

Four Nations Study

A comparative systems review and thematic policy analysis of public health across the four constituent countries of the UK

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Completed on behalf of the Association of the Directors of Public Health (ADPH) by a team led by the School of Health and Related Research (ScHARR) at the University of Sheffield



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Finally, we would like to emphasise that the contents of this report do not necessarily reflect the views or perspectives of the Health Foundation, the Association of the Directors of Public Health or the stakeholders who were involved in the research process. The report's contents and conclusions, including any errors of fact or interpretation, are solely those of the authors.

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Abbreviations

ASQ	Ages and Stages Questionnaire
EITP	Early Intervention Transformation Programme
EYFS	Early Year Foundation Stage
EU	European Union
FPH	Faculty of Public Health
FRAIT	Family Resilience Assessment Instrument Tool
GIRFEC	Getting it Right for Every Child
HCHF	Healthy Child Healthy Future
IY	Incredible Years
LA	Local Authority
MACE	Multiple adverse childhood experiences
NAO	National Audit Office
NHS	National Health Service
NLGN	New Local Government Network
OFSTED	Office for Standards in Education, Children's Services and Skills
PEDS	Parents Evaluation of Developmental Status
PH	Public health
RQIA	Regulation and Quality Improvement Authority
SHANAARI	Safe, Healthy, Achieving, Nurtured, Active, Respected, Responsible, Included
SDQ	Strengths & Difficulties Questionnaire (SDQ)
SOGS II	Schedule of Growing Skills II
UK	United Kingdom

Executive summary

The four countries of the UK face a number of similar public health challenges. They also share elements of the same systems of governance and societal values, as well as some common reserved political powers. Yet, since national devolution, it has been suggested that the four nations have developed their own approaches to public health, with different organisations, policies and funding systems in place, and with different relationships and ideas shaping public health action (Katikireddi, 2016; Hunter *et al.* 2010). Little is known however about the extent of divergence across the four nations, nor what can usefully be learned from the ‘natural experiment’ of national devolution between England, Scotland, Wales and Northern Ireland as it affects public health in each country (cf. Bevan *et al.* 2014). Comparing the public health systems and policy approaches across the four nations of the UK, whilst taking account of wider contextual differences, could yield valuable insights to guide future policy action to strengthen systems to promote public health.

With increasing policy emphasis on the importance of prevention, there is a need for a better understanding of how the wider public health system in each of the four countries of the UK functions and has developed over time. Within this, there is a need to better understand how policies relating to public health come about and find expression in each public health system. While ambitious and challenging, this study has sought to help address some of these gaps, thus contributing to our understanding of: areas of convergence and divergence across the public health systems of the UK since devolution; examples of practice that could be learnt from, shared and discussed across the four nations; and thus also possible ways in which the existing public health systems of the UK could be strengthened. To be clear here, the intention of the study has not been to provide a comprehensive review of the public health systems, nor indeed to comprehensively compare and make judgments about outcomes. Rather, the purpose has been to identify examples of similarity and difference across the public health systems which can subsequently be further discussed and learnt from across the four nations. The aims of the project are detailed below.

Research Aims

- To provide a framework and overview of the public health system in each of the four nations and to identify if, how and why these have evolved differently since devolution.
- To identify examples of similarities and differences in policy approaches to public health across the four nations.
- To identify examples of similarities and differences in how policy to address a specific issue is translated into practice within the public health system and (where possible) assess differences in relevant public health outcomes.

- To identify areas of practice that can be learnt from, shared and discussed across the four nations, along with associated opportunities for public health system strengthening.

Conceptual frameworks in comparative public health systems work

The starting point of most international comparisons of health systems is a conceptual framework, which serves ‘as a heuristic’ in understanding the system and as a basis for the collection and interpretation of information (Papanicolas and Smith, 2013). There are few widely used frameworks for conceptualising public health systems, including how policy action intersects with and shapes the wider system affecting public health. Existing work from the field of Health Policy and Systems Research (HPSR) emphasises that health systems, more generally, should be understood as comprising both ‘hardware’ (structures, organisations, technologies, resources) and ‘software’ (values, norms, actor relationships) (Gilson, 2012; de Savigny and Taghreed, 2009); and, moreover, that these different elements inter-relate dynamically and through complex processes, which moderate outcomes. These insights formed a starting point for the research.

Yet we needed a clearer conceptual understanding of the elements and dynamics of a public health system, so as to provide a basis for collecting and interpreting evidence about similarities and differences across the public health systems of the four nations of the UK. We therefore sought to develop an evidence-based public health systems framework during the course of the research, to act as a conduit for understanding convergence or divergence across the four nations. This involved the development of a ‘working’ model based on the grounded knowledge of a sample of key public health stakeholders across the four nations and testing/further development of this through systematic review evidence, as well as a process of ‘sense checking’ and stakeholder discussion.

Research methods

Design

The research was completed over a short, ten-month period (March to December 2017) and involved three main elements. Firstly, a systematic review of published literature relating to the public health systems in the four nations, which sought to identify examples of similarities and differences across the UK since devolution. Secondly, a linked and complementary in-depth review on a single priority area and case study of public health: school readiness (which was operationalised narrowly as “child development in the early years”). The decision to focus this case study on school readiness was underpinned by public health stakeholders identifying this topic as a priority concern during the research, given that developmental experiences and circumstances in the early years of a child’s life were recognised as key determinants of both long-term health and health inequalities. Thirdly, and linked to the in-depth review, an appraisal of where comparative quantitative data relating to school readiness across the four nations already existed.

Engagement of public health stakeholders

Public health stakeholders were engaged in the research. A full-day workshop was organised at the outset with key stakeholders from each UK nation to develop the initial ‘working’ model of elements within a public health system based on their knowledge and experience, in order to provide a starting point for the systematic systems review. Stakeholders were further consulted *via* telephone following completion of the first systematic system review and once a refined systems framework had been produced based on published literature. A teleconference also took place to discuss key findings towards the end of the project. For the case study review on school readiness (child development in the early years), key informants in each country were also consulted early on to explore understandings of current policies/practice, so as to contextualise our work and searches, and also, importantly, to identify potentially relevant evidence sources.

Searches, screening, quality appraisal and data synthesis

Searches were completed to answer specific research questions for each review and following pre-specified criteria. For both reviews, electronic databases were searched as well as additional citation searching of key identified papers, reference checking of included papers and follow up searching of publications by key identified authors. Stakeholder consultation to identify evidence sources was also used, but particularly as part of the in-depth review relating school readiness.

For the main review, retrieved citations were screened by two reviewers against inclusion/exclusion criteria with any queries discussed by the full team at regular meetings. For the school readiness review, retrieved citations were screened by the team of four public health registrars, with second checking carried out by the study lead. Studies which met the inclusion criteria were read in full and data extraction for each was completed using a data extraction form developed using the previous expertise of the review team. For the school readiness review, there was slight variation in that any policies identified through consultation with country stakeholders were synthesised into a country report by each Public Health Registrar; the contents of which were incorporated as data into the review.

Quality appraisal using available critical appraisal tools was inappropriate for the set of literature in the reviews due to the predominance of descriptive work and non-empirical studies. The approach was therefore based on the hierarchy of evidence, reporting study designs and any particular limitations identified. We aimed to highlight in the synthesis where included studies reported data rather than author opinion, and to identify any concerns regarding the conduct of these.

Data were synthesised with the use of tabulation and graphs, in addition to narrative summary and use of the public health system framework (mentioned above). The synthesis was focused on data relating

to similarities and differences between the nations, outlining initially where comparisons were reported and further details were then provided of included data from each country.

Key findings

Given the breadth and depth of the systematic review work completed as part of the research, there were a number of key findings across both reviews, which are summarised in this section. We start by discussing the public health systems framework that was produced and then move on to highlight the key takeaways from each review with regard to examples of similarities and differences across the different elements of the public health systems of the UK (as identified from the included sources). These latter findings are included in bulleted form here for ease of understanding (for more detail please refer to the contents of the main report).

The public health system framework

As mentioned above, data from included studies was used to develop a framework of inter-connected elements which comprise the public health system across the four nations of the UK. A graphical depiction of the important elements of, and relationships within, the system was produced relating to: origin and types of policy action, organizational structures and systems, ways of working, influencing factors and outcomes and impacts (see Figure 1 below).

The framework depicts potential pathways in the relationship between policy action (interventions/inputs), outcomes and impacts, and identifies potential moderators of that relationship. The arrows which link the columns of the framework highlight the interrelated nature of the public health system, with influencing factors at its core and elements of the system being in dynamic relationships with other elements. For example, the origin and types of action are determined by influencing factors, and in turn shape organisational structures and systems, and these then shape ways of working. The types of policy action, structures and systems, ways of working and influencing factors contribute to the outcomes and impacts that may be achieved. The framework also highlights where practitioner knowledge was not reflected in the included literature (the boxes that contain lighter-coloured text).

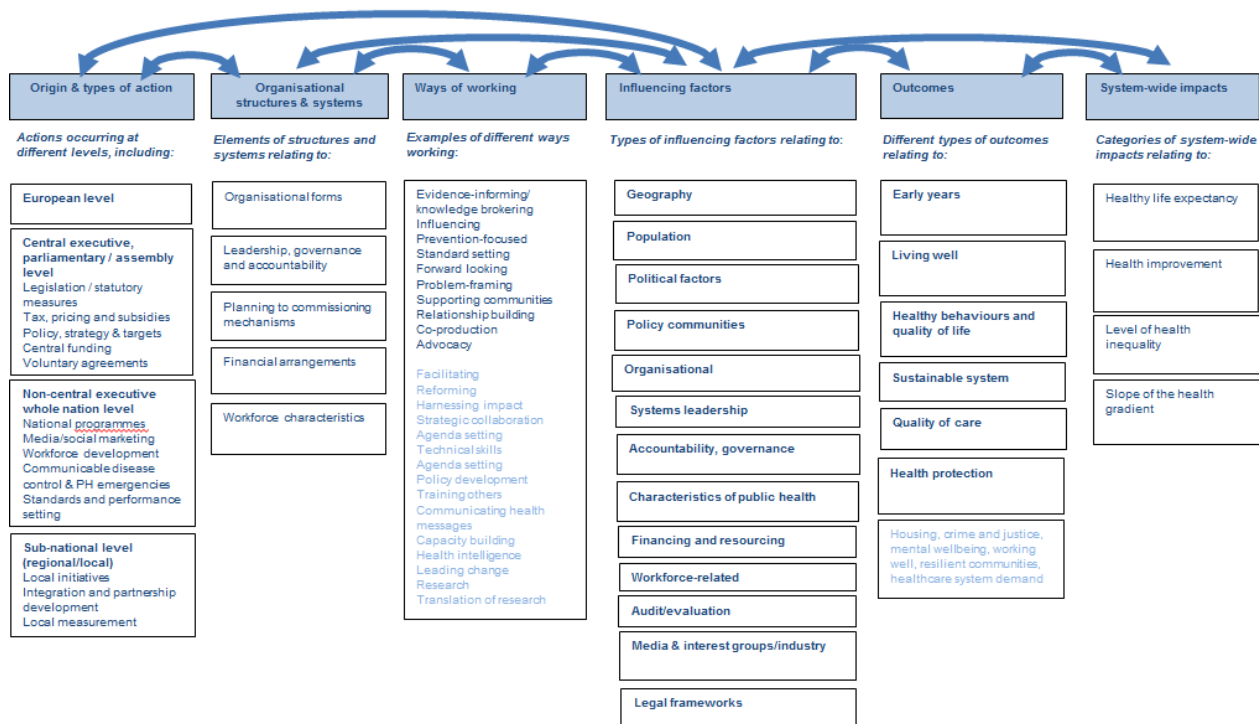


Figure 1. The public health systems framework.

Origin and types of policy action

Main review

- A range of examples of policy action were identified in included sources, originating at different points in the public health system.
- There was variance of opinion regarding the extent of divergence in policy action since devolution (with arguments both for considerable divergence and predominant similarity in direction of travel).
- The key role of the central executive and parliamentary/assembly action in all nations of the UK was highlighted.
- Historic similarity was reported across all nations in terms of limited clarity on public health policy, strategy, and targets for public health; though it was unclear the extent to which this applies in the current day given the dates of the included studies.
- A similar policy emphasis was highlighted in relation to the importance of local initiatives, prevention/early intervention, and partnership working; and some level of similarity of action between the nations in terms of achieving financial balance, increasing access to healthcare, and increasing service integration.
- The extent of similarity or difference in relation to how the UK nations have pursued action in relation to health inequalities was unclear. Historic studies suggested some level of similarity, most particularly during the New Labour period, with tensions mentioned in regard to a focus on social determinants versus lifestyle behaviours and individual responsibility approaches

across all nations. Yet more recent policy examples in Wales and Scotland perhaps suggest a shift in emphasis towards an approach more closely oriented on addressing wider determinants of health and health inequalities – with this a potentially insightful area for further, more detailed cross-UK comparison.

- A changing political landscape across the four nations was highlighted as offering potential for more divergence in action, for example, in terms of legislation.
- There was a question as to whether England is diverging from the devolved nations? Here, English policy underpinned by a focus on competition, markets and choice was highlighted as moving away from other nations, whose action continues to be more akin to original welfare state principles and more focused on cooperation and participation.

School readiness case study

- Exponential growth in early years policy action was highlighted in all nations since devolution.
- Examples of distinctive legislation were identified in Scotland and Wales shaping the context for action (e.g. Children and Young People (Scotland) Act 2014 which enshrined Scotland's Getting it Right for Every Child approach in law, duties related to children's play placed on Welsh local authorities, Wellbeing of Future Generations (Wales) Act 2015), but much similarity was also identified across all nations (e.g. early intervention focus, cross-sectoral approach, play-based early years curriculum, entitlements to early education/care, integrated family support, child health / parenting programmes).
- Policy approaches in Scotland and Wales appeared more distinctly focused on setting a framework for dealing with wider determinants of child development, most particularly emphasising children's rights and the need to address poverty.
- All countries have child health programmes that are broadly similar, yet distinctive tools or approaches for measuring and supporting child development were identified such as: the move to integrated reviews between education and health practitioners in England and Northern Ireland (for 2-2.5 year and 3+ reviews respectively), the SHANAARI wellbeing wheel in Scotland, and the use of a new Health Visiting Family Resilience Assessment Instrument Tool in Wales. There could be value in seeking to learn from these different tools and approaches.
- Examples of subtle divergence were identified reflecting different national conceptualisations/ approaches to early child development, e.g. whether it is framed as being about a child's learning in preparation for school or about a child's learning journey, wellbeing and preparation for life. Scotland was highlighted as having a relatively coherent approach, focusing on the latter, with tensions between these two framings in English (and to some extent Welsh) national policy. The former/English approach was criticized for being deficit-

focused (what children cannot do/who is being ‘left behind’), and risking over-assessment and negative labelling at an early age.

- Subtle divergence was highlighted in relation to whether pre-school provision was presented as being about education, learning and/or childcare, and/or as a universal entitlement or earned right based on being ‘in work’ (in Northern Ireland, non-compulsory pre-school education is presented as education *not* childcare and universally available to all children in their immediate pre-school year; in Scotland, universal provision for 3/4 year olds is presented as integrated early *learning* (not education) *and* childcare; in England and Wales, universal entitlement for 3 and 4 year olds is presented as early *education* and childcare, yet *extended* entitlements are connected to parents being in work and thus as an *earned* form of childcare).
- English policy underpinned by a focus on competition, markets and choice was identified as driving aspects of divergence from other nations (e.g. shaping differing approaches to the commissioning of early education, learning and/or childcare (with England having a more demand-led/market-based system than other nations) and health visiting services).

Organisational Structures and Systems

Main review

- Different organisational forms across the four nations exist, but these forms retain similar functions.
- Extensive reorganisations were highlighted in England, with less reorganisation in other nations.
- Northern Ireland was highlighted as the only nation with full structural integration between NHS and social services, and less relationship with local government.
- In terms of similarities, authors reported that all nations have national bodies for health protection, formal partnership bodies at different system levels, and similar leadership structures, with dispersed and complicated forms of leadership for public health.
- In terms of divergence, differences in local authority roles and commissioning mechanisms were highlighted, particularly relating to the emphasis in England on purchaser-provider split and the role of markets. In contrast to the direction taken in England, other nations were described as having more emphasis on collaboration/integration, and responsibility for planning and commissioning across the system.
- There appears to be significance here (in terms of these differing planning to commissioning systems) in terms of the skills needed in the public health workforce, with questions as to whether there is a need for a differing public health skill mix across the UK (and particularly perhaps in England where skills linked to commissioning and competition may increasingly be required).

- In relation to the characteristics of the workforce, there were reported to be revised understandings of who forms part of the workforce for public health in all nations and also recognition of the importance of a broad workforce in all nations.

School readiness case study

- The school readiness review supported many of the findings of the main review (e.g. complicated forms of leadership for child development in the early year swere identified, as well as the operation of formal partnership bodies at different levels of the system, and recognition of a wide workforce for supporting child development in the early years in all nations - health visitors, early years practitioners, teachers, nursery providers, childminders, children’s services, and more).
- The vital workforce role of health visitors in supporting families and helping to improve early years child development outcomes appeared to be emphasized in all nations (at least in terms of policy rhetoric).

Ways of working

Main review

- Ways of working were included in the initial ‘working’ model that was developed in the research which was based on the grounded knowledge of a sample of key public health stakeholders from all nations, but ways of working were often ill-defined in included sources, with a lack of clarity in terminology and overlapping meanings.
- Aspirations to work in particular ways were identified at all policy levels in each of the UK nations, but there was little in included sources about *how* or *whether* ways of working *would be* or *are being* achieved across the countries of the UK (ie. limited evidence on training needs, measurement, reflections on actual working practices).
- This is not to suggest that such material does not exist, but rather than such data did not feature in included studies. It does perhaps suggest however that there is scope for the public health workforce to evidence what it does more robustly in the future.
- One aspect not currently included in the public health systems framework is the technical knowledge of the public health workforce (e.g. in relation epidemiology, health protection, health economics, social research) and how this knowledge is applied in and through different ways of working in practice.
- The greatest proportion of included sources in relation to all nations mentioned ‘influencing’ (particularly influencing debate, policy and commissioning) or ‘partnership working’.
- Difficulties in embedding a prevention-focus were mentioned in included sources.

School readiness case study

- Child development in the early years was apparent as an exemplar of policy action that is grounded in a ‘prevention’ approach to public health in all nations (given the recognised links

between the early years and life-long health and inequalities). As with the main review, challenges in embedding a prevention-focus within the public health systems of all UK nations in practice were highlighted.

- There was much focus in the included sources on partnership working given the cross-cutting nature of the child development in the early years.

Influencing factors

A wide range of influencing factors were identified within the public health systems of the UK, illustrating the complexity of action to improve public health across the UK (examples are highlighted here).

Factors relating to the population and geography

Main review

- Population –related factors were emphasised as a key influencing factor, shaping the direction of policy and/or service provision (e.g. public knowledge/attitudes, levels of support, demographic changes, living conditions).
- Geography of the nations was described as influential in terms of service provision to urban/rural and dense/remote populations, with issues of rurality and remoteness particularly highlighted in relation to Scotland.

School readiness case study

- The most evident ‘population’ influencing factor was the prevailing level and spatial patterning of disadvantage and poverty in all nations (shaping the continued need for policy action across the UK, undermining parental resources to, e.g. invest in home learning, afford quality early education, learning or childcare).
- Uncertainty was reported in terms of understanding why services may or may not be taken up (including of free early education and care places).
- Positive perceptions and the acceptance of health visitors by families were highlighted as important.

Political factors

Main review

- A range of significant political influences were highlighted, shaping policy priorities and action taken, including: the extent of devolved powers, party politics, political ideas, centre-local government relations.
- Political factors were important drivers of moves towards divergence in public health policy between nations.
- There was limited evidence relating to political influences in Northern Ireland.

School readiness case study

- As with the main review, a range of political influences were highlighted within the public health systems relating to child development in the early years in England, Scotland and Wales, with limited evidence on political factors in relation to Northern Ireland.
- Included sources highlighted the importance of cross-party political support for action in the early years across the four nations since devolution.
- Political ‘ideas’ were highlighted as a key influence (e.g. ideas about appropriate role of the state, markets, individuals in early years provision), as well as the degree of trust of central government in local government, which shaped local government autonomy.
- Limits to policy action and securing system change in the devolved nations were highlighted given that key cross-cutting issues such as welfare/social security and employment - which can fundamentally reshape key wider determinants of child development such as poverty levels and income inequality – are reserved matters; making it challenging for the Scottish and Welsh Governments to ensure that wider enabling social and economic policies (e.g. forms of social security and income support) are in place and limiting the extent to which they can reshape wider determinants of child development.
- This situation is changing (e.g. the recent Scotland Act (2016) further devolves powers in key areas such as tax, employment support and welfare-related benefits and further powers are also due to Wales in coming years).

Financing and resourcing

Main review

- Financing and resourcing issues were highlighted across all nations and at all levels of the system - linked, in part, to the status of public health versus healthcare and the wider economic context.
- Under-investment in prevention, funding cuts to public health (particularly in England), sustainability of key services were all highlighted as important influencers across the four nations.

School readiness case study

- A complicated funding landscape for action at local level (e.g. health and education, national to local, NHS and LAs); moves from ring-fenced to mainstream funding; the short-term nature of funding for local activities; wider public sector austerity policies; and financial sustainability issues/funding cuts to early education and child care/health visiting services/children’s centres, particularly in England, were all highlighted as influencing factors.

- In terms of difference, recent investment in the development of the early years curriculum and in the Flying Start programme in more disadvantaged areas was identified as an important in supporting action to address child development in the early years in Wales in particular.

Workforce

Main review

- The skills and total numbers of the workforce were recognised as a key moderator of public health action in all nations. Difficulties in workforce planning were, however, highlighted given the range of fields involved in supporting public health, as well as difficulties associated with recent organizational changes - particularly in England due to the move of public health staff from the NHS into local authorities.
- Overlaps and unclear roles and responsibilities were highlighted as an influencing factor within the public health systems of each nation.

School readiness case study

- School readiness review findings largely supported the main review findings as above - also highlighted was the particularly influential role of health visitors in all nations, though significant pressures on health visitors were identified in England and Northern Ireland in particular.
- The caseload of health visitors was highlighted as important in shaping relationship development / engagement with families (with a lower caseload for 'Flying Start' health visitors in Wales linked to benefits for the most vulnerable families).
- Traditional divides between 'education' and 'childcare' were highlighted as important, including how this links to the qualifications, status and pay of different members of the early years workforce.

Organisational and leadership

Main review

- Issues relating to organisational sustainability were raised, as well as relationships between different organisations across the system.
- In terms of systems leadership and governance, there were criticisms of dispersed public health leadership structures.

School readiness case study

- A complex organisational landscape for child development in the early years was highlighted in all nations.

- Different types of organisations were identified as offering different quality early education, learning and/or childcare across all nations, with provision better in maintained/statutory settings.
- The significance of pre-school to school relationships was highlighted as significant in shaping the transition experience of children / whether children start school at a disadvantage.
- In terms of leadership, governance and accountability, the significance of local champions in shaping implementation was highlighted, as well as the powerful role of OFSTED in England in shaping aspects of the system.
- There was particular criticism of ‘deficit-focused’ early years foundation stage assessments in England, as being narrowly focused on literacy and numeracy and risking negative labelling/stigmatizing children from an early age.

The nature of public health

Across both reviews

- A number of challenges relating to the nature of public health / public health issues were highlighted as influencing factors.
- Difficulties in evaluating complex public health action in a complex system were highlighted as well as the complexity of health improvement (and child development as a wider determinant of health inequality), along with challenges in demonstrating and attributing the effects of related policy action.
- The low status of public health was mentioned in the main review.

Audit, data and evaluation

Main review

- A lack of baseline data and insufficient integrated monitoring systems to understand issues or track change was highlighted, as well as limitations on access to data and issues with data handling at times.
- Issues were also highlighted (related to points already made above) about the long time lag between policy action and health outcomes, which made evaluating public health action challenging.

School readiness case study

- Previous evaluation/international evidence was highlighted as a significant influencer in the development of policy relating to early years child development across the four nations.
- Difficulties in evaluating complex forms of action to support child development were highlighted (e.g. varied patterns of uptake/use, policy change over time).

- Limitations in early childhood monitoring systems were highlighted in all nations (e.g. lack of baseline service, workforce, developmental data), though with recent moves to address data sets in all nations.
- It was noted that child development may be defined as secondary (rather than primary) outcomes in evaluations of policy action, which can shape evaluative judgements of policy ‘success’ or ‘failure’.

Outcomes and Impacts

Main review

- There was limited comparative data in included sources regarding outcomes and impacts as compared across the four nations and thus no clear picture of whether one system was ‘moving ahead’ of the others (cf. Bevan *et al.*, 2014).
- While outcomes in the particular areas of tobacco control and vaccination rates were a noted success for all nations in included sources, differing systems of measurement in regard to outcomes, for example relating to health inequalities, was reported as making comparison challenging.
- Baseline characteristics of populations in the nations was highlighted as important when endeavouring to make comparisons (e.g. small improvement in Scotland given a population who have relatively poor health may be of more importance comparatively than the same improvement in England where outcomes started at a higher level).

School readiness case study

- Similar to the main review, included sources suggested a mixed picture of child development outcomes across the four nations suggesting no single system can be judged ‘better’ or ‘worse’ than another - any judgment of ‘success’ depends on what is measured in relation to child development and how.
- England, Scotland and Northern Ireland all capture Ages and Stages Questionnaire (ASQ) data as part of child health programmes, but no country comparisons were found in the review – there could be value in comparative work on ASQ data in the future.
- Included sources indicated that where country differences were identified (e.g. cognitive ability at age seven), it was not clear whether this was due to ‘policy’ or wider regional or local processes at work and thus that country geographies need to be taken into account when comparing ‘national’ outcomes across the UK.
- Across all nations, continuing developmental differences for children in the early years were reported according to socio-economic status - persistence of such socio-economic inequality serves to emphasise the pressing need for continued policy action to give children the best start in life across the UK as a means to help address this key wider determinant of health and health inequalities.

Limitations

The research adds to existing literature by highlighting examples of both similarity and difference across the public health systems of the UK; illustrating complicated pathways from policy action, through moderating factors, which shape outcomes and impacts; and meeting a primary aim of identifying areas for learning and further dialogue across the four nations. There are however, a number of limitations to the work which should be taken into account by readers when reflecting on the conclusions and suggested implications.

We sought to be inclusive across the reviews in terms of sources of evidence (including by study design and source type) and screened and included a large volume of literature. Searching for literature on the topic of public health systems and policy was challenging, due to the complex nature of public health concepts and the wide-ranging elements of healthcare and wider societal processes which may relate to public health but not be specifically referred to in evidence sources directly as “public health”. Searching for evidence related to policy for public health is also complicated by the fact that policy is constantly changing. The area of school readiness (child development in the early years) is for example a policy issue undergoing significant change. As such, findings from currently published sources (and academic material in particular) were limited to an extent by the fact that they may have been superseded by recent policy development. These challenges in the identification of relevant evidence for the reviews raise the possibility that relevant work and recent developments have been missed by our searches, including grey literature that may provide insight into policy action and system elements. However, a key purpose of the review was to provide a framework and overview of the public health system in each nation of the UK, rather than identifying all literature relating to each element of public health. We recognise that we have not provided a complete presentation of current policy documents for each nation or a comprehensive depiction of all current policy initiatives, but rather have included examples of legislation, government papers and policy documents, national programmes and more from included sources, which illustrate broad types of policy action/policy approaches in the public health system and have allowed identification of examples of similarities and differences in the public health systems since devolution. We further recognise that, in the school readiness review, we defined the focus of this review narrowly as ‘child development in the early years’. As such, we emphasise that it only explores one narrow subsection of a wider field of healthy child development and early years work, which includes issues such as healthy weight, breastfeeding, immunisation and many other areas of public health activity.

Another area of limitation is in regard to the examination of outcomes. We did not specifically search for each outcome that may be evaluated in relation public health systems, but rather report the comparative and singular outcomes described in included evidence. We acknowledge that a study which specifically aims to identify literature relating to public health-related outcomes would retrieve

a greater volume of studies than we included. As we go on to emphasise in the next conclusion section however, we did not set out to judge the public health systems of the UK based on a particular set of outcomes, but rather to provide information to support further cross-country discussion about how policy action has been reshaping the whole system in favourable, health-promoting ways (Rutter *et al.*, 2017).

We endeavoured to reduce the risk of missing key work by the use of supplementary searching techniques including citation searching, reference list checking, and searching for key authors in the field. We also consulted with public health stakeholders in each UK nation to request additional citations of relevance, which proved particularly important for identification of grey literature in the school readiness review in particular. At each stage of the review we used a process of “sense checking” with a small sample of public health stakeholders, which was a valuable mechanism for checking how, and if the findings resonated or were at variance to grounded knowledge and experience and sought to address this where possible.

The involvement of a sample of stakeholders raises the potential for biases to have been introduced by selection of stakeholders with particular views, opinions or experiences. It is possible that, for example, a different “start model” may have been developed had the composition of stakeholders in the first workshop been different. While stakeholder involvement was an important element of the work, the risk of bias was minimised by the use of transparent and replicable systematic review methods to identify evidence sources, and it was these wider evidence sources which underpinned development and refinement of the final public health systems framework. The study brings together insights from stakeholder experience together with available literature.

We adopted a method of synthesis based on logic model methods to provide a system-based framework for presenting the review findings. There is the possibility that a visual output such as this may not be clearly understood by all, and the meaning of particular terms or phrases used within it may be subject to differing interpretations. We emphasise that the framework should be seen as just one heuristic to help understand and make sense of what is a complex public health reality, rather than a perfect representation.

While our search processes sought to be inclusive, this affected our ability to critically appraise included studies, given the predominance of descriptive sources. The approach to quality appraisal used a process based on consideration of the hierarchy of evidence, highlighting studies of empirical design, and any particular limitations identified during the narrative reporting.

We initially aimed to only include literature which provided insight into the public health systems in all four nations of the UK by comparing and contrasting the systems in each country. However, we

identified only a small volume of material which made these comparisons, and therefore widened our included sources to those which related only to the aspects of public health system in a single country. In some cases, the abstracts for potentially relevant academic studies suggested that they related to all countries of the UK, but on closer scrutiny the content related only to a single nation. The greatest volume of included sources related to England in both reviews, and notably a small body of literature relating to Northern Ireland. We reflect this in our suggestion below of further research in Northern Ireland in particular as part of a wider effort to evidence the value of public health work.

Conclusions and implications

Seven main conclusions and associated implications for policy and further research arise from this study. These are addressed in turn below.

1. A public health systems framework is a useful heuristic tool for comparison, for the promotion of ‘systems-level’ dialogue and for use in future evaluations.

The public health systems framework that has been produced in the research is a useful tool for comparison and communication, and demonstrates the complexity of policy action to improve public health, as well as the need to view public health as part of a dynamic, inter-connected and changing system. A framework such as this is a useful way to represent public health as a system of interest. The framework we have produced here should be seen as a heuristic that can help further a process of understanding and making sense of what is a complex public health reality, rather than a perfect representation.

A number of challenges were highlighted in both reviews in terms of difficulties in evaluating complex policy action in a complex wider public health system. The public health systems framework can be used as a potentially useful starting point for unpicking and evaluating future public health action and outcomes against, as it sensitises to the inherent complexity of pathways of action to outcomes (for example, by illustrating feedbacks and inter-connections), and thus can be used as a tool to encourage reflection and ‘systems level’ dialogue in the design and implementation of evaluations (cf. Hawe, 2017).

Such ‘systems-level’ dialogue can usefully be promoted across the four nations of the UK, so that comparison is *less* about *judging* whether one nation is doing ‘better’ or ‘worse’ than another or indeed whether a particular approach ‘works’, and *more* about cross-country *learning* from each other: about how the configuration of, inter-connections between and feedback between different elements within the different public health systems are promoting change and where possible leverage points for system change might be (see Rutter *et al.*, 2017). We hope that this study can support, even in a small way, future conversations to take place to these ends.

2. Child development in the early years is a key ‘prevention approach’ to public health in each UK nation but one that is subject to pressures.

Across both reviews, it was clear there is much policy focus and rhetoric around the importance of a prevention approach to public health and of a need to address health inequalities. The case study area of school readiness, which we defined as ‘child development in the early years’ is a key example of a prevention approach to public health given that early childhood is a critical stage in ongoing development and is connected to lifelong health and health and other inequalities. Our findings suggest however, that action to support child development in the early years is subject to many issues, influences and pressures and, moreover, that there are key influencing factors and challenges in England and Northern Ireland in particular; including, for example, pressures relating to short-term funding or funding cuts to children’s centres, issues of financial sustainability in relation to early education or childcare, and pressures on health visitors who are recognised as key members of the early years public health workforce. While positive developments were highlighted in England and Northern Ireland – such as the move to integrated reviews between health and education practitioners in the early years (at 2-2.5 years and 3+ years respectively) – and from which there could be valuable opportunities for wider learning, our findings suggest that the legislative and policy context for early years may perhaps be more positive in Scotland and Wales (given, for example, that GIRFEC provides an integrated framework for action in Scotland and, in Wales, recent investments in Flying Start, national programmes to support parenting and address child poverty, as well as the legal duties placed on local authorities to, amongst other things, address future wellbeing as well as issues of play). Yet, despite the positive examples, there are still continuing challenges; not least in terms of evaluating large-scale early years initiatives and programmes such as these. As a result, there would appear to be a precarious evidence base on which to form decisions about whether to continue particular forms of action and this raises the risk of challenge.

We suggest that there is potential scope to learn more from the moves towards integrated health and education reviews in England and Northern Ireland, as well as the recent shifts in the legislative and policy context in Scotland and Wales, tracking how these reshape the wider public health system, and to understand better and discuss across the four nations how influences relating to funding and evidencing effectiveness can and are being dealt with in practice. We suggest, more broadly, that the whole system relating to child development in the early years could usefully be followed up as a ‘tracer’ area of a prevention approach to public health, and thus as a key area for future systems comparison, learning and dialogue across the four nations.

3. There are gaps in evidencing the value of what the public health workforce does, which undermines the status and priority accorded to public health across the UK nations.

The research identified gaps in evidencing what the public health workforce does, which undermines the status and priority accorded to public health across all nations. This seems a pressing issue to address across all UK nations in order to help advocate for political commitment to and investment in public health. We suggest further work could be commissioned to evidence what the public health workforce does, its value and contribution (in all its breadth). Doing so could usefully also involve: consideration of the role of training in supporting activities and ways of public health working; whether there are gaps here and thus what training needs might be (for public health specialists as well as the wider public health workforce); and whether and how it is possible to document, measure and monitor the skills that are deployed in public health working in practice.

4. Influencing is key way of public health working in all four nations of the UK.

The findings across both reviews suggest that influencing is at the core of modern public health practice in all nations of the UK, with a particular focus on influencing debate, policy decisions and/or planning to commissioning processes. Influencing should therefore be recognized as a key public health skill across the UK nations and efforts made to ensure that public health training appropriately supports this. Findings from the sources that were included in the reviews provided only limited insight here into the adequacy of existing training to support influencing skills and into how well the public health workforce actually manages to influence in practice. We suggest that these are potentially valuable areas for further investigation. There appears, for example, to be more to learn about the extent to which other workforce skills (e.g. those that have more traditionally been regarded as core to public health working, such as critical appraisal) are being deployed in practice, including the extent to which these skills support and/or relate to influencing debate, policy decisions and/or commissioning processes in the four nations. This could also include understanding more about the ways in which the public health workforce provides technical challenge and support in policy conception and development, including, for example, contributing to objective setting based on available evidence bases, baseline measures and plans for management, monitoring and evaluation.

5. Influencing at central executive or parliamentary/assembly level is important to affect system change for the benefit of public health across the UK nations.

While both reviews highlighted that considerable public health policy action takes place at sub-national levels in each nation of the UK, the substantive role of action at central executive and/or parliamentary/assembly level was particularly apparent. Indeed, highlighted public health ‘successes’ in both reviews (for example, the second-hand smoking bans and recent minimum unit pricing legislation in Scotland highlighted in the main review, and play and wellbeing duties placed on authorities in Wales in the school readiness case study) all originated at this point in the system. The reviews highlight that securing legislative change was importantly shaped by a range of different factors; for example, the actions of lobbying groups, public attitudes, the way issues were framed in political dialogue, and the fact that there has been some devolution of legislative powers. It seems

apparent then that influencing central executive and parliamentary/assembly action is core to modern public health practice, and an important area for deploying public health skills in both the devolved nations and in Westminster if there is to be substantive policy action and system change for the benefit of public health. We suggest that tracking and evaluating the system-wide impacts of key recent legislative measures introduced in Wales and Scotland could potentially provide valuable opportunities for future cross-UK learning.

While Directors of Public Health (DPH) have a fundamentally important role across the UK nations, the reviews evidence that a wider public health workforce is also important and that there are aspirations to work in broad partnerships across the four nations. Securing central-level political action often requires, amongst other things, coalitions of stakeholders, who not only share similar basic values and beliefs and thus collectively identify with one another, but also who collectively seek to frame dialogue and advocate for change in timely ways and in ways that resonate with central policy makers' knowledge, understanding and constraints (see, for example, Cairney, 2012; Shiffman, 2007). The reviews raise questions about the extent to which this type of coalition or collective public health identity exists within or across the workforce in the public health systems of the UK. The included evidence highlights considerable challenges in regard to understandings and evidence regarding public health, suggesting that more needs to be done to strengthen the collective identity and power of public health voices to affect changes in policy.

6. There are questions about how to lead a broad public health workforce in all UK nations.

Connected to this point above, leadership of the broad public health workforce is key here given the broad and complex nature of many public health issues. Challenges were reported in both reviews in relation to the scope and extent of public health leadership across the four nations. Our findings thus raise questions about how best to manage and lead this broad workforce in coherent and effective ways across all levels of the public health system. Given that there appears to be some similarity in issues and leadership challenges across the four nations, it would seem pertinent to progress associated cross-country dialogue and learning on this topic.

7. There is continuing scope to learn from examples of both convergence and divergence in the public health systems across the four nations.

Finally, examples of both similarities and differences across the public health systems of the UK were found. While areas of the system were identified where the devolved nations appear to have more in common with each other than with England (with the greater focus of English policy on competition, markets and choice highlighted as driving English divergence), there were also many similarities: in terms of policy action pursued, influencing factors, issues and challenges. It does not seem possible therefore to definitively characterize the field of public health as a straight forward example of either

convergence or divergence (cf. Simpson, 2017). It is recognized however, that there is a constantly changing policy, institutional and political landscape across the UK nations, and that, with the advent of future negotiations relating to Brexit and with recent extensions of, and ongoing discussions about, devolved powers, it is possible that this situation could swiftly change.

Politics was highlighted in both reviews as a key influence across the public health systems of the UK. Our findings suggest that ongoing ‘territorial complexities’ across the political systems of the UK (cf. Wincott 2005, 2006) complicate the development of policy to address some public health issues, but particularly action to address wider determinants of health and health inequalities in the devolved nations. Limits to policy action and thus securing system change in the devolved nations were particularly highlighted in the school readiness review, given that important cross-cutting issues (e.g. welfare support, social security, tax and employment) - which can fundamentally reshape poverty and income inequality as determinants of child development - are reserved matters; thus making it challenging for the Scottish and Welsh Governments to ensure that wider enabling social and economic policies are in place. Yet this situation is changing. As noted in the report, the recent Scotland Act (2016) further devolves some powers in key areas such as tax, employment support and welfare-related benefits and further tax varying powers are also due to Wales in coming years. Much may depend on how these powers are deployed. We suggest that tracking these developments and understanding how these serve to (re)shape the public health systems could be a valuable area for future research and cross-UK learning.

While learning is possible from identified examples of difference, the findings suggest that there is also much that can be learned from continuing similarities across the UK public health systems, including, for example, how best to respond to financial, organizational or workforce challenges and, potentially, how to advocate, influence and leverage change at points in each system that are most likely to yield benefits for public health. As noted in the limitations section above, this study identified few comparative accounts relating to public health across both reviews which looked across national boundaries. We suggest therefore that there is continued scope for further comparative research across the UK and thus continued cross-UK learning from the ‘natural experiment’ of devolution (cf. Bevan *et al.* 2014) in the future. We suggest that spaces for learning could be strengthened across the public health systems in order to promote this.

Section 1. Introduction

Background

The four countries of the UK face a number of similar public health challenges, including: rising obesity, excess alcohol consumption, tobacco use, mental health issues, social isolation, sexual health issues, and the need to address persistent health inequalities. They also share some elements of the same systems of governance and societal values, as well as some common reserved political powers. Yet, since devolution, each country has evolved distinct ways of running their healthcare and public health systems given that these areas have been subject to devolved powers, and each is embedded within differing broader social, economic and political contexts. Indeed, it has been suggested that the four nations have developed their own approaches to public health in particular, with different organisations, policies and funding systems in place, and with different relationships and ideas shaping public health action (Katikireddi, 2016; Hunter *et al.* 2010). Yet little is known about the extent of divergence across the four nations, nor what can usefully be learned from the ‘natural experiment’ of devolution between England, Scotland, Wales and Northern Ireland as it affects public health in each country (cf. Bevan *et al.* 2014).

Comparing the public health systems and policy approaches across the four nations of the UK, whilst taking account of wider contextual differences, could yield valuable insights to guide future policy action to strengthen systems to promote public health. A number of studies exploring the performance and quality of the four different healthcare systems have been published; highlighting, for example, differences in outcomes (life expectancy, disease specific mortality rates), access, capacity, safety and patient centeredness (Sutherland and Coyle, 2006), as well as improvements in certain performance indicators across the healthcare systems of the UK (hospital waiting times, ambulance response times to immediately life-threatening emergency (category A) calls and in the quality of stroke care) (see Connolly *et al.* (2010), updated in 2011 and repeated in 2014 as Bevan *et al.*, 2014, p.14). A key conclusion of such work was that: “There is little sign that one country is moving ahead of the others consistently” across the available indicators of performance (Bevan *et al.*, 2014, p.1). Yet is this also the case for public health? A number of population health outcome measures were included in the report by Bevan *et al.* (2014) namely: breast screening uptake; immunization (childhood and seasonal influenza); and life expectancy – with improvements across all four nations noted of between three and five years from the early 1990s. Comparative studies investigating differences in public health outcomes or indeed in the policy and system *processes* that contribute to these across the four nations are relatively rare.

With the increasing policy emphasis on the importance of prevention, there is a need for a better understanding of how the wider public health system in each of the four countries of the UK functions and has developed over time. Within this, there is a need to better understand how policies relating to public health come about and find expression in each public health system, and with what effects on public health outcomes. A recent review of alcohol policies across the four nations of the UK identified a number of important differences, including, for example, in the use of evidence to inform policy development, and a lack of shared information on current policies or positions on alcohol (Fitzgerald and

Angus, 2015). There is a need however to go further, providing a more synoptic overview of the public health systems, alongside an analysis of the policy approaches that seek to shape the system to address different public health challenges. While ambitious and challenging, this study has sought to help address some of these gaps in understanding over a short ten-month period: March to December 2017. More specifically, it has sought to identify examples of areas of convergence and divergence across the public health systems of the UK since devolution; identify examples of practice that can be learnt from, shared and discussed across the four nations; and thus also implications and possible ways in which the existing public health systems can be strengthened. To be clear here, the intention has not been to provide a comprehensive review of the public health systems, nor indeed to comprehensively compare and judge outcomes. Rather, it has sought to identify examples of similarities and difference across the public health systems which can subsequently be further discussed across the four nations. The aims of the project are detailed in full below.

Research Aims

- To provide an overview of the public health system in each of the four nations and to identify if, how and why these have evolved in differently since devolution.
- To identify examples of similarities and differences in policy approaches to public health across the four nations.
- To identify examples of similarities and differences in how policy to address a specific issue is translated into practice within the public health system and (where possible) assess differences in relevant public health outcomes.
- To identify areas of practice that could be learnt from, shared and discussed across the four nations, along with associated opportunities for public health system strengthening.

Conceptual frameworks in comparative public health systems work

The starting point of most international comparisons of health systems is a conceptual framework, which serves ‘as a heuristic’ in understanding the system and a basis for the collection and interpretation of information (Papanicolas and Smith, 2013). While conceptual frameworks of *healthcare* systems exist (Papanicolas, 2013), there are few widely used frameworks for conceptualising public health systems, including how policy action intersects with and shapes the wider system affecting public health.

Notwithstanding this imbalance in focus on healthcare systems as opposed to public health, existing work from the field of Health Policy and Systems Research (HPSR) has emphasised that health systems more generally should be understood as comprising both ‘hardware’ (structures, organisations, technologies, resources) and ‘software’ (values, norms, actor relationships) (Gilson, 2012; de Savigny and Taghreed, 2009) and, moreover, that these different elements inter-relate dynamically and through complex processes, which moderate outcomes. A key contributor to the field of HPSR, Gilson (2012)

argues here that policy can be understood as the ‘purposeful and deliberate actions’ through which efforts are made to strengthen aspects of health systems to promote health.

The insights from these existing sources provided a starting point for this research. To be more specific, the study began from an understanding that, in order to unravel how public health policies are translated into practice and potentially shape population health outcomes, this requires an understanding of both the ‘hardware’ and ‘software’ elements of the public health system (through which policy is developed and enacted), as well as the wider contextual factors that influence and moderate its effects. Yet we needed in this study to have a clearer conceptual understanding of the elements and dynamics of a public health system, so as to provide a clearer basis for the collection and interpretation of information about examples of similarities and differences across the public health systems of the four nations of the UK.

Given this need, the research aimed to develop and refine a public health systems framework that was evidence-based. The framework would then act as a conduit for understanding and presenting information about examples of convergence or divergence in public health across the four nations. While the process for developing this public health systems framework is discussed in more detail in the methods section below, it involved two main aspects: firstly, the development of a ‘working’ model based on the grounded knowledge and experiences of a sample of key public health stakeholders across the four nations of the UK; and secondly, the testing and further development of this through systematic review evidence, as well as a process of ‘sense checking’ and discussion of the value of the framework with a sample of public health stakeholders from across the four nations of the UK. It is to the methods for this research that the report now turns.

Section 2. Methods

Design

The research was completed over a short ten-month period, from March to December 2017. It comprised three main elements. Firstly, it included a systematic review of the public health systems in the four nations of the UK. Secondly, a linked, in-depth review was carried out which focused the spotlight on a single priority area of public health – school readiness (which was operationalised narrowly as ‘child development in the early years’). Thirdly, the study also included an analysis of where comparative quantitative data relating to school readiness across the four nations may exist and a plan to analyse that data if possible

The first review sought to better understand examples of similarities and differences in public health systems across the four countries of the UK. The second review complemented the systems review by examining child development in the early years as a specific exemplar or policy case, in order to further explore the systems elements identified in the wider review. The decision to focus the case study area on school readiness was underpinned by public health stakeholders identifying this topic as a priority public health concern during the research process, given that developmental experiences and circumstances in the early years of a child’s life were recognised as key determinants of long-term health and health inequalities. By defining the focus of this review narrowly as ‘child development in the early years’, we emphasise that it only explores one subsection of a wider field of healthy child development and early years work, which includes issues such as healthy weight, breastfeeding, immunisation and many other areas of public health activity.

Prior to commencement of each review, a protocol was drafted that set out the aims and objectives of each review, together with parameters relating to inclusion and exclusion, and details of the methods to be employed.

Research questions for the review work

The main research question for the public health system review was:

What examples can be identified of similarities and differences in the public health systems and public policy approaches of the four countries of the UK since devolution?

Sub-questions were:

- How did each country’s related public health policies come about?
- What is each country’s related policies and desired outcomes at a national level?
- Are there examples of similarities and differences in public health policy approaches in each country?
- How is policy interacting with/shaping the public health system in each country?
- How might differences in policy lead to differences in public health outcomes?

- What examples from within each public health system can be identified that can usefully be learnt from and shared?

The school readiness review aimed to answer the following specific questions:

- What policy approaches have been taken to address school readiness in each country since devolution?
- Are there examples of similarities and differences in how policy approaches to school readiness have been translated into practice in each nation since devolution?
- What similarities and differences exist between the four nations in relation to the quantitative data that is available on pathways from policy to school readiness?
- To what extent is it possible to make direct quantitative comparisons between nations in relation to pathways from policy to school readiness?
- What examples can be identified since devolution that can usefully be learnt from and shared?

Involvement of stakeholders

At the outset of the work, a full day workshop was organised in Manchester (April 2017) with public health stakeholders from each nation of the UK. In total, 18 individuals attended the workshop, including senior representatives from the core public health agencies in each nation, Directors of Public Health and the four Public Health Registrars who were key members of the research team. Representatives from each nation generously gave their time to attend. The aim of the workshop was to develop an initial framework of elements within a public health system, which would then provide a grounded starting point for the systematic systems review. The workshop was also intended as a means to seek guidance on potential sources of relevant documents for the systems review; particularly, for example, using expert knowledge in relation to sources of data for the quantitative work exploring comparability of data. Finally, the workshop was also intended as a means to seek guidance on potential priority areas for reviewing case study areas of public health.

The workshop consisted of an initial welcome and introductions, followed by a presentation by the research team which provided an orientation to the project and the workshop. A logic model approach was then used to kick off the development of the start public health systems framework. A ‘backward logic’ was employed here; starting with identification of intended outcomes and impacts of a public health system, before exploring practical activities/processes intended to achieve these outcomes, and barriers/facilitators to activities and outcomes. In this way, the discussion was structured in order to build up a detailed model of the public health system and how different elements inter-connected. The team used a combination of brainstorming with the whole stakeholder group, as well as interactive card sorting activities to group intended public health outcomes and prioritise items to consider. Prompts were used during these discussions, including the available public health or national outcomes frameworks from each of the four nations and lists of public health services. The discussion was also designed to be interactive and draw out stakeholder knowledge and experiences.

Questions that the group were asked to consider included:

- What are the aims and anticipated outcomes of the public health system?
- What does the public health system in each country aim to do, to achieve?
- What might be short term public health outcomes (less than five years) or longer-term ones (more than five years)?
- What are priority public health policy areas in each country's public health system?
- Within one or more of these priority public health policy areas, what are you doing for each? What activities/actions/processes are taking place? And in what places, at what levels?
- What affects the activities that have been identified in the last activity? What are the barriers to achieving what is planned?

As the workshop progressed, the team developed a draft systems framework, which was presented back to the group for discussion and further refinement. The draft systems framework was also used to start a process of identifying with the sample of stakeholders some examples of similarities and differences across the four nations. See Appendix 1 for the start public health systems framework.

During the workshop, stakeholders were asked about the priority areas for public health in each nation and the group were asked to put forward ideas for potential topics for more in-depth review, in order to explore systems elements in more detail. After some discussion here, the stakeholders present at the workshop recommended that 'school readiness' be the focus for a more detailed review as this was perceived a priority area of concern. 'School readiness' is a challenging area to review given the lack of clarity about what the term means. As will be explained in more detail below, the term had to be operationalised in the case study review and we did this by redefining it more broadly as 'child development in the early years'.

Importantly, further stakeholder engagement also occurred at later points in the study. Firstly, a process of consultation via telephone was carried out with stakeholders following completion of the first, systematic system review and the development of a refined systems framework that was literature-based. Discussions took place with representatives from all countries of the UK regarding this draft framework, in order to check the clarity and logic of what had been produced, and to seek feedback regarding any gaps. This consultation underpinned further iterations of the framework. Secondly, towards the end of the project, a teleconference took place (December 2017) to present the key findings of the work, and to seek feedback regarding how these headline results resonated with stakeholder experiences and views. Guidance was sought at this point on presenting the findings in the report and considering the associated implications.

For the case study review on school readiness (child development in the early years), the four Public Health Registrars who were based in each country of the UK and who were key members of the main research team undertook a process of consultation with stakeholders to inform the systematic review. The consultations with key informants in each country explored stakeholder understandings of current

policies and practice so as to contextualise our work and evidence searches, and also, in particular, helped to identify relevant national policy and other source documents for the review. The stakeholders that were involved in the consultation for this element of the project included: senior representatives of the public health system in each country, including those in attendance at the initial workshop; public health, children’s services and education system stakeholders, including those responsible for early years, health visiting and pre-school services (including NHS, local authority and commissioned services representatives); and staff from public health intelligence agencies.

Identification of literature

Search strategy

For the first, main systems review, literature searches were conducted in March 2017 in order to identify evidence within the scope of the reviews. Searches were restricted to results from 1999 onwards (the year of the formation of the Scottish parliament, given that this was a critical point in the history of devolution). Searches used free text terms and synonyms around the following concepts, usually combining one term from each of the four columns (where columns are merged, proximity or phrase searching was used) (see Table 1).

Table 1. Terms included in the search strategy for the main systems review.

HEALTH +	POLICY +	DIVERGENCE +	UK
Public health Alcohol Smoking Air quality	Systems Policy Spending Investment Governance Regulation Legislation Law Act Bill	Regional variation Devolution Local government Local authority Local trust(s)	United Kingdom (Great) Britain England Scotland Wales Northern Ireland
Life expectancy Mortality Health protection			
Health Medical Disease Wellbeing	Policy divergence		

To complement the electronic database searching process, the review team performed additional citation searching of key papers, reference checked included papers, and completed follow up searching of publications by key identified authors (including, for example, authors such as Paul Cairney, Katherine Smith and David Hunter). As outlined above, the project included ongoing stakeholder engagement

throughout the study, which was a means to seek suggestions for work of relevance to the review, including reports and policy documents.

Given that ‘school readiness’ was not explicitly addressed in the searches for the main evidence review, a follow-up search was conducted during July-August 2017 to further explore this topic. As mentioned above, a protocol was developed which operationalised school readiness as ‘child development in the early years’. As part of the development of the search strategy, a teleconference was convened to solicit local knowledge from the Public Health Registrars representing each of the four nations on the research team about possible search terms based on their initial discussions with country stakeholders. These are illustrated below in Table 2.

Table 2. Terms included in the search strategy for the case study review of school readiness.

School readiness	Age group	Policies and interventions	and UK
School adj (ready or readiness) Achievement gap Attainment gap (Barriers to) learning Learning (outcomes) Academic outcomes Cognition Cognitive development Motor development Language development Reading Literacy Numeracy Behaviour Toilet training Transition	Infant Early years Pre-school Playgroup / play group Nursery Sure start Primary school* P1	Policy / policies Devol* Legislat* Regulat* Govern* Law* Intervention* Curriculum Excellence Attainment Challenge Measures Scales Measur* Assess* Indicator* Test* ASQ (“Ages and stages” questionnaire) Growing Up In Scotland GIRFEC (Getting it right for every child) SDQ (Strengths & Difficulties questionnaire)	United Kingdom Brit* Scotland Wales (Northern) Ireland London Westminster Holyrood Belfast Cardiff Edinburgh Glasgow Highlands and Islands

To complement the electronic database searching for the school readiness review, the team searched government websites in each country for details of key government policy initiatives (e.g. policy papers, national programmes) and, as outlined above, also contacted senior representatives working within the policy domains of public health, children’s services and education (including those responsible for early years, health visiting and pre-school services across the NHS, local authorities and commissioned services) in order to identify key sources of evidence about policies, interventions, indicators and outcomes relating to child development in the early years. Additional citation searching of key identified

papers, reference checking of included papers, and follow up searching of publications by key identified authors was also carried out.

Sources searched

Initial searches were carried out in three key electronic databases - Medline, PsycINFO and Econlit. The citations obtained from these searches were sifted to ascertain that the initial results were broadly on topic, and validated the search by verifying that known papers and authors were being retrieved. Following this process, similar strategies were rolled out on three further electronic databases: ASSIA (Applied Social Science Index and Abstracts); IBSS (International Bibliography of the Social Sciences); and Sociological Abstracts and Social Services Abstracts. Two further searches were conducted on Web of Science Social Science Citation Index – a higher precision search, and a broader, higher-sensitivity search. A search of key identified policy initiatives was undertaken using Google/Google Scholar.

For the school readiness review, additional searches using the more specific search terms outlined above were carried out in Medline, PsycINFO, and ProQuest social science databases.

Study selection

Inclusion criteria

The following inclusion criteria were used to set the parameters of the public health system review:

Population: Documents relating to England, Wales, Scotland, or Northern Ireland

Intervention: Documents relating to Public health systems, public health policy, health care policy, or public health policy approaches including health promotion, health protection, and health care public health.

Outcomes: Documents reporting any population level health and wellbeing outcomes.

Study designs: We placed no restriction on study design as we expected that much of the relevant literature would include non-empirical discussion articles as well as studies using designs such as surveys and qualitative methods.

Other inclusion criteria: Grey literature in the form of policy documents and reports was eligible for inclusion.

Date: Documents published since 1999 (year of the formation of the Scottish parliament given this was a critical point in the history of devolution).

For the school readiness review, the inclusion criteria differed in terms of:

Population: Documents relating to children up to the age of seven.

Intervention: Documents relating to policy approaches to address school readiness. There is no single recognised definition of ‘school readiness’ that is common to the four nations of the UK. For the purposes of this review “policy approaches to school readiness” were defined broadly as: policies,

interventions, indicators and outcomes that contribute to supporting child development in the early years, so policy action relevant to promoting child development prior to starting school in the four nations since devolution, and was not limited to policy specifically framed in terms of “school readiness”.

Screening process

Retrieved citations were uploaded to EndNote, and title and abstracts (where available) of papers were screened by two reviewers (SB and AB) against the inclusion/exclusion criteria with any queries regarding inclusion discussed by the full team at regular (fortnightly) team meetings. For the main systems review we initially independently (blind) screened a sample of citations to establish consensus between reviewers. Further screening was divided between reviewers, with checking of a sample by another team member.

For the school readiness review, retrieved citations were initially screened by our wider team of four public health registrars, with second checking carried out by the study lead (AB).

During the screening process we used a two-stage approach, with initial marking of possible studies for inclusion, these studies were all then retrieved and discussed by the review team before finalising and coding those that would be taken forward for data extraction.

Following screening of the database, full paper copies of citations identified as potentially relevant were retrieved for systematic screening. Papers excluded at this full paper screening stage were recorded, and detail regarding the reason for exclusion was recorded.

Data collection process

Studies which met the inclusion criteria were read in full and data extraction for each was completed. A data extraction form was developed using previous expertise of the review team, and trialled on a sample of papers of different study designs by each reviewer. A copy of the extraction form is included at Appendix 2. Following the piloting of the extraction form, minor revisions were made to the form to include items such as policy, and columns for not only each country but for data across countries, were added. For the school readiness review, there was a slight variation in that policies identified through consultation with country stakeholders were synthesised into a country report by each Public Health Registrar; the contents of which were incorporated as data into the review.

Data items

The data extraction form was designed to be suitable for all types of study design, and to reflect the elements of the systems model including sections for types of action, influencing factors and outcomes, with columns to categorise data from each country and across countries. The extraction form collected data on: first author/year; study design; study participants; contextual factors, policy area, reported outcomes and impacts; processes and ways of working; influencing factors; summary of findings; and main author conclusions.

Quality appraisal

Given the anticipated predominance of non-empirical studies, quality appraisal using available critical appraisal tools was inappropriate for the set of literature in the reviews. Our approach to quality appraisal was therefore based on the hierarchy of evidence, reporting study designs and any particular limitations identified. We aimed to highlight in the synthesis where included studies reported data rather than author opinion, and to identify any concerns regarding the conduct of these.

Synthesis of results

Data were synthesised with the use of tabulation and graphs, in addition to narrative summary and use of the public health system framework. We focussed our synthesis on data relating to examples of similarities and differences between the nations, outlining initially where these comparisons were reported. We then provided further details of data from each country.

We drew on previous work by members of the team (for example Baxter *et al.* 2014) to use the included literature to further develop the public health system framework, which had been drafted at the initial stakeholder workshop. This method of using systematic review data is ideally suited to the analysis of complex, system-based policy action (interventions), and provides a graphical description of important elements and relationships within a system (Baxter *et al.* 2014). The completed framework serves as a tool to represent public health as a system of interest. It sets out proposed pathways in the relationship between policy action (interventions/inputs), outcomes and impacts, and identifies potential moderators of that relationship. The aim of the review work was to elucidate complex system processes and system outcomes, and thus add to understanding of why, where and how convergence and divergence in public health across the four nations has taken place or might take place in the future.

Methods for the quantitative analysis of ‘school readiness’ data

As outlined at the start of this section above, the third main element of the project involved understanding where quantitative data relating to school readiness across the four nations might exist and then appraising whether it was going to be possible to analyse and compare that data. At the outset, a protocol was developed which set out three main activities: 1) to determine, in each country, the availability of datasets related to school readiness across the whole public health system from upstream public health policy action to outcomes (ie. including structural measures such as numbers of staff in early years setting, process measures such as uptake of defined services and outcome such as the proportion of children who meet a defined milestone); 2) to use the GATHER checklist (Stevens *et al.* 2016) – which details essential information that should be included in reports of population-level health data and indicators – as a framework to describe each data source on school readiness and to assess its completeness; and 3) to develop a narrative comparison of the differences in data availability between countries and, where common datasets exist, complete direct quantitative comparisons if that is possible. The four Public Health Registrars who were research team members and based in each country of the UK initiated this aspect of the work through their consultations with key country stakeholders (as already mentioned above) in order to understand: what policies and external factors impact on school readiness;

what data exist that relate to these policies; how school readiness is conceived, defined and measured in each country; and locating relevant and publicly available datasets in each country.

As the consultations and quantitative work progressed, it became apparent that the school readiness review needed to be completed and a revised systems framework produced in order to be able to identify relevant datasets across the whole system, from upstream policy action on child development in the early years to outcomes. Given the short timeframe for the project, and the timing of the school readiness review, it became apparent that it was not going to be possible to progress the work on the more upstream organisational structure and process data. Time was focused therefore on identifying data sources on just outcomes related to school readiness/child development in the early years. Here, country-level action was identified in terms of ongoing efforts to develop national outcome datasets relating to this area and a number of data sets were identified as being ‘in development’ across the UK nations. It was also clear that different UK nations were measuring school readiness/child development in the early years in different ways. Details about the national outcome data sets that are established or in development across the four nations are provided in the school readiness case study section of this report and in Table 7 in particular. To emphasise then, we did not identify the existence of comparable long-term data directly focused on school readiness/child development in the early years across the UK nations and so we decided not to proceed to quantitative summaries or direct comparisons across countries.

Given that England had a long-term data set relating specifically to school readiness, which was publicly available via the English Public Health Outcomes Framework (PHOF), we did analyse the adherence of the school readiness data in the English PHOF to GATHER guidelines, finding good adherence. Based on trialling this process and the fact that some of the data relevant to school readiness / child development in the early years was in development in some of the other UK nations, we did not pursue the use of the GATHER checklist for any other quantitative data given that we judged that it would add limited value to the project as a whole.

Section 3. Detailed results of the systematic review of public health systems in the four nations

This section of the report outlines the detailed results of the systematic review of the public health systems in the four nations of the UK, which (as indicated above) sought to answer the following: What examples can be identified of similarities and differences in the public health systems and public policy approaches of the four countries of the UK since devolution? It starts by outlining the study selection process and included study characteristics. It then moves on to present a detailed narrative synthesis of the results, which has been organised around the elements of the public health systems framework that was developed in the research as this served as a way to compare the detailed findings from the sources that were included in the review. Please note that this section presents a *detailed* synthesis of the results. A higher level interpretation and discussion about what can be gleaned from these results, in terms of key findings and examples of similarities and differences across the four nations, is included in the discussion section of the report.

Study selection

From a database of 3829 citations we identified 102 documents which met our inclusion criteria, and data from these documents were extracted and synthesised. See Figure 2 below for a diagram illustrating the study selection process.

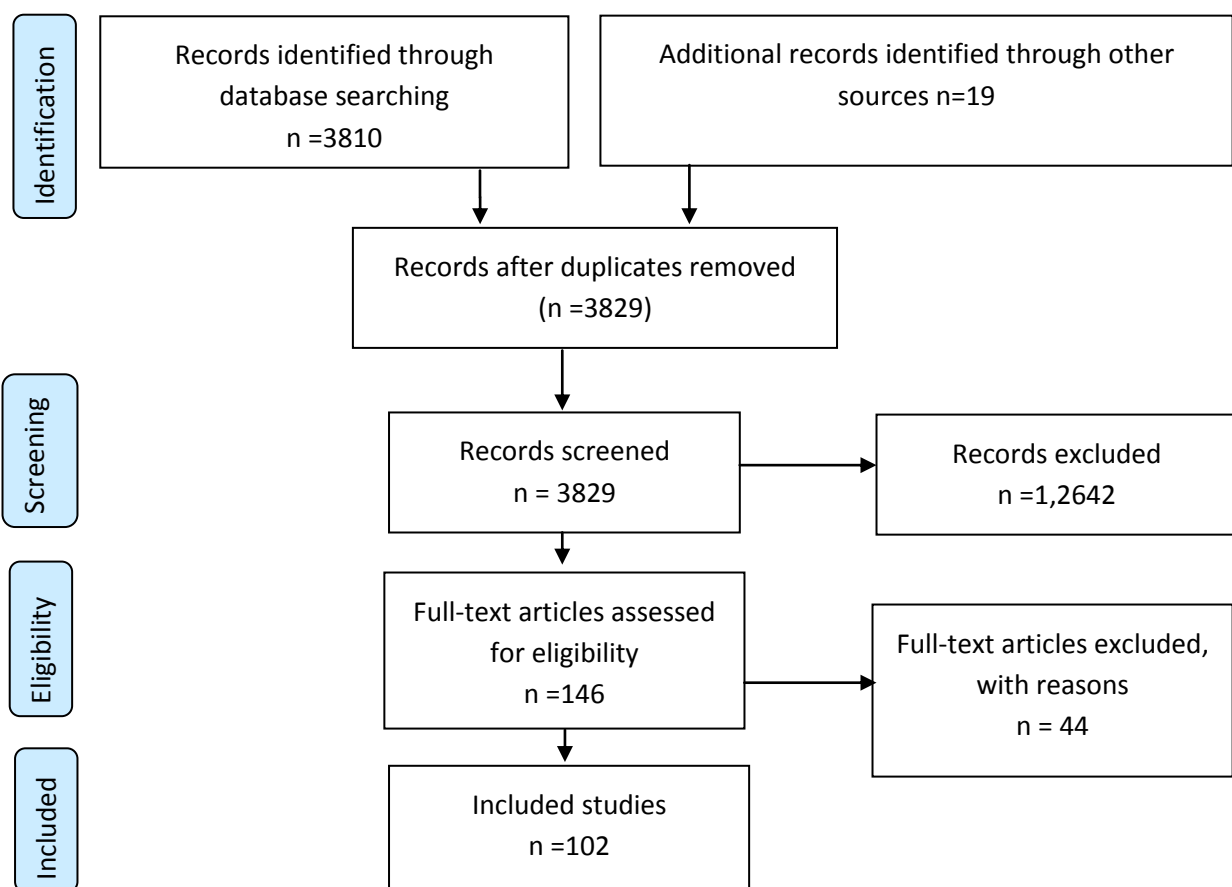


Figure 2. PRISMA diagram illustrating the process of study selection for the main public health systems review.

Type of studies excluded

A list of the documents excluded at full paper screening is provided as Appendix 3. Papers that were excluded at full paper review were often author accounts of historical developments, which provided no information of relevance to the current review. We also found a sizeable proportion of literature which examined methodological approaches, or related specifically to aspects of health services rather than public health.

Included study characteristics

Of the 102 included documents, the largest proportion (35) related to England only, followed by 24 that related to all the nations of the UK. There were 18 documents that were specific to Scotland, 8 that related to the 3 nations of England, Scotland and Wales, and 7 that were specific to Wales. Six studies compared England and Scotland, and only a small proportion of the identified literature (4 documents) were specific to Northern Ireland.

Just under half the studies (44) included a qualitative element in the design, typically interviews with stakeholders such as commissioners and public health senior staff. This was mirrored by just under half (43) of other studies being solely descriptive accounts or author views with no data provided. We identified 18 studies which examined the contents of policy and other documents, 8 which analysed existing data sets, and 4 which included a survey component. Four documents included reviews of the literature (including 1 systematic review of organisational partnerships). Table 3 provides summary details for each included study.

Table 3. Summary of included sources in the main review.

First author, date and study title	Design	Country
Abbott <i>et al.</i> 2005. Flattening the National Health Service Hierarchy: The Case of Public Health.	Qualitative	England
Abbott <i>et al.</i> 2006. What sort of networks are public health networks?	Qualitative	England
Asare 2009. Lesson-Drawing and Public Policy: Secondhand Smoking Restrictions in Scotland and England.	Qualitative	Scotland and England
Asare <i>et al.</i> 2009. Federalism and Multilevel Governance in Tobacco Policy: the European Union, the United Kingdom, and Devolved UK Institutions.	Descriptive	All UK
Baggott 2011. Prevention better than cure? Health consumer and patients' organisations and public health.	Qualitative	All UK
Barr <i>et al.</i> 2014. The impact of NHS resource allocation policy on health inequalities in England 2001-11: longitudinal ecological study.	Analysis of a data set	England
Barr <i>et al.</i> 2017. Investigating the impact of the English health inequalities strategy: time trend analysis.	Analysis of a data set	England
Bauld 2011. The impact of smokefree legislation in England: Evidence review.	Descriptive	England (some comparisons with Scotland)
Bauld <i>et al.</i> 2007. Assessing the impact of smoking cessation services on reducing health inequalities in England: observational study.	Descriptive	England
Bauld <i>et al.</i> 2008. Off target: A critical review of setting goals for reducing health inequalities in the United Kingdom.	Descriptive	England
Bevan <i>et al.</i> 2014. The four health systems of the UK: How do they compare?	Analysis of data sets	All UK
Blackman <i>et al.</i> 2009. Tackling health inequalities in post-devolution Britain: Do targets matter?	Qualitative	England, Scotland, Wales
Blackman <i>et al.</i> 2010. Wicked Comparisons: Reflections on Cross-national Research about Health Inequalities in the UK.	Qualitative	England, Scotland, Wales

First author, date and study title	Design	Country
Blackman <i>et al.</i> 2012. Framing health inequalities for local intervention: comparative case studies.	Qualitative	England, Scotland, Wales
British Medical Association 2017. Are UK governments utilising the most effective evidence-based policies for ill-health prevention?	Descriptive	All UK
British Medical Association 2017. Funding for ill-health prevention and public health in the UK.	Analysis of data sets	All UK
Cairney 2006. Venue Shift Following Devolution: When Reserved Meets Devolved in Scotland.	Qualitative and analysis of documents	Scotland
Cairney 2007. A 'Multiple Lenses' Approach to Policy Change: The case of Tobacco Policy in the UK.	Qualitative and analysis of documents	Scotland and England
Cairney 2009. The role of ideas in policy transfer: the case of UK smoking bans since devolution.	Qualitative	All UK
Cairney. Using Devolution to Set the Agenda? Venue Shift and the Smoking Ban in Scotland.	Qualitative	Scotland
Centre for Workforce Intelligence 2014. Mapping the core public health workforce.	Literature review and analysis of data sets	Scotland
Centre for Workforce Intelligence 2015. Mapping the core public health workforce. Final Research and Evaluation Report.	Literature review and analysis of data sets	England
Chambers <i>et al.</i> 2012. Reflections on the UK's approach to the 2009 swine flu pandemic: Conflicts between national government and the local management of the public health response.	Descriptive, review of documents	England (some mention of UK)
Chapman <i>et al.</i> 2005. Developing a Speciality: Regearing the specialist public health workforce in the United Kingdom.	Qualitative	England
Chapman <i>et al.</i> 2005. The geographical distribution of specialists in public health in the United Kingdom: is capacity related to need?	Survey	England
Coles 2016. Getting It Right for Every Child: A National Policy Framework to Promote Children's Well-being in Scotland, United Kingdom.	Descriptive	Scotland
Cylus <i>et al.</i> 2015. United Kingdom: Health System Review.	Descriptive	UK
Dhesi 2016. What next for environmental health?	Qualitative	England
DHSSPS 2016. Review of the Public Health Act (NI) 1967 Final report March 2016.	Descriptive	Northern Ireland (some comparison with rest UK)
Donnelly 2008. After the smoke has cleared--reflections on Scotland's tobacco control legislation.	Descriptive	Scotland
Drakeford 2006. Health policy in Wales: Making a difference in conditions of difficulty.	Descriptive	Wales (some mention of England)
Edwards <i>et al.</i> 2014. Public Health Wales: A national Programme Budgeting and Marginal Analysis (PBMA) of health improvement spending across Wales: disinvestment and reinvestment across the life course.	Descriptive (some analysis of budgets)	Wales
Egan <i>et al.</i> 2016. Local policies to tackle a national problem: Comparative qualitative case studies of an English local authority alcohol availability intervention.	Qualitative	England
Evans 2004. Shifting the Balance of Power? UK Public Health Policy and Capacity Building.	Descriptive	UK
Exworthy 2003. Tackling health inequalities in the UK: progress and pitfalls of policy.	Descriptive	UK
Exworthy 2011. The challenge of joined-up government in tackling health inequalities. <i>International journal of public administration</i> 2011, 34(4):201-212.	Descriptive	England
Fotaki 2007. Can directors of public health implement the new public health agenda in primary care? A case study of primary care trusts in the North West of England.	Qualitative and survey	England
Fox 2013. Health inequality and governance in Scotland since 2007.	Qualitative and document analysis	Scotland
Frank <i>et al.</i> 2015. Seven key investments for health equity across the lifecourse: Scotland versus the rest of the UK.	Analysis of data set	England and Scotland
Gadsby <i>et al.</i> 2017. Commissioning for health improvement following the 2012 health and social care reforms in England: what has changed?	Survey, document analysis, qualitative	England
Goodwin <i>et al.</i> 2014. How can planning add value to obesity prevention programmes? A qualitative study of planning and planners in the healthy towns programme in England.	Qualitative	England
Gordon <i>et al.</i> 2010. Improving the view of Scotland's health: The impact of a public health observatory upon health improvement policy, action and monitoring in a devolved nation.	Descriptive	Scotland

First author, date and study title	Design	Country
Gray 2013. The structures of the NHS in Northern Ireland: Divergence, policy copying and policy deficiency.	Descriptive	Northern Ireland
Greer 2005. The territorial bases of health policymaking in the UK after devolution.	Descriptive	UK
Greer 2008. Devolving policy, diverging values? The values of the United Kingdom's national health services Research report.	Descriptive	UK
Greer 2010. Intergovernmental relations and health in Great Britain after devolution. <i>Policy and Politics</i> 2010, 38(4):509-529.	Qualitative	UK (little on Northern Ireland)
Greer 2016. Devolution and health in the UK: Policy and its lessons since 1998.	Descriptive	UK
Greer <i>et al.</i> 2016 The wages of continuity: health policy under the SNP.	Descriptive	Scotland
Gugglberger. 2014 Phases of health promotion implementation into the Scottish school system.	Qualitative	Scotland
Harrington <i>et al.</i> 2009. Health inequalities in England, Scotland and Wales: Stakeholders' accounts and policy compared.	Analysis of policy statements, qualitative	England, Wales, Scotland
Hawkes <i>et al.</i> 2014. A stakeholder analysis of the perceived outcomes of developing and implementing England's obesity strategy 2008-2011.	Qualitative	England
Hawkins 2013. Framing the alcohol policy debate: industry actors and the regulation of the UK beverage alcohol market.	Qualitative	England and Scotland
Hawkins <i>et al.</i> 2012. Alcohol Industry influence on UK alcohol policy: a new research agenda for public health.	Descriptive	England and Scotland
Heenan 2004. A partnership approach to health promotion: a case study from Northern Ireland.	Qualitative	Northern Ireland
Hine 2010. The 2009 Influenza pandemic: an independent review of the UK response to the 2009 influenza pandemic.	Qualitative, analysis of documents	UK
Holden 2012. 'Whisky gloss': The alcohol industry, devolution and policy communities in Scotland.	Qualitative, analysis of documents	Scotland
Holden <i>et al.</i> 2014. Vested interests in addiction research and policy. The challenge corporate lobbying poses to reducing society's alcohol problems: insights from UK evidence on minimum unit pricing.	Descriptive	UK
Hoskins 2009. Health Visiting-The end of a UK wide service?	Descriptive	UK
House of Commons Health Committee, 2016. Public health post-2013 Second Report of Session 2016-17.	Descriptive	England
Hunter 2012. Partnership Working in Public Health: The Implications for Governance of a Systems Approach.	Qualitative	England
Jebb <i>et al.</i> 2013. The evolution of policy and actions to tackle obesity in England. <i>Obesity Reviews</i> 2013, 14(42-59).	Descriptive	England
Jenkins <i>et al.</i> 2016. Integration, influence and change in public health: findings from a survey of Directors of Public Health in England.	Survey	England
Jewell 2008. Health and social care regulation in Wales: An integrated system of political, corporate and professional governance for improving public health.	Descriptive	Wales
Kaehne <i>et al.</i> 2017. Bringing integration home: Policy on health and social care integration in the four nations of the UK.	Descriptive	UK
Katikireddi <i>et al.</i> 2014. Changing policy framing as a deliberate strategy for public health advocacy: a qualitative policy case study of minimum unit pricing of alcohol.	Qualitative	Scotland
Katikireddi <i>et al.</i> 2014. Understanding the Development of Minimum Unit Pricing of Alcohol in Scotland: A Qualitative Study of the Policy Process.	Qualitative	Scotland
Longley <i>et al.</i> 2011. A national health inequalities fund for Wales: Concept, design and implementation.	Qualitative	Wales
Longley <i>et al.</i> 2012. United Kingdom (Wales): Health system review.	Descriptive	Wales
Mackenbach 2011. Can we reduce health inequalities? An analysis of the English strategy (1997-2010).	Qualitative	England
Malam 2009. Impact of smoking legislation in Wales.	Survey	Wales
Marks <i>et al.</i> 2010. Public health governance: views of key stakeholders.	Qualitative	England
Marks <i>et al.</i> 2011. Governance for health and wellbeing in the English NHS.	Qualitative, survey	England
Marks <i>et al.</i> 2015. The return of public health to local government in England: changing the parameters of the public health prioritization debate?	Qualitative	England

First author, date and study title	Design	Country
McCambridge <i>et al.</i> 2014. The challenge corporate lobbying poses to reducing society's alcohol problems: insights from UK evidence on minimum unit pricing.	Qualitative, analysis of documents	Scotland (some comparison with England)
Milne 2012. A public health perspective on transport policy priorities.	Descriptive	England
Mooney 2011. Social Justice, Social Welfare and Devolution: Nationalism and Social Policy Making in Scotland.	Descriptive	Scotland
Musingarimi 2008. Obesity in the UK: A Review and Comparative Analysis of Policies within the Devolved Regions.	Qualitative, analysis of documents	UK (little on Northern Ireland)
Musingarimi 2009. Obesity in the UK: A review and comparative analysis of policies within the devolved administrations.	Qualitative, analysis of documents	UK (little on Northern Ireland)
Oliver <i>et al.</i> 2013 Everett M: Who runs public health? A mixed methods study combining qualitative and network analyses. .	Qualitative	England
O'Neill <i>et al.</i> 2012. United Kingdom (Northern Ireland): Health system review.	Descriptive	Northern Ireland
Orton <i>et al.</i> 2011 Prioritising public health: a qualitative study of decision making to reduce health inequalities.	Qualitative	England
Peckham <i>et al.</i> 2016. PHOENIX: Public Health and Obesity in England – The New Infrastructure Examined. Final Report.	Descriptive	England
Perkins <i>et al.</i> 2010. 'What counts is what works'? New Labour and partnership in public health.	Review	England
Riley 2016. The challenge of creating a 'welsh NHS'.	Descriptive	Wales
Rowland 2006. Mapping communicable disease control administration in the UK - Between devolution and Europe.	Descriptive	UK
Sautkina <i>et al.</i> 2014. Lost in translation? Theory, policy and practice in systems-based environmental approaches to obesity prevention in the Healthy Towns programme in England.	Qualitative	England
Scottish Government 2015. Review of Public Health in Scotland: Strengthening the Function and re-focusing action for a healthier Scotland.	Descriptive	Scotland
Semple <i>et al.</i> 2010. UK smokefree legislation: changes in PM2.5 concentrations in bars in Scotland, England and Wales. <i>Annals of Occupational Hygiene</i> 2010, 54(3):272-280.	Analysis of data set	Wales, Scotland, England
Sim <i>et al.</i> 2007. Maximizing the contribution of the public health workforce: the English experience.	Descriptive	England
Smith 2007: Health inequalities in Scotland and England: the contrasting journeys of ideas from research into policy.	Qualitative	England and Scotland
Smith 2012. Beyond Rhetorical Differences: A Cohesive Account of Post-devolution Developments in UK Health Policy.	Qualitative	UK
Smith <i>et al.</i> 2009. Divergence or convergence? Health inequalities and policy in a devolved Britain.	Review of documents	England, Scotland and Wales
Smith <i>et al.</i> 2009. Partners in health? A systematic review of the impact of organisational partnerships on public health outcomes in England between 1997 and 2008.	Review	England, Scotland and Wales
Steel 2012. United Kingdom (Scotland): health system review.	Descriptive	Scotland
Stewart 2013. The environmental health practitioner: new evidence-based roles in housing, public health and well-being.	Descriptive	England
Timmins 2013. The four health systems: Learning from each other.	Descriptive	UK
Walshe <i>et al.</i> 2016. Health and social care devolution: the Greater Manchester experiment.	Descriptive	England
Walton 2015. New Ways of Working for Public Health: Providing Specialist Public Health input to Community Planning Partnerships and Integrated Health and Social Care Arrangements.	Qualitative	Scotland
Warwick-Giles <i>et al.</i> 2015. Co-owner, service provider, critical friend? The role of public health in clinical commissioning groups.	Qualitative	England
Whiteford 2016. "There is still a perception that homelessness is a housing problem": devolution, homelessness and health in the UK.	Qualitative	UK
Wimbush 2007. Developing effective policy and practice for health promotion in Scotland.	Descriptive	Scotland
Woodfield <i>et al.</i> 2007. Regional Variations in the Implementation of the Local Air Quality Management Process within Great Britain.	Qualitative and analysis of documents	England, Wales and Scotland

Quality of studies

As outlined in the methods section above, it was not appropriate to critically appraise studies which were based on author opinion and description. The qualitative studies were generally carried out to a satisfactory standard, with appropriate use of quotations to illustrate the themes identified by authors, and adequate summary of participant characteristics. There was often less detail regarding the processes of recruitment and sampling, although there were no particular concerns to suggest that the set of literature was not applicable or could not be relied on. We have endeavoured to indicate in the synthesis where views or experiences expressed may be of limited relevance to current contexts.

Synthesis of results

We summarised the data in the form of a public health system framework (see Figures 3 and 4), which sets out the elements of the public health system described in the literature. The model was based on the “start” model which had been agreed at the stakeholder workshop at the start of the project. This was further developed and refined using the included literature to produce the final version included here. In the following narrative synthesis, data relating to each element of the PH system (i.e. each column in Figures 3 and 4) is outlined in turn, highlighting where similarities and differences between the nations were reported to exist in included sources. It should be noted here that the intention was not to produce a comprehensive review of all literature which relates to public health in each nation, but rather to review literature which related, more synoptically to elements of the public health system across the four nations of the UK. As mentioned above, the next, discussion section provides a higher level of interpretation, stepping back from the synthesis of data included in this section here, to suggest what can be gleaned from these detailed findings.

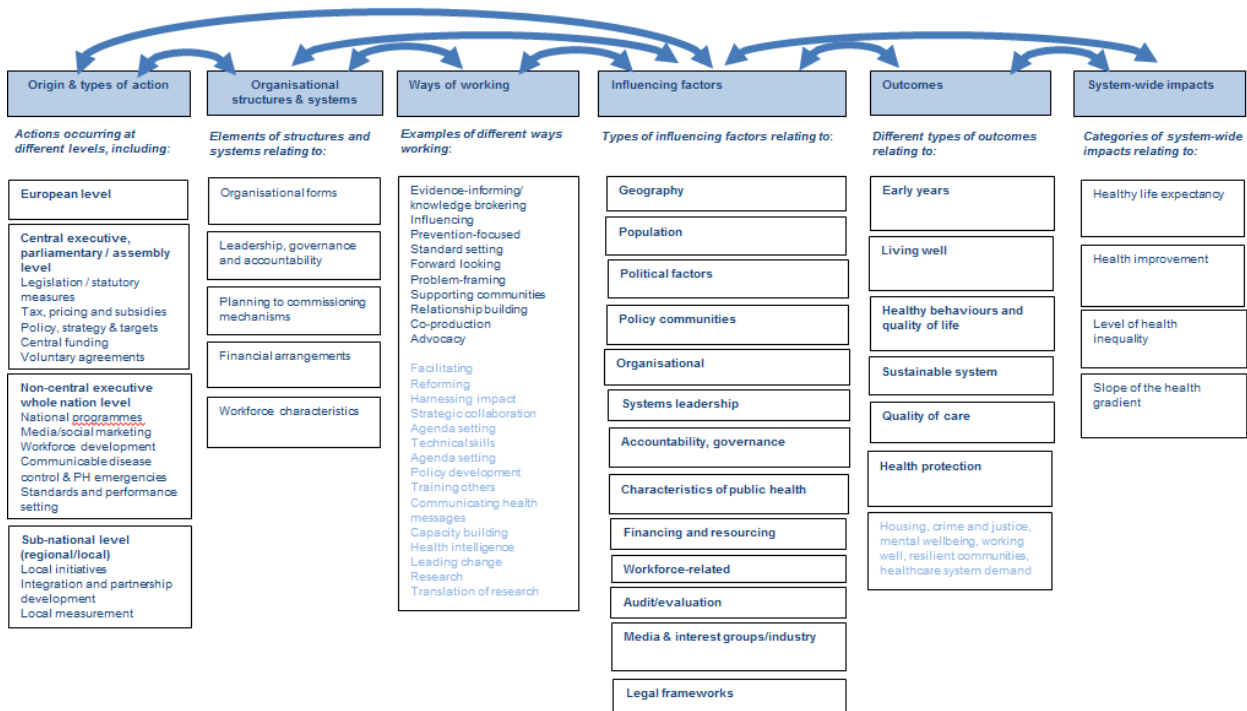


Figure 3. The public health systems framework.

Origin and types of action

The literature outlined public health action occurring at four main levels: 1) action taken at a European level; 2) political action taken at a whole UK, central executive or devolved parliamentary/assembly level; 3) action taken at a whole nation level that was not direct central executive or parliamentary/assembly action.; and 4) action taken at a sub-national level which could be regional or a specific city or locality-based.

European level action

Four papers highlighted the role of action at a European level within the public health systems of the four nations. One study examining the introduction of the policy of minimum unit pricing for alcohol in Scotland, for example, described how the potential for the alcohol industry to appeal under European law could have acted as a barrier to taking this course of action (McCambridge *et al.*, 2014). Another paper outlined how a UK law mirrored a defunct European Union directive requiring banning of tobacco product advertisements on billboards and in print media. The existence of European advocacy for tobacco control was reported to have facilitated the introduction of UK legislation on tobacco advertising (Asare and Studlar, 2009). In a second paper by the same authors however, they describe in contrast limited influence of European directives on tobacco control, as the UK was “ahead” of the requirements for cigarette packaging (Asare *et al.*, 2009). In another example of the role of European action in the public health system outlined, the UK Food Standards Agency issued guidance on their preferred traffic light scheme in 2007, which was adopted by a small number of retailers and manufacturers but could not be mandated in the UK as labelling is a European competency (Jebb *et al.*, 2013). In another paper, European regulations were described as helping to harmonise processes in nations following devolution as they limited opportunities for divergence (Rowland, 2006).

Central executive, parliamentary/assembly level action

The included literature outlined and compared political action taken at a UK level, and also within each of the four nations relating to: legislation; taxation measures; the establishment of particular policy; providing central funding for national programmes; and voluntary agreements. The level of central executive/parliamentary or assembly action was highlighted as of key significance within the public health systems of the UK, with the authors of one included paper asserting that a main area of difference between nations is in terms of the perceived extent of government intervention that should be used in public health (Smith and Hellowell, 2012).

Legislation/statutory measures

Included studies described a range of examples of legislative action relating to public health at both a UK and individual nation level. It is outside the scope of this review to provide a comprehensive list of legislation relating to public health in each nation, but our intention is to outline examples reported in the literature which illustrate the significant role of legislative action in the public health system, and influence on divergence since devolution. Later in this report we provide a case study example of the public health system in regard to one particular area of public health – school readiness (defined as child development in the early years) – and for which we have carried out a more in-depth examination of

individual elements of the system, including relating to legislation. It is important to note that legislation has been continually changing since devolution and remains in a process of transition; we have therefore endeavoured to highlight in the following section where author reports are no longer current.

Some authors highlighted that much legislation relating to public health remains at a UK level, with examples given such as: the ban on tobacco advertising (Asare and Studlar, 2009), raising of the legal age to buy tobacco products and banning from vending machines (Frank *et al.*, 2015); regulation of marketing advertising and promotion of junk food towards children (Musingarimi, 2009). Woodfield *et al.* (2003) indicated that the Environment Act 1995 set out air quality regulations which applied across the UK. Yet subsequent devolution of policy-making and legislative powers to the Scottish and Welsh governments on issues relating to the environment means that separate air quality legislation is in place in Scotland, England and Wales. At the time of writing this report, there was also some level of commonality in that air quality is also shaped by common European Directives.

One recent paper highlighted the constantly changing political and legislative landscape in reporting about the drink driving blood alcohol content level across the UK (BMA, 2017). The maximum blood alcohol limit in England, Wales and Northern Ireland is 80mg of alcohol per 100ml of blood (80mg/100 ml) whereas in Scotland, it was lowered to 50mg/100ml blood in December 2014. Comprehensive tobacco control legislation which banned smoking in all public indoor areas including workplaces, public houses, restaurants and private clubs came into place in March 2006 in Scotland (Donnelly and Whittle, 2008). While this initially created divergence, other nations of the UK followed a year later in 2007 (Asare and Studlar, 2009).

At an individual nation level, Rowland (2006) highlighted that the UK has never had a single public health law, and that public health has always been administered separately in Scotland. The constantly changing legislative landscape for public health however is illustrated here, by the recent Public Health (Wales) Act 2017 of the Welsh Assembly which received royal Assent in July 2017, covering areas including a national strategy on obesity, smoking restrictions, protection from risk and harm, planning processes and health impact assessment. The nature of work required following this Act will be substantive and varied, and will be implemented over the coming few years. Other distinctive legislation in Wales includes the Wellbeing of Future Generations (Wales) Act 2015, which requires a forward-looking approach and core ways of working, focusing on: the long term; integration; involvement; collaboration; and prevention. This Act is

There have also been recent substantive legislative changes in other UK nations. In England, for example, this most particularly is reflected in the enactment of the Health and Social Care Act 2012, which, amongst other measures, led to the transfer of responsibility for public health from the NHS to local authorities—a fundamental change in the organisational structure of the public health delivery system (House of Commons Committee, 2016). A substantive legislative measure and area of current difference in legislation between nations related to Scotland being the first country in the world to pass legislation introducing a minimum unit price for alcohol in 2012 (the Alcohol (Minimum Pricing) (Scotland) Act

2012), although implementation has been delayed due to challenge in the High Court (Katikireddi *et al.*, 2014a; BMA, 2017a). At the time of writing this report the challenge was defeated and so the Act is now lawful and there are plans for implementation to occur in 2018. During the writing of this report, the Welsh Government introduced a new Minimum Price for Alcohol Bill to be considered by the National Assembly for Wales.

The influence of differing extents of legislative powers on action within each nation was illustrated in one paper which described Wales expressing support for public health as a criterion for licencing, but not having the power to legislate (BMA, 2017b), and another which highlighted that Scotland's new powers to legislate on second-hand smoke enabled this action, whereas previously Scotland's role had been limited to health education, smoking cessation clinics and enforcement of age-related restrictions, with other aspects of control a UK matter (Asare and Studlar, 2009).

We have covered a number of examples of divergence in legislation in the material above. Examples of further areas of legislative difference between the four nations of the UK described in included sources included: reference to legislation in Northern Ireland taking "a broader definition of public health threats" (Cylus *et al.*, 2015) with in particular the Public Health Act in Northern Ireland being concerned with the notification and prevention of infectious diseases, rather than having an "all hazards" approach (Greer, 2005) (currently planned change here has been delayed); Scottish legislation including the expression "health risk state" which extends the ability to deal with hazards other than infectious diseases (Cylus *et al.*, 2015); legislation in Wales was described as enshrining the centrality of preventive measures and establishing a stronger safety net for homeless people (Whiteford and Simpson, 2016); and the 2009 Licencing Act in Scotland included the protection and improvement of public health as an objective, and included the banning of promotions such as Happy Hours (Katikireddi *et al.*, 2014a).

Taxation and pricing measures

The minimum unit pricing measure to be introduced in Scotland was a much-discussed topic in the included literature, with some suggestion of differential approaches across the four nations. As noted above, the Scottish government legislated to introduce minimum unit pricing in 2012; the Northern Ireland Executive and Welsh Government have expressed support; yet the UK Government reversed a decision to introduce the measure following public consultation in 2013 (BMA, 2017a). As also already noted, at the time of writing, the Welsh Government introduced a new Minimum Price for Alcohol Bill to be considered by the National Assembly for Wales. One paper described how previous success of the policy in regard to smoking control in Scotland acted as a facilitator for this further public health action (Katikireddi *et al.*, 2014a). Factors which have been important in underpinning the introduction of this measure will be discussed in more detail later in this section of the report when we move to focus on factors influencing the public health system. Another taxation action referred to in the literature was the planned introduction of a UK-wide tax on producers and importers of sugary soft drinks due to be introduced in 2018 (House of Commons Committee, 2016). While this is a UK-wide measure, there is potential for divergence as the decision regarding where to spend the revenue from this tax may differ between nations.

Policy, strategy and targets

A sizeable proportion of the included literature discussed the establishment of policy as a key element of political action in the four nations. Greer (2005) for example described nations as having distinct party systems and policy communities, which led to the development of distinctive agendas. One author described Scotland as diverging in health policy to a greater extent than the other devolved nations (in particular from England) (Steel and Cylus, 2012). However, in contrast to these perceptions of health policy divergence, other authors contended that political policies regarding health in all nations since devolution continue to have remarkable similarities (Harrington *et al.*, 2009). However, authors of another study concluded that in key health policy areas, rather than the devolved nations diverging, it is policy in England that is moving away from the other nations, by becoming most distinct from the origins of the UK welfare state (Mooney and Scott, 2011). This was supported by a further paper which described Scottish rejection of the English policy of contestability and competition, in favour of retaining the founding values of the NHS (Greer, 2005). Indeed, the health policy focus in England was described as a commitment to markets and technical solutions (Greer, 2016).

In Northern Ireland, politics was described in one paper as having little focus on public policy (Greer, 2016); shaped in part by the wider political climate in Northern Ireland. The policy approach in Scotland was described as shifting away from top down implementation, and instead creating co-operative broad policy frameworks which are implemented at a local level, with local discretion (Mooney and Scott, 2011). Authors of one discussion paper emphasised that the Scottish government had banned private providers from NHS provision in Scotland (Mooney and Scott, 2011) although this information may no longer be current, as some services are contracted to private provider by NHS boards. Like Scotland, values based on communication and collectivism are reported to lie at the heart of the NHS in Wales, with policy in Wales described as being underpinned by collaboration rather than competition, with in contrast to England, choice being perceived as less important (Greer, 2005).

One paper described a limited capacity to make policy in the early period following devolution in Wales, due to restricted administrative capacity (Drakeford, 2006). Since then, however, there have been substantive changes in Wales, not least due to the Government of Wales Act 2006, which led to the creation of a separate legislature (the National Assembly for Wales) and executive (the Welsh Government) and thus enhanced legislative and associated administrative competence in relation to a number of different areas. These changes thus render this paper outdated in terms of understanding current capacity.

In regard specifically to policy relating to public health, historic papers reported that there has been a lack of clarity in formulating policy goals and a limited focus on public health at a senior policy level across all the nations (Fotaki, 2007). In an historic paper dating from 2003, Exworthy *et al.* (2003) discussed various models of policy formulation and implementation and highlighted the need for the problem, policy and politics to be in alignment in order for issues to get on the policy agenda. They analysed UK policy on inequalities between 2002 and 2003 and concluded that while health inequalities was now on the agenda, all the requirements for action were not present. Another historic paper published in 2004

argued that UK policy in regard to public health was characterised by fundamental tensions in central policy, with demands for “demonstrable delivery” contrasting with reducing spend on public health (Evans, 2004). Authors of a slightly later study argued that an increasing emphasis on the NHS in England to play a greater role in prevention has increased the responsibilities sited in the health service (Smith *et al.*, 2009). This has changed however, with the passing of the Health and Social Care Act 2012 in relation to England which transferred a number of public health responsibilities out of the NHS.

One author highlighted consistency in public health policy across the UK, in that, as already reported above, while Scotland led the ban on smoking in public places it was put in place subsequently across the whole UK (Smith and Hellowell, 2012). In Northern Ireland, an historic contrast with the other nations was described as being an emphasis on moving away from “providing for” towards “working with” communities on health promotion (Heenan, 2004). Public health in Northern Ireland was also reported to be based on democratic participation and “having a say rather than having a voice” (Greer, 2005). Both these sources are however both old now and it cannot be inferred that this relates to the present-day.

In Scotland, a national public health strategy with priorities is currently being developed (Government, 2015). The Scottish National Party Government is credited with helping to prioritise public health (Blackman *et al.*, 2009) and increase resources to address health improvement in both the NHS and local authorities (Fox, 2013). Scottish policy has linked areas together such as health, public health, social and housing services and education, with health care and population health being viewed as a continuum (Fox, 2013).

A paper examining public health policy in Wales published in 2005 described how an initial policy focus on population health was forced to change to instead prioritising waiting lists, following poor publicity (Greer, 2005). This paper thus connects public health policy historically in Wales to wider political pressures and influences (telling us something about the connections between different elements in the system), but should not be taken to represent the situation in the present day.

In regard to target setting, guidance in England regarding how improvements are to be achieved was described as being “hazy”, with policy only referring in a very general manner to a change from a national illness service to a national health service (Smith *et al.*, 2009). England however, was reported to have identified health improvement targets earlier than other nations (Bauld *et al.*, 2008). Scotland was described as having an emphasis on meeting targets placed with the NHS (Steel and Cylus, 2012). National strategies in Scotland were described as combining promotion, prevention, treatment and protection goals, and targeting both population level and high risk groups, with cross-cutting objectives and targets (Wimbush *et al.*, 2007).

The authors of one systematic review reported that policy in Wales was less prone to locate responsibility for meeting inequalities targets with the NHS than other nations (Smith *et al.*, 2009). Health targets in Wales were described as being more general than targets for England in one paper (Bauld *et al.*, 2008). Targets in Wales were also described as having an emphasis on local action and local targets, together

with increasing access, rather than outcomes (Blackman *et al.*, 2009). The aims were reported to be: systems and policies better attuned to Welsh needs; better health for all; and improved service quality (Riley, 2016). The concept of “prudent healthcare” was described as underpinning investment in health improvement (Edwards *et al.*, 2014) and is now well-established in Wales, involving the principles of: public and professionals as equal partners through coproduction, care for those with the health need first, do only what is needed and no harm, and reduce inappropriate variations through evidence-based approaches.

The included literature discussed a number of particular areas of policy priorities, which will be outlined in the following sections. Importantly, these should be considered to be particular examples to illustrate the role of policy priorities in the public health system (as identified from the included literature), rather than being a comprehensive examination of all public health policy in the four nations.

Policy on inequalities

There were conflicting opinions in the included literature on the topic of policy convergence or divergence specifically relating to health inequalities across the UK nations, and limited comparative information about more recent policy approaches here. One paper dating from 2012 noted similarity in approaches between the four nations (Smith and Hellowell, 2012). The authors argued that there was reference to wider determinants of health as well as lifestyle behaviours in the policies of all countries, and all had some emphasis on increasing individual responsibility for their health. Indeed, the authors of this paper contended that there had been consistency in policy generally between the four nations, with a common direction of travel in regard to an emphasis on lifestyle behaviour change and the dominance of the medical model of health. Another included paper dating from 2009 similarly emphasised that policy in all countries had been similar in regard to a focus on reducing waiting times, and also in that the achievement of financial balance was perceived to be a higher priority than reducing health inequalities (Harrington *et al.*, 2009). An emphasis across all nations on individual behaviour and medicalisation in health inequalities policy was also described in another paper (Blackman *et al.*, 2009). The authors of this paper found in their qualitative study that local discourses about the nature and causes of health inequalities had significant similarities between nations, although timescales for meeting targets varied in each country (Blackman *et al.*, 2009). We emphasise the historic nature of these papers here.

In contrast to the view that nations have similar approaches regarding inequalities, one paper dating from 2012 described Scotland as having a greater emphasis on wider determinants, rather than individual behaviour change. The authors pointed to action which aimed to target employability, confidence, skills of young people and neighbourhood regeneration (Blackman *et al.*, 2012). The authors also concluded that the policy focus on treatment was less apparent in Scotland, with more emphasis on improving economic conditions and lifestyles together with health system reform to maximise the impact on health inequalities (Blackman *et al.*, 2012). Another paper described Scotland as merging policy to reduce inequality with policy to make universal health care more effective and efficient (Fox, 2013). A further study highlighted the linking of economic growth to poverty in policy by the Scottish government, which

relies on economic growth to smooth out inequalities between different geographic areas in Scotland, and between the poorest groups and the rest of Scottish society (Mooney and Scott, 2011).

Difference in policy was highlighted in another paper dating from 2009 which described ethnicity as not being seen as a main focus for reducing health inequalities in England, but being an important consideration in Scotland (Harrington *et al.*, 2009). Ethnicity was also described as an important consideration in inequalities policy in Wales, driven by the social policy agenda of the government (Harrington *et al.*, 2009).

Descriptions of policies regarding inequalities in Wales were unclear about differences from other nations over time. One paper dating from 2009 reported that the health inequalities agenda was moving little forward, and instead NHS waiting times and the need for financial balance skewing priorities (Blackman *et al.*, 2009). This paper also reported a focus on health promotion rather than health inequalities, and a shift from social determinants to a focus on increasing equality of access and modernisation of services rather than inequalities in outcomes (Blackman *et al.*, 2009). The historic nature of these points should however be noted. One more recent included paper, for example, highlighted a new more integrated “whole of society” approach to health improvement, which underpins strategies on poverty, sustainable development and early childhood (Riley, 2016). This ‘whole of society’ approach is reflected and embedded in legislation in Wales; for example, in the Wellbeing of Future Generations (Wales) Act 2015 which was mentioned above. The ‘Fairer Outcomes for All’ Action Plan in Wales also expresses concern with the social gradient, with a key target of ‘By 2020, to improve healthy life expectancy for everyone and to close the gap between each quintile of deprivation by an average of 2.5%’ and recommends action across the social gradient in health. There is also more recent reference to the social gradient in Scotland: a relatively recent source included in the study from the Scottish Government referred to the importance of taking action across the whole social gradient (Scottish Government, 2015).

Policy on service integration

Another particular area of policy discussed in the included literature related to central government policy regarding integration of services. One paper reported that policy guidance in all countries was similar in regard to its focus on the need for integration between health and social care services (Kaehne *et al.*, 2017). Public health as a separate area of activity was not mentioned in this paper. The authors of this paper described how the NHS in all nations of the UK had undergone considerable re-organisation in terms of integration, with clear policy guidance in all nations on the integration between health and social care services to promote collaboration and integration. It was emphasised that England, Scotland and Wales all have some fragmentation between health and social care. This paper highlighted however, that while policy may be similar, there is divergence in terms of implementation. In contrast to other nations, policy in Northern Ireland was described as having an emphasis on consultation and co-operation across bodies (O'Neill *et al.*, 2012) with partnership for health across agencies and sectors (Greer, 2005).

Professionalism, service integration, and partnership were described as looming much larger as strategies in Scottish health policy than in England (Greer, 2005). NHS Health Scotland, for example, was

described as actively encouraging education and health sectors to work together at a local level (Gugglberger and Inchley, 2014). Another study echoed this emphasis on integration in Scotland, reporting an increasingly distinctive approach which stressed integration and partnerships in the NHS, rather than the market-driven approach in England (Steel and Cylus, 2012). However, in Scotland currently Local Authorities/NHS Boards are not fully integrated organisations but are required to collaborate as partners across boundaries, in contrast to the move in England where public health has become part of the local authority.

Policy on homelessness

A further example of public health policy referred to in the included literature was in regard to the area of homelessness. A reported similarity in policy amongst nations was highlighted to be an increasing acceptance that homelessness is a housing as well as a health issue (Whiteford and Simpson, 2016). In Northern Ireland, strategy was described as providing a basis for closer collaboration between housing, health and social care. Authors of this paper reported that Scotland and Wales have pursued broadly similar policies based on “light-touch” governance in the form of government guidance and strategic direction via health and homelessness standards frameworks and performance/outcomes measures. Scotland however, was identified as being the only nation not to have a priority need classification for homeless people, having removed the criteria in 2012. The authors of this paper highlighted another area of divergence of policy in that in England homelessness has been described as predominantly a local health and housing issue, rather than a national policy one (Whiteford and Simpson, 2016). In Wales, a recent (August 2017) £8m of funding has been announced for the Homelessness Prevention Grant programme in addition to the £6m allocated to local authorities to prevent homelessness.

Policy on healthy living

Areas of similar policy and strategy across the four nations in relation to diet and obesity were described including: the improvement of population diet and nutrition by decreasing sugars and salt; increasing consumption of fruit and vegetables; increasing physical activity; healthy school schemes; and improved labelling of food products (Musingarimi, 2009). England at one stage was reported as the only nation with a specific obesity strategy (Musingarimi, 2009). However, this has now changed with other countries having strategies in place with, for example, a new Scottish strategy out for consultation at the time of this report and a commitment to an obesity strategy set out in legislation. In Wales, the Health (Wales) Act 2017 includes the development of a national obesity strategy, which Public Health Wales are supporting. Despite historical differences here, there are now specific plans in place to address obesity in these nations.

The strategy in England brings together existing actions and policies together with new initiatives and programmes (Hawkes *et al.*, 2014). Policy on obesity in England is described as having an emphasis on the need for individual-level behaviour change while recognizing that the environment can make it difficult for individuals to maintain healthy lifestyles. There has been a move away from central government policies to guidance, monitoring and feedback, with strengthened locally-led actions (Jebb *et al.*, 2013). Other papers described an increased personalisation agenda and emphasis on choice,

incentivising individual behaviour change and individual responsibility in England (Marks *et al.*, 2010, Smith and Hellowell, 2012). Policy in England regarding diet and obesity was described as being characterised by a shift to a stronger life course approach, addressing weight control in both children and adults, with treatment services alongside policies which encourage personal autonomy and voluntary approaches to changing behaviour (Jebb *et al.*, 2013).

In Northern Ireland, one included paper described there being no specific strategy on obesity, but it being part of the overall objective to “enable people to make healthier choices” (Musingarimi, 2009). Since this paper was published however, a strategy for 2012-2022 is now in place including a group of indicators. While there also was reported to be no strategy in 2009 in Scotland, a 2010 (currently under revision) strategy has been in place since this paper was published. The decision was reportedly taken not to have a specific strategy for obesity in Wales in the past, but rather to have a number of strategies focusing on nutrition and physical activity which incorporated obesity (Musingarimi, 2009).

Other papers relating to policy on health living included one which outlined that in England, central government policy (Healthy lives, Healthy People: A call to action on obesity) advocates spatial planning as one way to support healthy behaviour change through modifying the urban environment. It reported that the National Planning Policy Framework states that local plans should take account of support/wellbeing for all (Goodwin *et al.*, 2014). Another paper highlighted differences between countries in regard to alcohol policies. The alcohol policy in England was described as being focused on binge drinking, and was committed to banning alcohol sales below the level of duty and VAT. The focus was alcohol harm reduction, by targeting interventions to those most at risk of harm/problematic drinkers (Hawkins and Holden, 2013). In contrast, policy in Scotland was described as shifting from an individual and sub-population level, to a population level and public health rather than public order issue (Hawkins and Holden, 2013).

Policy on child health

The area of early years/school readiness forms the exemplar for an in-depth analysis in a subsequent section of this report, therefore examples of policy outlined in the wider included literature will only briefly be described here. Authors of one paper concluded that rather than the divergence typically reported since devolution, all nations had retained a similar health visiting emphasis on child health/child protection (Hoskins, 2009). Spending on education per person in England was reported to be higher than other nations during the period 2002-2007 however, has returned to comparable levels (Mooney and Scott, 2011). Preventive measures in children’s early years were described as a major concern in Scotland, outlined in a Child Poverty Strategy (Mooney and Scott, 2011). Hoskins (2009) drew attention to change in Scotland in that the health visiting service in Scotland no longer provided a “cradle to the grave” service, and instead had a focus on child health and vulnerable families, with non-child health work no longer carried out. In contrast, Wales was reported in 2009 to be considering strengthening the public health role of its Health Visiting service to include a fully integrated service for individuals, communities and populations (Hoskins, 2009). The next section of this report, which outlines detailed

findings of the school readiness review, provides further insight into this topic, identifying further similarities and differences in health visiting services across the four nations, including challenges.

Central funding of programmes

The included literature reported government-level public health action in the form of central funding of programmes to address inequality. In England, a resource allocation policy aimed to address health inequalities by specifically focusing on reducing geographical inequalities in life expectancy. This programme ended in 2010. The funding programme targeted local authorities with the worst health and deprivation indicators termed “Spearhead areas”. The policy directly linked additional healthcare expenditure to improved population health (Barr *et al.*, 2014) and aimed to improve the health of these particular areas at a faster rate than the wider population (Smith, 2007). Authors of one included paper (published a year after this strategy ended) reported that in England there were no policies addressing income inequality, or other important determinants of health inequalities such as working conditions and excessive alcohol consumption. They argued that while some policies directly addressed the main causes of adult death, they were aimed at improving average access to treatment, not inequalities in access (Mackenbach, 2011).

Another example of the use of central funding in England was described by Bauld *et al.* (2008). They described how smoking cessation services were intended to focus on particular groups including young people, pregnant women and particularly economically disadvantaged smokers, with the first allocation of funds provided to some of the most deprived area. The Healthy Towns Programme (2008), which provided a £30 million investment to evaluate environmental approaches to obesity was a further example described (Goodwin *et al.*, 2014). In addition, the Sure Start programme in England included free childcare, early education and parent support for low income families (Mackenbach, 2011) – see the results of the school readiness review for more details about Sure Start and comparator programmes in the other nations. Other described centrally funded initiatives included: Health Action Zones (including initiatives such as benefits advice, engaging people with disabilities in leisure and sport, social spaces for hard to reach mothers), health improvement programmes; healthy living centres; and the New Deal for Communities (Perkins *et al.*, 2010; Smith *et al.*, 2009). Also, within the NHS, the Making Every Contact Count initiative and programmes to improve the health of NHS staff (House of Commons Committee, 2016). The Cycling Towns initiative (now disbanded) was referred to by another included paper (Milne, 2012) and the Healthy Towns Programme as a further example (Goodwin *et al.*, 2014).

In Scotland, the included literature reported that central resources have also been made available to fund programmes aiming to address inequality including the Fairer Scotland Fund which ended in 2011. This government initiative targeted investment at community planning partnerships (Mooney and Scott, 2011). In Scotland, social and economic determinants are described as a policy focus, with the role of central government in taking action emphasised (Smith and Hellowell, 2012). The Local Sustainable Travel Fund was designed to fund packages of action to promote walking and cycling (Mooney and Scott, 2011). Other examples described include: The New Futures Fund for ex-offenders and substance abusers; the Working for Families Fund for lone parents with complex needs; an Education Maintenance

Allowance for 16-19 year olds attending school; part-time publicly funded pre-school from the age of three (from aged 2 for children from the most deprived families) (Frank *et al.*, 2015). The Scottish Government have also introduced an integrated care fund to try to shift the balance of care towards prevention and support.

The details in included studies relating to Wales about central funding of programmes were historic and therefore outdated in the current context. Nevertheless, they provide support for the importance of this type of action as an element of the public health system. We will not provide too much detail here given the historic nature of the data, but examples were identified of changes to funding allocations, alongside administrative re-organisation and other direct policy measures (Drakeford, 2006), and specific health inequalities funding to tackle poverty and its effects (Longley *et al.*, 2011; Riley, 2016). There will be many other examples from Wales, and indeed the other nations of the UK, which were not mentioned in our included sources.

Voluntary agreements

While government intervention regarding tobacco control is predominantly in legislative form, actions on other areas of public health such as diet, and alcohol (in nations apart from Scotland), are predominantly via voluntary measures. Included studies described voluntary pledges with industry as being a key form of government level public health action, with some criticism from authors regarding over-dependence on this in England in particular (BMA, 2017b; BMA, 2017a; Asare and Studlar, 2009; Cairney, 2007a). One included paper outlined how an emphasis on standard-setting had been replaced by an approach favouring working with partners to develop voluntary actions (Jebb *et al.*, 2013). Another outlined how the UK-wide voluntary agreement regarding the traffic light format had been achieved by working alongside industry (Jebb *et al.*, 2013). The Public Health Responsibility Deal which encompassed voluntary pledges/agreements with industry was also referred to (BMA, 2017b). Another example described was a system of voluntary self-regulation of the alcohol industry (Hawkins *et al.*, 2012).

Non-central executive/parliamentary/assembly whole nation level action

The labelling of this category has been the subject of much discussion within the team and with our expert advisors, with varying views regarding the most appropriate term to use. This category is intended to encompass elements of the public health system which are at the level of each of the four individual nations, but which are not direct central executive or parliamentary/assembly action.

National programmes

While national programmes could be seen to be included as government-level action, the included literature described both programmes which were centrally funded by government, and other national programmes forming part of general health care funding. We therefore distinguish the element of national programmes in the public health system from centrally-funded programmes.

Included documents highlighted similarities between nations in regard to national programmes such as national free smoking cessation NHS programmes, and investment in particular programmes for pregnant women (Asare and Studlar, 2009). Harrington *et al.* (2009) drew attention to the similarity of the project-

based national programmes which tended to be focused around changing lifestyles, such as Five a Day programmes, health eating and exercise on prescription. Programmes also exist to tackle wider issues such as benefit take-up campaigns, home insulation and regeneration.

One paper (Jebb *et al.*, 2013) relating to England, but applicable to all nations categorised different approaches underpinning national level action comprising: social marketing (such as change4life, state4life); early years interventions (such as a national helpline for breastfeeding mothers, family nurse partnership, child health programme, national child measurement programme); school-based approaches (standards for schools, cooking skills, physical education and sport, sports clubs, school games, travel to school initiatives); workplace interventions (such as buying standards for catering, public sector challenges); communities action (such as the Health Community Challenge Fund, convenience stores projects); changing the food environment (such as restriction on advertising, food labelling schemes, calorie labelling, calorie reduction pledges); physical activity initiatives (children's play strategy, Bikeability, the Olympic Legacy; treatment services (such as Let's Get Moving, NHS health checks, NHS choices).

None of the included papers outlined examples of national programmes particular to Northern Ireland. In Scotland, one example of national action was the development of a programme for weight management within routine NHS primary care (the Counterweight programme) (Musingarimi, 2009). Another example was the planned Named Person programme for every child up to the age of 18 (Coles *et al.*, 2016) - the implementation of which has been stalled due to legal challenges.

In Wales, national programmes tackling poverty were described including free school breakfasts, and free swimming (Riley, 2016). One paper (Edwards *et al.*, 2014) provides a comprehensive review of "All Wales" health improvement initiatives. The authors identified 25 initiatives including examples such as a Cooking Bus, Smokebugs, Baby Friendly, Fresh Start Wales, Smokers helpline, Healthy Schools Scheme, HIV prevention, and a national no smoking day. Longley *et al.* (2011) described how different approaches at the stages of concept, design and implementation can reduce or enhance the effectiveness of funds.

Communicable disease control and public health emergencies

Perhaps unsurprisingly, a number of papers highlighted the importance of action relating to communicable disease control and public health emergencies across all four nations, which we place here as originating at non-executive/parliamentary/assembly level within each system – though there is clearly Ministerial involvement and parliamentary/assembly level influences in each nation. In regard to planning for public health emergencies and the management of communicable diseases, one included paper highlighted continuing policy efforts to work across the UK nations during emergencies, with an oversight committee which has representation from all four nations, and a scientific advisory group for emergencies (Hine, 2010). It was reported that each nation has its own pandemic preparedness plan, but that these remain consistent within a UK wide framework (Hine, 2010). However, it was also emphasised that the health departments in the nations have made differing decisions regarding their

approaches, for example, in regard to antiviral treatment and distribution for influenza (only given to those most at risk in the devolved nations) (Hine, 2010). Other differences not mentioned by this author include subtle differences such as certain diseases are notifiable in England, but not in Scotland, and Health Protection Scotland providing guidance on managing outbreaks and environmental hazards for Scotland, which is followed rather than UK guidance, and local incidents being managed at local NHS Board level rather than the regional response in England. A more historic paper by Rowland (2006) examined structures for health protection across the UK nations, noting also the different systems regarding which diseases are notifiable, and in regard to the structures in place, noting that there had been major changes in communicable disease control across nations since devolution (Rowland, 2006). Another paper (Greer, 2016) echoed differences in regard to notifiable disease.

Continuing inter-connections between the four nations were thus evident in relation to this area of policy in particular. Further historic inter-connections were highlighted by Hine (2010), who noted that the dissolution of the Public Health Laboratory service in England forced Wales (which had used the service) to make new arrangements. While also an historic paper, Northern Ireland was described as having a relatively small set of resources for communicable disease control, which leads to reliance on England (Rowland, 2006). In England and Northern Ireland, the respective Department's of Health are a lead department for pandemic preparedness and response, in Scotland, the Scottish Government Resilience Division has responsibility for co-ordinating the response (Hine, 2010). In Wales, Public Health Wales manages health protection issues such as public health outbreaks and emergencies.

Media campaigns/social marketing

As mentioned above in the section on national programmes, an element of national action within the public health system is the use of social marketing (Jebb *et al.*, 2013) and campaigns via the media. An example of the role of media within the public health system was described during an outbreak of influenza, where telephone information services were used and a "single authoritative voice" was used to provide information to the media. In Scotland, this person has been the health minister, in the other nations it has been the Chief Medical Officer (Hine, 2010). Other examples of media action at a national level described were the use of television, internet, newspapers and posters to provide information on the dangers of second-hand smoke (Asare and Studlar, 2009). One paper described a pledge to invest in an integrated marketing programme to inform, support and empower parents to make changes to children's diets and physical activity levels (Musingarimi, 2009). In Northern Ireland, there had been media coverage of the smoking ban in the Republic of Ireland (Asare and Studlar, 2009). In Scotland a social marketing approach was described as underpinning development of a Healthy Living Brand, and used as part of the Health Challenge (Musingarimi, 2009).

Standard and performance setting

One paper highlighted the standard setting role of the National Institute for Health and Care Excellence as an executive non-departmental public body working within the English NHS, but with its services also used in varying ways in Scotland, Wales and Northern Ireland (Cylus *et al.*, 2015). Its remit is broader than the NHS, including both health and social care and public health.

In another example of the role of standard setting within the public health system, the setting of food standards was mentioned in included papers. In the past, the Food Standards Agency operated across the UK despite food safety being a devolved matter (Rowland, 2006). Over time however, this situation has changed with, for example, Food Standards Scotland being established in 2015 as a non-ministerial office, part of the Scottish Administration, alongside, but separate from, the Scottish Government to implement and monitor Scottish and EU food regulations. Other papers reported Scotland taking the lead on setting nutritional standards for school meals, followed by the other nations (Musingarimi, 2009); and published standards for health services and statutory duty to reduce health inequalities (Whiteford and Simpson, 2016). One paper highlighted Welsh Healthcare Standards as differing, with its own National Service Frameworks implemented through a process of annual requirements – the Annual Operation Framework (Jewell and Wilkinson, 2008).

Sub-national level (regional/local) action

Local initiatives

In addition to initiatives at a national level, the literature described examples of action within the public health system taken within local areas and/or public health departments which may be in particular response to local health needs. Many papers described initiatives located in particular in areas of poor health and deprivation (Blackman *et al.*, 2012). In Scotland, included papers described an area-based approach to health improvement targeted at the most deprived areas (Blackman *et al.*, 2009) with a “whole raft” of innovative community-based services put in place (Greer, 2016). Wales also was described as having put in place a range of area-based initiatives as part of the Sustainable Health Action Research Programme (Blackman *et al.*, 2009).

In England in 2008, NHS North East with the backing of local agencies began implementing a regional health and well-being strategy (Better Health Fairer Health) which included ten themes relating to health improvement across the life course (Milne, 2012). A report by the House of Commons Select Committee highlighted that individual local authorities agree local priorities for public health through their Health and Wellbeing Strategies (House of Commons Committee, 2016). The Committee had been provided with many examples of local public health actions in England including the Lambeth Food Flagship Programme, the redesign of Coventry to be an age-friendly city and projects to support new parents in the South East Asian Community. The role of local planning in public health action was highlighted by one paper, which described how changes to local planning policy had facilitated the implementation of the Healthy Towns programme (Goodwin *et al.*, 2014). The author of one paper described a “bottom up approach” being a distinguishing feature of action on homelessness in England, with the impetus for action coming predominantly from local areas such as London (Whiteford and Simpson, 2016).

One included article discussed the moves towards devolution within England, and in particular the “Greater Manchester Experiment” (Walshe *et al.*, 2016). The authors of this paper highlighted the high level of centralisation and government control of public services in England, with successive governments reducing the control of local authorities. Devolution in Scotland, Wales and Northern Ireland however, was presenting opportunities for regional devolution in England, with powers over areas

such as transport, planning, housing and health and social care being delegated to a collective of public bodies in a region. The authors concluded that in Greater Manchester, the “devolution deal” might be beneficial in terms of greater co-ordination and co-operation in local decision-making, although the potential for conflict loomed large. Devolution might enable improved integration in care delivery, governance and planning of services and reduction of fragmentation and waste, although considerable challenges are described.

One particular area of public health action at a local level described in the included literature was alcohol licencing. It was highlighted that unlike Scotland, England and Wales have no specific link between licencing objectives and public health protection. However, health justifications can be used by licencing authorities in these countries during their decision-making processes (Egan *et al.*, 2016). Wales has a new power (July 2017) from the Public Health Act of a duty to conduct a Health Impact Assessment, which is likely to be used for this purpose in the future

Partnership working

The introduction of local partnership arrangements to develop strategies to tackle health inequalities and improve public health was a feature of local action within the public health system in all nations (Blackman *et al.*, 2009). In this section, we outline examples of local action/initiatives regarding partnership working, we will return to the topic of partnership working in a later section on factors influencing the organisation of public health in the four nations, where we explore review results relating to the challenges of partnerships and integration.

In Northern Ireland, Community Health Partnerships were reported to have been set up in 2004 as local multi-agency groups, including health board and local authorities to take a lead in tackling health improvement and co-ordinating health and social care (Cylus *et al.*, 2015). Another example described was the Creggan Health Information Project which created a core group of local people with knowledge or expertise of health issues (Heenan, 2004), and a further example was a Regional Working Group on Health and Homelessness established in 2013 composed of statutory, community and voluntary organisations (Whiteford and Simpson, 2016). Linking of community-based preventative services with social services and health care in Scotland was noted by Fox (2013) and newly formed Community Planning Partnerships and Community Health and Social Partnerships were described by in a paper by Walton and Mackie (2015). A report by the Scottish Government also emphasised partnership and integration and the importance of local empowerment and engagement (Scottish Government, 2015c).

An example of partnership working cited in Wales was the standards for homeless people and vulnerable groups, which provided a framework for partnership working within the seven local Health Boards. One paper relating to Wales refers to a “belief in the value of local responsibility, action and co-ordination and cross-sectoral solutions” (Blackman *et al.*, 2012). Another reports that local Health Boards and Local Authorities are required to develop five year health and well-being strategies to work in partnership to implement (Kaehne *et al.*, 2017). Working in partnership and through collaboration is also a core theme

of the sustainable ways of working in Wales which are encouraged through the Wellbeing of Future Generations (Wales) Act 2015.

Similarly in England, partnership working was described in relation to planning and public health (Goodwin *et al.*, 2014). The development of partnerships between Clinical Commissioning Groups and local public health staff was described as crucial to the success of the system (Warwick-Giles *et al.*, 2015). Another paper described the need for local areas to develop strategies and commissioning for services for the prevention and treatment of obesity with a strong emphasis on partnership working including the private sector and community groups (Jebb *et al.*, 2013). The link between organisational restructuring and greater inter-organisational partnership working in England was made by authors of one study (Chapman *et al.*, 2005a). The transfer of much of public health to local authority Health and Wellbeing Boards in 2012 provided a local forum for partnership working between health care, social care and the public health role of local authorities (Timmins, 2013).

One paper highlighted the increasing importance of partnerships underpinning regional planning for health improvement in Scotland. A National Planning Forum comprises representatives of directorates and Boards and considers which planning issues need to be tackled on a national basis. It described how at a local level each Board produces a local health plan looking three to five years ahead (Steel and Cylus, 2012). This has now (since 2015) become a requirement to produce a Local Outcomes Improvement Plan (LOIP) and locality plans which includes prevention work and is not just limited to health.

Organisational structures and systems

The included literature described where public health was situated in the four nations, and how organisations and systems were set up to deliver public health. In this next section we provide a brief overview of the organisational structures described in the included literature, highlighting the key aspects relating to the public health system. As we outlined in regard to the section on legislation, the structures and systems in the four nations are in constant transition and we have endeavoured to highlight where author reports are no longer current. The elements of organisational systems we found reported in the literature have been grouped into: organisational forms; service delivery and commissioning mechanisms; the workforce; and governance and accountability. In synthesising this literature we emphasise the historic nature of some of the included papers, describing structures and systems which may have been superseded in recent times, although illustrate similarities and differences between nations since devolution.

Organisational forms

The included literature discussed similarities and contrasts between the form of organisations in the four nations. Given the constantly changing nature of the organisational landscape we have endeavoured to provide an overview of where main similarities and differences may exist at the time of this report. A similarity noted by the author of one study (Greer, 2016) was that all the devolved governments centralised the public health function into single agencies: NHS Health Scotland; Public Health Wales;

Public Health Agency in Northern Ireland and Public Health England. However, this report does not detail that while NHS Health Scotland leads national work on Health improvement and prevention in Scotland, there is a plurality of organisations that coordinate a range of different public health functions including communicable disease/environmental hazards, intelligence and quality improvement with much delivery at a local level. At the time of this report current work is ongoing in Scotland to combine these multiple functions into a single agency. Other included papers in contrast to the study above tended to emphasise the differing structural forms across nations. Hine (2010) for example reported that nations had different organisational forms, and Timmins also described divergence in structures and management.(Timmins, 2013) Greer echoed the differences in regard to organisation of the health systems between nations (Greer, 2016), and Kaehne *et al.* also emphasised different structural ways for implementation of policy goals (Kaehne *et al.*, 2017).

Authors commented on the extensive structural re-organisation which has occurred in England, compared to more limited re-organisation in other countries (Timmins, 2013). However, it should be noted that Health and Social Care in Northern Ireland is currently going through a process of transformation that was not apparent at the time of the publication of this paper. In Northern Ireland restructuring re-configured 18 existing delivery trusts into 5 integrated health and social care trusts responsible for all aspects of health provision; primary care, secondary care, community health care and mental health services (Gray and Birrell, 2013). In addition, a sixth trust is the Northern Ireland ambulance service, operating a single Northern Ireland wide service. In contrast to England Scotland was reported to have had relative structural stability since 2004 (Timmins, 2013). A Public Health Review was announced by Scottish Government in 2014 and a report was published in 2016 with a process of reform currently underway, including the development of a single national body and the establishment of priorities for public health. Wales was described as having fewer structural changes than England, but more than Scotland, with relative stability until 2009 when the existing 22 local Health Boards decreased to seven as a result of the abolishment of hospital Trusts into single Boards (Timmins, 2013).

One of the included papers (Hine, 2010) highlighted that while different nations may have varying organisational forms, they retained similar functions. However, another (Greer, 2016) argued that in Northern Ireland there is no overall framework regarding the public health functions as there is in Scotland, England and Wales, resulting in, for example, more limited investigative powers, employment restrictions and limited powers regarding disinfection and contamination.

In England, the transfer of statutory duty to improve the health of the population and responsibility for a large range of public health services to Local Authorities in 2012 changed the organisational landscape considerably. There were changes to organisation, structure and delivery of services, with the aim of a more joined up public health approach, clearer leadership, and a greater emphasis on disease prevention, with reportedly aimed to ensure strategic planning based on local health needs (House of Commons Committee, 2016). Local Authorities had a statutory duty to create Health and Wellbeing Boards which brought together local services and representatives (Timmins, 2013; House of Commons Committee,

2016). Local authorities were required to develop Joint Strategic Needs Assessments and Health and Wellbeing Strategies to be discharged through the Boards (House of Commons Committee, 2015). One paper highlighted concerns regarding the new structural forms, reporting that local Health and Wellbeing Boards do not require Environmental Health input, leading to environmental health being largely invisible in the new PH system (Dhesi and Lynch, 2016).

Northern Ireland was described as being the only nation that has opted for full structural integration between NHS and social care services (since 2009) thereby creating six Trusts (including the ambulance service) for service delivery to their local population (Kaehne *et al.*, 2017). This was highlighted as being distinct from England, Scotland, and Wales which all have some structural divide/fragmentation between health and social care. A second included paper agreed that structural integration of health and social care was the most distinctive feature of the health system in Northern Ireland in comparison to the rest of the UK (Gray and Birrell, 2013). The authors of this paper (Gray and Birrell, 2013) described the organisational structure in Northern Ireland as being most similar to Scotland, with its 14 comprehensive health boards and also to Wales, which has moved to replace local health boards and hospital trusts with a smaller number of seven comprehensive health boards. The authors go on to report that Northern Ireland is more centralised than other nations as there is a very limited local authority role in health/social care (although there is some limited partnership working in public health). The absence of a clear structural relationship with local government at a devolved nation level in relation to public health was highlighted in this paper as being a major difference compared with Scotland, with its system of formal community health partnerships (now called community planning partnerships). England also has structures for local involvement in health/public health.

One paper relating to Scotland emphasised that while delivery of public health rests primarily within the NHS, local government and a range of national agencies, there can be many central agencies, local authorities, academic and civic organisations contributing to the public health system (CfWI, 2015). In Scotland, planning and delivery functions are delegated to 14 regional NHS Boards that plan and commission hospital and community health services including public health. At a local level, until 2015, community health partnerships (CHPs) covered all areas of Scotland. These were NHS and local authority structures that aimed to ensure close involvement of local authorities, patients and the public (Cylus *et al.*, 2015). They were replaced by Health and Social Care Partnerships (HSCPs) as part of restructures to improve the integration and delivery of services provided by Health Boards and local authorities in Scotland.

In Wales, core elements of the public health system are delivered by seven integrated Local Health Boards which are local NHS organisations responsible for public health services and other services and have a focus on using an integrated structure to move towards prevention-focused care (Cylus *et al.*, 2015). The Boards differed from their predecessors in that they are responsible for the planning and delivery of all health services within their geographical boundaries including hospital, community and primary care (Longley *et al.*, 2012). Public Health Wales provides each Board with specialist support and

also provides support to the 22 local authorities (BMA, 2017b). The Well-Being of Future Generations Act (passed by the Welsh Assembly in March 2015) places a statutory duty on public sector organizations to improve the economic, social and environmental well-being of Wales in accordance with the sustainable development principle. Planning across public services (including health) is carried out by Public Services Boards (PSBs) – to include local Health Boards – which aim will to improve the economic, social and environmental well-being of their area (Cylus *et al.*, 2015). One paper dating from 2008 indicated that a process was underway at that time to unify the public health system with integration of the three areas of public health practice (health protection, health improvement and healthcare quality) as well as linking services to academic public health (Jewell and Wilkinson, 2008). One author commented that Welsh Boards tended to be responsible for more people than Scottish Boards, even though Wales has a smaller population (Timmins, 2013).

Leadership, governance and accountability

The area of public health leadership within the organisational system was outlined in the literature. Since the Health and Social Care Act in 2012 nationally in England, responsibility for public health is split between the Department of Health, Public Health England and NHS England. In addition, the Local Government Association seeks to support local authorities through a series of publications (House of Commons Committee, 2016). The creation of a small centralised Public Health England as a result of the Act was described in the literature as being a particular element of contrast with other nations (Gadsby *et al.*, 2017). The new lead agency was reported to have been set up to provide national campaigns, support local initiatives and coordinate health protection (Gadsby *et al.*, 2017).

In England, a total of 134 Directors of Public Health were reported as having responsibility for leading public health provision within Local Authorities, answering directly to each Local Authority Chief Executive. They have responsibility for the public health budget (CfWI, 2015). All have Officers who lead in setting and monitoring public health measures (Cylus *et al.*, 2015). A mixed method study exploring views of senior public health and Clinical Commissioning Group stakeholders found that participants described decision-making on public health topics as involving a range of decision-makers sited in Local Authorities, public consultation and elected members (Gadsby *et al.*, 2017). The authors reported a perception of dispersed forms of public health leadership due to the mixed way that the transfer of public health staff to local authorities had occurred, which made decision-making more complex. Public Health England is an executive agency of the Department of Health, giving it a closer relationship with the Secretary of State than NHS England, which is a non-departmental public body. A report from a House of Commons Select Committee highlighted that the Secretary of State therefore retains—in theory at least—a more direct responsibility for public health than he does for the other health functions which are the responsibility of NHS England (House of Commons Committee, 2016).

It was highlighted that all nations have national bodies to strengthen and coordinate health protection (Public Health England, Health Protection Scotland, Public Health Wales and the Public Health Agency for Northern Ireland) (Cylus *et al.*, 2015). In Northern Ireland, the Minister of Health oversees the Department of Health, Social Services and Public Safety (Cylus *et al.*, 2015) – now called the

Department of Health. The primary responsibility for public health in Northern Ireland rests with the PHA. This was established in 2009 and is organized into three directorates: Public Health; Nursing and Allied Health Professions; and Operations. Within each directorate, there are in turn a number of divisions with distinct responsibilities. The first directorate – Public Health – includes health protection, health and social well-being improvement, service development and screening, as well as research and development. Activities undertaken by the Public Health agency include the promotion of health and well-being by working with other 54 Health systems in transition United Kingdom (Northern Ireland) agencies on particular initiatives aimed, for example, at promoting healthy lifestyles, supporting commissioning activities by LCGs with public health advice, responding to threats posed by infectious diseases and supporting research and development on new interventions.

The public health directorate also has responsibility for commissioning, coordinating and quality assuring the seven screening programmes currently operating within Northern Ireland including breast, bowel and cervical cancer; diabetic retinopathy; antenatal and newborn screening; and abdominal aortic aneurysm screening (O'Neill *et al.*, 2012). The Agency also has responsibility for health and social care research and development, and has Nursing and Allied Health Professions and Operations directorates (Gray and Birrell, 2013).

In Scotland, the delivery of public health programmes was reported to be the shared responsibility of the Scottish Government, the NHS and local authorities, with NHS Scotland having the role of leadership organisation (BMA, 2017b). NHS Boards have significant powers to determine the pattern of local care provision and to set local priorities, with increasing emphasis having been given to NHS Boards in taking a lead on improving population health (Steel and Cylus, 2012). In contrast to other nations, the public health observatory in Scotland was described as having a strong collaborative emphasis and a “niche role” with a focus on health improvement which contrasted with the wider role of observatories in the other nations (Gordon *et al.*, 2010).

The Welsh Government, through the Department for Health and Social Services, funds the NHS in Wales, which includes development of policy and strategy for public health. The Minister for Health and Social Services is responsible for health and social services, and is accountable to the National Assembly for Wales. The Director General, Health & Social Services within Welsh Government, also the Chief Executive of NHS in Wales – provides policy advice (Cylus *et al.*, 2015). The official departmental lead is through the Chief Medical Officer (CMO) who acts as head of the Population Health Department. This department has policy leads for public health strategy, health improvement and health protection (Jewell and Wilkinson, 2008). Leadership is provided by the NHS Trust Public Health Wales which operates both nationally and through staff located in each Local Health Board (Longley *et al.*, 2012), although these are staff of Public Health Wales. A report which provided an overall analysis of the health system in Wales, reported that the system remains very similar to those in the rest of the UK following devolution, with many of the original features of the NHS still intact (Longley *et al.* 2012).

Commissioning mechanisms

A key distinction in organisational forms described in the literature was the purchaser-provider split in England, with market forces having a greater role (Cylus, 2015; Timmins, 2013). Northern Ireland however, also has a purchaser/provider split in terms of service provision, although authors of one paper described this as being in limited operation (Gray and Birrell, 2013). In Scotland in contrast there is no purchaser/provider split in terms of service provision – instead there are formal contracts between providers and commissioners which are in place only when necessary (Timmins, 2013). There is an emphasis on partnership between purchasers and providers rather than market forces (Cylus *et al.*, 2015). Wales similarly has no purchaser/provider split – seven Health Boards plan and provide health services, and partnership between purchasers and providers is emphasised (Cylus *et al.*, 2015).

Commissioning involves identifying needs, reviewing service provision, deciding priorities, procuring services, and managing performance (Gadsby *et al.*, 2017). In England, at the time of devolution, Primary Care Trusts took a lead role in health improvement and were responsible for commissioning health services from General Practitioners, NHS Provider Trusts, and some private and voluntary sector organisations (Blackman *et al.*, 2009). The budget and responsibility for commissioning public health moved back to Local Authorities however, in 2012 (Cylus *et al.*, 2015) with commissioning currently split between Local authorities, Clinical Commissioning Groups and NHS England. NHS England has commissioning responsibility for certain key public health services, particularly relating to immunisation, screening programmes, public health programmes for children and prisoners and aspects of sexual health (CfWI, 2015). Health visiting, which was previously commissioned by the NHS was commissioned by Local Authorities from 2015 (CfWI, 2015). The transfer of commissioning other public health services to Local Authorities included sexual health services, public health nursing, drug/alcohol treatment, smoking cessation and weight management services (Gadsby *et al.*, 2017).

Difficulties in relation to the new system of outcomes based commissioning in England, particularly in relation to prevention were reported by one paper (Gadsby *et al.*, 2017). This mixed-methods study elicited the views of senior public health and CCG staff in England. The authors highlighted that commissioning was now split across the English healthcare and public health system, and the commissioning culture had shifted from a “specialist led investment approach” (in Primary Care Trusts), to a business-oriented approach (in Local Authorities) using best value frameworks. A study which carried out a survey of Directors of Public Health in 2016 reported that, since the English reforms, almost all participants (94%) reported having made changes to services commissioned, which included setting up new services, changing providers, re-designing existing services and de-commissioning services (Jenkins *et al.*, 2016).

In Northern Ireland, there has been an abolition of General Practitioner fundholding (Greer, 2005) instead, a Health and Social Care Board and Public Health Agency are currently responsible for commissioning care; and five territorial Health and Social Care Trusts are responsible for providing care. The Board, in consultation with the Public Health Agency and in response to the Commissioning Plan Direction, produces an annual commissioning plan. The plan and its associated service and budget

agreements must be agreed between the Agency and the Board. The Board is advised by five local commissioning groups, and Trusts may commission services such as domiciliary care (O'Neill *et al.*, 2012). As mentioned above, it was highlighted that although there is in principle a purchaser–provider split, emphasis is placed on cooperation and consultation within the system, giving rise to questions about whether a split exists in practice (O'Neill *et al.*, 2012). The purchaser-provider relationship was described as being collaborative, in contrast to the competition model in England (Smith and Hellowell, 2012). The ongoing programme of transformation will change the current process of commissioning in Northern Ireland in the short term, with proposals to abolish the Health and Social Care Boards and embed the function instead in the Public Health Agency, although details of changes at the time of this report remain under discussion.

The purchaser-provider split was described as being rejected in Scotland, with instead a move towards full central control over providers and an emphasis on integration (Kaehne *et al.*, 2017). Following devolution NHS Trusts were merged with Boards and the purchaser–provider split introduced by the United Kingdom Government in the 1990s was dismantled (Steel and Cylus, 2012).

One historic paper dating from 2008 indicated that the Welsh ministers commissioned public health services largely from the National Public Health Service in Wales – an NHS organisation, and also the Wales Centre for Health (Jewell and Wilkinson, 2008). These no longer exist in Wales and are now Public Health Wales (PHW). There is no purchaser-provider split with Health Boards planning and providing services (Timmins, 2013).

Financial arrangements

Funding arrangements in England changed following the introduction of the Health and Social Care Act 2012, with statutory responsibility for health improvement moving from the NHS to Local Authorities, together with a ring-fenced budget (BMA, 2017b). The Directors of Public Health were required to take a strategic approach to planning public health activity with whole-scale service reviews in some Local Authorities and use of the public health budget to invest in other Council services. In some cases, this provided an opportunity to embed public health into other services and promote joined-up working, with some shifts in spending towards more integrated approaches (Gadsby *et al.*, 2017).

In Scotland, in 2007 a new relationship (“concordat”) was drawn up which was described as representing a new era of co-operation between local and national government in Scotland. In contrast to England, it aimed to reduce the majority of ring-fenced funding in local authority budgets, and was characterised by local flexibility and outcome-based funding (Mooney and Scott, 2011).

Funding for public health services and functions is allocated by the Welsh Government as part of the budget for health and social care services (BMA, 2017b). Budgets are allocated to the Local Health Boards and Public Health Wales. General Practitioners and other private contractors are remunerated via a system similar to elsewhere in the UK (Longley *et al.*, 2012).

Workforce

The Health and Social Care Act 2012 involved the transfer of public health specialist staff in England from the NHS to Local Authorities. The total number of public health workers in England was reported in 2015 to be around 36,000 to 41,000 people. This included: public health consultants and specialists (including Registrars); Directors of Public Health; public health academics; public health managers; public health scientists; intelligence and knowledge professionals; health visitors; school nurses; other public health nurses; public health practitioners; environmental health professionals. Of these, the greatest number were reported to be in four core roles - health visitors, school nurses, public health practitioners and environmental health professionals (which, when combined, account for approximately 80 to 85% of the total core public health workforce) (CfWI, 2015). The Faculty of Public Health maintains professional standards and oversees the quality of training and professional development of public health specialists and revalidation methods for public health workers across all nations (Cylus *et al.*, 2015). One paper highlighted that since the re-configuration of services, public health staff had been learning new skills (such as in relation to procurement) (Gadsby *et al.*, 2017). This need for a different staff skill set was also highlighted by another paper relating specifically to environmental health (Dhesi and Lynch, 2016). The authors described the need for environmental health practitioners to have new skill sets in evaluation and as “thinkers” rather than “doers”, with graduate training needing to prepare new practitioners to think critically and become high-level managers of the future, while being technically competent.

A government report on public health in Scotland in 2015 (Scottish Government, 2015) outlined planned development of the public health workforce, with adoption of a structured approach to utilising the wider workforce. The leadership structure in Scotland was described as being: Directors of Public Health who lead the public health departments of 14 local NHS boards and clinical directors or equivalent who lead some national NHS Boards. Four of the national NHS boards in Scotland have teams dedicated or contributory to core public health functions, and remaining boards receive public health input where required from national and local boards. Public health practitioners are located across public sector working in health improvement, environmental health, health visiting, PH intelligence, science, and academia and until 2015 were located within Community Health Partnerships, Local Authorities, local and national NHS Boards, and Universities, and more recently Health and Social Care Partnerships (CfWI, 2015).

Ways of working

The initial model agreed during the stakeholder workshop identified a list of descriptors that were perceived to characterise the elements of public health work and which were entitled by stakeholders as ‘ways of working’. Further items were suggested later by the project advisory group. We took this list as the starting point for synthesising data relating to ‘ways of working’ reported in the literature. This process was challenging as the descriptors frequently overlapped, and references to these ways of working were often vague or lacked clarity. In the public health system framework (Figures 3 and 4), we indicate where we found descriptors in the included literature relating to the different ways of working,

although it is important to recognise that other elements reported by stakeholders may be subsumed within aspects of the data which will now be outlined.

Supporting communities

We identified 4 papers which alluded to public health ways of working to support communities. Heenan (2004) reported the assertion that community development must be embedded in the planning and delivery of services in Scotland. A paper relating to Health Visiting in England (Hoskins, 2009) described a resource pack being developed to support community development work. Two papers (Kaehne *et al.*, 2017; Marks *et al.*, 2015) however, described minimal local engagement in community decision-making in England, and low levels of public participation in Wales respectively.

Advocacy

We found 1 reference to advocacy in the literature. This was in a Scottish Government report on public health, which described the need for the public health workforce to be instrumental in advocacy and support for others in delivering outcomes (Scottish Government, 2015). It is recognised that advocacy is included as a key public health skill in current formal public health curriculum and professional standards.

Evidence-informed/knowledge brokering

We found limited data mentioned in the included sources regarding evidence-informing as a way of working. There was more data whether public health evidence had been used in/informed policy development processes. Indeed, there was criticism in some studies regarding the way that evidence was used in public health policy across the UK, and this will be explored further in regard to influencing factors in a later section of the report. It is worth highlighting here, however, that the British Medical Association asserted that there was limited action on prevention that was evidence-based (BMA, 2017a). A qualitative study found that stakeholders perceived that public health policy was based on theories and ideas rather than research evidence, with ideas becoming established and difficult to change, such as the dominance of lifestyle-behaviour explanations of health inequalities (Smith, 2007). One area where evidence was described as having been informing public health action, was agreement regarding the harm from smoking (Asare and Studlar, 2009). It is important to highlight that this is not to suggest that the public health workforce is not applying the skills of evidence based working, but rather that this source suggested that policy rhetoric about prevention, and evidence that exists on this, was not being translated into policy development.

A difference between evidence-informing processes between the nations was described in relation to alcohol policy. Echoing the point already made above, the British Medical Association pointed out that the nations have not consistently acted on evidence in the same ways (BMA, 2017a). A qualitative study found that evidence was reported to have played an important role in presenting the policy issue of alcohol as a problem requiring action in Scotland with data from a variety of sources being brought together by those advocating action to demonstrate the size of the problem (Katikireddi *et al.*, 2014a). A Scottish Government report on public health in 2015 outlined the aim of achieving greater application of

evidence to policy and practice, and the importance of data, information and intelligence, research and evidence (Scottish Government, 2015).

Influencing

It seemed that many of the public health ways of working described in the literature could potentially be viewed as different elements of influencing. Only one direct reference to influencing in Northern Ireland was made, in a description of a smoke-free coalition being formed in 2005 (Cairney, 2009). Similarly we found only 1 study specifically referencing influencing processes in Wales, describing the role of the Director of Public Health as acting as a pivot for health action within a defined geographical area (Longley *et al.*, 2011) .

References to the role of public health working by influencing in Scotland included: leading public health officials issuing warnings on smoking in 1999 (Asare and Studlar, 2009); a range of public health advocates bringing issues of alcohol pricing onto the political agenda via lobbying politicians; engagement of public health representatives in media debates and briefings (Holden and Hawkins, 2012); a health action group being formed which regularly engaged with politicians (Katikireddi *et al.*, 2014a); use of a public health team and topic experts to provide advice where required in community planning partnerships (Walton and Mackie, 2015); a Scottish Public Health Network report on homelessness enabling the issue to be high on the agenda; and a health and homelessness group convening a conference to raise the profile of the issue (Whiteford and Simpson, 2016). One paper described minimum unit pricing of alcohol as being an issue that different public health organisations could provide a clear and unified message on, which was important in providing a consistent message to the Scottish government (Holden *et al.*, 2014). A Scottish government report on public health (Scottish Government, 2015) outlined an enhanced role for public health specialists in community planning, and the core public health workforce needing to be directly influential. The Scottish Public Health Observatory was highlighted to have influence via a web of connections to other organisations in Scotland including academia and Health Protection Scotland.

References to influencing in the literature relating to public health in England were: public health groups forming a campaigning alliance regarding tobacco (Cairney, 2007b); public health specialists providing a lead in developing strategies to meet local needs and providing advice to inform commissioning (Gadsby *et al.*, 2017); public health staff influencing elected members of Commissioning Boards (Gadsby *et al.*, 2017); and local champions of health improvement working to incorporate a health dimension into non-health structures such as crime and commissioning (Marks *et al.*, 2010). Directors of Public Health in England were described as having a variety of influencing roles: supporting/advising elected members and other senior officers within children's and adult social services across a Local Authority; supporting other Local Authority provision in promoting public health; supporting and improving commissioning of health and social care services; and having statutory involvement in Health and Wellbeing Boards and developing Joint Strategic Needs Assessments and Joint Health and Wellbeing Strategies at a local level (CfWI, 2015). One study using qualitative methods to explore multiple locations (Warwick-Giles *et al.*, 2015) reported that the role of public health in commissioning was conceptualised differently in different

areas – it could be “co-owner”, “service provider”, or alternatively “critical friend”. A survey of Directors of Public Health in England (Jenkins *et al.*, 2016) found that the move to local authorities was perceived to have made it easier to influence health improvement policy (66% responded “quite often able to influence”, 82% perceived more influence since the change). Influence was most exerted: when the transfer of staff to local government had gone well; when collaborative working relationships had developed; when local partnership groups were seen as being effective; and by being on a Health and Wellbeing Board. Less influence was reported: in areas of deprivation; in Conservative-led councils; and in London Boroughs.

Another study concluded that since the re-location of services to local authorities, public health commissioning is being more influenced by a new set of decision-makers – elected councillors with their own local knowledge, ideologies and experiences (Gadsby *et al.*, 2017). The study described how elected members influenced public health decision-making and public health staff influenced elected members, with public health staff working to influence Council staff through learning events, information sharing, engagement events targeted at elected members and non-public health officers. Another study of individuals involved in public health policy (which was carried out prior to reconfiguration of public health services) (Oliver *et al.*, 2013) reported that strategies to influence policy making were: (i) controlling decision-making organizations; (ii) controlling policy content; (iii) controlling policy-makers and (iv) using network structures.

Prevention-focused

One analysis of the UK health system reported that local health boards are seeking to use new integrated structures to move towards prevention-focused care (Cylus *et al.*, 2015). Authors of a study examining policy-making in Wales described an impetus for post -devolution policy action on prevention as devolution had made the issue more visible, and an expectation of a response more insistent (Drakeford, 2006). Another however, reported less emphasis than England and Scotland on secondary prevention as a means of tackling health inequality (Smith *et al.*, 2009). The Wellbeing Future Generations (Wales) Act 2015 certainly places emphasis on prevention as a sustainable way of working and Wales was reported to be placing a strong emphasis on homelessness prevention in one paper (Whiteford and Simpson, 2016).

In England, the Health and Social Care Act 2012 outlined the aim for a more joined up public health approach, with greater emphasis on disease prevention. Prevention is intended to be an important element of local Sustainability and Transformation Plans in England (House of Commons Committee, 2016). In one study in England, public health service providers were described as engaging to build relationships for prevention work on obesity (Gadsby *et al.*, 2017). This study highlighted the difficulties associated with outcomes-based commissioning in England in relation to prevention activity, as outcomes are less easy to evidence, there are only short-term contracts, and decisions are made based on expediency rather than need. Another paper identifying challenges in having a prevention-focus described a mismatch between the rhetoric regarding obesity at national policy level in England which emphasises the importance of prevention and the reality, yet which has seen cuts in public health funding and criticism of national policy makers (Peckham *et al.*, 2016). A qualitative study of views of policy makers and

planners echoed the challenges in prevention-focused work. It found that commissioners often had a very different perspective regarding how to tackle inequalities to those with a specialist public health background; in particular, having a focus on those with an established condition versus primary prevention, targeting those at high risk or deprived rather than population-wide approaches. The strategy on obesity in England was described in one paper as being focused largely only on prevention in children (Hawkes *et al.*, 2014).

Scotland was reported to be leading on taking an integrated approach to treatment/prevention of obesity (Musingarimi, 2009). The Scottish government has identified a need for public health to focus more on prevention activities “upstream”, addressing the economic, social and environmental causes of health inequalities (Scottish Government, 2015). One paper from 2007 which may now be outdated, described prevention efforts in Scotland to be largely concerned with primary care development (anticipatory care) and health system reform to maximize their impact on reducing health inequalities (Wimbush *et al.*, 2007). In Northern Ireland, it was reported that some local authorities employed “Investing for Health” officers to work at a local level and cross-sectorally on population health goals prioritised in a Northern Ireland public health strategy which was launched in 2002 (Gray and Birrell, 2013). Following a Review of Administration in 2009, these officers and their work were absorbed into the Public Health Agency Programmes.

The British Medical Association asserted that in all nations there is under-investment in prevention activities and, in some areas (particularly England) funding cuts. It argued that across the UK commitments to prioritise ill-health are not met with funding commitments, and there is a disproportionate focus of funding on treatment over prevention (BMA, 2017b). The paper called for a clearer understanding of prevention spending.

Forward-looking

While forward-looking may have underpinned much of the ways of working described in regard to prevention, we found little reference to ways of working specifically using this term in the literature relating to public health systems. Local Development Frameworks/local plans in England were described as including health impact assessments (Goodwin *et al.*, 2014). In Scotland similarly, there was reference to engagement of public health with urban planning (Musingarimi, 2009). Marks *et al.* (2015) referred to mainstreaming public health into all commissioning in England, planning and activities, replacing pilots and projects with longer-terms sustainable plans (Marks *et al.*, 2015). The role of Directors of Public Health in taking a strategic approach to planning public health activity in England was also described (Gadsby *et al.*, 2017). In an example of forward looking in one particular area of public health in Scotland, it was outlined that Health Boards were required to produce health and homelessness action plans (Whiteford and Simpson, 2016). In Wales, forward-looking is encouraged as part of the Wellbeing of Future Generations Act (2015) although specific details regarding how the five “ways of working” it refers to: long term; integration; involvement; collaboration; and prevention should be actioned are not provided.

Problem-framing

One paper referred to the need for public health professionals to “make visible that which is hidden” including the consequences of policy, planning and other decision-making (Marks *et al.*, 2010). One example of a problem-framing way of working reported that the Strathclyde police in Scotland had applied a public health approach to violence by creating a Violence Reduction Unit (Fox, 2013). The importance of problem-framing was referred to most in regard to the proposed minimum alcohol pricing policy in Scotland. It was reported that industry campaigners opposed to price-based interventions sought to dominate the framing of the issue as a problem with a small minority of harmful and hazardous drinkers (Hawkins and Holden, 2013). Framing alcohol policy instead as a broad, multi-sectoral, public health issue that requires a whole-population approach, was reported to be crucial in enabling policymakers to seriously consider minimum unit pricing, and public health advocates had intentionally presented alcohol policy in this way (Katikireddi *et al.*, 2014b). Another example described was reference across the UK to a change in the framing of smoking in public places - from being an economic issue (associated with taxes/exports) and a civil liberties issue, to being about public health and the need to intervene (Cairney, 2009).

Standard setting

We found little data specifically relating to the process of setting public health standards, and how public health ways of working operated in this area. References to standard setting as a way of working included: differing awareness of standards for improving the health and well-being of homeless people and specific vulnerable groups in Wales (Whiteford and Simpson, 2016). This paper highlighted how the policy of local adaptation for local needs has resulted in widely divergent levels of progress and provision, with uneven implementation of standards. In terms of setting professional standards, one paper highlighted that the Faculty of Public Health maintains professional standards and oversees the quality of training and professional development of Public Health specialists and revalidation methods for public health workers across all nations (Cylus *et al.*, 2015).

Relationship building

One paper highlighted the importance of informal networks, identifying a lack of stable transparent relationships in all nations (Greer and Trench, 2010). Another described how public health service providers engage, and build relationships in relation to prevention work on obesity (Gadsby *et al.*, 2017).

Co-production

One included paper referred to co-production as a way of working, describing how an earlier emphasis on top-down standard-setting, such as restrictions on advertising certain foods to children and mandatory school food standards, has been replaced by an approach favouring greater co-production with partners in England (Jebb *et al.*, 2013). This would appear to be co-production with industry and other organisational partners, rather than per se co-production with the public or residents in particular communities. In Wales, achieving health and wellbeing with the public patients and professionals as equal partners through co-production is one of the four prudent principles set out following the Bevan Commission in

2015, although we found no specific examples of ways of working referring to this concept in the included literature.

Influencing factors

The included literature described an extensive range of factors which were influential in determining public health systems in the four nations. In the system model, these factors are placed centrally as they help to explain similarities and divergence in the action taken, organisational structures and systems, and ways of working, which in turn may then have an influence on outcomes and impacts. The influencing factors were categorised into those relating to: the population; geography of nations; politics; features of the organisation; systems leadership; accountability and ownership; the nature of public health; financial resources and contracting; the workforce; the culture of audit and evaluation; the role of media and industry; and other contextual factors.

Factors relating to the population

The literature outlined how characteristics of the population served could influence elements of the public health system. Changing public attitudes to smoking for example were reported to have been influential in government policy and the introduction of restrictions (Asare and Studlar, 2009). Changing public opinion was described as the catalyst which enabled government to act (Cairney, 2007b). Public support for the ban on second-hand smoking in Scotland was reported to have been highly influential (Donnelly and Whittle, 2008). In another example of an influencing population factor, public pressure to reduce waiting times in Wales was described as leading to public health policies being put to one side (Smith and Hellowell, 2012). The author of one paper highlighted that if a redistribution of income and wealth is necessary to reduce health inequalities, then government will have to convince the electorate that this should be done (Mackenbach, 2011).

One paper discussed how there was more public support for interventions that restrict choice, if they apply to children rather than the entire population (Musingarimi, 2009). This review of policy regarding obesity in the four nations emphasised the high obesity prevalence in all the nations, and that government targets were influenced by political perceptions of public concern. The similarities between nations in regard to public health challenges such as rising obesity, excess alcohol consumption and smoking rates was emphasised in another included document (Timmins, 2013). Similarly, long term population challenges to the system in regard to demographic changes and the number of people living with chronic conditions are common across the UK (Kaehne *et al.*, 2017).

Population density in Scotland is low in comparison to the rest of the UK due to large rural and remote areas. In contrast with other nations, the population has been fairly stable over the last 50 years, but the proportion of those aged over 65 has grown significantly (Steel and Cylus, 2012). In comparison to other Western European countries there are reported to be high mortality levels among people of working age in Scotland, and there is a poor smoking-related health record with high rates of premature death correlated closely with high levels of smoking prevalence (Donnelly, 2008) and greater prevalence of major chronic diseases and associated risk factors (Fox, 2013). One report highlighted a particular

challenge in that Scottish people are in poorer health in comparison with other parts of the UK, including those with similar history and socio-economic characteristics. It described a complex interplay of factors relating to life circumstances, lifestyle, diet and physical activity influencing premature deaths (Steel and Cylus, 2012). A further example of the influence of population characteristics in action described in the literature, is the greater burden of alcohol-related harms in Scotland than elsewhere in the UK being a key driver for taking legislative action (Katikireddi *et al.*, 2014a).

Both Scotland and Wales were described as having relatively poor populations (Asare *et al.*, 2009) with Wales in particular having a legacy of past health damaging industrial employment (Blackman *et al.*, 2012) and a high prevalence of limiting long-term illness or disability due to a legacy of poverty and heavy industry (Drakeford, 2006). Wales was reported to have a health profile very similar to other post-industrial nations and regions across Western Europe, with substantial geographical variations in life expectancy (Longley *et al.*, 2012, Drakeford, 2006). Issues facing the population of Wales at a local level in areas of particular deprivation were reported to mean many vulnerable people, and difficulties in providing services for homelessness in one study (Whiteford and Simpson, 2016).

Scottish health inequalities were described as being generally the highest in Western Europe (Frank *et al.*, 2015). Levels of income inequality in Scotland were reported to be high in absolute terms and relative to the rest of the UK, with the country also having a higher proportion of overcrowding in certain areas than any other part of the UK outside London (Mooney and Scott, 2011). Lower housing costs in Scotland however, were highlighted by the authors of one paper as helping to keep poverty down (Frank *et al.*, 2015). This contrasts with particular challenges regarding homelessness reported in London due to the lack of an affordable housing supply (Whiteford and Simpson, 2016). The poor levels of population health in Scotland was described as influencing the setting of government targets relating to inequalities. Faster improvement in particular local areas was the target, as aspiring to meet poor national averages was not considered to be a satisfactory aim (Blackman *et al.*, 2009).

Fox *et al.* (2013) emphasised that it is important for a country to take account of its culture, history and current politics when understanding the determinants of health, and formulating action to reduce health inequalities. The Scottish electorate were described as being more supportive and accepting of state intervention than other parts of the UK (Katikireddi *et al.*, 2014a). A report by the Scottish Government emphasised the importance of population engagement with health issues, and taking action across the whole social gradient (Scottish Government, 2015). The politics of the population in Wales was described as being more left of centre (Drakeford, 2006) with particular historical forces shaping people's beliefs, attitudes and political allegiances. One author described these at times as differing significantly from those held by people in England, Scotland or Ireland (Greer, 2005). In one paper, low levels of public participation generally in Wales was reported to lead to "tokenistic consultations" on service integration (Kaehne *et al.*, 2017).

Geography of nations

One included paper highlighted the influence of the spatial distribution of populations within the three nations, with Scotland and Wales having a less dense population which influences service delivery, and also there are areas of less dense population in all countries of the UK, having lower levels of pollution than urban centres (Woodfield and *et al.*, 2003). The small size of Scotland was highlighted by two included papers as providing opportunities for exerting influence on policy (Fox, 2013, Gordon *et al.*, 2010). Similarly, the smaller scale of Wales was asserted to make it easier to get policy makers together and provide greater opportunities for shared initiatives (Jewell and Wilkinson, 2008). In Wales, the movement of people over the border to England was reported to affect service delivery (Timmins, 2013). The scope for competition in terms of service provision was reportedly more limited than in Scotland or England, due to the rural nature of large parts of Wales (Timmins, 2013).

Northern Ireland has a relatively rural population, and also a comparatively smaller population, with higher than average levels of poverty (Asare *et al.*, 2009, Greer, 2016). Geographical separation from the mainland by the Irish Sea was also described as leading to relative isolation from the UK administrative centre, with its proximity to the Republic of Ireland influencing the approach to health (Greer, 2005).

Political factors

A sizeable proportion of the included literature discussed political influences on the public health system, although there was comparatively little relating to Northern Ireland. One included paper provided a particularly useful summary of the influence of political factors in the public health system. Holden and Hawkins (2012) asserted that policy divergence in Scotland was shaped by power (formal, financial, resources), policies (who policy communities are), and politics (party agendas). Another study emphasised that policy outcomes are the result of a complex series of negotiations between interests at more than one level of government (Cairney, 2007a). In 2004, Evans (2004) reported that while “improving public health was a long-term project” for the Labour government of the time, that politicians' decisions are often driven by short-term election cycles; describing the lack of progress on shifting the public health agenda from downstream to upstream approaches as being due to “the politics of health policy and the complexity, uncertainty and unpredictability of the policy world”.

Papers described how politics had driven action, for example, a report outlining that preserving individual choice was perceived by the UK government as being more important than taking policy action on tobacco control (Asare and Studlar, 2009). The influence of backbench Members of Parliament in shaping policy was outlined, with political risk in ignoring their views (Cairney, 2007a). Authors described the shaping of policy by competing power bases within government departments, with political “gaming” moving ministers between posts and the erosion of networks at the expense of intra-governmental co-ordination and relations (Exworthy and Hunter, 2011) and “gaming” in relation to targets and political perceptions of targets (Musingarimi, 2009). The influence of wider politics on local activity was described, with examples including the giving of signals that policy was to change, and political messages within parties that encouraged action not to be taken (Goodwin *et al.*, 2014). Aspects such as favourable political climates for action, and areas being of interest to Ministers were highlighted

as influential factors in strategy development (Hawkes *et al.*, 2014). The influence of a particular political party being in government was outlined, with for example a previous Labour government being described as having a focus on targeted interventions, industry self-regulation and public information programmes, with an emphasis on free markets, light touch regulation and individual responsibility (Hawkins and Holden, 2013). One particular example of political influence on public health was the report of health visitors being at the forefront of New Labour's plans to tackle health inequalities within the NHS and improved wider public health, but a review of this vision led to the role being abandoned (Hoskins, 2009). Challenges relating to health visiting services are considered further in the results of the school readiness case study review, in the next section of this report.

Included literature highlighted how action on health protection (surveillance and control) had been influenced by different political assemblies (Rowland, 2006). UK government manifesto commitments in 1998 and 2005 in particular had influenced the development of public health policy during these Parliaments (Asare and Studlar, 2009). Authors of one paper referred to New Labour priorities and ideologies being concerned with individual responsibility and a pro-market/pro-business stance as being influential in the limited action taken on alcohol (Hawkins and Holden, 2013). Papers described other political considerations such as income from taxation of products such as tobacco being beneficial to the treasury (Asare and Studlar, 2009, Cairney, 2007a) and the role of the leisure industry in the economy during consideration of alcohol pricing (Hawkins and Holden, 2013).

After the devolved government elections in 2011, for the first time since devolution different political parties governed in each of the four nations (Smith and Hellowell, 2012). Authors highlighted the politicisation of health in the devolved administrations. The public sector plays a larger part in the economy in Scotland, Wales and Northern Ireland than in England and this gives the public sector a larger political voice (Timmins, 2013). Health politics was highlighted as being particularly influential in Scotland, Wales and Northern Ireland as health is a large element of the devolved administration budget (around 40% of total expenditure compared to 30% of all departmental expenditure in England). This was described as leading to a considerable amount of political scrutiny and debate in the devolved administrations. The NHS was described as being always in the Welsh political spotlight, with all groups in the multi-party system exploiting health issues (Riley, 2016). Studies we identified referring to Northern Ireland described how episodes of suspension of the Northern Ireland assembly, and therefore direct rule, had influenced health policy (Cairney, 2009), leading to similarity in targets with England due to strong influences from Westminster (Musingarimi, 2009). The focus of devolution in Northern Ireland in contrast to Scotland and Wales was described as addressing constitutional issues (Gray and Birrell, 2013). One paper highlighted how Northern Ireland in contrast to other nations was influenced by policy and action in the Republic of Ireland. This influence was reported to be apparent for example in the adoption of second-hand smoking restrictions (Asare and Studlar, 2009).

Wales was also reported to have been influenced by the smoking ban in the Republic of Ireland (Asare and Studlar, 2009). Devolved powers were granted in 1999, following which White Papers outlined

health policy with a new emphasis on reducing health inequalities and protecting and improving health. The NHS was positioned as only one powerful tool in a much wider set of measures needed to address the determinants of health. Requirements for public involvement were also set out in contrast to the more consumerist approach in England (Drakeford, 2006).

It was highlighted that the Welsh Assembly has less devolved powers in contrast with Scotland (Smith and Hellowell, 2012), with a split between powers that have been devolved (including health and education) and those that have not (including Treasury and defence, and of particular relevance to public health the licencing of alcohol) (Jewell and Wilkinson, 2008, BMA, 2017b). This different level of political power limits policy-making capacity (Kaehne *et al.*, 2017). The authors of one paper described Wales as pursuing a policy agenda that is broadly akin to Scotland (Whiteford and Simpson, 2016). However, the limited devolved powers and the lack of separate Welsh institutions was described as constraining the Welsh Government's control over the NHS and the determinants of population health (Riley, 2016). Unlike Scotland, Wales does not have a long history of separate legislation for health care, as most Acts of Parliament in this area have been for both England and Wales (Greer, 2005).

Political ideology in Wales was described as being centre-left which drives the emphasis on a partnership approach (Timmins, 2013). The post-devolution governments in Wales have been dominated by the Labour party either alone or in coalition, although the Welsh Labour Party has followed different policies from its English counterpart. Differences between the Labour parties have been especially in health, with rejection in Wales of all notions of quasi-markets and competition in public services (Longley *et al.*, 2012). Political differences between Wales and England were described as fuelling divergence (Longley *et al.*, 2012). Policy in Wales was criticised by the authors of one paper as having clear statements of intent which were not supported by clear policy guidance on action (Kaehne *et al.*, 2017). Post-devolution policy was described as having enhanced the visibility and expectation of health improvement, with aspirational statements rather than targets which are not quantified, but indicate the desired direction of travel (Harrington *et al.*, 2009). Another paper criticised statements of strategic intention in Wales which have not succeeded each other seamlessly, or been followed through (Riley, 2016).

In contrast to Northern Ireland and Wales, whose policy development processes were reported to have been influenced by the smoking ban in the Republic of Ireland, England was reported to have been influenced less by Ireland and more by the United States (Asare and Studlar, 2009). The tobacco industry was also reported to have had considerable influence on Parliament in London (Asare and Studlar, 2009). Public health policy in England was criticised for having an unclear narrative and uncertainty regarding programmes and interventions to be prioritised to tackle obesity (Sautkina *et al.*, 2014). Also, there was criticism that there is an incoherent national approach to the problem of transport (Milne, 2012) together with a mismatch between rhetoric at policy level (which emphasises the importance of prevention) and the reality which has seen funding cuts (Perkins *et al.*, 2010). The House of Commons Health Committee reported that concerns exist regarding tension between evidence-based decision-making and political

priorities, with potential for services such as sexual health, drugs and alcohol to be neglected if felt not to be political priorities (House of Commons Committee, 2016).

The included literature highlighted a range of distinguishing features of politics in Scotland following devolution. The political system was described as being more consultative and consensual than Westminster (Fox, 2013) with more straightforward processes to introduce a Members Bill and supportive civil servants to draft legislation (Cairney, 2009). The comparatively small size of the senior civil service was reported to contribute to collegiality among officials and influential actors (Fox, 2013). The smaller size of the policy-making community was also proposed to make access to policy-makers easier which helps reframe policy debate (Katikireddi *et al.*, 2014a, McCambridge *et al.*, 2014). The accountability of NHS Boards to ministers was reported to ensure regular dialogue with officials (Steel and Cylus, 2012)

Drivers of PH policy divergence in Scotland were reported to be: strong political will and committed local stakeholders (Gugglberger and Inchley, 2014); centre-left political ideology which underpins a partnership approach (Timmins, 2013); an integrated cross-government approach to improving health designed to promote cross-sector working, with strengthened political and Executive leadership and investment (Wimbush *et al.*, 2007, Steel and Cylus, 2012); and a greater culture of openness and willingness to engage with stakeholders and whole population interventions than Westminster (McCambridge *et al.*, 2014); There was also reported to be a long-standing commitment of leading participants in Scottish government to reducing health inequalities and a distinct conception of the welfare state which is more favourable towards universalism (Fox, 2013). There was an emphasis in the literature on differences in “ethos” between Scotland and England, with a conceptualisation of health inequalities as being a problem of health disadvantage needing health improvement (Harrington *et al.*, 2009). Differing action (such as tobacco control) became a “signature devolution issue” by creating a helpful way of the Scottish National Party differentiating itself from the UK government, and articulating a distinctive Scottish approach (Katikireddi *et al.*, 2014a, Donnelly and Whittle, 2008). This description of a “distinctive Scottish approach” was echoed in a paper from 2016 (Greer *et al.*, 2016) which described the Scottish National Party government as having stability and a unique focus on long-term issues that are not obviously political winners.

Action at a political level was enabled by the election of a majority Scottish National Party government in 2011. Up to this point divergence had been limited following devolution, as the Labour Party had a key role in both the Scottish and UK government (Holden and Hawkins, 2012). Efforts to pass legislation on alcohol in particular had failed previously due to a minority government (Katikireddi *et al.*, 2014a). The Scottish National Party manifesto placed less emphasis than the Labour party on individual responsibility, and included a commitment to price-based measures on alcohol (Katikireddi *et al.*, 2014a). The nature of the devolved powers was described as influencing the action that was/could be taken in regard to alcohol, as duty and VAT powers were not devolved, therefore a tax-based intervention could not be pursued (Holden and Hawkins, 2012). The limited powers and the political climate including

cross-party support were thus influential in the pursuit of price-based interventions (Katikireddi *et al.*, 2014a, Donnelly and Whittle, 2008). The formation for the first time of an Scottish National Party government was also described as disrupting the strategy and relationships of key figures from the alcohol industry, which created the conditions for policy innovation (McCambridge *et al.*, 2014).

Policy communities

The role of policy communities in influencing political policy such as tobacco and alcohol, has previously been described. One paper asserted that the power and political influence of “the healthcare lobby” underpins resource allocation decisions which do not favour public health (Evans, 2004); it was unclear however which nations of the UK this paper was referring to. Another paper indicated how different characteristics of policy communities in the nations may be influential, by emphasising that the English health policy community is much larger and more diverse than the others (Greer, 2005). The author described Scottish health policy communities as being strongly present, having a strong sense of themselves as distinct, and tending to put far more emphasis on professional values, the value of professionals, and partnership as against competition or the use of market-like incentives. Wales was described as lacking the strong health policy communities that exist in England and Scotland, with stakeholders who may be marginal in health policy in other nations coming to the fore following devolution (Greer, 2005).

Organisational and leadership

Stability

The literature described how stability of organisations influenced the public health system. Relative stability of the NHS in Scotland (Fox, 2013) and Scotland being more stable than England in terms of relationships and partnerships was highlighted as a key difference between these nations (Blackman *et al.*, 2009). This was echoed in further papers describing relative stability and continuity in the health promotion infrastructure in Scotland (Wimbush *et al.*, 2007) which created a strong launching pad for achieving change (Steel and Cylus, 2012). However, as mentioned in the organisational section above, there has been more recent shifts here in Scotland, with a process of public health reform is currently underway in Scotland including the development of a single national body and the establishment of priorities for public health. Relative stability of organisational structures was described in Northern Ireland (Blackman *et al.*, 2010). Re-organisation in England was described as “time-consuming” (Abbott *et al.*, 2005), and impeding partnership working (Blackman *et al.*, 2012), with the public health system being more confused and fragmented than before following the transfer of staff from the NHS to Local Authorities (Gadsby *et al.*, 2017). The effect of re-organisation in England was also described as leading to variation in public health power and priorities between different local area authorities, and increased exposure of public health work to local budgets and cut backs (Greer, 2005). There could be shifting priorities and restructuring across different geographical and political boundaries (Perkins *et al.*, 2010), Milne (2012) in a descriptive discussion of transport interventions in England, concluded that the disruption incurred by organisational change will be disadvantageous, and in combination with austerity measures may delay effective action for some time. In a study carried out prior to the re-location to Local Authorities, pressure from outside the public health area, combined with an inability to identify benefits

in new organisational forms, was described as obstructing the ability of public health to achieve its potential in primary care (Fotaki, 2007).

A Final Report from the Phoenix study which examined the impact of structural changes to the health and care system in England focused on obesity described how the development of the new public health system was still in progress, with both the internal organisation of public health in local authorities, the NHS, and Public Health England very much in a continuing state of flux (Peckham *et al.*, 2016). In Local Authorities in particular, the additional organisational upheaval (a common feature of local government) has had a significant impact on the way the organisation of public health is developing. Another paper (Mackenbach, 2011) which analysed the English strategy on inequalities between 1997 and 2010, highlighted the speed with which policies were changed and evaluation targets adapted, which made partnership working practically impossible.

Partnership working and integration

We earlier outlined the introduction of partnership working in regard to it being a form of local/regional public health action that was being taken across the four nations. In this section we will consider barriers and facilitators to partnership working which influence the development of these partnerships, and other forms of organisational integration. The challenges of partnership working were described in all the four nations (Kaehne *et al.*, 2017) with structural divide/fragmentation between health and social care presenting a particular obstacle to partnership working. In England, difficulties in sharing information and challenges in relationships between organisations such as Local Authorities and Clinical Commissioning Groups was described in one study (Gadsby *et al.*, 2017). Differing approaches such as between public health and planning organisations could reportedly lead to a clash of timescales for delivery and a mismatch of expectations (Goodwin *et al.*, 2014). The authors of this study concluded that while cross-organisational initiatives provide an opportunity for closer working practices, that the timing of these is crucial. A qualitative study in England (Hunter and Perkins, 2012) found differing organisational priorities and lack of clarity regarding roles and responsibilities. It described partnerships getting “bogged down” in process issues, with a need for rules to follow for successful partnerships and investment in building trust and relationships. The authors highlighted that partnership working may be an enabler, rather than directly responsible for outcomes.

A study examining air quality management in England found that there were variable levels of collaboration between different organisations (Woodfield and *et al.*, 2003). The culture of the NHS in England was described as promoting competition rather than sharing experiences and networking (Gadsby *et al.*, 2017). One study found little evidence to suggest that Health and Wellbeing Boards were undertaking a system co-ordination role, or prioritising public health issues (Peckham *et al.*, 2016). In a qualitative study of the views of Health and well-being board members and other, the transfer of public health practitioners from the NHS, combined with a ring-fenced public health budget which largely reflected ‘downstream’ public health spending, was described as leading to conflicts over the choice of criteria for priority-setting stakeholders (Marks *et al.*, 2015). Changes in priorities for organisations could lead to gaps in service provision and across pathways of care. The House of Commons Health Committee

identified that the currently developing Sustainability and Transformation Plans offered an opportunity to embed public health and prevention targets in local policy and action (House of Commons Committee, 2016).

In Scotland, a government report highlighted similar issues to England regarding a need for greater clarity in organisational roles and links between organisations (Scottish Government, 2015). It provided a framework of factors which facilitate partnership working. In another report, organisations were described as having separate priorities, targets, budgets and responsibilities, with domination of councils and concerns regarding the ownership and leadership of some issues (Walton and Mackie, 2015). Legislation in 2014 required each Health Board and associated Local Authority to prepare an integration scheme setting out the model to be used in the area. Integration authorities were implemented from April 2016 (replacing Community Health Partnerships) to integrate community health, adult social care, adult primary care and some hospital services however, some local variation in what the focus of integration is on was reported. (Kaehne *et al.*, 2017). Coles *et al.* (2016) reported that while the Getting It Right for Every Child initiative in Scotland had the intention of further developing integration, the service landscape for children remained relatively fragmented, with multiple initiatives sometimes working at cross purposes with little co-ordination between activities.

One paper relating to Wales outlined how re-organisation had been designed to focus on and better integrate local government and social services, with local health boards and Local Authorities having an obligation to work together (Greer, 2005). However, one study described how local boards and Local authorities as not being coterminous hindered integration (Kaehne *et al.*, 2017) and another expressed concerns about the size of Welsh Health Boards as being too large and too remote from the population (Timmins, 2013). The first of these papers also outlined how Boards and Local Authorities were required to develop a five-year Health and Wellbeing Strategy to work in partnership, with a National Commissioning Board established to steer coordination between health and social care (Kaehne *et al.*, 2017). The authors were critical however of a lack of clear understanding of what successful integration looks like.

Northern Ireland has a fully integrated health and social care system, with health and social care trusts providing acute and hospital-based services and a variety of community services (Whiteford and Simpson, 2016). In contrast to other nations it was described as having a long history of a structurally integrated health and social care system (since the 1970s) (Gray and Birrell, 2013).

Systems leadership

Smith (2007) highlighted that influential individuals and expertise are important in terms of promoting particular ideas about health improvements, with “credibility” key. In Scotland, for example, political leadership on the issue of tobacco control (firstly against the ban, but then in support of it) was described by the authors on one included paper to be key to the Parliamentary Bill’s introduction and eventual enactment (Donnelly and Whittle, 2008). Another paper similarly outlined how on the issue of homelessness in Scotland, progress has been shaped by the level of sustained leadership and commitment

from pivotal policy drivers, especially ministers, Health Boards, and Directors of Public Health (Whiteford and Simpson, 2016). The author asserted that as leadership on this issue has waxed and waned, so has the progress. Another included paper described strengthened political and Scottish Executive leadership on the issue of health inequalities since devolution (Wimbush *et al.*, 2007).

A report on public health by the Scottish Government in 2015 highlighted the need for clarification and strengthening of the role of Directors of Public Health, with strengthened local and national leadership (Scottish Government, 2015). Concerns about the ownership and leadership of some issues were reported in a qualitative study of community partnerships (Walton and Mackie, 2015). The creation of public health practitioners (just over half qualified originally as nurses) in 2001 to strengthen local leadership on public health issues within Local Health and Care Co-operatives was described (CfWI, 2015). One included paper commented on the influence of leadership from professional networks (Fox, 2013). The author highlighted that Scotland has high status medical leaders who are closely connected with policy-making.

We found no included documents which referred to systems leadership in Northern Ireland. In Wales, day-to-day ministerial responsibility for public health resides with the Minister for Health and Social Services. Official departmental lead is through the Chief Medical Officer who acts as head of the Public Health and Health Professions Department. This department has policy leads for public health strategy, health improvement and health protection (Jewell and Wilkinson, 2008). Public health is the shared responsibility of all NHS bodies in Wales and more widely permeates all Welsh Government departments, which share a commitment to assess the health impact of policy developments. Leadership is provided by the NHS Trust Public Health Wales (PHW), which operates both nationally and through its staff located in each local health Board (Longley *et al.*, 2012).

Papers relating to England described how strong leadership is needed to achieve change, with successful public health systems having vision and political leadership (Marks *et al.*, 2010). We earlier described influencing as one of the public health ways of working, and the included literature linked influencing with strong leadership. One study for example which carried out a survey of Directors of Public Health concluded that changes, such as setting up new services or changing service providers, were more likely in authorities where public health leaders felt that they were influential (Jenkins *et al.*, 2016). The authors also highlighted that stability of leadership within public health is an important factor in level of influence exerted (Jenkins *et al.*, 2016). Another author emphasised that those working in public health must develop leadership to raise the profile of the health inequalities issue, ensuring it receives the resources, workforce capacity and attention it is due; and advocating for central government to play a key role in shifting social norms (Orton *et al.*, 2011).

The Health and Social Care Act in 2012 introduced changes to organisation, structure and delivery of health services and public health, with one of the aims of achieving clearer leadership (Gadsby *et al.*, 2017). Health and Wellbeing Boards were formally established in 2013 to promote collaboration and provide strategic leadership for commissioning (Marks *et al.*, 2015). A recent paper described how Health

and Wellbeing Boards bring together key leaders to coordinate commissioning, although the study reported variable performance (Gadsby *et al.*, 2017). As already mentioned above, the authors raised concerns regarding dispersed forms of public health leadership, due to the mixed way that the transfer of staff to Local Authorities occurred, which has made decision-making more complex. Another study similarly echoed concerns regarding leadership in new models of partnership working, calling for investment in leadership “of the right sort” which demands working across silos (Hunter and Perkins, 2012). A lack of leadership co-ordination between local authorities and NHS organisations in England was described in another qualitative study (Marks *et al.*, 2010).

At a local level, public health specialists in England were described as tending to provide a lead role in developing strategies for meeting local health needs and specialist advice to inform Primary Care Trust commissioning (Gadsby *et al.*, 2017). This mixed-method study exploring views and perceptions of a range of stakeholders raised concerns that public health commissioning is being more influenced by a new set of leaders – elected councillors with their own local knowledge, ideologies and experiences. The leadership of senior managers was further described as important in a systematic review of partnership working (Perkins *et al.*, 2010). The authors of this paper highlighted that having councillor and senior officer support could have a significant impact in terms of whether or not programmes were protected or commissioned. They also asserted that the public health profession had lost some of its authority and independence in being able to provide leadership where views were at odds with Local Authority or government policies. The organisational position of the public health team and the Director of Public Health were highlighted as being particularly influential in strategic decision-making.

In an echo of the call in Scotland for strengthened public health leadership, papers relating to England also highlighted that those working in public health must develop leadership to raise the profile of health inequalities and ensure public health receives attention (Orton *et al.*, 2011). Clarity over systems leadership at a national level in England was reported to be lacking (House of Commons Committee, 2016). Public health was described in one study as being run predominantly by middle level managers who have no formal training in public health, and who rely on selected groups of professional experts to provide advice (Oliver *et al.*, 2013). One study published in 2005 declared that the creation of a Board level post in each Primary Care Trust resulted in Directors of Public Health spending more time on corporate responsibilities and less time on public health (Chapman *et al.*, 2005a). As already noted, the Director of Public Health role was reported to be a particularly challenging one, due to increased responsibility and a wide range of tasks required in another paper (Fotaki, 2007). On a more positive note, the placing of Directors of Public Health in Local Authorities, with a clear focus on health improvement by means other than health care interventions, was also described as an opportunity for consideration of health and wellbeing impacts to be embedded far more firmly into all the processes of local government (Milne, 2012).

In a further critical account of public health leadership in England, Marks *et al.* (2015) described public health policies as being developed via a process of option appraisal and iterative and developmental

agreement, with a lack of clarity regarding the process of prioritisation and wider decision-making in the Local Authority and amongst Board members. The influence of Directors of Public Health in decisions was reported to be variable in the different sites studied. In one the Director of Public Health was seen to be over-ruled, in another negotiation had led to a significant loss of the public health budget however, in the third there was more successful budget allocation. The lack of leadership co-ordination between local authorities and NHS organisations was commented on by the same authors in an earlier paper (Marks *et al.*, 2010). Credibility issues were reported for non-medical Directors of Public Health, in terms of acceptance by other health professionals (Fotaki, 2007).

Accountability, governance and ownership

Included literature outlined how systems of accountability and ownership influenced the public health system. A paper from England for example (Marks *et al.*, 2015) highlighted that local authorities are democratically accountable to the local population: this was identified by interviewees in this qualitative study as a key factor in decision-making and underlined how priority-setting differed from a centralized NHS. Also, local government was subject to less central control of local spending decisions which provided greater scope for setting priorities. The study found however, that there were differences in understanding of what commissioning means between the NHS and Local Authorities. Another study reported that there was an emphasis on local flexibility but also significant central control – with centrally imposed targets, and increasing use of edicts on how to use NHS resources potentially undermining local decision-making (Kaehne *et al.*, 2017). Gadsby *et al.* (2017) described how councils in England have power to innovate and make changes locally that meet local needs under a general “power of competence” but this means public health decision-making is less amenable to central government control and less accountable. Tensions and disagreements between local and national scales of governance were reported in a discussion paper reflecting on the 2009 Swine Flu epidemic (Chambers *et al.*, 2012).

Another paper relating to England outlined how joint targets and shared agendas, led to shared responsibility between departments (Hawkes *et al.*, 2014). However, the need for clear and well defined pathways, and ownership of the public health agenda were called for in another study (Marks *et al.*, 2010). This qualitative study also emphasised the need for governance and incentive arrangements to be critically assessed for their impact on population health and wellbeing. It reported how different governance arrangements and approaches to governance can influence health outcomes through their impact on commissioning strategies, public health practice, and performance management and regimes.

A report by the House of Commons Health Committee highlighted that prevention was no longer the sole responsibility of people practicing in the NHS in England, although there was not enough being done to embed public health in the NHS. It criticised variation in performance between Local Authorities, and unclear accountability, with the mechanisms for public accountability and transparency about public health decision-making and performance at a local level being “far from clear” (House of Commons Committee, 2016). Blackman *et al.* however, reported that accountability appeared to be more systematic in England than either Scotland or Wales (Blackman *et al.*, 2010).

One paper relating to Northern Ireland reported differing expectations of the groups who formed the health partnerships, with differing agendas, difficulties with accountability and tensions regarding power sharing (Heenan, 2004).

In Wales, one paper outlined how central control had diminished control of Local Authorities in social care provision (Kaehne *et al.*, 2017), although an earlier paper described Local Authorities as having more influence and autonomy than their Scottish and English counterparts (Blackman *et al.*, 2009).

In Scotland there was reported to be an emphasis on integration and partnerships, local autonomy and joint strategies (Blackman *et al.*, 2009). In common with the other nations authors highlighted the importance of addressing issues of ownership (Gugglberger and Inchley, 2014). One example of difficulties in ownership was described, with a change in terminology from “health promoting school” to “health and wellbeing promoting school” being interpreted as a process of ownership change from health to combined health and education (Gugglberger and Inchley, 2014). An area criticised by the authors of one paper was the need to convince Local Authorities to recognise child poverty as a local priority, and to increase accountability in relation to child poverty in Scotland (Mooney and Scott, 2011). Another study reported that Audit Scotland had found issues with complex governance arrangements and difficulties agreeing budgets which needed addressing (Kaehne *et al.*, 2017). A reportedly particularly positive area was the strong accountability to the Scottish Parliament via ministers and scrutiny by the Health Committee, Audit Scotland and Healthcare Improvement Scotland within a National Performance Framework. As NHS Boards are accountable to ministers this reportedly led to regular dialogue with officials (Steel and Cylus, 2012).

The nature of public health

A sizeable proportion of the included literature discussed how particular characteristics of the field of public health influenced the way that the system operated. One author highlighted that the low status of public health led to the risk of raids on budgets to support other aspects of healthcare (Smith and Hellowell, 2012). In an earlier paper by the same author, the importance of the “sellability of ideas” regarding health improvement was highlighted, with some ideas being easier to sell to policy makers than others. Evans (2004) described the challenge of balancing competing resource demands for health improvement with health care, as being a central dilemma for public health, with questions of power often underlying resource allocation. This author asserted that in the UK government there was scepticism regarding the potential of public health to deliver required changes; contrasting the nature of interventions such as smoking cessation which are able to demonstrate observable benefits in the shorter term, with tackling inequality and disadvantage which cannot be delivered in the short to medium term (Evans, 2004).

Papers relating to England described public health as being unclear, with breadth and diversity which undermined the identity of public health (Abbott *et al.*, 2005). It was described as being a “cinderella area” (Blackman *et al.*, 2012), as being multi-faceted (Hawkes *et al.*, 2014), being a low level of priority (Abbott *et al.*, 2005), and lacking a clear role (Fotaki, 2007). Perkins *et al.* (2010) described the public

health system as “a chaotic sprawling dynamic set of practices, and set of activities that might more closely resemble a non-system”. One author noted the noticeable increase in the role of lifestyle behaviour change terminology in public health objectives, and a change in meaning of the term “determinants of health” to refer to predominantly lifestyle-behaviour issues (Smith *et al.*, 2009).

Other included papers relating to England echoed the challenges in demonstrating effects from public health interventions, with one describing incompatibility in the lengthy time frame for public health interventions, with the short-termism of politics, which makes it difficult to convince elected members of the value of public health services (Gadsby *et al.*, 2017). Governments are seen to measure success in terms of short term impacts on health rather than long term solutions required to tackle entrenched inequalities (Orton *et al.*, 2011). Authors described historic difficulties in getting health improvement to be prioritised on the policy agenda in England when the focus was on managing NHS deficits and achieving waiting time targets (Exworthy *et al.*, 2003). This resulted in public health being eclipsed in England (Blackman *et al.*, 2009). Health consumer groups operating in England were also reported to focus more on influencing policy in regard to care, treatment and support, rather than on preventing illness (Baggott and Jones, 2011).

The complexity of health improvement in general was particularly highlighted in one paper, which emphasised how the multiple causes and associations caused difficulties in attributing changes in public health outcomes to policy inputs, with the time period for impacts at odds with political and organisational timescales (Exworthy and Hunter, 2011). The need for time-limited specific targets was described as leading to policy-makers seeking “quick wins” such as via prescribing drugs and smoking cessation aids (Smith *et al.*, 2009). In their report on public health in England, the House of Commons Health Committee echoed these challenges, concluding that because returns on public health preventative investment are often seen as very long term, this makes them particularly vulnerable to cuts (House of Commons Health Committee, 2016).

A lack of research evidence for the most cost-effective approaches to delivering population-level interventions to reduce inequalities was reported in one paper as being an obstacle to public health being prioritised. The paper echoes the problems in measuring the effects of complex interventions or attributing cause and effect over long time periods (Orton *et al.*, 2011). This qualitative study exploring the views and experiences of stakeholders involved in decision-making to reduce inequalities described public health specialists finding themselves in a system in which the pressure to reduce waiting lists and meet budgetary demands often over-shadowed the need for preventive approaches (Orton *et al.*, 2011). There were difficulties described in redressing the balance from a medicalised culture and model of care, to more upstream preventive approaches, with commissioners often having a very different perspective to public health specialists in regard to focus of intervention. General Practitioners were also reported to have more of a focus on medical tasks rather than public health activities and a wider strategic role (Hoskins, 2009).

A lack of shared understanding regarding what exactly public health interventions consist of, and how they would be delivered, was also described, with challenges interpreting unclear aims in order to implement a programme (Sautkina *et al.*, 2014). Marks *et al.* (2015) concluded that there were differences between NHS-based public health and local authority-based public health in England, in regard to views over evidence, priority-setting processes and the role of local democratic decision-making, with a marked difference in emphasis between different Local Authorities in different areas in England. A qualitative study exploring the views of stakeholders in England by the same authors (Marks *et al.*, 2010) found that interviewees described tensions regarding definitions of evidence, with local knowledge influencing priorities. The fore-mentioned report by the House of Commons Health Committee in relation to England outlined tensions between politics and evidence (House of Commons Committee, 2015).

A more positive view was reported in 2010 by Perkins *et al.* (2010). This review of organisational partnership working in England reported some evidence of moves towards a more holistic approach in obesity, and the need to tackle the wider determinants of health, with some councils developing a system-wide strategic approach. In contrast to this description of a shift in focus, Egan *et al.* (2016) examined local policy making on alcohol in England, and concluded that there was little emphasis on public health concerns and long term health problems. Instead, social harm (crime and disorder) remained the primary focus. A qualitative study of stakeholder values and priority setting described differences in how public health and public health interventions were understood, with local authorities appearing to be less familiar with population-based approaches (Marks *et al.*, 2015). The Final Report from the Phoenix study in England outlined how Local Authority public health teams had been re-thinking the skills and skill mixes required for public health work, concentrating on bolstering their business management/commissioning skills, and concentrating less on more 'traditional' public health skills (Peckham *et al.*, 2016).

There was limited reference in the included literature relating to the nature of public health in documents relating to Wales or Northern Ireland and a number of included papers were quite old, risking that the content is now out of date. One paper dating from 2006 reported that the definition of communicable diseases differed between the nations of the UK. For example, in England and Scotland the approach to health protection includes wider threats such as climate change and injuries (Rowland, 2006). One document from 2009 and relating specifically to Scotland described lack of an evidence base for the Health Visiting service and a heavily clinically orientated approach (Hoskins, 2009). Similar to England, public health in Scotland was criticised for lack of clarity, with a need to be clearer about its priorities (Scottish Government, 2015). In this report from the Scottish Government, it was further noted that responsibility should be shared widely across different organisations, sectors, communities and individuals.

We earlier described how framing of the problem was an element of public health ways of working, with examples of how changing the nature of understanding of the public health problem had been influential.

Examples illustrate how the perceived nature of the public health problem had influenced outcomes, with the minimum unit pricing of alcohol policy in Scotland being presented as a health issue arising from overconsumption at a population level requiring broad, multi-sectoral policy action rather than a social disorder (Katikireddi *et al.*, 2014b), and the re-framing of the smoking in public places debate on health rather than business, including tackling of the myth that passive smoking was a nuisance rather than a killer.

Financing and resourcing

The influence of financial aspects in the public health system was described throughout the included literature and, indeed, was reported as a significant moderator on policy action, organisations and ways of working. Here, Timmins (2013) highlighted the interconnectedness of the nations, in that the level of spending in England affects the level of funding in the other nations through the Barnett formula. The ongoing economic context was emphasised as making the potential for divergence limited by one author (Smith and Hellowell, 2012). In particular, fiscal concerns were reported to be adversely affecting moves towards integration (Kaehne *et al.*, 2017). Interconnectedness between elements of the financial system was highlighted by a study describing how the cost of the 2009 swine flu epidemic had meant that other public health programmes had been de-prioritised (Chambers *et al.*, 2012).

Per capita spending on health in Scotland was reported as being historically higher than the rest of the UK in one paper, but the differential was reported by the authors to have narrowed in recent years (Steel and Cylus, 2012). Per capita expenditure in England, Scotland and Wales was reported to have converged since devolution in another paper, as the increase in England and Wales outpaced that in Scotland (Smith and Hellowell, 2012). This author emphasised however, that a key area of divergence between nations was in regard to the way that financial resource were tied to targets. A report by the British Medical Association criticised public health spending in all nations of the UK, with under-investment in prevention activities and funding cuts to PH (particularly in England) (BMA, 2017b). The report highlights a disproportionate focus of funding on treatment over prevention, with a need for a clearer understanding of prevention spending. The authors also commented that the decision to leave the European Union will be an increasingly important factor in public health spending issues.

Funding for public health services is allocated by the Welsh Government as part of the budget for health and social care services, and planned expenditure on public health and prevention was reported to have remained broadly similar between 2013/4 and 2017/18 (BMA, 2017b). Authors of another included report dating from 2012 criticised the decision of the Welsh Government to allow real health expenditure to decline faster than that in the rest of the UK, placing services under pressure (Longley *et al.*, 2012). The Welsh Assembly in contrast to Scotland currently have no powers to raise additional revenue through tax (Smith *et al.*, 2009) – this situation could change with the possible future extension of devolved powers in Wales expected in 2018. Edwards *et al.* (2014) reported that it was difficult to assess the amount of spend on health improvement, as many activities were outside the central programme budget and there was no readily available source of information on wider spending in Welsh Government and Public Health Wales on health improvement.

Northern Ireland, in common with Wales, has no powers to raise additional revenue through tax (Smith and Hellowell, 2012). One included report outlined limited data on funding in Northern Ireland, although what was available indicated an overall decrease in planned expenditure on health promotion, but an overall increased budget for the Public Health Agency of 5% between 2014/15 and 2015/16 (BMA, 2017b). The suspension of the Northern Ireland Assembly has led to public-health decision-making being left much more to a local level (Smith and Hellowell, 2012). The small size of the market was highlighted, and a lack of clarity regarding purchaser and provider roles was described (Gray and Birrell, 2013).

In Scotland, it was noted in a paper dating from 2012 that the 3% tax varying power had remained unused up to that point (Smith and Hellowell, 2012). It was reported that there had been an overall increase in planned public health expenditure between 2013/2014 however, funding in most areas was reported to have been stable (BMA, 2017b). The influence of budgetary constraints was emphasised, relating to UK government budget austerity policy (Fox, 2013). Increased fiscal pressures were described as making it difficult to maintain current levels of health care, with innovations potentially not sustainable (Fox, 2013; Steel and Cylus, 2012). Authors of a paper concluded in 2011 that achieving a reduction in poverty in the face of declining public resources may be more difficult in Scotland than in England due to differential effects of the economic crisis (Mooney and Scott, 2011). Importantly, the recent Scotland Act (2016) gives further devolution of powers to, for example, raise taxes and control certain aspect of employment support and welfare-related benefits, which may offer greater opportunity for the Scottish government to exert control over some key wider determinants of public health. These are thus potential areas of future policy divergence.

In England, some increased public health funding was reported in 2013/14, followed by reductions in real term spending in 2015/16, and projected decreases to 2020/21 (BMA, 2017b). The House of Commons Health Committee reported that public health funding was matched to past spending rather than need, with re-allocation resulting in only small reductions in variation between different areas (House of Commons Committee, 2015). Smith and Hellowell (2012) highlighted that England was the only country to have ring fenced public health spending in 2010. However, funding arrangements changed with the Health and Social Care Act in 2012 when responsibility moved from the NHS to Local Authorities; resulting in cuts to public health budgets and planned removal of the ring-fenced public health budget in 2018-19, with central government grants to Local Authorities replaced by funding through retained local business rates (BMA, 2017b, House of Commons Committee, 2015). Included papers described how there was use of the public health budget to invest in other council services, and how not having a ring-fenced budget leads to uncertainty (Gadsby *et al.*, 2017). Financial uncertainty had been created, with new contracts requiring negotiation in new ways, and two tier councils creating additional complexity (Timmins, 2013). Having a ring-fenced budget was also however, described as potentially negative as well as positive, due to an inability to innovate and do things in a different way (House of Commons Committee, 2016).

A qualitative study in England by Marks *et al.* (2015) reported the view of Health and Wellbeing Board members and other stakeholders that the public health budget in reality was a small proportion of the total Local Authority budget, and that impact would be maximized by public health being reflected in corporate values and in decision-making across the local authority. Public health funds were described as potentially acting as a catalyst for fostering innovation and making changes to promote health over the long term. However, most participants drew attention to the impact of austerity on local government priorities. The study highlighted the interconnectedness of elements within the public health system, finding four main influences on priorities for public health investment: an organisational context where health was less likely to be associated with healthcare and where accountability was to a local electorate; a commissioning and priority setting context located within broader Local Authority priority-setting processes; different views of what counts as evidence and the role of local knowledge; and debates over what constitutes a public health intervention.

The potentially positive outcome from changes to funding was echoed in a second paper, which described how in some cases the change had provided an opportunity to embed public health in other services, and enhance joint working and spending on integrated approaches (Gadsby *et al.*, 2017). Another paper in contrast argued that preventive services are at increased risk in times of financial stringency (Marks *et al.*, 2011). In a qualitative study carried out prior to the move to Local Authorities, commissioners described feeling constrained to balance investment for preventative work, whilst there was seen to be a need for immediate medical intervention and avoiding hospitalisation (Orton *et al.*, 2011). In another study, funding for population-based preventive services was described as being under threat from health care demands (Marks *et al.*, 2011). In Local Authorities, the budget could be “top sliced” and used to supplement funds for Local Authority services. The tightening of budgets overall was described in one recent study as leading to more central control (Kaehne *et al.*, 2017). However, in contrast, an earlier study highlighted how local government was subject to less central control of local spending decisions providing greater scope for setting priorities (Marks *et al.*, 2011). An example of the direct impact of financial resources on the public health system was provided in one paper examining transport policies (Milne, 2012). The authors described how financial restrictions in Local Authorities are leading to reductions in the monitoring of particulate pollution.

The influence of commissioning systems was described in a report from the House of Commons Health Committee on public health (House of Commons Committee, 2016). Commissioning was described as being confused and fragmented, causing problems in a number of areas. Issues with commissioning and co-ordinating services across local boundaries (such as across London Boroughs) was described in a paper exploring issues regarding homelessness (Whiteford and Simpson, 2016).

Workforce-related

A number of work-force-related influencing factors within the public health systems of the UK were noted in the included literature. Kaehne *et al.* (2017) concluded that there were workforce issues across all nations adversely affecting integration of public health services. The paper described how effective integration was likely to be hindered by differing approaches, cultures and care models, with mutual

professional recognition important moving forward. The authors highlighted workforce issues in Wales in particular, in terms of silo working and lack of a clear understanding of what successful integration looks like. A second paper relating to Wales outlined good practice being difficult to achieve, with “somewhat simplistic incentives” being offered, and these being subverted locally which diluted the original purpose of the initiative (Longley *et al.*, 2011). At the time of writing this report a Parliamentary Review of Health and Social Care in Wales was due to be published which is expected to have a section on workforce in it, together with detail about what integration in Wales looks like.

There were little data relating to workforce issues in Northern Ireland, apart from one paper dating from 2004 which described lack of an overall strategy or any training for change in the health visitor role following them moving out of their traditional role to one that was community-based (Heenan, 2004). The authors described the reconfiguration of role being approached in a “haphazard way” with a lack of long term vision.

A paper relating to Scotland described perceptions of a shared commitment to working together and the values of public health (Blackman *et al.*, 2012). A study examining in detail the public health workforce in Scotland described how workforce planning and development is challenging (CfWI, 2015). While Directors of Public Health have responsibility for their population, responsibility for delivering public health objectives is shared across organisations/professional groups (organisationally this includes national/local NHS Health Boards, local Partnerships and 9 Local Authorities). In an echo of a previous section on the nature of public health, workforce planning and development was also described as being complicated by different interpretations of public health (staff in health data analysis, health improvement and health visiting may/may not regard themselves as part of public health, and public health in Scotland is often seen as a specific NHS function led by NHS Directors of Public Health) (CfWI, 2015). Each organisation/group also has its own perspective of the staff comprising the core workforce, and many see the concept of “core” workforce as unhelpful if it creates silos, as opposed to joined-up, service delivery. Another issue outlined in this study related to a lack of consensus around definitions (especially in relation to academic posts, knowledge and intelligence, public health science, and delivery roles in health promotion). Other papers reported limited availability of public health specialists and a need for more public health resources in new planning partnerships (Walton and Mackie, 2015). Also, there was a report of inadequate workforce planning (Kaehne *et al.*, 2017).

The majority of the literature relating to workforce factors related to England, and in particular outlined issues created when staff moved from health authorities to other organisations. We detail the literature relating to England here. Professional isolation and poor career progression in new smaller teams was described (Abbott *et al.*, 2005). Training for staff was said to be variable, with reforms creating new working environments and the need for different skills to work effectively (Gadsby *et al.*, 2017). The variability of training for staff was echoed in another included document (CfWI, 2014). There were said to be challenges associated with developing the workforce, with a lack of qualified staff for posts, particularly in relation to clinical aspects (Fotaki, 2007). There were concerns that traditional public

health roles and responsibilities were being eroded, to be replaced by corporate and managerial ones (Chapman *et al.*, 2005b). One paper explored in particular the environmental health role which had been transformed from a regulatory role to one of “general practitioners of public health” (Dhesi and Lynch, 2016). The authors highlighted a lack of visibility and influence of environmental health in England due to a lack of statutory membership, exclusion from the Health and Wellbeing Boards, narrowing of scope, increasingly technical work, and the lack of recognition from other professions. The opportunities and challenges of the new environmental health practitioner role was outlined in another paper (Stewart and Bourn, 2013). The need to incorporate the vision of tackling the most acute health inequalities through evidence-based practice and taking a population-based approach was emphasised. A paper which was published before the move in England of public health staff to Local Authorities described a lack of public health workforce numbers to carry out tasks expected of Directors of Public Health - also a lack of public health skills such as epidemiology, statistics and information analysis, and also lack of health protection skills (Abbott *et al.*, 2005). The authors of this study applauded the introduction of public health networks to pool expertise and skills, share good practice and be a source of continuing professional development.

Organisational change in England was described as making it difficult to identify public health specialists (Fotaki, 2007). An “uneasy alliance” between medical and non-medical public health specialists was reported (Abbott *et al.*, 2006) and also challenges in regard to changes in Health Visiting which led to perceived reduced status and tensions between the social and medical Health Visitor public health role (Hoskins, 2009). Smaller teams following restructuring may mean consultants and specialists in public health having to generalise their skills to cover a much wider range of functions with a risk of the loss of specialised expertise (Chapman *et al.*, 2005a). Uncertainty regarding public health spending could also have implications for workforce planning, and decisions regarding future organisation of services (CfWI, 2015). Reductions in resources were reportedly forcing some local systems to examine novel approaches, which did not facilitate joint working (Perkins *et al.*, 2010).

The complexity of the public health workforce was highlighted by several studies. One study explored notions of the wider public health workforce in England and referred to it as “enormous, diverse and largely ignorant of its own potential for improving health” (CfWI, 2015). The roles and responsibilities were often unclear, with evidence of a lack of shift in priorities and strategies within the workforce, with variability in roles and responsibilities between areas apparent (Perkins *et al.*, 2010). Evans (2004) referred to capacity building as a key issue in public health in England, with a need to map out what it means to build capacity across the whole public health system. One paper described “over-engineering of partnerships” with a focus on structures rather than relationships and trust (Exworthy and Hunter, 2011). In one paper, the speciality of public health was described as increasingly moving away from an exclusively medical model (Milne, 2012). A report by the Commons Health Select Committee sums up the public health workforce challenges in England outlining “multiple players, uncertainty over roles and responsibilities, reduced capacity, difficulty forging relationships across more complex systems” and a

need to facilitate movement of staff across organisations to ensure they gained the breadth of experience needed (House of Commons Committee, 2016).

Audit, data and evaluation

Audit, data and evaluation-related factors were noted as moderators within the public health systems of the four nations in the included literature. Greer *et al.* (2016) concluded that in all nations there is a problem of little comparable data, with non-comparable baselines and a long lag between policies and outcomes. Mixed views about the desirability of performance management in all countries was reported (Harrington *et al.*, 2009). One study criticised the little modelling of how interventions would reduce inequalities, even in the English localities where detailed performance monitoring has been undertaken (Blackman and al., 2010). This was echoed by a further study which described little plausible modelling regarding whether programmes would enable targets to be met (Harrington *et al.*, 2009).

O'Neill *et al.* (2012) concluded that it is difficult to establish how Northern Ireland compares to other health systems as mechanisms are currently inadequate. Another author reported that policies regarding health in Northern Ireland (and Wales) tend to go unevaluated (Greer, 2016). A lack of learning from modernisation or delivery agendas in other nations was outlined, with a tendency to rely on consultant reports that focus on “efficiency interpretations” (Gray and Birrell, 2013).

Similarly, there were criticisms of audit and evaluation in England, with poor handling of data and inaccuracy of statistics and reporting (Bauld *et al.*, 2008); an absence of a culture of evaluation (Hawkes *et al.*, 2014); a lack of quality local epidemiological data (Chambers *et al.*, 2012); a lack of monitoring and evaluation (Perkins *et al.*, 2010); and poor access to data and information with information about local authorities performance against local priorities not collected systematically, making it difficult to scrutinise and compare the performance of Local Authorities robustly and objectively (House of Commons Committee, 2016). There were calls for systematic attempts to draw together learning from individual projects into an overarching evaluation (Jebb *et al.*, 2013) and sharing of best practice and systematic monitoring of Local Authorities’ progress towards public health goals at a national level (House of Commons Committee, 2016). England however, was described as having a strong audit culture (Bauld *et al.*, 2008) and being policy and audit driven with a “command and control approach” culture of centrally driven targets and performance assessment (Blackman *et al.*, 2012). A challenge to evaluation in the new landscape of integration of services was described by one study which emphasised that performance management regimes favour single organisational success (Marks *et al.*, 2010).

Bauld *et al.* (2008) suggested that there was some inaccurate reporting of data in Scotland. The focus of the Scottish system was also described in different ways to England in one paper, as being less driven by targets and more of a continuous improvement philosophy (Blackman *et al.*, 2012). Indeed, in contrast with a “command and control” approach in England, there was reported to be more emphasis on monitoring and support for improvement in Scotland with less arrangements for top-down performance measurement; with progress the subject of discussion and annual reviews of local Boards carried out by the Scottish Government (Blackman *et al.*, 2012). It was suggested that Wales had the least performance

assessment of targets of the four nations (Blackman *et al.*, 2012). Performance was noted as being scrutinised by Wales Audit Office review, and the Audit Committee with a voluntary concordat between bodies inspecting, regulating and auditing health and social care in Wales (Jewell and Wilkinson, 2008).

In relation to Wales, an historic study by Musingarimi (2009) was critical of a lack of baseline surveillance data. There have clearly been developments in relation to data collection and monitoring of outcomes in Wales however since that time, not least with the introduction of initiatives such as the Welsh Public Health Outcomes Framework. A more recent study examining homelessness actions suggested that there was a lack of key data and intelligence on the impact of homelessness in Wales (Whiteford and Simpson, 2016). Another more recent study suggested that policies regarding health inequalities tended to go unevaluated in Wales (Greer, 2016).

The media and interest groups

We described earlier how use of the media comprised a form of national public health action. The media and industry were also described in terms of being influential moderating factors within the public health system. The influence of the media was reported particularly in examples relating to Scotland and Wales. Media representation was described as helping to establish a consensus/strategy for action in a study of health inequalities and governance in Scotland (Fox, 2013). Lobbying by corporate businesses was described as extensive by authors of a study of the minimum unit pricing for alcohol policy in Scotland, with industry establishing long term relationships with individuals of influence, and where relationship building and lobbying are not successful legal challenges are used (Holden and Hawkins, 2012). Use of the media to influence public opinion was described in Scotland to help prepare for the legislation on smoking in public places, with “emotive and hard hitting advertisements” showing the health effects of passive smoking (Donnelly and Whittle, 2008). In Wales, the influence of the media was described in relation to poor publicity regarding waiting lists leading to a change in government priorities, which forced an emphasis on this and constrained funding for public health (Greer, 2016, Blackman *et al.*, 2012). Other papers described constant scrutiny by the media that tends to look for conflict and victims (Riley, 2016) and media interest in public health and health and social care that keeps ministers and officials “on their toes” (Jewell and Wilkinson, 2008).

Legal frameworks

One paper provided an example of the influence that legal frameworks can have within the public health system. Rowland (2006) highlighted that there is a lack of clarity regarding who is responsible for which aspects of communicable disease control across the UK. They described how the system has been further complicated by the development of multi-level governance in public health (such as the requirement to implement international health regulations). The authors called for an overhauling and consolidation of public health legislation. The author described how inadequacies of the old public health law in Scotland had caused difficulties in terms of allocating legal responsibilities for different health protection functions.

Outcomes

We searched for data in the included set of documents which related to comparisons of public health outcomes across the four nations. We did not complete searches directly relating to ‘outcomes’ and very few of the included sources made comparisons across the UK. We did not complete a comprehensive review of all publicly available outcomes data that exists across all the UK nations (ie. in the English and Welsh Public Health Outcomes Frameworks) as this was outside the scope of this short project and it would not have been possible to make appropriate judgements about how the different elements of each public health system (which we tried to move to set out in the material above) had contributed to these (thus risking inappropriate interpretation of why certain outcomes might appear ‘better’ or ‘worse’). Given there were very few existing comparative studies in our included sources, we scrutinised the outcomes data reported for the public health systems within all of the included set of documents and report these here as a way to illustrate the different types of public health systems outcomes that are relevant to include in our public health systems framework and to try to highlight, where possible, where any trends were mentioned in the included sources.

Authors of included papers highlighted that data comparability across the four nations tends to be limited, with the need for agreement on indicators that would provide most insight (Timmins, 2013). The targets and timescales in each country vary, with measurement of health improvements and health improvement gaps measured differently in each country, which leads to difficulty making like-for-like comparisons (Blackman *et al.*, 2009; Musingarimi (2009). Despite challenges, one recent study in 2015 endeavoured to make a comparison, concluding that for most indicators of equity across major determinants of health, there was little difference between Scotland and England or the whole of the UK (Frank *et al.*, 2015).

As suggested above, in addition to examining where there might be comparability, we were also interested in the range of outcomes that were outlined in the included set of documents, reporting these by elements of the public health outcomes frameworks from the four nations. We have previously in this section described the challenges in evaluating outcomes from public health action, due to the complex and multiple elements and long term nature of any change. It is perhaps unsurprising therefore that while the literature discussed at length the factors influencing the public health system, there were limited data reporting outcomes; with reference to planned targets to be achieved more common than outcomes.

Authors reported separation of outcomes frameworks in England between health, social care and public health (Kaehne *et al.*, 2017). System restructuring in England and Wales was highlighted as making it difficult to evaluate the effects of policies (Blackman *et al.*, 2009). There was criticism of targets in England for focussing on processes or activities rather than health outcomes (Perkins *et al.*, 2010) and criticism of misalignment of “departmental commitments”, “headline indicators” and overall targets (Mackenbach, 2011). This paper highlighted the importance of the scale required for achieving population impacts, with insufficient scale of implementation reflecting an “inability to change in response to new priorities”. Another author emphasised the importance of considering outcomes at a system-wide level, with the success of other parts of the system impacting on the NHS (Gadsby *et al.*, 2017).

Three documents provided general outcomes data for England. One reported that public health outcomes remained broadly similar since the move from the NHS to Local Authorities, with 80% of the 149 public health indicators being level or improving over the previous three years (House of Commons Committee, 2016). Another reported in 2010 that there was no evidence that health action zones had made greater improvements to public health than areas which were not Health Action Zones (Perkins *et al.*, 2010). This was echoed in another paper which concluded that they had made little impact in terms of measurable improvement in health outcomes (Mackenbach, 2011).

A lack of alignment between outcomes frameworks for the NHS and health and social care in Wales was criticised by the author of one study (Kaehne *et al.*, 2017). A lack of comparable data over time was reported to prevent analysis of performance of the health system in Scotland (Steel and Cylus, 2012). Objectives of successive Scottish governments regarding the health system were reported to be: improving population health; improving the outcomes of health care; and improving the efficiency and productivity of spending on health (Steel and Cylus, 2012)

In the following sections we have used the outcomes categorisation which was developed at the initial stakeholder workshop through an activity that combined the outcomes frameworks from the four nations and report what the included studies said about each type of outcome.

Early years

Aspects of the early years (child development) will be considered in further depth in our case study analysis in the next main section of this report. Included studies in the main review noted, in relation to the outcome category of early years, that in 2011/12 childhood rates of immunisation at age 2 were similar across the three devolved nations and North East England, although England as a whole had lower rates (Bevan *et al.*, 2014). The same study reported that rates of measles, mumps and rubella vaccination across all countries were more than 90%, but less than the 95% World Health Organisation recommended level. In contrast to this, another report indicated that Scotland had 96-98% of 2 year old children completing a course of core vaccinations, with the MMR 95% target being exceeded each year since 2008 (Steel and Cylus, 2012). Data from Northern Ireland reported that infant mortality rates fell from 9.6% per 1000 live births in 1985 to 5.1 in 2009 (O'Neill *et al.*, 2012). In relation to Scotland, one included study noted that rates of perinatal, infant and maternal mortality had been reduced to “very low levels” (Steel and Cylus, 2012).

Living well

The school leaver attainment gap was reported to be unchanged in both Scotland and England, although there may be a relative decline in participation in higher education from those in more disadvantaged groups in Scotland (Frank *et al.*, 2015). The same paper reported that Scotland had the highest mortality rate but similar or better self-reported health, and had had a greater reduction in amenable deaths over time. The country was also reported to have had a small but consistent fall in teenage pregnancy and upward trend in diagnosis of sexually transmitted infections (Steel and Cylus, 2012).

Ageing well

There was little data reported in the included studies in relation to this outcome category. We recognise that ageing well indicators (for example, % of older people reporting being in good health in Wales) are included as measures in relation to this outcome category in all nations.

Healthy behaviours/quality of life

The British Medical Association described a long-term decline in smoking linked to tobacco control policies across the UK, together with a reduction in hospital admissions for heart attacks and asthma following the smoke-free legislation (BMA, 2017b). One paper reported a 17% reduction in acute coronary syndrome following the smoking ban in public places in Scotland, but also concluded that cigarette consumption in England has declined in comparison with Scotland (Frank *et al.*, 2015). A 39% reduction in second-hand smoke exposure was reported in 11 year old children and adults and an 86% reduction in the amount of second-hand smoke in bars following the smoking in public places legislation in Scotland was also outlined in this study. Another paper reported similar outcomes following smoke-free legislation in England compared to Scotland, with improvement in air quality in bars and workplaces, decline in exposure of children, and a general pattern of smokers cutting down consumption (Bauld, 2011). A further paper found also that indoor air quality had improved in Scotland, England and Wales, with a mean reduction of 84-93% in particulate matter (Semple *et al.*, 2010). In Wales, there was report of a reduction from seven in ten people being exposed to second-hand smoke within the previous week to four in ten a year after the ban, with a greater reduction for non-smokers. There was no significant change in smoking prevalence however, with one in four adults smoking both before and after despite high levels of a reported intention to quit, and no apparent difference in attitudes to smoking (Malam, 2009).

The literature reported targets for obesity in three of the four nations. In Northern Ireland, for example, in 2005 a target to stop rising levels of childhood obesity by 2010 was similar to the target in England. There were also targets for food intake and increasing physical activity (Musingarimi, 2009). In Wales, in addition to food intake targets, there was an emphasis on change in knowledge and attitudes regarding food and nutrition (Musingarimi, 2009). In England, the target to halt year on year increases in obesity among children under 11 by 2010 was abandoned in 2007. It was replaced by an aim to reduce the prevalence of childhood obesity and overweight to 2000 levels by 2020 (Musingarimi, 2009). England was described as having the most ambitious target for physical activity, with 70% of adults meeting the recommended levels of activity by 2020. Scotland was described as having no obesity-related targets, with the failure to meet previous targets suggested as one reason for their non-existence. Instead guidance and national indicators exist in a number of areas including: to increase the proportion of healthy weight children; increase physical activity, increase the proportion of journeys made to work by public or active transport.

Sustainable system

Though perhaps tangentially related to a sustainable system, one paper highlighted a reduced number of full-time health visitors in post and a drop in training places in England following changes to the service (Hoskins, 2009).

Healthcare quality

Greer (2016) cited a report from the Organisation for Economic Collaboration and Development which found no systematic differences between healthcare quality in the four nations. Other health care quality outcomes were mentioned in Bevan *et al.* (2014) – we did not seek to extract healthcare data in detail.

Health protection

Hine (2010) highlighted that different antiviral approaches, cessation of routine testing and inherent cultural differences meant that making comparisons between UK countries based on available surveillance data was difficult. The lack of a single definition for terms such as a “pandemic influenza-related death” prevented direct comparisons between countries on issues of communicable disease control.

Impacts

Life expectancy

One paper concluded that life expectancy at birth had increased by about five years for men and three years for women between 1991 and 2011 across all nations of the UK. In 2011, England had the highest life expectancy at birth for males and females, followed by Wales, Northern Ireland and Scotland (Bevan *et al.* 2014). This was echoed in another study which reported that across the UK, life expectancy had increased between 1980 and 2013, and mortality rates from most cancers and circulatory diseases had decreased (Cylus *et al.*, 2015). Similarly, O’Neill found overall life expectancy in Northern Ireland has shown a continued increase for both men and women over the period 1908 to 2009 (O’Neill *et al.*, 2012). Life expectancy at birth in Scotland for both men and women in Scotland has improved over the past 30 years but remains below the average for the UK as a whole, mortality rates for people of working age are the highest in Western Europe (Steel and Cylus, 2012). In Wales, life expectancy has risen in line with that for the UK as a whole, together with healthy life expectancy, although self-reported health status and health-related behaviours have been resistant to change (Riley, 2016).

Papers relating to England highlighted the widened gap in life expectancy between deprived areas and the country as a whole (Barr *et al.*, 2017). Life expectancy had increased in deprived areas, but the national average has improved at a higher speed (Mackenbach, 2011). They described the few policies in the field of prevention which were directly relevant for achieving the life expectancy target. There was reported to be disagreement about measures, specifically the life expectancy target in England because it was regarded as too high level and long term (Blackman *et al.*, 2009).

Health improvement

Papers reported that the Scottish Government has set national health improvement targets in 2004 (Blackman *et al.*, 2009). A lack of impact on health improvement was noted however in a later paper

which the author attributed to not following through on priorities with funding allocations at a local level including not shifting the budget from health care to population health (Fox, 2013).

Health inequalities

Smith *et al.* (2009) criticised the assumption in documents from all countries of the UK that targeted approaches to improve health in poorer groups will reduce inequalities. They described how all four nations conceptualised health inequalities in terms of health deprivation and health gaps. In a later paper, Smith and Hellowell (2012) reported that all nations had moved from a determinants approach to a focus on health services and lifestyle behaviours, but for different reasons.

Smith *et al.* (2009) in their paper 2009 exploring convergence and divergence since devolution concluded that approaches taken to inequalities in the four nations are remarkably similar, with a focus in all countries on the need to improve the poor health of poor people, an emphasis on lifestyle behaviour change, but limited information regarding how this will be addressed. They reported that the Welsh Government had diverged most from other nations, although all countries have a focus on poor areas. They proposed that wider cultural and societal trends such as individualism may explain why policies in regard to inequalities have not diverged.

Mackenbach (2011) were critical of the lack of policies in England addressing income inequalities or other important determinants of health inequalities such as working conditions and excessive alcohol consumption, with some policies aiming to improve average access to treatment rather than inequalities in access. The focus in England was reported to be initially on closing the gap between areas of poor health and the national average (Bauld *et al.*, 2008). In particular, reduction in the infant mortality gap between manual groups and the rest of the population and reducing the life expectancy gap between the fifth of areas with the worst health and deprivation indicators and the national population average (Harrington *et al.*, 2009). This was later combined into a focus on area-based difference (Smith *et al.*, 2009). Northern Ireland was reported to have had a similar focus on closing the gap, the target in Scotland was to reduce the health of the poorest, and in Wales the target was to improve the health of the poorest and close the gap for child poverty (Bauld *et al.*, 2008). In Scotland, 2003 targets focused on health improvement in the most deprived areas rather than narrowing the gap (Smith *et al.*, 2009). Another paper highlighted that targets to increase the rate of health improvement in the most deprived areas were adopted later in other nations than England which introduced national targets in 2001 (Blackman *et al.*, 2009).

In Wales, it was reported that while a health inequality target was adopted in the same year as Scotland (2004) it was not seen as a performance target, with local targets and the emphasis on increasing access being more influential (Blackman *et al.*, 2009). Another paper echoes there being less focus on targets for reducing health inequalities in Wales, with health gaps monitored and health inequalities targets not specifically described but being essentially aspirational statements (Gugglberger and Inchley, 2014, Harrington *et al.*, 2009, Smith *et al.*, 2009).

Data relating to the impact of policy and action on health inequalities in England indicated that the absolute and relative rate gaps in smoking prevalence between targeted (Spearhead) areas and others were estimated to have fallen by a small but statistically significant amount between 2003-2004 and 2005-2006, described as a modest reduction in inequalities (Bauld *et al.*, 2007). Another paper by the same author reported less positive outcomes in that the relative gap between “Spearhead” LAs and England as a whole increased for males and for females between 1995-1997 and 2003-2005, and the relative gap in the infant mortality rate between “routine and manual groups” and the whole population widened between 1997-1999 and 2003-2005 (Bauld *et al.*, 2008). Exworthy *et al.* (2003) reported some improvement in absolute poverty but a widening of health (and wealth) gaps between social groups (social gradient) from the baseline period (1995-1997) to 2008 – particularly the gap between “routine and manual” groups and the population as a whole. From 2002-2006 the gap in life expectancy widened and the gap in infant mortality widened.

A longitudinal ecological study found that between 2001 and 2011 the increase in NHS resources to deprived areas accounted for a reduction in the gap between deprived and affluent areas in male mortality amenable to healthcare of 35 deaths per 100 000 population (95% confidence interval 27 to 42) and female mortality of 16 deaths per 100 000 (10 to 21), with each additional £10m of resources allocated to deprived areas being associated with a reduction in 4 deaths in males per 100 000 (3.1 to 4.9) and 1.8 deaths in females per 100 000 (1.1 to 2.4) (Barr *et al.*, 2014). The authors concluded that the policy of increasing the proportion of resources allocated to deprived areas was associated with a reduction in absolute health inequalities from causes amenable to healthcare.

A 2017 paper by the same authors outlined that during the Spearhead initiative the trend of an increasing gap in life expectancy was reversed (Barr *et al.*, 2017): the gap in life expectancy for men reduced by 0.91 months each year (0.54 to 1.27 months) and the gap in life expectancy for women reduced by 0.50 months each year (0.15 to 0.86 months). However, since the strategy had ended the inequality gap was reported to have increased at a rate of 0.68 months each year (–0.20 to 1.56 months) for men and 0.31 months each year (–0.26 to 0.88) for women. By 2012, the gap in male life expectancy was 1.2 years smaller (95% confidence interval 0.8 to 1.5 years smaller) and the gap in female life expectancy was 0.6 years smaller (0.3 to 1.0 years smaller) than it would have been if the trends in inequalities before the strategy was introduced had continued. They report that the Department of Health’s assessment in 2010 (using data up to 2008) estimated that the gap in life expectancy between Spearhead areas and the country as whole had widened, and several commentators therefore concluded that the strategy had not been successful. The authors suggested however, that there is an issue of timing here as the effects may not have been fully realised by the time of evaluation and a mixed picture has been found in other studies.

A review of documents and policies relating to health inequalities in England in 2011 concluded that despite some partial successes, there was a failure to reach targets that had been set (a 10% reduction in inequalities in life expectancy and infant mortality) due to the fact that the most relevant entry-points had not been addressed and actions were not delivered at a large enough scale for achieving population-wide

impacts (Mackenbach, 2011). The study found that most policies addressed one or more determinants of health inequalities, but only a few had direct relevance for achieving the life expectancy or infant mortality targets by 2010. A few policies related to underlying determinants of health inequalities, but effects on inequalities in life expectancy were unlikely either because any prevented deaths are relatively rare (as in the case of homelessness or fuel poverty) or because they will occur in a future far beyond 2010 (as in the case of child poverty, education and pathways to work). There were no policies addressing income inequality as such, or other important determinants of health inequalities such as working conditions and excessive alcohol consumption. The study outlines that while some of the “headline indicators” showed narrowing inequalities for areas such as smoking, rates went down both in manual and in non-manual groups, with a similar absolute rate of decline which increased relative inequalities and smoking prevalence in fact increased. Similarly, although absolute inequalities in mortality from cardiovascular disease declined, relative inequalities increased. Inequalities in income and wealth in England have remained unchanged or even widened over the previous 13 years (although at a slower speed than during the previous decades). The authors’ cited studies which examined specific initiatives including Health Action Zones which reportedly “made little impact in terms of measurable improvement” and the Sure Start programme following which “no health outcomes indicative of health inequalities reduction” were observed. Evaluation of the implementation of smoking cessation services in deprived areas indicated only “a tiny contribution” to reducing inequalities. The authors highlight that it is possible that without the intervention the gap in life expectancy or infant mortality may have widened to a greater extent over the time period. The authors asserted that achieving a reduction in inequalities “requires large-scale policy change in many fields, and this change will have to be articulated in political party programmes”.

Scotland introduced quantifiable national targets for reducing health inequalities in 2004. Initially the targets were around narrowing a ‘health gap’ but this later changed to a focus on health improvement targets in the most deprived fifth of local areas. Statistical areas were used rather than local government areas as in England (Blackman *et al.*, 2009). There was a conceptualisation of health inequalities as a problem of “health disadvantage” needing a health improvement response, with an emphasis on differences in the “ethos” between Scotland and England (Harrington *et al.*, 2009). Smith and Hellowell (2012) discussed the clear shift from a determinants approach, and suggested that it may have been due to reaching the end of the time limited targets that had been set. Targets for addressing poverty, disadvantage and health inequalities supplemented NHS health improvement targets on smoking, alcohol, physical activity, teenage pregnancy and child immunization (Wimbush *et al.*, 2007). In 2007, a “concordat” gave local authorities the opportunity to develop measures that would address the poverty and inequality that existed locally but within a framework of poverty reduction nationally (Mooney and Scott, 2011).

Bauld *et al.* (2008) concluded in 2008 that there had been modest progress in Scotland, but that the monitoring period was short so the trends may not be robust. It was reported that rates of self-reported smoking in pregnancy had declined overall, with decreases in smoking during pregnancy in the most

deprived areas, although there had been a greater decrease in the most affluent areas, and so some widening of the inequality ratio in first target year of 2003 to 2004 had occurred. A review of the Scottish health system in 2012 (Steel and Cylus, 2012) reported that most other western European countries had experienced faster increases in the health of their populations and the gap in health between the most and least deprived areas has widened. It was reported that life expectancy at birth for both men and women in Scotland had improved over the past 30 years, but remained below the average life expectancy for people in the UK as a whole. Projections for the next two decades forecast a widening gap between the most and least deprived areas and a fall in Scotland's position in the European "league table". Since 1999, residents of the poorest 15% of areas have seen a gain of 2.1 years in healthy life expectancy for men and 1.1 years for women, whereas the increases in the rest of Scotland for men and women have been 2.9 and 2.3 years respectively. Mortality from all causes has fallen in Scotland in line with trends across the rest of Western Europe. Mortality rates for Scottish children are close to the western European average however, for people of working age mortality is the highest in Western Europe. This echoed a paper published in 2011 which quoted the 2010 Christie Report "despite a series of Scottish Government initiatives and significant growth in spending since devolution, on most key measures social and economic inequalities have remained unchanged or become more pronounced" (Mooney and Scott, 2011).

Slope of the health gradient

A number of historic papers indicated a lack of focus on the slope of the health gradient. Here, for example, Bauld *et al.* (2008) highlighted that, at the time of writing the paper, none of the four nations expressed targets in terms of the social gradient. Smith *et al.* (2009) found "a few references" to social gradient in their analysis of policy documents from England in 2009 and "no references" in policy documents from Scotland or Wales. They reported that most of the literature from these three countries instead described health gaps and health disadvantage. It is not clear the extent to which this remains the case given the historic nature of these papers. We found some reference to the social gradient in government-related papers though have not completed a detailed analysis on this topic in the confines of this short project. Here, for example, and as mentioned above, one of the sources included in the study from the Scottish Government published in 2015 referred to the importance of taking action across the whole social gradient (Scottish Government, 2015) and the Welsh 'Fairer Outcomes for All' Action Plan states that a key healthy life expectancy target in relation to the social gradient.

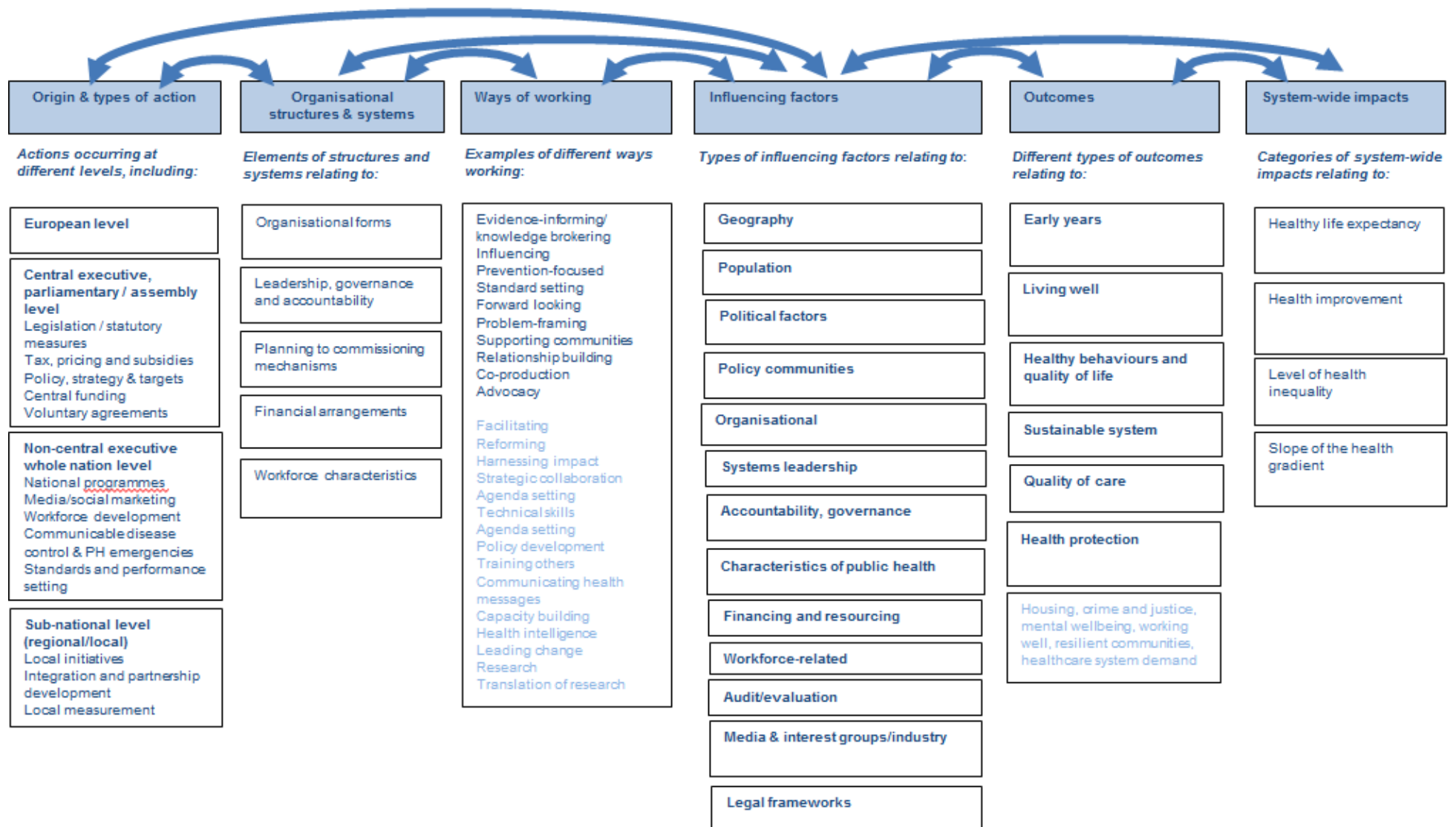


Figure 4. The public health systems framework (large scale diagram).

Section 4. Detailed results of the systematic review of ‘school readiness’ in the four nations

This section of the report outlines the detailed results of the in-depth review on a single priority area and case study of public health – school readiness – which was operationalised as “child development in the early years”. As indicated earlier in the report, this second review complemented the systems review by furthering exploring, and thus testing and sense checking, the systems elements identified in the wider review. As indicated earlier in the report, the decision to focus the case study area on school readiness was underpinned by public health stakeholders identifying this topic as a priority public health concern during the stakeholder workshop at the start of the research, given that developmental experiences and circumstances in the early years of a child’s life were recognised as key determinants of long-term health and health inequalities; and indeed are fundamentally shaped by wider determinants of health, such family poverty and income inequality.

The review sought to answer the following questions:

- What policy approaches have been taken to address school readiness in each country since devolution?
- What are the similarities and differences in how policy approaches to school readiness have been translated into practice in each nation since devolution?
- What are the similarities and differences between the four nations in relation to the quantitative data that is available on pathways from policy to school readiness
- To what extent is it possible to make direct quantitative comparisons between nations in relation to pathways from policy to school readiness?
- What examples can be identified since devolution that can usefully be learnt from and shared?

This section starts by outlining the study selection process and included study characteristics. It then moves on to present a detailed narrative synthesis of the results, which is organised around the key elements of the public health systems framework that was developed in the research as this served as a way to compare the detailed data extracted from the sources included in the review. Please note that this section presents a *detailed* synthesis of the results. A higher-level interpretation and discussion about what can be gleaned from these results in terms of key findings can be found in the discussion section of the report.

Study Selection

From a database of 901 sources, we identified 118 that met our inclusion criteria for the school readiness review and from which data from these documents was extracted and synthesised. See Figure 3 for a diagram illustrating the ‘school readiness’ case study review study selection process.

Type of studies excluded

A list of the documents excluded at full paper screening is provided as Appendix 4. Papers that were excluded at full paper review were often focused on teachers or assessment regimes, were not policy-oriented or covered policy action pre-devolution and so provided no information of relevance to the current review.

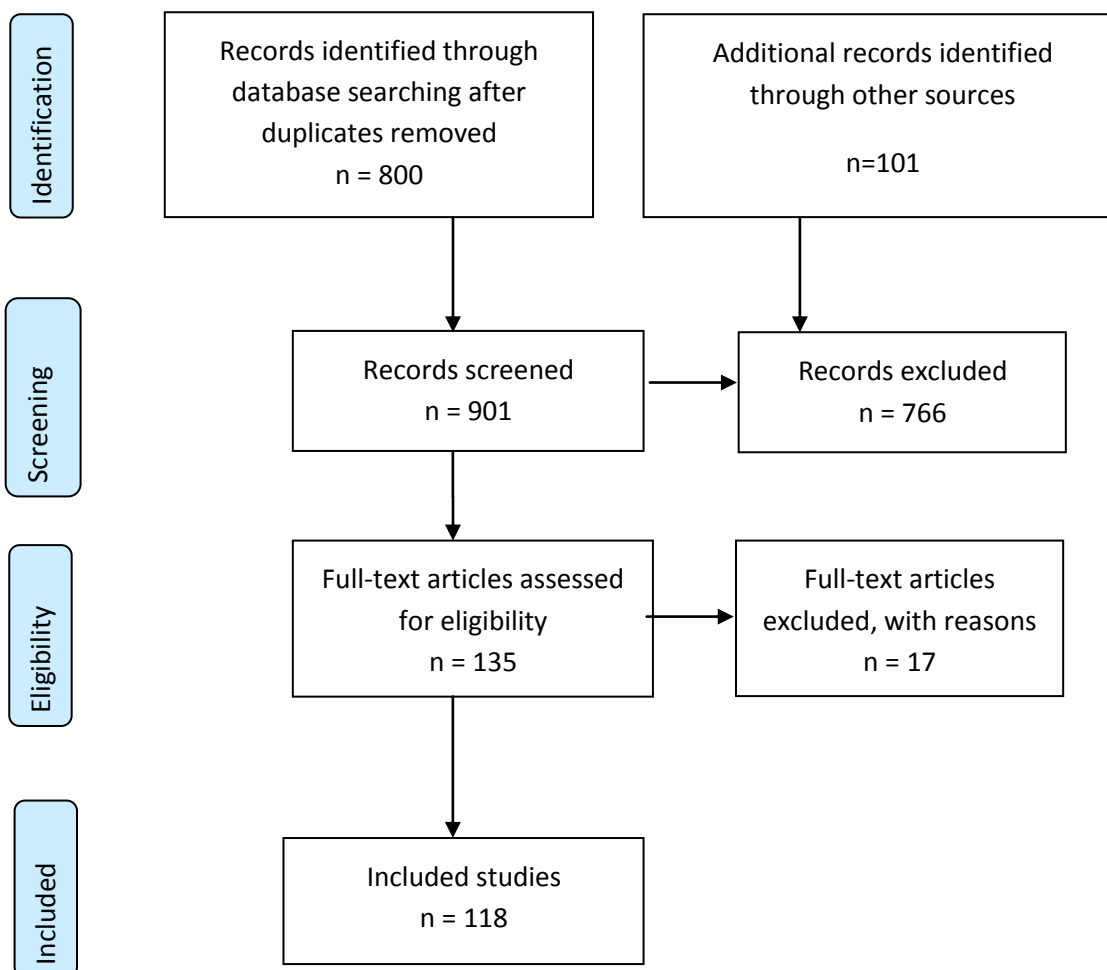


Figure 5. PRISMA diagram illustrating the process of study selection for the school readiness review.

Included study characteristics

Of the included 118 documents, this included 39 peer reviewed journal articles, 39 non-peer reviewed reports (evaluation, research, audit or statistical in nature), 32 policy, legal or guidance documents, and 8 classified as ‘other’ (for example, briefings) – see Figure 6. The identified sources of evidence were published between 2002 and 2017 (Figure 7), with most sources published in 2013 or later (n=84). The majority of the sources identified were descriptive in nature (n=75). The team identified 7 sources that had some form of comparative element: 5 sources focused on comparing across all 4 nations of the UK; 1 source focused on 3 nations (England, Scotland and Wales); 1 source on England and Scotland. The other identified sources contained evidence relating to just one UK nation (n=111).

Table 4 and Figure 7 show the type of source and country of focus of the 111 ‘single nation’ sources; showing that, of these, 34 were peer-reviewed journal articles, 37 were non-peer reviewed country

reports and 32 primary policy, strategy or legal documents. There were differences in the types of source of the ‘single nation’ evidence identified for each UK nation. For England, the majority of the ‘single nation’ evidence was journal articles (n=22). For Northern Ireland, Scotland and Wales, there was a mix; with more non-peer reviewed reports identified as of relevance alongside primary policy documentation. Table 5 provides summary details for each of the included sources of evidence in the review.

Figure 6. Graph showing type of source of all the evidence identified in the ‘school readiness’ review

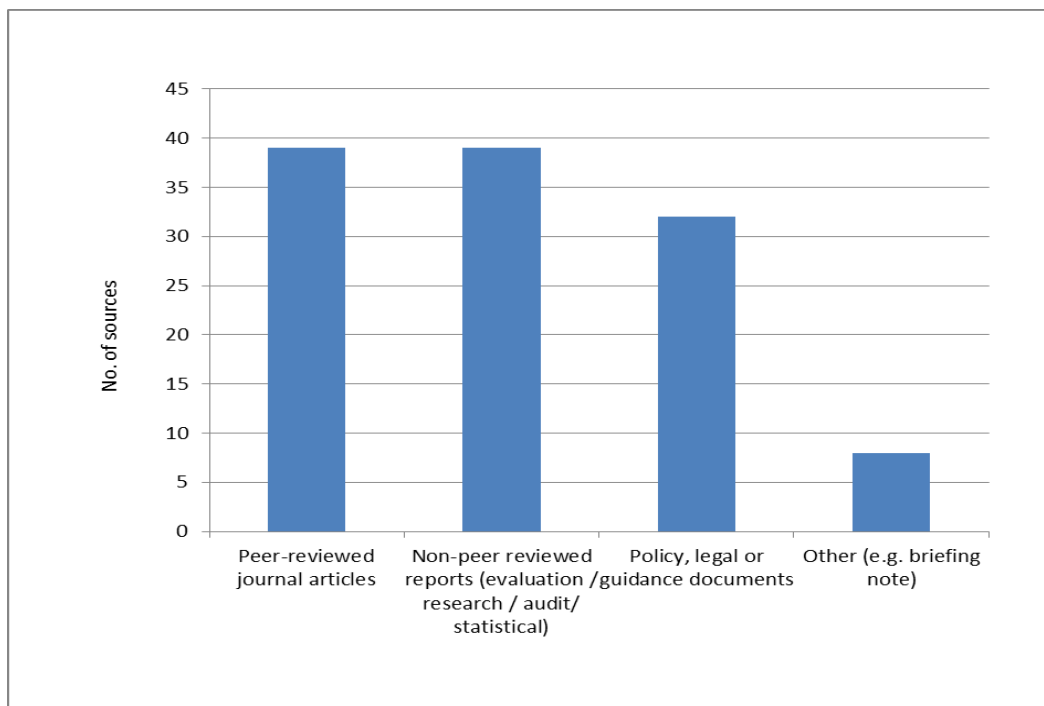


Figure 7. Graph showing the number of sources of evidence identified for the school readiness review by date of publishing.

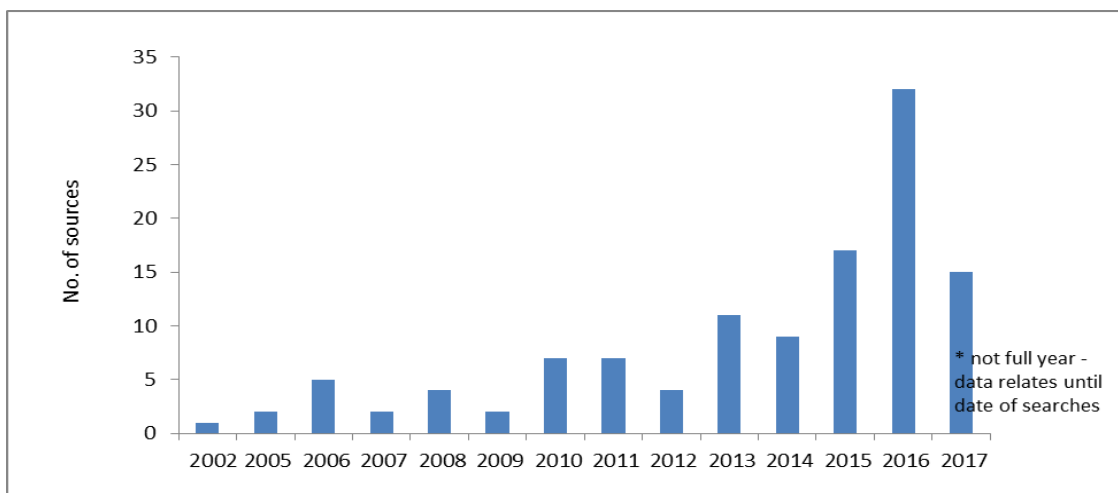


Table 4. The type of source and country of focus of the evidence identified for the school readiness which only focused on one UK nation.

Type of evidence

Country of focus	Peer-reviewed journal articles	Non-peer reviewed reports (evaluation, research, audit, statistical)	Policy, legal or guidance documents	Other (e.g. briefing note)	TOTALS
England	22	9	7	1	39
Northern Ireland	3	8	4	2	17
Scotland	4	14	9	3	30
Wales	5	6	12	2	25
TOTALS	34	37	32	8	111

Figure 8. Graph showing the type of source and country of focus of the evidence identified for the school readiness review which only focused on one UK nation.

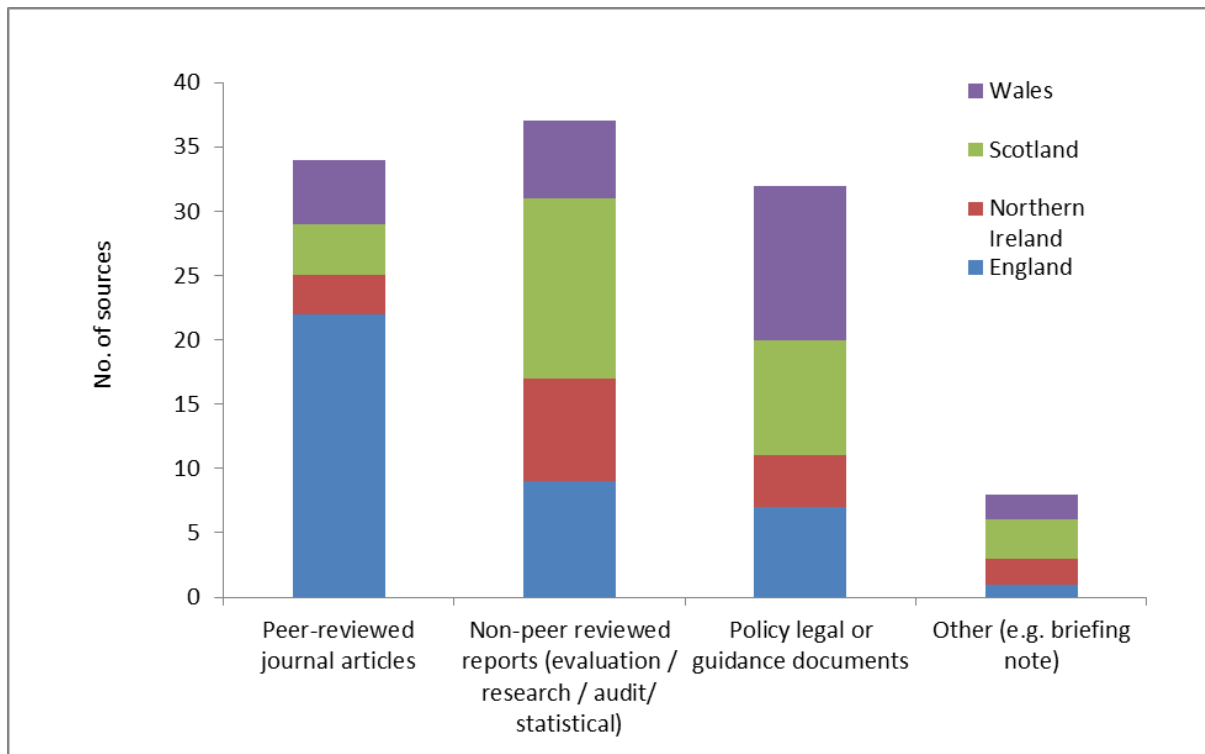


Table 5. Summary of included sources in the school readiness case study review.

First author, date, source title	Source Type	Design	Country / Countries
Ang (2014). Preschool or Prep School? Rethinking the Role of Early Years Education.	journal article	Descriptive	England
Belsky J <i>et al.</i> (2006) Effects of Sure Start Local Programmes on children and families: early findings from a quasi-experimental, cross sectional study.	journal article	Descriptive	England
Belsky J <i>et al.</i> (2008). Research and Policy in Developing an Early Years' Initiative: The Case of Sure Start.	journal article	Descriptive	England
Bradbury, A. (2013). Education policy and the 'ideal learner': producing recognisable learner-subjects through early years assessment.	journal article	Qualitative	England
Bradbury, A. (2011). Rethinking assessment and inequality: The production of disparities in attainment in early years education.	journal article	Qualitative	England
Bradshaw P <i>et al.</i> (2015). Growing Up in Scotland: The Circumstance and Experiences of 3 year olds living in Scotland 2007/2008 and 2013.	Evaluation / research / audit/ statistical report	Quantitative	Scotland
Bradshaw, P. <i>et al.</i> (2012). Growing Up in Scotland: Early experiences of Primary School.	Evaluation / research / audit/ statistical report	Quantitative	Scotland
Bradshaw <i>et al.</i> (2016) Language Development and Enjoyment of Reading: Impacts of early parent-child activities in two growing up in Scotland cohorts.	Evaluation / research / audit/ statistical report	Quantitative	Scotland
Bywater T. and Sharples, J. (2014). Effective evidence-based interventions for emotional well-being: Lessons for policy and practice.	journal article	Review	All UK
Care Inspectorate (2016a) Scotland's early learning and childcare – an initial overview of the expansion of provision during 2014/15.	Evaluation / research / audit/ statistical report	Descriptive	Scotland
Care Inspectorate (2016b) Review of Scotland's Early Learning and Childcare Expansion.	Evaluation / research / audit/ statistical report	Mixed methods	Scotland
Centre for Effective Services (2013). Prevention and early intervention in children and young people's services - Child health and development.	Evaluation / research / audit/ statistical report	Descriptive	Northern Ireland
Children and Families (Wales) Measure (2010)	Policy/legal/guidance document	Descriptive	Wales
Children in Wales (2012). Legislative framework for Childcare in Wales.	Other - briefing note	Descriptive	Wales
CNP (2017). Colin Neighbourhood Partnership.	Other - briefing note	Descriptive	Northern Ireland
Coles E. <i>et al.</i> (2016). Getting It Right for Every Child: A National Policy Framework to Promote Children's Well-being in Scotland, United Kingdom.	journal article	Descriptive	Scotland
Couper, S and Mackie, P. (2016). Scottish Public Health Network (ScotPHN) 'Polishing the Diamonds' Addressing Adverse Childhood Experiences in Scotland.	Evaluation / research / audit/ statistical report	Descriptive	Scotland
Cowley <i>et al.</i> (2009). Too little for early interventions? Examining the policy-practice gap in English health visiting services and organization.	journal article	Quantitative	England
Cunningham-Burley S. <i>et al.</i> (2002). Mapping Sure Start Scotland.	Evaluation / research / audit/ statistical report	Mixed methods	Scotland

First author, date, source title	Source Type	Design	Country / Countries
CYPIC (2017). Child and Young People Improvement Collaborative (CYPIC) (2017) Children and Young People Improvement Collaborative – Vision and Outcome Aims.	Policy/legal/guidance document	Descriptive	Scotland
Darbyshire N. <i>et al.</i> (2014). An Unsure Start for Young Children in English Urban Primary Schools.	journal article	Descriptive	England
Department for Education (2013) Sure Start Children’s Centres Statutory Guidance.	Policy/legal/guidance document	Descriptive	England
Department for Education (2017). Early education and childcare - Statutory guidance for local authorities.	Policy/legal/guidance document	Descriptive	England
Department of Education NI (2006). Curricular guidance for pre-school education.	Policy/legal/guidance document	Descriptive	Northern Ireland
Department of Education NI (2017) Important Information for Parents Applying for a Pre-school Education Place 2017/18 School Year.	Policy/legal/guidance document	Descriptive	Northern Ireland
Department of Health (2015) Universal Health Visitor Reviews Advice for local authorities in delivery of the mandated universal health visitor reviews from 1 October 2015.	Policy/legal/guidance document	Descriptive	England
Department of Health (2016) Improving Outcomes and supporting Transparency: Part2: Summary technical specifications of public health indicators. DH August 2016.	Policy/legal/guidance document	Descriptive	England
Department of Health, Social Services and Public Safety (2010). Healthy Child, Healthy Future - A Framework for the Universal Child Health Promotion Programme in Northern Ireland.	Policy/legal/guidance document	Descriptive	Northern Ireland
Dunlop A.W. (2015). Aspirations and actions: early childhood from policy to practice in Scotland.	journal article	Policy review	Scotland
DWP (2017) Improving lives: helping workless families.	Policy/legal/guidance document	Descriptive	England
East Lothian Council (2017) Early development instrument.	Other - briefing note	Descriptive	Scotland
Ellis, S. and Moss, G. (2014). Ethics, education policy and research: the phonics question reconsidered.	journal article	Descriptive	England
ETI (2016). Chief Inspector’s Report 2014-2016. Education and Training Inspectorate.	Evaluation / research / audit/ statistical report	Descriptive	Northern Ireland
Evans, K. (2013). School Readiness: The Struggle for Complexity.	journal article	Descriptive	England
Geddes R. <i>et al.</i> (2011). A rapid review of key strategies to improve the cognitive and social development of children in Scotland.	journal article	Review	Scotland
Glasgow Centre for Population Health (2017) SDQ - pre-school children.	Other - briefing note	Descriptive	Scotland
Hatcher, <i>et al.</i> (2006). Evidence for the Effectiveness of the Early Literacy Support Programme.	journal article	Quantitative	England
Hutchings, <i>et al.</i> (2017). Evaluating the Incredible Years Toddler Parenting Programme with parents of toddlers in disadvantaged (Flying Start) areas of Wales.	journal article	Mixed methods	Wales
ISD Scotland (2016) Methodology to produce a revised estimate of health visitor staff in post as at 31 March 2014	Evaluation / research / audit/ statistical report	Descriptive	Scotland

First author, date, source title	Source Type	Design	Country / Countries
ISD Scotland (2017a) Child Health 27-30 Month Review Statistics Scotland 2015/16.	Evaluation / research / audit/ statistical report	Quantitative	Scotland
ISD Scotland (2017b) Child Health Programme Child Health Systems Programme Pre-School (CHSP Pre-School).	Policy/legal/guidance document	Descriptive	Scotland
Kidner, C. (2011). SPICe Briefing - Early Years – Subject Profile.	Other - briefing note	Descriptive	Scotland
Knibbs <i>et al.</i> (2013). National Evaluation of Flying Start: Impact Report.	Evaluation / research / audit/ statistical report	Quantitative	Wales
Lea <i>et al.</i> (2015). Evaluation of Making it REAL (Raising Early Achievement in Literacy).	Evaluation / research / audit/ statistical report	Descriptive	England
Lewis, (2011). From Sure Start to children's centres: an analysis of policy change in English early years programmes.	journal article	Mixed methods	England
Local Government Association (2016) Get in on the Act – Childcare Act 2016.	Other - briefing note	Descriptive	England
Machin <i>et al.</i> (2013). Educational attainment across the UK nations: Performance, inequality and evidence.	journal article	Mixed methods	All UK
Maryat <i>et al.</i> (2014). Parenting Support Framework Evaluation, August 2009 to December 2013 - Final Report.	Evaluation / research / audit/ statistical report	Mixed methods	Scotland
McCoy, E. (2011). Local Authorities Improving Life Chances: A Review of a New Approach to Raising Literacy Levels.	Evaluation / research / audit/ statistical report	Descriptive	England
McGuinness C. <i>et al.</i> (2014). Impact of a play-based curriculum in the first two years of primary school: Literacy and numeracy outcomes over seven years.	journal article	Quantitative	Northern Ireland
Melhuish E. <i>et al.</i> (2008). National Evaluation of Sure Start Research Team. Effects of fully-established Sure Start Local Programmes on 3-year-old children and their families living in England: a quasi-experimental observational study.	journal article	Quantitative	England
Melhuish E. <i>et al.</i> (2007). Variation in community intervention programmes and consequences for children and families: the example of Sure Start Local Programmes.	journal article	Quantitative	England
Melhuish, E. (2016). Longitudinal research and early years policy development in the UK.	journal article	Descriptive	England
Melhuish E. <i>et al.</i> (2010). Evaluation and value of sure start.	journal article	Descriptive	England
Merrell C. and Tymms, P. (2011). Changes in children's cognitive development at the start of school in England 2001-2008.	journal article	Quantitative	England
Montgomery A. <i>et al.</i> (2016). EITP Workstream 2: An Audit of Evidence-Based Parenting Programmes in Northern Ireland.	Evaluation / research / audit/ statistical report	Mixed methods	Northern Ireland
Morris M. <i>et al.</i> (2014). Flying Start Synthesis Report.	Evaluation / research / audit/ statistical report	Mixed methods	Wales
Mulholland <i>et al.</i> (2016). Summary of Community Planning Partnerships' (CPPs) Early Years Change Fund Returns (2012-2015).	Evaluation / research / audit/ statistical report	Descriptive	Scotland
NAO (2016). Entitlement to free early education and childcare. Report by the Comptroller and Auditor General.	Evaluation / research / audit/ statistical report	Descriptive	England
National Children's Bureau (2016). Incredible Years in Northern Ireland: Mapping & Fidelity Report 2013-15.	Evaluation / research / audit/ statistical report	Mixed methods	Northern Ireland

First author, date, source title	Source Type	Design	Country / Countries
National Foundation for Educational Research (2010). Evaluation of Integrated Children's Centres in Wales.	Evaluation / research / audit/ statistical report	Qualitative	Wales
Naumann <i>et al.</i> (2013). Early Childhood Education and Care Provision: International Review of Policy, Delivery and Funding Final Report.	Evaluation / research / audit/ statistical report	Descriptive	England and Scotland
Neaum S. (2016). School Readiness and Pedagogies of Competence and Performance: Theorising the Troubled Relationship between Early Years and Early Years Policy.	journal article	Descriptive	England
NESS team (2010). The impact of Sure Start Local Programmes on five year olds and their families. Research Report DFE-RR067.	Evaluation / research / audit/ statistical report	Quantitative	England
Northern Ireland Executive (2016) Draft Programme for Government Framework (PFG) 2016 – 21.	Policy/legal/guidance document	Descriptive	Northern Ireland
OFSTED (2015). Early years -The report of Her Majesty's Chief Inspector of Education, Children's Services and Skills 2015.	Evaluation / research / audit/ statistical report	Descriptive	England
O'Hagan, J (2017). Northern Ireland Health and Social Care Workforce Census March 2017	Evaluation / research / audit/ statistical report	Descriptive	Northern Ireland
Ormston, R. <i>et al.</i> (2014). Evaluation of the family Nurse Partnership Programme in NHS Lothian, Scotland: Summary of Key Learning and Implications.	Evaluation / research / audit/ statistical report	Mixed methods	Scotland
Perry, C. (2013). Early years provision. NIAR 68-13. Research and Information Service - Research Paper.	Other - briefing note	Descriptive	Northern Ireland
Perry, C. (2016). Programme for Government: Education. Research and Information Service - Research Paper.	Evaluation / research / audit/ statistical report	Descriptive	Northern Ireland
PHE (2016). Review of mandate for the universal health visiting service.	Evaluation / research / audit/ statistical report	Mixed methods	England
PHE (2016b) Health Matters: Giving every child the best start in life.	Policy/legal/guidance document	Descriptive	England
PHE (2016c) Best start in life and beyond: Improving public health outcomes for children, young people and families - Guidance to support the commissioning of the Healthy Child Programme 0-19: Health Visiting and School Nursing services	Policy/legal/guidance document	Descriptive	England
PHW (2015) Welsh Adverse Childhood Experiences (ACE) Study - Adverse Childhood Experiences and their impact on health-harming behaviours in the Welsh adult population.	Evaluation / research / audit/ statistical report	Descriptive	Wales
PHW (2016) Making a Difference: Investing in Sustainable Health and Well-being for the People of Wales	Evaluation / research / audit/ statistical report	Descriptive	Wales
PHW (2017) Our Strategic Plan 2017-2020.	Policy/legal/guidance document	Descriptive	Wales
Pugh, G. (2010). Improving Outcomes for Young Children: Can We Narrow the Gap?	journal article	Descriptive	England
Rankin J. <i>et al.</i> (2015). Tackling Health Inequalities in Scotland: an Innovative Approach to Implement the 'Early Years' Policy into Practice.	journal article	Descriptive	Scotland
Regulation and Quality Improvement Authority (2016). Every Child Counts Regional Audit of the Child Health Promotion Programme – Health Visiting and School Nursing Service.	Evaluation / research / audit/ statistical report	Mixed methods	Northern Ireland

First author, date, source title	Source Type	Design	Country / Countries
Roberts-Holmes, G. (2015). The "Datafication" of Early Years Pedagogy: "If the Teaching Is Good, the Data Should Be Good and if There's Bad Teaching, There Is Bad Data.	journal article	Qualitative	England
Robling <i>et al.</i> (2015) Building Blocks trial Executive Summary. Evaluating the Family Nurse Partnership in England: A Randomised Control Trial 006/0060.	Evaluation / research / audit/ statistical report	Mixed methods	England
Robling et al (2016). Effectiveness of a nurse-led intensive home-visitation programme for first-time teenage mothers (Building Blocks): a pragmatic randomised controlled trial.	journal article	Mixed methods	England
RSM McClure Watters (2015). Independent Review of the Sure Start Programme.	Evaluation / research / audit/ statistical report	Mixed methods	Northern Ireland
Sammons <i>et al.</i> (2015). The impact of children's centres: studying the effects of children's centres in promoting better outcomes for young children and their families. The impact of children's centres: studying the effects of children's centres in promoting better outcomes for young children and their families Evaluation of Children's Centres in England (ECCE, Strand 4).	Evaluation / research / audit/ statistical report	Mixed methods	England
Save the Children (2017). The Children Act 2004.	Other - briefing note	Descriptive	Wales
ScotPHO (2017) Online Profile Tool v2.0.1.	Policy/legal/guidance document	Descriptive	Scotland
Scottish Government (2012a) Supporting Children's and Young People's Learning: A Report on Progress of Implementation of The Education (Additional Support for Learning) (Scotland) Act 2004 (As Amended).	Evaluation / research / audit/ statistical report	Descriptive	Scotland
Scottish Government (2014) Building the Ambition National Practice Guidance on Early Learning and Childcare Children and Young People (Scotland) Act 2014.	Policy/legal/guidance document	Descriptive	Scotland
Scottish Government (2008) The Early Years Framework.	Policy/legal/guidance document	Descriptive	Scotland
Scottish Government (2015a). OECD-Scotland Education Policy Review - A background report by the Scottish Government.	Policy/legal/guidance document	Descriptive	Scotland
Scottish Government (2015b) Universal Health Visiting Pathway in Scotland Pre-Birth to Pre-School.	Policy/legal/guidance document	Descriptive	Scotland
Scottish Government 2016 National Outcomes.	Policy/legal/guidance document	Descriptive	Scotland
Scottish Government, 2017 Wellbeing.	Policy/legal/guidance document	Descriptive	Scotland
Smith, T. (2007). Early Years services in Britain 1997-2007: a quiet revolution?	journal article	Descriptive	England
Social Mobility Commission (2016) State of the Nation 2016: Social Mobility in Great Britain.	Evaluation / research / audit/ statistical report	Descriptive	All UK
Sylva K and Pugh G (2005). Transforming the Early Years in England.	journal article	Descriptive	England
Taylor C. <i>et al.</i> (2016) Implementing curriculum reform in Wales: the case of the Foundation Phase.	journal article	Mixed methods	Wales
Taylor C. <i>et al.</i> (2013): Devolution and geographies of education: the use of the Millennium Cohort Study for 'home international' comparisons across the UK.	journal article	Quantitative	All UK

First author, date, source title	Source Type	Design	Country / Countries
Taylor C. <i>et al.</i> (2015). Evaluating the Impact of Early Years Educational Reform in Wales to Age Seven: The Potential Use of the UK Millennium Cohort Study.	journal article	Quantitative	Wales
Wainwright N. <i>et al.</i> (2016). The Foundation Phase in Wales – a play-based curriculum that supports the development of physical literacy.	journal article	Mixed methods	Wales
Walsh, G. <i>et al.</i> (2006). An appropriate curriculum for the 4–5 year old child in Northern Ireland: Comparing play-based and formal approaches.	journal article	Mixed methods	Northern Ireland
Walsh G. <i>et al.</i> (2010). Implementing a Play-Based and Developmentally Appropriate Curriculum in Northern Ireland Primary Schools: What Lessons Have We Learned?	journal article	Mixed methods	Northern Ireland
Welsh Government (2009). Flying Start and Cymorth: An Interim Evaluation Report	Evaluation / research / audit/ statistical report	Mixed methods	Wales
Welsh Government (2011). Healthy and Sustainable Pre-School Scheme National Award Criteria September 2011.	Policy/legal/guidance document	Descriptive	Wales
Welsh Government (2012) A vision for health visiting in Wales.	Policy/legal/guidance document	Descriptive	Wales
Welsh Government (2013) Building a Brighter Future: Early Years and Child Care Plan.	Policy/legal/guidance document	Descriptive	Wales
Welsh Government (2015a). Child Poverty Strategy for Wales.	Policy/legal/guidance document	Descriptive	Wales
Welsh Government (2015b) Early Years Outcomes Framework.	Policy/legal/guidance document	Descriptive	Wales
Welsh Government (2016a) Taking Wales Forward 2016-2021.	Policy/legal/guidance document	Descriptive	Wales
Welsh Government (2016b) Well-being of Future Generations (Wales) Act 2015.	Policy/legal/guidance document	Descriptive	Wales
Welsh Government (2016c). An overview of the Healthy Child Wales Programme.	Policy/legal/guidance document	Descriptive	Wales
Welsh Government (2016d) Measuring the health and wellbeing of a nation - Public Health Outcomes Framework for Wales.	Policy/legal/guidance document	Descriptive	Wales
Welsh Government (2016e) Shared Purpose: Shared Future Statutory guidance on the Well-being of Future Generations (Wales) Act 2015	Policy/legal/guidance document	Descriptive	Wales
West A. (2015). Education policy and governance in England under the Coalition Government (2010–15): Academies, the pupil premium, and free early education.	journal article	Descriptive	All UK
White C. and Gibb J. (2013). Early Years Peer to Peer Support Programme Evaluation of effectiveness and impact.	Evaluation / research / audit/ statistical report	Qualitative	England
Wincott, D. (2005) Reshaping public space? Devolution and policy change in British early childhood education and care.	journal article	Descriptive	England, Scotland and Wales
Wincott, D. (2006) Devolution and the Welfare State: Lessons from Early Childhood Education and Care Policy in Wales.	journal article	Descriptive	Wales
Woolfson L. and King, J. (2008). Evaluation of The Extended Pre-School Provision for Vulnerable Two Year Olds Pilot Programme Final Report.	Evaluation / research / audit/ statistical report	Mixed methods	Scotland

Quality of studies

As outlined in the methods section above, it was not appropriate to critically appraise studies which are based on author opinion and description, or indeed to appraise sources which are primary policy, legal or guidance documents (29 sources of this type were included in the review). As with the main review, the qualitative studies reported in journal articles were generally carried out to a satisfactory standard, with appropriate use of quotations to illustrate the themes identified by authors, and adequate summary of participant characteristics, though often with less detail regarding the processes of recruitment and sampling. There were no particular concerns to suggest that the set of literature was not applicable or could not be relied on. We have sought in to indicate in the synthesis where views or experiences expressed may be of limited relevance to current contexts.

Synthesis of results

As with the main public health systems review, data was summarised in the form of a system framework (Figures 8), which was based on the model that had been revised using the included literature from the main systems review. In the following detailed narrative synthesis, data found in the review relating to each element of the system (i.e. each column in Figures 8) is outlined in turn and we try to highlight where there are examples of similarities and differences between the nations were identified from included sources. As with the main review, the intention has not been to produce a comprehensive review of all possible sources relating to school readiness/child development in the early years, but rather to review literature which related more synoptically to elements of the system across the four nations of the UK and to draw out examples as a basis for further cross-country discussion and dialogue about systems strengthening. As mentioned above, the discussion section provides a higher level of interpretation, stepping back from the synthesis of data included here, to suggest what can be gleaned from these detailed findings.

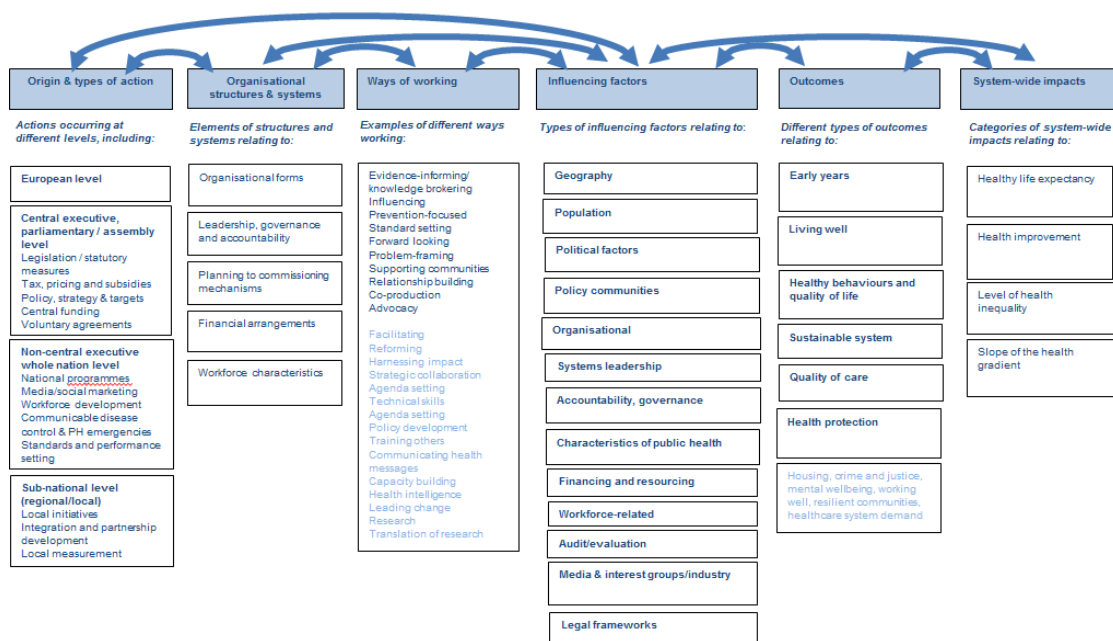


Figure 9. The public health systems framework.

Origin and types of action

Included sources outlined policy action relating child development in the early years as originating at four main levels: 1) action taken at a European level; 2) political action taken at a whole UK, central executive or devolved parliamentary/assembly level; 3) action taken at a whole nation level that was not direct central executive or parliamentary/assembly action.; and 4) action taken at a sub-national level which could be regional or a specific city or locality-based. At each level, different types of policy action were identified as ways to shape early child development; for example, through legislative measures, formal central government policies or strategies, different types of programmes and commitments of funding. Examples of policy action highlighted in the included sources at these four main levels will now be described in detail.

European level action

One included paper highlighted European Union recommendations on early years provision and targets set for Member States (Naumann *et al.*, 2013); noting that, in 2002, Member States adopted the following targets:

- To provide by 2010 a full-day place in formal childcare to:
 - at least 90% of children aged between three and mandatory school age
 - at least 33% of children under three years of age (European Commission, 2008 in Naumann *et al.*, 2013).

It was also indicated that, before this 2010 target, the EU's emphasis was on increasing the quantity of childcare and pre-primary places given that this was understood to enable more parents, especially mothers, to join the labour market. Naumann *et al.* (2013) suggested that, more recently, and due to research on the relationship between high-quality services and child outcomes, the EU's focus had shifted to the quality of early years/pre-school provision.

Central executive, parliamentary/assembly level action

At a central government or parliamentary/assembly level, the included literature highlighted a range of different examples of policy action across the four nations, including: legislative measures in the form of Acts which set out rights, responsibilities and/or entitlements relating to children in their pre-school years; formal policies and written guidance designed to (re)orientate action and behaviours across different elements of the wider system relating to child development; curricular requirements in pre-school years; entitlements to early education, learning or childcare; and measures relating to tax and social security benefits.

Legislation/statutory measures

Included sources described legislative action at both a UK and individual nation level as being of relevance to child development in the pre-school years. What follows cannot be considered as a comprehensive review of legislative measures in this field (that in itself would involve a detailed study), but rather our intention is to outline examples reported in the literature which illustrate the significant role of legislative action in relation to the system shaping child development in the early

years. As will be discussed below, the included sources illustrated that legislative action across the four nations has been complex and, in some cases, overlapping across the UK nations given the extent of devolved and reserved powers. Across all nations however, legislative action has set out: duties and responsibilities of different policy actors in relation to early years services; frameworks for integration or cooperation in relation to early years provisions; statutory school age, along with any flexibilities in transitions from pre-school into school; and entitlements to free early education, learning or childcare for children who are under school age. It is important to note here that legislation has been continually changing since devolution and remains in a process of transition; we have therefore endeavoured to highlight in the following section where data from included sources is no longer current.

Duties, responsibilities and expectations for cooperation

Perhaps unsurprisingly, included evidence highlighted that legislation exists in each country setting out duties, responsibilities and expectations for cooperation between different policy actors in relation to early years provision. In relation to Northern Ireland, it was noted that the Children's Services Co-operation Act (Northern Ireland) 2015 (and Act of the Northern Irish Assembly) required Northern Irish departments and statutory bodies to co-operate with one another and with other children's services providers to improve the well-being of children and young persons, and placed specific duties on named bodies to cooperate where appropriate (Children's Services Co-operation Act (Northern Ireland) 2015 Explanatory Notes, 2015).

As mentioned in the main systems review, the Health and Social Care Act 2012 established Health and Wellbeing Boards in England as collaborative forums for local leaders across the NHS and local government to work together to improve the health and wellbeing for their local population (including for children in their early years), with statutory membership including representatives from relevant clinical commissioning groups, and local authority Directors of Public health and Children Services. Duties relating to cooperation were also highlighted in included studies in relation to, for example, the Children Act 2004 (Smith, 2007; Cowley *et al*, 2009) and Childcare 2006 (Smith, 2007; Pugh, 2010) as they apply to England. Smith (2007) highlighted, for example, that the Children Act 2004 sought to bring together services (education, health and welfare) under a director of children's services and establish local authority-led integrated planning. These measures also applied to Wales (Save the Children, 2017). In relation to the Childcare Act 2006, Smith (2007) argued that it abolished (for the first time) the legal differentiation between education and childcare, and was effectively a way to formally recognise that quality early education is one of the most important factors in promoting a child's life chances. Pugh (2010) and the Department of Education (2013) further noted that this 2006 Act required English local authorities to ensure the integrated provision of early childhood services in their area and placed a duty on them to not only improve the well-being of young children, but also reduce inequalities. Interestingly, Cowley *et al* (2009) highlighted that, despite the statutory duty for integrated local authority planning for children and young people up to the age of 19, their content analysis of 30 child and young people's plans for 2006–2009 revealed that, at a strategic level, such plans made little mention of pre-school children or their needs.

Included papers relating to Scotland also highlighted various legislative measures relating to responsibilities and expectations for cooperation in relation to early years provision. Of particular significance here was the Children and Young People (Scotland) Act 2014, which sets out the nature of and duties associated with provision for young people in general in Scotland and also requires integration in service design and delivery (Care Inspectorate, 2016a; Dunlop, 2015). Of particular relevance for early years provision in particular, the Care Inspectorate (2016b) highlighted that the Statutory Guidance that accompanies the Act states that:

“The aim of Parts 6, 7 and 8... is to improve and integrate the role of early years support in children and families’ lives by increasing the amount and flexibility of early learning and childcare.... to develop a high quality and flexible system of early learning and childcare which is accessible and affordable for all children, parents and families... improve outcomes for all children, especially our most vulnerable children....”

The Care Inspectorate (2016a, 2016b) argued that the Children and Young People (Scotland) Act 2014 Act represented an important change to provision in Scotland. A view supported by Dunlop (2015), who indicated that the Act enshrined Scotland’s distinctive ‘Getting it Right for Every Child’ (GIRFEC) policy approach and practice model (which is discussed in more detail below) in law. In line with GIRFEC, the Act also, notably, sought to formally ensure that provision is oriented around children’s rights and a holistic national understanding of wellbeing (Dunlop, 2015).

A children’s rights-based approach has also been embedded through legislation in Wales (Save the Children, 2017), along with the rights of future generations, which have been secured through the Wellbeing of Future Generation Act 2015. This Act repealed certain aspects of earlier legislation which applied to both England and Wales (ie. the Children Act 2004, mentioned above), and set out that, for the first time, public bodies listed in the Act must act in a sustainable way, look to prevent problems, and ensure that they plan and orientate action towards improving core, national wellbeing goals (Welsh Government, 2016b). Although the Act does not refer specifically to child development in the early years, its breadth and scope includes making provision for the wellbeing of children in their early years. The Wellbeing of Future Generation Act placed specific duties on local authorities and established Public Services Boards as key local partnerships for taking forward integrated wellbeing plans (including the early years) and local authorities are required to work with Public Service Boards to produce Wellbeing Plans which incorporate participation and involvement of children and young people (Welsh Government, 2016e). A further potentially distinctive law that relates to the duties placed on local authorities in relation to child development and school readiness was the Children and Families (Wales) Measure 2010. This Measure is linked to reducing child poverty and placed a duty on each Welsh local authority to secure ‘sufficient play’ opportunities for children within its jurisdiction, as well as (amongst other requirements) ensuring provision for integrated family support teams and boards (Children and Families (Wales) Measure, 2010).

Statutory school age

Included sources illustrated differences in the statutory school age across the four nations and also differences in terms of the statutory level of flexibility allowed in terms of how a child can transition from pre-school into school. Included sources indicated that, in both England (Department of Education, 2017) and Scotland (Bradshaw *et al*, 2012), there was some flexibility in terms of the age at which a child could start school. This appears to contrast with Northern Ireland where Perry (2013) indicated that there is no flexibility within legislation in relation to school starting age. In Northern Ireland, legal provisions prior to devolution (Article 46 of the 1986 Education and Libraries (Northern Ireland) Order, and substituted by Article 156 of the Education Reform (NI) 1989 Order) set out requirements around school starting age (Perry, 2013). Given the requirements of the 1989 Order, children in Northern Ireland are reported to have the youngest statutory school age in Europe (Perry (2013); with some starting *compulsory* primary school as young as four years and two months (Walsh *et al*, 2010).

Legal provisions relating to the compulsory school age in England date from the period around devolution. Section 8 of the Education Act 1996 and the Education (Start of Compulsory School Age) Order 1998 (SI 1998/1607) set out that a child reaches compulsory school age on particular 'prescribed days' on or following their fifth birthday (Department of Education, 2017). Children must therefore legally be in school after they turn 5. More recently however, new statutory guidance came into force in 2014 (issued under Section 84 of the School Standards and Framework Act 1998) allowing parents to seek a place for their child outside of their normal age group and with Local Authorities required to consider this on a case by case basis (Department of Education, 2017). In Scotland (as in Northern Ireland), legal provisions prior to devolution set out requirements around school starting age, with the Education (Scotland) Act 1980 setting out that 'a person is of school age if he has attained the age of five years'. In practice, Bradshaw *et al* (2012) noted that children were eligible to start to school between 4.5 and 5.5 years old, with some flexibility for those who were at the younger end of the spectrum to defer their entry for a year; meaning that a proportion of children were slightly older than 5.5 at the time of school entry.

Entitlements to free early education, learning or childcare

A number of sources highlighted legislative provisions for early education, learning and childcare in Scotland, Wales and England for children who are under school age, with entitlements to free provision set out in statute in each of these nations. Notably, in Northern Ireland, free early years education was not reported to be a statutory entitlement. West (2015) indicated that, since devolution, free early education had been expanded across each of the four nations of the UK, particularly in the period from 2010. West (2015) argued that the provision of early education was actually broadly similar across all UK nations, though indicated that the exact details of the offer varied, partly due to the differing ages at which children in each nation formally start school (as mentioned above).

In relation to Northern Ireland, Perry (2016) reported that the Department of Education funded one year of non-compulsory pre-school education through the Pre-School Education Programme, which the government committed to all children in their immediate pre-school year. It was noted however, that there was no guarantee that a funded place would be available at a preferred pre-school provider (Department of Education NI, 2017). The Department of Education in Northern Ireland emphasised that this provision “is *not* free or funded day care” (Perry, 2016; Department of Education NI, 2017 *italics added*). This appeared to differ to the other nations of UK in which there was more explicit reference to early education or learning *and* childcare.

In relation to Scotland, it was reported that such provision was now formally referred to as ‘early *learning and childcare*’; a new and distinctive concept introduced in the Children and Young People (Scotland) Act 2014, which was designed to remove the artificial divide between preschool and childcare and thus reflect a more *integrated* approach to education, learning *and* care (Children and Young People (Scotland) Act 2014 in Care Inspectorate, 2016b, p.3). At the time of writing this report, Scotland was reported to have the most generous *universal* statutory entitlement to free early learning and childcare at 600 hrs/yr for *all* 3 and 4 year olds (equivalent to 16 hrs/wk in term time – 38 weeks of the year), and with eligibility extended for 2 year olds on the basis of households receiving certain benefits and support (Scottish Government, 2015). In terms of the associated specific legislation, Parts 6, 7 and 8 of the Children and Young People (Scotland) Act provided for the increase and also extended eligibility to 2 year olds from less advantaged backgrounds (West, 2015). There is planned expansion to 1140 hrs/yr by 2020 for all 3 and 4 year olds and a further number of eligible 2 year olds (Care Inspectorate, 2016b).

In Wales, and in England, the Childcare Act 2006 placed a duty on local authorities to secure sufficient childcare for working parents in their area (Children in Wales, 2012; Smith 2007). In Wales, it became a statutory duty for Welsh Local Authorities to provide a free part-time, good quality education place the term following a child’s third birthday (should a parent want it) in 2005 - through The Education (Nursery Education and Early Years Development and Childcare Plans) (Wales) (Amendment) Regulations (Children in Wales, 2012). West (2015) reported that there was currently a universal entitlement to 380 hrs/yr (10 hrs/wk) in Wales in a school or funded nursery, with eligibility extended on the basis of disadvantage (as in Scotland) in ‘Flying Start’ areas. Flying Start is targeted programme for families with children under 4 years of age in particular more disadvantaged areas of Wales, for more information, please see the discussion about this Welsh programme below. As with Scotland, the Welsh Government has also expressed an ambition to extend free childcare in Taking Wales Forward 2016-2021, creating “the most generous childcare offer anywhere in the UK: 30 hours free childcare a week for working parents of three and four year olds, 48 weeks of the year” (Welsh Government 2016, p.5). Notably, and unlike in Scotland, this extension is based on parents being ‘in work’ – not a universal entitlement. During the course of writing this report this new childcare offer was being piloted in Wales.

In England, West (2015) reported that entitlement to free part-time education for 4-year-olds was introduced in 1998 for five part-time sessions (i.e. around 5x 2.5 hours sessions, equating to 12.5 hours a week), with this subsequently extended to 3-year-olds and the number of hours increased. By 2010, there was a universal entitlement for all 3 and 4-year-olds to 570 hours of free early education a year (usually taken as 15 hrs/wk for 38 wks of year) (West, 2015) – which is slightly less than in Scotland. The Childcare Act 2016 took forward UK government commitment to secure additional entitlement to childcare for 3 and 4 year olds in families with working parents in England (Local Government Association, 2016); extending this to 30 hrs free childcare in England for parents who are in work - as with the stated aspiration in Wales - but for 38 weeks of the year. From September 2017, local authorities have been required by legislation to secure this extended entitlement for qualifying children in their area (Department of Education, 2017). Importantly, as with the stated plans in Wales, eligibility for this 30 hrs entitlement is based on parents being ‘in work’; suggesting the policy emphasis of the extended provision is on *childcare*, as opposed to entitlement to *early education*. Indeed, this point is highlighted by OFSTED (2015) who suggested that in England the wider policy debate had rested heavily on the cost of childcare and the burden this represented for working families and less about wider priorities of parents and the development of caring environments where children are developing well. Arguably then, this differs from the more *integrated* concept of ‘early learning and childcare’ in Scotland and the universality of provision, and the more singular focus on *education* (and not care) in Northern Ireland that also is available to all children in their immediate pre-school year.

Other examples of statutory measures

The included evidence outlined examples of other statutory measures that seek, in some way, to shape child development in the pre-school years. In relation to Scotland, it was reported, for example, that the Education (Additional Support for Learning) (Scotland) Acts 2004 and 2009 provided a legal framework through which support was provided to overcome barriers to learning (with responsibilities placed on Education Authorities here); not only for children in school (for those who have reached school age), but also for pre-school age children that were using local authority provided places (Scottish Government, 2012a). In England, included evidence highlighted legal provisions made in relation to Children’s Centres (which had a ‘core purpose’ introduced in statutory guidance in 2013) (Department for Education, 2013) and also the 2015 mandation of 5 universal health visitor reviews to be carried out to check and support child development in early years (Department of Health, 2015). Here, the Department of Health (2015) highlighted that the UK Government deemed mandation in England necessary to ensure standardised provision of reviews across the country and stability at a time of transfer in commissioning responsibilities for health visiting from the NHS to local authorities – an issue that will be returned to in later sections below. On this issue of mandation, PHE (2016) noted that early evidence suggested that mandation had helped maintain the momentum of the National Health Visiting Programme in England and that there was widespread support for mandation to remain in place. National health visiting and child health programmes will be discussed

in more detail below in the section relating to national programmes. Included evidence also noted legal provisions relating to the national curriculum in differing UK nations, but these will be discussed as part of a separate comparative section on the early years curriculum below. During the writing of this report, and exemplifying the points made above about legislative measures remaining in a process of constant transition, the Child Poverty (Scotland) Bill was passed (November) setting out statutory goals to meet in a bid to reduce the number of children experiencing the damaging effects of poverty by 2030.

Taxation and subsidies

Moving on from legislative policy action, a limited number of included sources highlighted the potential significance of UK-wide social security subsidies on child development in the pre-school years. A number of included sources mentioned childcare tax credits, which were introduced in 1998 with the aim of making early education and childcare more affordable for low-income families (Melhuish, 2016). Other included sources also highlighted the significance of tax- and benefits-based action, given the way it could shape interconnections between poverty, early disadvantage and child development (Pugh, 2010; Smith, 2007; Wincott, 2005, 2006; Welsh Government, 2015). Kidner (2011) noted here, that across the UK nations there had been considerable investment in the early years through welfare benefits and tax subsidies, including via: maternity benefits, child benefit, child tax credit, the childcare element of working tax credit and the childcare voucher scheme. Such social security measures have tended to apply similarly across the four nations given that these are reserved, not devolved, policy matters (Dunlop, 2015; Welsh Government, 2015). It is recognised that there have been more recent policy developments here with, for example, welfare reforms and the introduction of universal credit across the UK, ongoing discussions in relation to the further devolution of powers, such as in relation to social welfare in Scotland, and policy discussions about universal basic income. Given this broader context, this could therefore be an area of future divergence across the UK nations and potentially a significant development given that poverty and income inequality are recognised to fundamentally shape child development and both long-term health and health inequalities.

Policy, strategy and targets

A further type of action that was highlighted in a sizeable proportion of the included literature was the development of central government-led policies and strategies in each nation in relation to child development in the pre-school years. Formal written policies or strategies are effectively ways to strengthen or (re)orientate action and behaviours across different elements of the wider system relating to child development in the pre-school years. Only a limited number of the included sources commented directly on the significance of devolution to the development of national UK or devolved nation policy or strategy. Here though, Wincott (2005, 2006) made direct links between central government policy relating to early childhood education and care and devolved powers, noting that the UK was a 'notorious laggard' in this area, but that 'explosive growth' in policy development coincided with devolution. Wincott (2005, 2006) argued that this marked early childhood education

and care out as a distinctive policy arena and, moreover, that the general complexity of this policy topic meant that it was of significance, across all nations, as a matter (or not) of ‘joined-up’ policy making (given that it involves action that crosses traditional government departmental or substantive boundaries). Machin *et al.* (2013) also referred to devolution but noted instead that the four ‘home nations’ of the UK were becoming increasingly different with regard to education policy (of which they see education in the early years as one component part).

Included sources highlighted that, since devolution, there had been clear central government policy commitments to early childhood development in *all* UK nations. Indeed, included sources highlighted a range of recent policies or strategies in each UK nation that focus on supporting children to have the best start in life, early intervention and prevention due to identified links with inequalities in childhood and later life, and, in all nations, connections have been made in government policy between poverty, early childhood and longer term health and wellbeing (see, for example, points made in: Welsh Government, 2015a, 2016a; PHW, 2016; PHW 2017; PHE, 2016b; Scottish Government, 2016; Northern Ireland Executive, 2011a and 2011b; Cowley *et al.*, 2009; Geddes *et al.*, 2011; Kidner, 2011; Centre for Effective Services, 2013). Interestingly however, no consistent national definitions of school readiness were identified in national policy or strategy in *any* of the four nations. Moreover, identified differences here (as will now be discussed below) imply that central government policy in each nation embeds a slightly different approach to child development in the early years.

In Scotland, no recent policy or strategy documents were identified that explicitly focused on, or used the terms, ‘school readiness’ or being ‘school ready’ (though this is not to say categorically that no such document exists). Three of the included sources highlighted Scotland’s aspirational approach to child development and wellbeing in the early years, mentioning that policy documents had recognised the need for a coherent approach to and priority focus on early intervention as a means to addressing unequal childhoods, and life-long disadvantage and inequality (Coles *et al.* 2016; Bradshaw *et al.*, 2015; Dunlop, 2015). Supporting this point, outcome 5 of Scotland’s 16 national outcomes, for example, aspires to ensure that ‘our children have the best start in life and are ready to succeed’, as part of an early intervention approach to support lifelong health and wellbeing (Scottish Government, 2016).

In Northern Ireland, there was more explicit reference to “Readiness for school and improved learning” as, for example, a key outcome in the 2010 framework for the Healthy Child, Healthy Future Programme (DHSSPS, 2010, p.16). As in Scotland, included sources of evidence referred to a broad policy focus on giving children and young people the best start in life, as one means of addressing poverty and a focus on children in their pre-school year was highlighted (Northern Ireland Executive, 2016; RSM McClure Matters, 2015). The recent draft Programme for Government 2016-2021, for example, includes improving child development, making explicit reference to development during pre-school years, and proposed indicator 15 seeks to measure the percentage of children who

are at the appropriate stage of development in their immediate pre-school year (Northern Ireland Executive, 2016 p.15; Perry, 2016). This emphasis on the pre-school year appears to reflect the 2012 Northern Ireland 'Learning to Learn' policy which aimed to ensure that "all children have opportunities to achieve their potential through high quality early years education and learning experiences" and to re-define the pre-school programme to focus on children in their preschool year (Perry, 2013).

Included sources of evidence on policy and strategy in both Wales and England appeared to refer more explicitly to 'school readiness' or being 'school ready', though less sources were identified in Wales. In Wales, the 2013 Wales national 'Building a Brighter Future: Early Years and Child Care Plan' indicated that school ready (school readiness) refers to:

'a child's understanding of six basic concepts: colours, letters, numbers/counting, sizes, comparisons and shapes. The state of early development that enables an individual child to engage in and benefit from learning from compulsory school age...' (Welsh Government, 2013).

The vision for health visiting in Wales, which outlines proposals to maximise the contribution that Health Visitors provide for children in the community, also mentions 'school readiness', noting that Health Visitors have a key role here in 'optimising each child's potential for school readiness' (Welsh Government, 2012, p.3). As noted, more included sources of evidence on policy and strategy referred explicitly to 'school readiness' or being 'school ready' in England. While no consistent definition was identified, the concept did appear to be more widely mentioned (and thus perhaps embedded as a policy concept), by virtue of the fact that it appears not only in national statutory policy guidance in relation to, for example, the 'core purpose' of Children's Centres (Department for Education, 2013, p.7), but also in the English public health outcomes framework (Department of Health, 2016, p.17). Public Health England (2016b) also highlights that 'ready to learn at two and ready for school at five' are key strategic priorities for their work, and that this requires a focus on positive early experiences.

Neaum (2016) argues that central government policy in England has actually embedded a specific conception of school readiness; framing being ready for school through a 'performance' pedagogical model as opposed to a 'competence' model. The former framing, it is argued, is future-focused, in that the early years is regarded as preparation for school and therefore, in terms of child development, knowledge and skills are framed as being acquired in preparation for what comes next. Neaum (2016) argues that this policy approach to school readiness requires the setting of pre-determined outcomes to ensure that children acquire the appropriate skills and knowledge by a pre-determined point in time; and thus, to manage and monitor 'readiness for school', these outcomes become the basis for assessment (in which pre-defined skills and knowledge are mapped to age-related norms and assessed against explicit criteria) (Neaum, 2016). Wincott (2005, 2006) appeared to concur here, arguing that English policy relating to early childhood has a testing approach, arguing that this contrasts with

Wales, where, since devolution, there has been concerted effort by the Welsh Government to move away from the English approach and to focus more on what children can do, rather than assessment which identifies what they cannot. Darbyshire *et al* (2014) also appeared to make similar points, noting that English national policy has tended to focus on being school ready and on ‘achievement gaps’ that are found between children from high versus low socio-economic backgrounds. Significantly, Darbyshire *et al* (2014) argued that this policy approach has resulted, in practice, in certain categories of children being identified as ‘proxy indicators’ for those who are at risk of not achieving as well at school (e.g. children receiving free school meals). They argued that this is not a useful way to understand the range of vulnerabilities that are actually faced by some young children, nor therefore to identify specific ways to help address academic and social learning needs and inequalities.

Other points made in relation to central government policy or strategy in the included evidence related to their complexity and range in each of the four nations in relation to child development in the early years; thus apparently exemplifying the cross-cutting nature of child development in the early years in *all* nations. In Northern Ireland, for example, the Department of Education Early Years Framework ‘Learning to Learn’ (DE, 2012) acknowledged the importance of pre-school experiences for social, emotional and cognitive development, specifically noting that pre-school experiences are a major influence in success at school (it is also noted that Sure Start is an important element of the strategy) (RSM McClure Matters 2015; NCB, 2013). Recent public health strategies in Northern Ireland also recognised and sought to promote early intervention and prevention in contributing to child health and development, and in leading to better population health and tackling inequalities, as well as the influential role of child poverty here (Centre for Effective Services, 2013). Similarly, included sources relating to Wales highlighted that recent Welsh Government policy recognised the need for a cross-sectoral approach to support child development in the pre-school years; with the 2013 Building a Brighter Future: Early Years and Childcare Plan, for example, highlighting the need to bring together priorities that influence children and their families (defining the early years here as the period of life from pre-birth to the end of Foundation Phase or 0 to 7 years of age) (Welsh Government, 2013). This Plan also set out the need for collaborative working across: Education and Skills; Communities and Tackling Poverty; Health and Social Services; Economy, Science and Transport; Housing and Regeneration; Local Government and Government Business; and Finance and is reported to be underpinned by the Welsh Government’s commitment to children’s rights (Welsh Government, 2013). In Wales, the need for cross-sectoral collaboration in policy is connected to the Welsh Government’s recognition that a range of factors are important for ensuring children have a good start in life, including the need to reduce poverty and deprivation – as exemplified in the Child Poverty Strategy for Wales 2015 (Welsh Government, 2015a).

In relation to England, and as already mentioned above, included sources highlighted the connection that has been made in UK policy (particularly during the New Labour administration) between child poverty and early child development, and also childcare as a means to enhance job prospects and

income (see for example Melhuish et al., 2010; Pugh, 2010). More recently, government policy narratives have connected child development, poverty and childcare to the notion of worklessness as, for example, in the recent policy paper *Improving Lives: Helping Workless Families*; in which policy connections are made between childcare and work as a route out of poverty (DWP, 2017). In this recent policy relating to England, inequalities in and lower levels of child development appeared to be framed as caused by worklessness, as evidenced in the statement that ‘children in workless families are twice as likely to fail at all stages of their education’ (DWP 2017 p9). National outcome measures are mentioned here for tracking progress; one of which relates to child development in the early years: the proportion of children achieving a ‘good level of development’ at the end of the school year when children turn 5 (all pupils and FSM pupils). We discuss this ‘good level of development’ outcome measure in more detail later on this section of the report. This notion of worklessness is also mentioned in the Welsh Child Poverty Strategy (Welsh Government, 2015a). It is important to note here that these are political narratives about the issue and reflect government ideas and perspectives: wider evidence suggests different modes of causation, with poverty and different forms of disadvantage key wider determinants of inequalities in the early years.

Included sources highlighted the broad range of policy and strategy designed to support child development in the pre-school years in Scotland, in particular across the health and education sectors. Geddes *et al* (2011) noted on this point that the development of Scottish government policy had in the past been incremental and cross-cutting, involving many government departments (and also delivery mechanisms). Key central government health policies highlighted by Geddes *et al* (2011) and others (see Taylor *et al* 2015; Dunlop, 2015; Kidner, 2011; Naumann *et al* 2013) include: Hall4 – Health for All Children in the Early Years; the Early Years Framework; Equally Well; Achieving our Potential; Better Health, Better Care. The Early Years Framework is highlighted as of particular significance by Bradshaw *et al* (2015) given the emphasis it has placed on shifting focus and resources to the early years. Bradshaw *et al* (2015) highlighted that, by January 2011, (3 years into the 10 year Framework) there was evidence that services were being redesigned and resources redirected in this way. In relation to education policy, the Curriculum for Excellence is highlighted as of significance (Geddes *et al* 2011). This will, however, be discussed in more detail below in a separate section compares the early years curriculum across the UK nations. Other sources highlighted the existence of the National Parenting Strategy in Scotland as a key policy document, along with other related strategies that aim to improve life chances, such as the Scottish Child Poverty Strategy, which sets out the Scottish Government's approach to tackling child poverty via maximising household resources, improving children's life chances, addressing area-based disadvantage and working with local partners (Bradshaw *et al*, 2015). The National Improvement Framework and Plan is also a significant policy development in education in Scotland (reviewed annually by Ministers by statutory requirement), which focuses on improvements to the education system, including in the early years; discussing and planning ways to encourage the uptake of early learning and childcare, new training and induction

programme for child minders working in early learning and childcare; responding to local needs; and activities to reduce poverty-related attainment gaps.

Included sources emphasised the uniqueness of the Scottish policy approach to improving outcomes for all children (including in the pre-school years) given that the above policies have, relatively recently, been knitted together by ‘Getting It Right for Every Child’ (GIRFEC), which is intended as a coherent framework and practice initiative (now enshrined in law, as noted above) (Dunlop, 2015). Coles *et al* (2016) described GIRFEC as a ‘landmark’ Scottish government policy, signifying a distinct way of thinking and agenda for change. As already suggested above, GIRFEC, and its accompanying legislation (Children and Young People (Scotland) Act 2014), seeks to direct all practice towards children’s rights and thus a child-centred approach to supporting their development, also grounded in early intervention, universal service provision and integration/multi-agency coordination across boundaries (to be implemented at local level by Scottish local authorities) (Coles *et al.* 2016). As also noted above, GIRFEC also promotes a holistic national understanding of wellbeing, as described by 8 ‘SHNAARRI’ indicators: safe, healthy, achieving, nurtured, active, respected, responsible, included (Scottish Government, 2017; Bradshaw *et al*, 2015).

Early years curriculum

A further example of action relating to child development in the pre-school years that occurs at central government level is development and reform of the early years curriculum. Included studies indicated that *all* four nations have moved in the direction of a more play-based, child-oriented and developmentally appropriate approach to teaching and learning in the preschool and early school years (McGuinness *et al* 2014; Walsh *et al* 2006; Ang, 2014; Pugh, 2010; Taylor *et al* 2015). McGuinness *et al* (2014) argued that each country has however, adopted slightly different policy conceptions of when school starts and different curricular policies to ease the transition between pre-school and statutory schooling; which may shape the continuity of children’s learning and thus development (Dunlop, 2015). The Foundation Stage in Wales is for 3-7 year olds; the Early Years Foundation Stage (EYFS) in England is for 0-5 year olds; the Foundation Stage in the Northern Ireland Curriculum is for 4-6 year olds and the ‘early level’ in the single Scottish Curriculum for Excellence is for 3-6 years olds (McGuinness *et al* 2014). Given the different approaches here, it is recognised that comparison in terms of policy relating strictly to readiness for school can be confusing.

The Northern Ireland approach focuses on the narrowest age-range and the Foundation Stage coincides with (rather than straddles) the start of entry into a formal primary school environment. Pre-school education providers in receipt of public funding are expected to follow Curricular Guidance for Pre-school Education (see Department of Education NI, 2006), which is also a play-based and child-centred approach to teaching and learning (Perry, 2013).

Interestingly, included studies suggested that Northern Ireland and Wales were the first countries of the UK to start the move away from a more ‘traditional’ approach to learning towards a more

distinctive play-based and child-centred curriculum; both doing so by piloting/phasing in a new approach. Walsh *et al* (2010) indicated that the Northern Ireland Foundation Stage (4-6 years) started in 2007 as part of the Revised Curriculum, but that a play-based and developmentally appropriate curriculum (the Enriched Curriculum) was piloted in more than 100 schools between 2000 and 2002 (continuing until the Foundation Stage was introduced in 2007). McGuinness *et al* (2014) argued that, by being responsive to the developmental stage of individual children, the aim was to remove children's early experience of persistent failure and promote their sense of self-competence and self-esteem. In Wales, the new foundation phase was introduced from 2004 via a phased approach, which Taylor *et al* (2015) described as a 'flagship policy' of the devolved Welsh Government. In papers published around that time, Wincott (2006 p.283) argued that this action was the most innovative, wide-ranging and distinct of all the countries of the UK, involving:

'a fundamental rethinking of the relationship between school and preschool, based on the introduction of the principles and philosophy of early years education into the first three years of compulsory schooling'.

Taylor *et al* (2016, 301) argued that the Welsh Government's current curricular approach represents an attempt to 'bridge a child-centred approach to education within a broader standards-driven education system', highlighting that:

1. although developmentally appropriate practice is encouraged, there is still a strong requirement for children to develop key skills or outcomes, particularly in literacy and numeracy, and by a certain age (e.g. the end of the Foundation Phase);
2. it encourages a balance of continuous, enhanced and focussed provision (which involves an element still of formal teaching); and
3. the role of parents is seen as 'needing intervention' (e.g. to mitigate the impact of educational disadvantage at home) with less emphasis on parents/families as co-producers of the curriculum/learning experiences (Taylor *et al*, 2016, 301).

Significantly, Taylor *et al* (2016) indicated that the Welsh Curriculum has involved an extensive range of accompanying training and support by the Welsh Government; involving, for example, the production of training modules and guidance materials, access to a full-time Training and Support Officer (TSO) in each local authority, and, overall resources for schools to lower adult:child ratios in reception classes to 1:8. We identified examples of other accompanying curricular guidance prepared in the other nations of the UK, such as English non-statutory materials to support the ongoing formative assessment of children's progress towards the ELGs in all seven areas of Learning and Development (Evans 2013); and self-evaluation resources for pre-school settings in Northern Ireland and Scotland (Department of Education NI, 2006; Geddes *et al* 2011).

Included sources in relation to Scotland noted that there had been no official curriculum in Scotland (non-statutory curriculum guidelines instead and with education set by the Scottish Minister in charge

of education), until the integrated Curriculum for Excellence for 3-18 year olds was introduced around 2009, following ‘years of development, consultation and refinement’ (Ellis, 2007) Geddes *et al* 2011, p.24). The ‘early level’ curriculum for pre-school years was introduced as part of this for 3-6 year olds bridging across early learning and childcare and the transition into formal schooling (Naumann *et al*, 2013; McGuinness *et al* 2014). Dunlop (2015) highlighted the importance of separate Scottish guidance for ‘Pre-birth to Three’, published by Learning and Teaching Scotland in 2010, in order to support earlier child development and recognising that pregnancy and the first years of life are key influencers of development and future outcomes. Dunlop (2015) further noted that there was a strong emphasis in the Curriculum For Excellence on children’s health and well-being and connections across different learning areas. This emphasis on wellbeing resonates with the Scottish GIRFEC approach already mentioned above.

In England, the Early Year Foundation Stage (EYFS) was introduced in 2008 (revised in 2012) and (as with the other nations) is promoted as a way to support children to develop and learn in different ways and at different rates (Ang, 2014). Evans (2013) highlighted that the EYFS has been directly connected to the idea of school readiness in England with the Department of Education noting that:

“...[the EYFS] promotes teaching and learning to ensure children’s ‘school readiness’ and gives children the broad range of knowledge and skills that provide the right foundation for good future progress through school and life” (DfE, 2012, p. 2 in Evans 2013).

Evans (2013) argued however, that there are challenges here as the content of the EYFS actually embeds complex and contradictory understandings of readiness: whilst it is expected that children’s developmental progress rates will differ, the EYFS also promotes a view that a more-or-less typical trajectory will be followed, deviation from which may indicate a developmental deficit in the child (Evans 2013). Roberts-Holmes (2013) highlight that the Conservative–Liberal Democrat coalition Government introduced a revised version of the EYFS, which focused more on ‘essential knowledge and concepts’ in order to lead to ‘a good foundation in mathematics and literacy’. Ellis and Moss (2014) also noted that the government has mandated the teaching of systematic synthetic phonics as the dominant approach to early reading instruction in England. As with Taylor *et al*’s (2016) points about the current curriculum in Wales then, there has still been a requirement for children to develop key skills or outcomes, particularly numeracy and literacy, by a certain age.

As with all central government policy action, included studies illustrated that the early years curriculum is, and indeed appears to have been since devolution, an area of ongoing change across the four nations. In particular here, Taylor *et al* (2016, 302) highlighted that the Welsh Government is embarking on (what they describe as) ‘an even more radical overhaul’ of curriculum and assessment across Wales following an independent review by Professor Donaldson (the ‘Donaldson Review’) - one aspect of which will involve the reorganisation and redesign of curricula and assessment in

relation to the Foundation Phase. It is possible therefore that this could be a key area of future divergence between the four nations of the UK.

Central funding commitments for programmes

Moving on from the national curriculum as a type of policy action, included studies also highlighted action in the form of central government funding commitments for programmes, which tend to be ring-fenced forms of allocation from central government. Unfortunately, limited evidence was identified in our search process to compare the nations in any detail here, for example, in terms of how central allocations differ across the four nations and if/whether this has changed over time given removal of central ring-fencing. It would be possible to conduct further research on this aspect but this was outside the scope of our work. We therefore report the limited information from included sources illustrating some of the examples of these types of programmes, which is nevertheless of value given that it supports the inclusion of this element in our public health systems framework.

In terms of the information gleaned from identified sources, some comparison was made in relation to total commitments of funding to the Sure Start Programme that was introduced by New Labour UK government around the time of devolution and applicable to all UK nations. We consider the details of Sure Start in more detail a little later in this section of the report, just focusing on the funding committed here. One descriptive paper indicated that when Sure Start was set up, a total of £542 million became available for the programme across the four nations over three years, with £452 million designated for England (Belsky *et al.*, 2008). An evaluation report by RSM McClure Watters (2015) noted that the total budget allocation to deliver Sure Start in Northern Ireland in 2014/15 was just over £24m. RSM McClure Watters (2015) go on to attempt a rough and basic estimated comparison of the spend on Sure Start in Northern Ireland and England, and the Flying Start programme in Wales – noting that funding allocation to Sure Start in Northern Ireland equated to around £620,000 per Sure Start per annum, with an average cost per child at £658 (ranging from £441 to £1,112). RSM McClure Watters (2015) suggest that this compared favourably to the Sure Start spend in England where they report the allocation was around £1,300 per eligible child per year (2009-10) and to the Welsh Flying Start Programme, where spend was £2,000. It should be emphasised here that it is not clear how reliable these figures are.

A limited number of other sources mentioned central funding allocations. It should be noted however, that these should not be interpreted as a systematic or comprehensive picture. In many cases, it was unclear how early education, learning or care was being defined and therefore what the figures did or did not include and, in some cases, whether the figures applied to England only or the UK as a whole. For example, it was noted that early education represented a major area of public investment, with the UK government currently investing £5.2 billion annually and with this set to rise to £6.4 billion with the implementation of the tax-free childcare scheme across the UK (OFSTED, 2015). Pugh (2010) noted that childcare represented a substantial area of government investment - well over £20 billion in the 12 years since 1997 (it was not clear however where this figure came from or whether it referred

to England or the UK as a whole). The NAO (2016) reported on the funding for free early childcare education and childcare that had been provided to English LAs; noting that the Department of Education gave £2.7 billion to LAs in 2015-16 (with 1.5 million taking up a free childcare place) (NAO, 2016). On the issue of childcare funding, included sources did not report up to date figures. Historic papers written in 2005 and 2006 noted that per capita funding for Welsh childcare had fallen behind the level for England (Wincott, 2005, 2006). This should not however be taken as representative of the current situation or therefore of current spending profiles across the four nations on early years childcare.

In Northern Ireland, one included source noted that the Northern Ireland Executive had planned to set aside £12m (on top of departmental funding) for its development of future childcare (Perry, 2013). Another source noted central investment by the DHSSPS/HSCB/PHA to address the deficit in health visitors and school nurses by funding additional health visitor training posts in 2014/2015 (RQIA, 2016).

Other sources focusing on Wales, mentioned that the budget for Flying Start, with, for example, £35million allocated to the programme in 2010/11 (Welsh Government, 2009). Taylor *et al.* (2016) highlighted the significant central investment in the introduction of the Foundation Phase in Wales, noting that as a result of the Foundation Phase, it was estimated that the total cost of primary years education overall in Wales had increased from £25,241 to £28,019 per pupil (based on 2012–13 figures) – an estimated 11% increase in costs (just under an additional £100 million per year) mainly due to improving adult to child ratios and training practitioners.

In relation to Scotland, Kidner (2011) discussed the complex funding allocations to early education, learning and care in Scotland, highlighting commitments at UK, national and also local government level, and from the education and health sectors. One source mentioned central commitments to the early years change fund (established in 2011 as a partnership of the Scottish Government, local government and the NHS to take forward a significant change programme with associated investment of public funding) to help deliver joint commitment to prioritising action to improve children's lives and embed early intervention and prevention (Mulholland *et al.*, 2016). It was reported that between 2012/13 - 2015/16 planned commitments were: Scottish Government £52.5 million, the NHS committed £117million and local government £105 million (with some funding used in practice for implementation of national initiatives but most going to locally designed and led initiatives by Community Planning Partnerships) (Mulholland *et al.*, 2016).

Non-central executive, whole nation level action

Having discussed similarities and differences across the four nations in relation to the different types of policy action taken at central government (executive) or parliamentary/assembly level, we now consider and compare examples of whole nation action across the four nations that is not at central government (executive) or parliamentary/assembly. Here, included evidence highlighted a range of examples of universal and/or targeted national programmes focused on supporting child development

in the early years (these can be thought of as specific and deliverable activities, actions or services in each nation). Action relating to the development of nationally coordinated data collection/performance monitoring was also highlighted, along with activity relating to the inspection of early years settings and day care workforce development.

National programmes

In terms of national programmes focused on child development in the early years, included sources mentioned both universal and more targeted activities and services, including: child health programmes in each nation based on the principles of progressive universalism; more targeted and integrated forms of extra family support in each nation; activities to improve home learning environments (in Scotland and Wales in particular); and quality improvement work in the early years sector. No particular patterns were identified in the included sources in terms of a balance between universal and targeted provision. The identified evidence about these broad types of national programme will now be discussed in more detail below.

Child health programmes

All four nations have a universal child health programme delivered by a range of professionals, and with health visitors at the centre of provision. Each country's programme not only involves screening and immunisations, but also seeks to assess and support child development (e.g. speech, language, social skills, fine motor skills). Based on the included sources of evidence, the high-level stated aims of each programme appeared to be similar (e.g. child-centred, a focus on early intervention, integrated provision of services, enhanced support for those children and families who need it) and also based on the principle of progressive universalism (DHSSPS, 2010; Scottish Government, 2015b; Welsh Government, 2015; Welsh Government 2016c; PHE, 2016b, 2016c; Northern Ireland Executive, 2016); that is to say, universal services are combined with progressively more support based on level of need (cf. Melhuish, 2016). Perhaps distinctly in Wales, the Flying Start Programme also offers an enhanced health visiting service to those families with children under 4 years of age living in the most deprived areas of Wales – this particular aspect is discussed in more detail in the context of the section below on enhanced forms of family support.

Despite similarities in the high level aims of the child health programmes, included sources highlighted subtle differences in terms of the content of the programmes, with variation in the number and timing of scheduled universal family/child contacts and the practical measurement tools associated with the programme (see Table 6 below). As illustrated in Table 6 England currently has the least scheduled universal contacts at 5, though these are mandated (as mentioned above), while Scotland has the most at 11. There has been action to (re)develop the child health programmes of all nations in recent years. The current Welsh programme is, for example, relatively new, with implementation started by Welsh Health Boards in October 2016 (Welsh Government, 2016c). In Northern Ireland, a new, integrated 3+ review has recently been introduced to take place in Department of Education-funded pre-school settings; with health and preschool practitioners working

together to pilot the approach through the Delivering Social Change Early Intervention Programme (Northern Ireland Executive, 2016; Perry, 2016). Perry (2016) reports that the Department of Education in Northern Ireland expects the 3+ review to be implemented first in pre-school settings with DE-funded places, with remaining providers included by mid-2018. England has also moved towards integration of reviews, bringing together the Healthy Child Programme review and the progress check completed by early years providers at 2-2.5 years into a single, holistic review (PHE, 2016b). At the time of writing this report, it did not appear that there were any such moves towards integration of reviews as part of the child health programmes in Wales and Scotland.

Table 6. Comparison of specific elements of the child health programmes in the four nations of the UK. (Table developed from different sources: DHSSPS, 2010; Scottish Government, 2015b; Welsh Government, 2012; Welsh Government 2016c; PHE, 2016b, 2016c; Northern Ireland Executive, 2016).

Elements of universal child programmes	England	Northern Ireland	Scotland	Wales
Programme details	Healthy Child Programme 0-19 - 0-5 years element for pregnancy and first 5 years of life	Healthy Child, Healthy Future (HCHF) Programme - pre-school element is 0-4.5 years	Child Health Programme - Health Visiting Pathway is pre-birth to pre-school	Healthy Child Wales Programme – for all families with 0-7 year old children (Flying Start also offers an enhanced health visiting service to families/children under 4 in most deprived areas of Wales)
Universal element	YES	YES	YES	YES
Enhanced provision for families with identified needs	YES	YES	YES	YES
Scheduled universal contacts	5 (mandated) <ul style="list-style-type: none"> • Antenatal review • Within 14 days • 6-8 weeks • 1 year (9-12 mths) • 2-2.5 years (integrated review) 	9 <ul style="list-style-type: none"> • Antenatal review • 10-14 days • 6-8 weeks • 14-16 weeks • 7-9 months • 1 year • 2-2.5 years • 3+ review (NEW) • 4-4.5 years 	11 <ul style="list-style-type: none"> • Antenatal review • 11-14 days • 3-5 weeks • 6-8 Weeks • 3 months • 4 months • 6 months • 8 months • 13-15 months • 27-30 months (NEW in 2013) • 4-5 years 	8 <ul style="list-style-type: none"> • Antenatal review • 14 days • 8, 12, 16 weeks • 6 months • 15 months • 27 months • 3.5 years • 4/5 years (handover from health visitor to school nurse)
Integrated	YES - health and	YES - health and	Not in place	Not in place

reviews between health and education sectors	education practitioners are working together for the 2-2.5 year review	preschool education practitioners are working together to pilot a 3+ health review		
Practical assessment and measurement tools	ASQ 3	ASQ SE2 (as part of 3+ review)	ASQ3 (nationally recommended for all reviews) Other tools can be used based on professional judgments. Other recommended questionnaires: Parents Evaluation of Developmental Status (PEDS); ASQ SE2; Strengths & Difficulties Questionnaire (SDQ); Schedule of Growing Skills II (SOGS II) National Practise Model / Wellbeing Wheel with SHANAARI indicators	Integrated tool - all Wales Health Visiting Family Resilience Assessment Instrument Tool (FRAIT) Schedule of Growing Skills (SOGS) – selective use Foundation Stage Profile Assessments

Interestingly, as illustrated in Table 6, differences were identified in the measurement tools that are used in each child health programme. Included studies highlighted that both Scotland and England recommended the use of the Ages and Stages Questionnaire (ASQ) 3, while in Northern Ireland there has been a recent move towards recommending the ASQ social and emotional (SE2) version as part of the new 3+ review (Perry, 2013). This differs to the tool used in Wales. Here, a tailored ‘all Wales’ Health Visiting Family Resilience Assessment Instrument Tool (FRAIT) is to be used at key stages throughout a child’s first five years of life as part of the Healthy Child programme, as an integrated way to identify and support protective factors within families, as well as identify additional family or developmental needs, alongside potential safeguarding concerns (Welsh Government, 2016c). In Scotland, for assessment purposes, practitioners are also recommended to use the GIRFEC national practice model (as mentioned already above) to help assess needs and identify concerns for the benefit of the individual child; involving the use of, for example, a distinctive ‘Wellbeing wheel’ to capture and communicate information and concerns, with the 8 SHANARRI indicators as mentioned above (see Scottish Government, 2017).

Integrated/enhanced forms of family support

While the child health programme in each nation offers enhanced support for families who need it, included sources also highlighted other national programmes that have sought to deliver more

targeted, extra forms of integrated family support; one aim of which has been to support child development in the pre-school years. Prominent examples in the included literature were the Family Nurse Partnership, Sure Start programme and Flying Start programme in Wales. These are discussed below.

Family Nurse Partnership

Included sources indicated that the Family Nurse Partnership (FNP) has been introduced in England, Scotland and Northern Ireland with some level of national-level backing to support young mothers and their children in addition to usual care and support (Robling *et al.*, 2015; RSm McClure Watters, 2015; Ormston *et al.*, 2014) – though this does not mean that the FNP has been commissioned or delivered in every area of each country. FNP is a licensed, strength-based, intensive and structured home visiting programme for young mothers - delivered by specially trained nurses - up until their children have reached 2 (Robling *et al.*, 2015). It was identified from included sources that the timing, scope and support for the roll out the FNP has differed across England, Scotland and Northern Ireland, with rollout also shaped, to some extent, by the commissioning processes in place in each nation for this service (Ormston *et al.*, 2014; Bradshaw *et al* 2015; Robling *et al.*, 2015; RSM McClure Watters, 2015). In England, for example, there has been a national unit to oversee the FNP programme nationally, but there has been commissioning activity locally (Robling *et al.*, 2015). England introduced the FNP first in 2007 across 10 pilot sites (Ormston *et al.*, 2014). Scotland introduced the FNP in a test site in 2010 (NHS Lothian, Edinburgh Community Planning Partnership (CPP) area) with subsequent, gradual rollout to other areas such as Greater Glasgow and Clyde, Fife, and Ayrshire and Arran (Bradshaw *et al* 2015). The Public Health Agency in Northern Ireland began offering the FNP in late 2010, piloting the approach first in the Western Health and Social Care Trust (RSM McClure Watters, 2015). As will be discussed later in this section of the report, evaluation of the FNP has raised questions about the achievement of specified primary outcome measures (e.g. breastfeeding rates) but Robling *et al.* (2016) argued that there was ongoing need to understand the contribution of the FNP to supporting child development outcomes beyond age 2, particularly cognitive and language development. It was unclear at the time of writing the report to what extent there had been more recent decommissioning of the FNP in relation to the findings of evaluation work.

Sure Start and Flying Start

A number of included sources highlighted the role of the Sure Start programme in promoting local services linking health, education and care, and in supporting parents as well as child development (see, for example, Kidner, 2011; Melhuish *et al.*, 2010; RSM McClure Watters, 2015). Sure Start was introduced around the time of devolution and was applicable to all UK nations. Sure Start local programmes were developed as a result of the commitment of the New Labour UK government to this approach, but included studies highlighted however, that the Sure Start programme had different trajectories in each nation, as will be discussed below.

The most extensive range of sources focused on the Sure Start programme in England. It was highlighted, for example, that the first round of Sure Start local programmes was set up in 1999, working to bring together quality health, family support, early education and childcare services for the benefit of parents and children under 4 in the 20% most disadvantaged areas (Merrell and Tymms, 2011; Melhuish *et al.* 2010; Smith, 2007). The English Sure Start programme did not have a prescribed central protocol and funding came directly from central government to local programmes, which were independent of local government - as a result there was considerable variability in the nature of the programme across England (Melhuish *et al.*, 2010). Melhuish *et al.* (2010) indicate that, over time, the English Sure Start programme changed (due in part to learning during implementation, concerns about whether it was having the intended impact, and political influences – see influencing factors section later). As a result, the Sure Start programme was transformed into integrated Children’s Centres, along with an accompanying set of more clearly specified services and guidelines, and a transfer to local authority control (as well as the embedding of their role in statute) (Melhuish *et al.*, 2010; Belsky *et al.*, 2008). Lews (2011) argues further that the offer of the English Sure Start programme changed from focusing on support for children and their parents to an emphasis on children’s cognitive development on the one hand, and parental employment on the other.

An evaluation report by RSM McClure Watters (2015) highlighted that, in Northern Ireland, Sure Start originated in 2000/01 as a health and social programme, as it was initiated by the (then) Department of Health, Social Services and Public Safety (now Department of Health). It was indicated that Sure Start in Northern Ireland initially focused more on health and wellbeing outcomes, but reported that, with transfer of responsibility to the Department of Education in 2006, the focus had widened to include more educational/developmental outcomes. The RSM McClure Watters (2015) report indicated that the Northern Irish Sure Start has focused on the top 20% most deprived wards, with expansion of provision to the top 25%. It was also highlighted that family support hubs had been set up– multi-agency networks of statutory, community and voluntary organisation – to provide early intervention and family support services to vulnerable families (including those with pre-school age children), and which link to the work of Sure Start by referring families and supporting coordination (RSM McClure Watters, 2015).

In relation to Scotland, a briefing paper by Kidner (2011) indicated that Surestart Scotland was introduced in 1999/00 and that, although the basic principles were the same as the English programme, local authorities were able to develop the provision and funding was not ring fenced. Sure Start Scotland thus became part of a broad programme of action to promote early childhood development and a positive start in young children’s lives (Cunningham and Burley, 2002). Kidner (2011) indicated that, with the publication of the Early Years Framework in Scotland (as mentioned already above), Sure Start was no longer referred to, though similar kinds of integrated extra family support continued to be promoted; noting, for example, that there are an estimated 136 family centres across Scotland, albeit with questions about their reach (Kidner, 2011).

In Wales, the Welsh Government (2009) reported that funding associated with the Sure Start programme had been incorporated into the Welsh Cymorth funding stream following its introduction in 2003/04 to support children and young people; with initial ring-fencing but flexibility in terms of how the funding could be targeted on more disadvantaged areas or more disadvantaged groups and families. Cymorth has since been incorporated into the Local Authority Support Grant for mainstream service provision (with no ring fence) (Welsh Government, 2009). Bearing some resemblance to Sure Start, the Welsh Government introduced a targeted programme called Flying Start, which sought to focus support for children under the age of 4 and their families in more deprived areas of Wales (Welsh Government, 2009). It was reported that Flying Start services received £2K per annum for every 0-3 year old child to deliver 4 key service components: 1) free high-quality part-time childcare for 2-3 year olds; 2) enhanced support from dedicated Flying Start health visitors; 3) access to parenting programmes; and 4) parent-child language development activities and play schemes (Welsh Government, 2016c; Hutchings *et al.*, 2017; Morris *et al.*, 2014).

National parenting and home learning programmes

In terms of other examples of national programmes, included sources highlighted universal programmes in Scotland aimed at supporting parenting and effective home learning and thus child development in the pre-school years. In particular, Bradshaw *et al* (2015) mentioned the ‘Play, talk, Read’ campaign – a Scottish government campaign to encourage and support parents to engage daily in playful interaction with their children from an early age. Also noted was Bookbug, the Scottish government’s early years book gifting scheme run by the Scottish Book Trust (Bradshaw *et al.*, 2015). Bradshaw *et al* (2015, 2016) indicate that, more recently, both programmes have become more targeted (for example, through outreach work) in order to try and more effectively support parents in more disadvantaged circumstances and also therefore their children’s developmental outcomes. These Scottish programmes appear to bear similarity to the Welsh ‘Education Begins at Home’ campaign, which also includes specific ‘Ready to Learn’ resources designed to help parents and carers prepare their children for school (Welsh Government, 2016c). There is also a Bookstart programme in Wales funded by the Welsh Government which seeks to support child development through home reading, a parenting programme ‘Give It Time’, which provides sources of advice and guidance for parents to support their children’s development, and a Welsh Government supported Family Information Services – run in each local authority in Wales – providing free and impartial advice and guidance for families.

In Northern Ireland, the Early Intervention Transformation Programme (EITP) is a substantive programme of the Northern Ireland Executive/Atlantic Philanthropies Delivering Social Change Signature Programme, which aims to improve outcomes for children and young people across Northern Ireland through embedding early intervention approaches in a range of different ways – including supporting parenting, home learning and quality early years provision (Montgomery *et al.*, 2016). The programme is funded jointly by the Delivering Social Change Fund as well as other

government departments, such as Health, Education, Justice and Communities and The Atlantic Philanthropies. Montgomery *et al.* (2016) in their report of the ETIP noted that the current policy agenda ‘places significant emphasis on the value of parenting education and support for all families who require this kind of assistance across Northern Ireland’.

National programmes to improve the quality of early years provision

Other examples of national programmes that were mentioned in included sources as relating to child development in the pre-school years included action to improve the quality of early years provision. White and Gibb (2013), for example, mentioned the early years peer to peer support programme in England (now completed), which involved a support package to raise the quality of the early years education sector in order to improve child outcomes. In Scotland, the Children and Young People’s Improvement Collaborative (CYPIC) is a broad quality improvement programme aimed at improving all services, which, amongst other activities, is supporting early years practitioners to continually test, measure, implement better ways of working (CYPIC, 2017; Dunlop, 2015). As mentioned above, the National Improvement Framework and Plan in Scotland also sets out a range of activities, backed at national level, which focus on improvements to early years provision as part of the education system. This includes recognition of the need for action in order to reduce poverty-related attainment gaps. In Wales, the Healthy and Sustainable Pre-school Scheme in Wales is highlighted as an integrated way to support quality pre-school provision to enhance child health, development and wellbeing (Welsh Government, 2011).

Other examples of national programmes

Country-level action in Wales and Scotland to address multiple adverse childhood experiences (ACE) was mentioned in two included sources. Here, the scope and pressing need for future action to address ACEs was mentioned primarily, given the way in which adverse early experiences are recognised to shape children’s developmental trajectories and long-term life chances (Public Health Wales, 2015; Couper and Mackie, 2016). We recognise that funding has been secured to develop ACE screening and appropriate interventions in Northern Ireland, including for families with children 0-3 but included sources did not provide any further information on this type of action. The introduction of children’s zones in Wales – an area-based approach – was identified as one way of integrating action on this issue, as well as activities associated with the Wales ‘First 1000 Days’ Collaborative, which includes ACEs as one of three outcomes of the programme (PHW, 2017). The Welsh Government reports that Tackling Poverty Programmes, such as Families First, are being implemented, which align with the Child Poverty Strategy for Wales to support parents and child achieve better outcomes, ‘particularly in terms of reducing health, education and economic inequalities’ (Welsh Government, 2015a, p13). It is recognised that there will be many more examples of national programmes across the four nations (both past and present) which are not mentioned here, yet these findings clearly give a sense of the similar breadth of current programmatic activity across the four nations in relation to child development in the early years.

National-level outcomes measures and performance setting (specifically relating to child development in the early years)

Moving on to other examples of whole nation action, included studies highlighted the development of national child development outcomes measures and performance monitoring systems relating to child development in the early years across the four nations. Interestingly, each nation was found to have different formulations of nationally established child development outcome measures of interest. Table 7 provides a summary of the different national-level child development outcomes measures identified from included sources across the four nations of the UK.

Table 7. Summary of national-level child development outcome measures across the four nations. (Developed from a range of sources: Department of Health, 2015; ScotPHO 2017; ISD Scotland, 2017; Northern Ireland Executive, 2016; NHS Digital, 2016; CYPIC, 2017).

Country	Title/descriptor of national-level child development outcome measure	Status (e.g. established, new)	Assessment / measurement details	Where data can be found
England	Good level of development (GLD) – percentage of children achieving a good level of development at the end of the foundation stage (with data broken down by whole population/males/females)	Established	Observational assessments by teachers when children have turned five years old – children graded according to Early Years Foundation Stage Profile (EYFSP) criteria on basis of whether they are ‘emerging, expected or exceeding’ against specific early learning goals (e.g. personal, social and emotional development, physical development and communication and language, and mathematics and literacy). Children are defined as having reached a GLD if they achieved at least the expected level in key areas.	English PHOF
England	Phonics screening - % percentage of Y1 pupils achieving the expected level in the phonics screening check, with data, as above, broken down by whole population/males/females	Established	Assessments by teachers. At end of Year 1 teachers assess pupil’s ability to decode words using phonics. The screening check tests the ability to decode both real words and non-words as a measure of the extent to which pupils have learnt to operate specific phonics rules.	English PHOF
England	Sub-indicators making use of Ages and Stages questionnaires (ASQ-3™) - using scores generated for 5 areas of development - Communication, Gross Motor, Fine Motor, Problem solving, Personal-social) (<i>new indicators in development</i>)	New – in development	ASQ-3™ questionnaires completed as part of Healthy Child programme/integrated review.	Possibly English PHOF (in future)
Wales	Young children developing the right	New – in	Data from Foundation Phase	Welsh PHOF, but

	skills	development	Baseline Assessment for children aged 4-5 (as derived from Welsh Foundation Phase Profile)	is also shared with EYOF and is a Wellbeing of Future Generations national indicator
Wales	Percentage of children reaching or exceeding their developmental milestones between ages 2-3	New – in development	Data only currently available for Flying Start children but further development of the Early Years Development and Assessment Framework (mentioned above) and the Healthy Child Wales programme will support.	Welsh EYOF
Northern Ireland	% of children who are at the appropriate stage of development in their immediate pre-school year	New – in development	Data from the new 3+ health review being implemented in Northern Ireland.	Personal Child Health Record (PCHR) until Child Health System (CHS) upgraded
Scotland	Developmental concerns at 27-30 months and 4-5 years – children no, or with one or more, developmental concerns at 27-30 months across 9 domains (social; emotional; behavioural; attention; speech language & communication; gross motor; fine motor; vision and hearing).	27-30 months established in 2013 4-5 years introduced in 2017	Data from child health reviews as part of child health programme.	Child health review data is maintained by Information Services Division Scotland. ScotPHO release Children and Young People Profiles which report on this.
Scotland	Scottish National Standardised Assessments assessing numeracy and literacy testing at the end of primary 1 (P1)	New – introduced in 2017	Data from National Standardised Assessments at school in primary 1.	<i>Unclear at the time of writing this report</i>

As illustrated in Table 7, all nations have set national-level outcome measures relating to child development and have nationally coordinated data collection and monitoring systems in place (with associated data systems for some outcomes measures currently in development in some cases at the time of writing this report). In both England and Wales (and as mentioned earlier in the report) a comprehensive public health outcomes framework (PHOF) has been developed as a national performance monitoring/accountability regime. In the English PHOF section on improving the social determinants of health, there are indicators that directly and explicitly relate to school readiness (Department of Health, 2015). At a high level, there are 2 broad components to these national ‘school readiness’ indicators:

1. ‘Good level of development (GLD)’ - defined as the percentage of children achieving a good level of development at the end of the foundation stage (end of reception year) with data

broken down by whole population/males/females. The GLD data comes from observational assessments made by teachers. When children have turned five years old, teachers grade children according to Early Years Foundation Stage Profile (EYFSP) criteria, making an assessment of whether children are ‘emerging, expected or exceeding’ against specific early learning goals (e.g. personal, social and emotional development, physical development and communication and language, and mathematics and literacy) (Department of Health, 2015). Children are defined as having reached a GLD if they achieved at least the expected level in these areas. Early years providers must report EYFS Profile results to local authorities, who are under a duty to return this data to the relevant Government department (Roberts-Holmes, 2013). The early years foundation profile is scheduled to be replaced by alternative assessments in the reception class (Melhuish 2016), though this has proved more complex to implement than initially anticipated (Neaum, 2016).

2. ‘*Phonics screening*’ - defined as the percentage of Y1 pupils achieving the expected level in the phonics screening check, with data, as above, broken down by whole population/males/females. At the end of Year 1 teachers assess pupil’s ability to decode words using phonics (spelling). The screening check tests the ability to decode both real words and non-words as a measure of the extent to which pupils have learnt to operate specific phonics rules (Ellis and Moss, 2014). Results are published online, including as part of the PHOF, and are also incorporated into the Ofsted inspection regime in England (DfE, 2012b).

The English PHOF also includes an inequality measure for ‘school readiness’ data in that an included outcome relates to the proportion of those school children eligible for free school meals who achieve a GLD and/or the expected level in phonics (Department of Health, 2015). As noted above, the use of the proportion of those school children eligible for free school meals as a ‘proxy indicator’ for inequalities and has been subject to criticism (see above and Darbyshire *et al*, 2014).

In the English PHOF, another indicator of relevance to child development in the early years is within the Health Improvement Domain: the ‘proportion of children 2-2½yrs offered Ages and Stages questionnaire (ASQ-3™) as part of the Healthy Child Programme or integrated review’ (REF). This indicator however, gives more of a sense of the coverage of the Programme rather than being directly measuring a developmental outcome. A sub-indicator is reportedly being developed using ASQ-3™ to make use of scores generated for 5 areas of development (Communication, Gross Motor, Fine Motor, Problem solving, Personal-social). NHS Digital (2016) reported that they undertook a pilot study of ASQ-3™ England data concluding that ‘regional and socio-demographic differences are present in relation to ASQ results... reporting through the Children and Young People Health Service (CYPHS) dataset will play a key role in enabling a baseline to be identified against which we can measure the impact of subsequent interventions’.

In Wales, the Well-being of Future Generations (Wales) Act 2015 (mentioned above) overarches the Wales PHOF and also an early years outcomes framework (EYOF) (Welsh Government, 2015b, 2016d). Two key child development indicators feature in these two outcomes frameworks:

1. *‘Young children developing the right skills’* – this indicator is in the PHOF, is shared with the EYOF, and is a Wellbeing of Future Generations national indicator. It is a new indicator and will apparently be calculated using data from the Foundation Phase Baseline Assessment for children aged 4-5, which is derived from the Foundation Phase Profile (was introduced into schools to support assessment and early identification of possible developmental delay) (Welsh Government, 2016d; Welsh Government, 2016c). Because this is a new indicator, data was not publicly available at the time of writing this report.
2. *‘Percentage of children reaching or exceeding their developmental milestones between ages 2-3’* – this indicator is in the EYOF. Welsh Government (2015b) report that data for this is only currently available for Flying Start children but that further development of the Early Years Development and Assessment Framework (mentioned above) and the Healthy Child Wales programme will support data collection (Welsh Government, 2015b).

In relation to Scotland, Geddes *et al* (2011) reported that there was limited routine standardized measurement or monitoring of cognitive, language or social-emotional development in children older than two months across Scotland. This now is outdated as developmental assessment data is captured at national scale in child health reviews as part of the Child Health Programme (as already mentioned above) and stored in the Information Services Division (ISD) Scotland ‘Child Health Systems Programme Pre-School (CHSP Pre-School)’ (ISD Scotland, 2017). ISD Scotland report on data from this system (ISD Scotland, 2017), as do the ScotPHO who release ‘Children and Young People Profiles’ (ScotPHO, 2017). Relevant pre-school child development indicators focus on ‘developmental concerns at 27-30 months’ and record the percentage of children with no, or with one or more, developmental concerns at 27-30 months across the following domains: social; emotional; behavioural; attention; speech language & communication; gross motor; fine motor; vision and hearing (ScotPHO 2017; ISD Scotland, 2017). In future, there will also be available data relating to the new 4-5 year review (specifically developmental concerns at 4-5 years) which has only recently been introduced and relating to the new Scottish National Standardised Assessments for numeracy and literacy based on testing of child in primary 1 (P1) (see Table 7). Other large-scale and coordinated national data collection exists through the Growing Up in Scotland (GUS) project - a large-scale longitudinal research project supported by the Scottish Government - which tracks the lives of cohorts of Scottish children from the early years, through childhood and beyond (Bradshaw *et al*, 2016). Bradshaw *et al* (2012) highlight that the GUS project provides baseline data for a range of different policies in Scotland, including those relating to child development in the pre-school years. As mentioned above, the GIRFEC National Practice Model is now intended for use nationally across Scotland, but the aim here is to support local practice to meet children’s needs (rather than to be used

for performance checking at national level). It is recognised that there are a wide range of other indicators and data that are available in Scotland, and indeed in the other nations of the UK, that relate to wider indicators of healthy child development (e.g. dental health, breastfeeding rates). We did not focus on comparing these in the context of this short ten month study.

In Northern Ireland, proposed indicator 15 in the draft Northern Ireland Programme for Government focuses on improving child development in the pre-school years: ‘% of children who are at the appropriate stage of development in their immediate pre-school year’ (Northern Ireland Executive, 2016 p.15). However, as indicated by the Northern Ireland Executive (2016, p.15), this is a new measure for children in the pre-school year and data will come from the new 3+ health review being implemented in Northern Ireland (as mentioned above); with data recorded using the Personal Child Health Record (PCHR) documentation, until the Child Health System (CHS) is upgraded (Northern Ireland Executive, 2016).

Workforce development

In addition to the examples of whole nation action already discussed above, three included sources highlighted measures taken in relation to the development of the early years workforce – one source each relating to England, Scotland and Northern Ireland. This is not to suggest that other examples relating to workforce development in the four nations do not exist, but rather that no data was in the sources that were included in the review. One paper highlighted reforms to the career and training structure of the early years workforce in England, including the creation of the Early Years Professional as a new graduate profession (Pugh, 2010). A briefing paper highlighted action to introduce common value statements for the early years workforce in Scotland and also the introduction of requirements for day care staff to meet registration requirements (Kidner, 2011). A research and information service paper in Northern Ireland highlighted that there are moves to ensure that all DE funded services for 0-6 are subject to thorough inspection processes, including the Sure Start Programme (Perry, 2013).

Inspection measures

Finally in relation to whole nation level action, a limited number of included sources mentioned policy action relating to the inspection of early years setting. A Scottish briefing paper mentioned action in Scotland to establish Education Scotland (by merger) (Kidner, 2011) with a responsibility for inspecting early education and the extent to which quality indicators are met. There is a dual system in Scotland with the Care Inspectorate responsible for inspecting and assuring childcare aspects of early years provision. A Care Inspectorate (2016a) report highlighted that, as the body who regulates and inspects all registered early learning and childcare services in Scotland (whether or not they receive funding), they had worked in partnership with the Scottish Government and Education Scotland to try to ‘overcome the traditional divide between ‘education’ and ‘childcare’ provision’, in order to create a more integrated system that would benefit children and their parents; involving, for example, the development of statutory and national practice guidance (Care Inspectorate, 2016a).

In England, the move to incorporate the phonics ‘screening check’ into the OFSTED inspection process was mentioned (DfE, 2012b), along with changes to make OFSTED inspection judgements of early years providers the ‘sole arbiter of quality’ that should be taken into account at local authority level (West, 2015). An OFSTED (2015) report highlighted that, from September 2014, a separate early years judgement for schools with Nursery and Reception provision was reintroduced and that, from September 2015, a common inspection framework was introduced so that all early years provision before Year 1, across the public, private and voluntary sectors, will be judged using the same framework. In relation to Northern Ireland, a research and information service paper highlighted that the Learning to Learn framework included the aim of moving towards ensuring that all 0-6 services funded by the Department of Education are subject to thorough inspection processes (Perry, 2013). There are also inspection measures in Wales but the sources that were identified for inclusion in the review did not provide any detailed information about specific policy developments in this area.

Sub-national level (regional/local) action

The previous section focused on examples of whole nation action across the four nations not taken at central government (executive) or parliamentary/assembly. We now move on to highlight sub-national level action that was highlighted in included sources of evidence; that is to say, relating to specific cities, localities or organisational environments (e.g. pre-school settings). As above, what follows should not in any way be considered as a comprehensive review of sub-national level action to support child development in the pre-school years. Rather, what follows represents a discussion based on the data in included sources. This section thus gives only partial insight into some of the possible range of sub-national level action taking place, from early years service integration and the development of partnerships, to the local delivery or local commissioning of parenting support or home learning interventions, and the development and use of local measures of child development.

Plans, policies, integration and partnership development

A number of included sources of highlighted examples of local action to develop plans, integrate early years services and often, as part of this, develop partnerships at locality level. A number of the included sources focused on the local dimensions of some of the key national programmes highlighted above (ie. Sure Start, Flying Start, child health programmes). Included sources illustrated that the actual delivery, administration or implementation of national programmes, and indeed of wider policy and strategy, took place at locality level, with elements often designed, delivered or commissioned locally (depending on the funding and commissioning arrangements in each country).

In Wales, included sources mostly mentioned local elements of the delivery of Flying Start given that the programme is administered as a grant to Welsh local authorities and with some local discretion as to how to provide the core elements of the programme (e.g. parenting programme, childcare) (Knibbs *et al.*, 2013). Morris *et al.* (2014, p.3) highlighted here, for example, that many Flying Start areas had moved to establish broader health care teams ‘offering an inter-agency mix of health visitors, speech

and language therapists, dieticians and midwives (or midwifery liaison)' with clear expectations of integrated working.

A number of the included sources focusing on England tended to focus on local elements of planning or delivering the Sure Start programme, or the later commissioning of children's centres by local authorities (Sammons *et al* 2015). Here, Sammons *et al* (2015) highlighted that there had been considerable recent changes to children centres, including reductions in services of staff (mainly due to budget cuts). Sammons *et al* (2015) indicated, for example, that according to information provided by the Local Government Association (LGA) based on Department for Education returns, total planned expenditure by local authorities on Sure Start and children's centres was due to fall by 4.6% between 2011/12 and 2012/13. The issue of budget cuts will be returned to again in the influencing factors section below. Also in relation to England, included sources highlighted the recent move to local commissioning of health visiting services as part of the national Healthy Child programme (due to the transfer of this responsibility from NHS England to LAs on 1 October 2015) (Department of Health, 2015). PHE (2016) indicated that recent published local commissioning intentions and survey responses outlined extensive plans for change to health visiting in England: reduced investment, increased integration, skill-mixed teams and a greater focus on outcomes.

Moving on to Scotland, included sources highlighted local elements associated with the Scottish Early Years Change Fund, noting the importance of local community planning partnership (with the support of CYPIC), along with other local stakeholders, in: developing Integrated Children's Services Plans (ICSP), designing and/or delivering specific early years initiatives; the setting of local outcomes; and also, in some cases, disinvestment decisions (Mulholland *et al* 2016). In relation to local policy development, Bradshaw *et al* (2015) noted that, by January 2011, most Scottish local authorities had developed formal parenting strategies and Marryat *et al* (2014) that a city-wide Glasgow Parenting Support Framework was launched (earlier) in August 2009. In their government-commissioned report on Early Years Change Fund Returns, Mulholland *et al* (2016) reported that national Family Support funding in particular had been used locally for: family centres; information hubs and resources; support within local authority settings; home support and outreach; family and parenting programmes; activity aimed at meeting specific targets; staffing; and training. Another, more specific example from Scotland in the included sources was the promotion of joint working in West Lothian between a children's centre and nursery managers in order to share knowledge of early years working across different parts of the local authority, which was identified as important in terms of being able to deliver the Scottish Government's commit to expand childcare to 600 hrs (Care Inspectorate, 2016b). Rankin *et al* (2015) also provided an example of, what they called, an 'ambitious' program of local action by the NHS Health Board in Lanarckshire to reshape early services in ways that would meet the Scottish GIRFEC approach: supporting the early years workforce to develop knowledge and skills, and to influence and build capacity in research related activity and project management.

In Northern Ireland, the development of the Colin Neighbourhood Partnership - a cross-sectoral and inter-agency group of organisations - was highlighted as a locally-developed example of action to ensure that early intervention services are delivered in the Colin area of west Belfast (CNP, 2017). More of the included sources of evidence relating to Northern Ireland focused on the delivery of local parenting programmes and it is to this example of local action that we now turn.

Parenting and home learning

A number of the included sources focused on locally delivered parenting programmes or local efforts to improve home learning environments as a means to supporting child development outcomes. In relation to Northern Ireland, an audit of parenting programmes by Montgomery *et al* (2016) indicated some use of the Mellow Parenting Programme (developed in Scotland) which is targeted at vulnerable families or those identified as having complex needs and seeks to teach parents strategies and skills to improve interaction, positive behaviour and develop positive family relationships. They report that local delivery of the programme in Northern Ireland can be linked to Sure Start projects, while some is linked to Public Health Agency funding. The local delivery of the Incredible Years (IY) suite of programmes was also highlighted in included sources in relation Northern Ireland. IY is a series of interlocking, evidence-based programmes for parents, children and teachers, which aim to reduce behavioural problems and promote social competence, emotional regulation and problem-solving skills in young children (Montgomery *et al* 2016; National Children's Bureau, 2016); some of the programmes focus specifically on the pre-school years and on school readiness in particular. The National Children's Bureau (2016) indicated that delivery of IY is concentrated in areas of high deprivation and high child population and is on the largest scale in the South Eastern Health & Social Care Trust (SEHSCT) area. There appears to be a relatively complicated landscape of funding the local delivery of the IY programmes. A government-commissioned report by the National Children's Bureau (2016) indicated that investment from health authorities is common and well established in the form of direct commissioning of IY as a named programme by the Health and Social Care Board and from the Public Health Agency; with core IY parent programmes available in all Trust areas. It is noted that more general education funding is also accessed for the delivery of IY locally, with provision sometimes funded through the Extended Schools Programmes (Montgomery *et al.* 2016, National Children's Bureau, 2016). It is further noted however, that in the North East and South East regions, the programme is funded by the Ministry of Defence Schools Fund (Montgomery *et al.*, 2016).

In England, an initiative led by the National Literacy Trust (with some funding from government) highlighted work with 21 local authorities to support them to develop new planning processes to influence literacy at home based on: local needs assessment, mapping of service provision, and the design and evaluation of local approaches (Local Government Association, 2016). Examples of action taken in different local authorities included: ensuring parental engagement was a mandatory unit of training developed and rolled out as part of the Every Child a Talker programme (Sheffield); frontline staff training on parental engagement and home learning (including childminders, children's centre

staff) (Lambeth); training of staff who run Rhyme Times to help them support parents with communication and evaluate the impact (Wiltshire); a “Tots and Teens” partnership for SEN pupils to read with the children at a local playgroup every fortnight (Suffolk) (Local Government Association, 2016).

In Wales, included sources touched on the parenting support programmes delivered as part of local Flying Start. A Welsh Government Social Research by Morris *et al* (2014) emphasised that across the local Flying Start areas, the interventions for parents: 1) focused on different points in their child’s life (ante-natal, baby and toddler); 2) used different formats (formal or informal groups and one-to-one activities, including intensive support, based in homes or in neutral venues) and 3) incorporated different means of referral. Morris *et al* (2014, p.4) also indicated that there was variability locally in the parenting support available across Flying Start areas but overall the support ‘was greater than that to which parents had access to outside Flying Start’.

In relation to Scotland, Marryat *et al* (2014) reported on the Triple P (licensed) programme in Glasgow, which aimed to prevent severe behavioural, emotional and developmental problems in children by enhancing the knowledge, skills and confidence of parents. Marryat *et al* (2014) reported however, a lack of change in social and emotional functioning among the child population of Glasgow, along with low completion rates for Triple P interventions, and so recommended disinvestment in its local delivery. Interestingly, an audit of parenting programmes in Northern Ireland by Montgomery *et al.* (2016) noted that Triple P used to be provided in the country but had not been identified as currently in use at the time of their work.

Measurement tools

Two included studies highlighted measurement tools that had been developed or implemented locally in Scotland to support the tracking of child development. It is likely that there are many other examples from across the UK nations. The examples shared in the included sources were: 1) the Goodman' Strengths and Difficulties Questionnaire (SDQ) which has been used since 2010 by staff at early years establishments funded by Glasgow City Council to screen the behaviours of children in their pre-school year (Glasgow Centre for population Health, 2017); and 2) the early Development Instrument (EDI), a teacher completed checklist implemented by East Lothian Council and other local stakeholders to assess children’s level of development or school readiness when they enter school across 5 domains: Social competence; Physical Health and Well-being; Emotional maturity; Language and cognition; Communication skills (East Lothian Council, 2017). Montgomery *et al* (2016) noted that, in Northern Ireland, some providers of IY parenting programmes incorporate standardised questionnaires, such as the Eyberg Child Behaviour Inventory and ASQs; with others using tools like Family Star or a standardised tool to measure self-efficacy (TOPSE).

Organisational Structures and Systems

Some of the included literature described how current organisations and systems were set up to support action on child development in the early years in each nation. As with the public health

systems main review, we sought information regarding similarities and differences in relation to organisations between nations in the included sources and grouped identified points into the following themes: organisational forms; financial arrangements, service delivery and commissioning mechanisms; leadership and governance; and the workforce. We start by considering similarities and differences in organisational forms, and then move on to the other aspects in turn. As outlined in main review, the structures and systems in the four nations are in constant transition and we have sought to highlight where author reports are no longer current we have been able to do so.

Organisational forms

Included sources emphasised the broad range of organisations (and also individuals) involved in policy action to support child development in the early years in each nation –national parliament/assembly, central executive, ministerial departments, local authorities, national and local partnerships, early years providers, schools, regulatory bodies and more (many of which have been mentioned in the discussion to this point above). It is not possible to comprehensively list these out or compare them comprehensively in the constraints of this report. We can only set out the similarities and differences as identified from the included sources. We recognise therefore that there may be other areas of similarity or difference that not covered here.

In terms of organisational similarities, as suggested implicitly in the material above, included sources emphasised the existence of various partnerships in nation, and particularly those in place at local level. For example, in relation to England and Wales, included sources highlighted the role of Children and Young People’s Partnerships, which in the past had a statutory footing in the Children’s Act 2004, and with a remit for integrated planning for all children’s services (Save the Children, 2017; Smith, 2007). More recently in Wales, the Wellbeing of Future Generation Act placed specific duties on local authorities and established Public Services Boards as key local partnerships for taking forward integrated wellbeing plans (including for the early years) and local authorities are required to work with Public Service Boards to produce Wellbeing Plans which incorporate participation and involvement of children and young people (Welsh Government, 2016e). As noted above, in relation to English partnerships, one paper raised questions about the level of strategic engagement with the early years, given that, through analysing a selection of English plans, little mention of pre-school children or their needs was found (Cowley *et al.*, 2009).

In relation to Scotland, Community Planning Partnerships were highlighted in a government evaluation report as having a key role locally, for example, in developing plans to support the implementation of national early years initiatives (Mulholland *et al.*, 2016), and with support from the Children and Young People Improvement Collaborative in Scotland. In relation to Northern Ireland, an evaluation report by RSM McClure Watters (2015) highlighted the importance of the 11 new ‘super’ councils that have increased responsibilities under community planning, including aspects of health and wellbeing, and which are required to form Community Planning Partnerships. There is also a Children and Young People’s Strategic Partnership (CYPSP) in Northern Ireland - a single multi-

agency partnership covering all of Northern Ireland, comprised of senior representation from Statutory/ Voluntary/Community organisations, Councils and Government Departments involved in delivering services to children and families to support integrated planning and commissioning and this children's wellbeing and development over the longer-term.

In terms of further similarities, different sources suggested that, across the four nations, there are versions of integrated children's/family support centres, though with apparently different recognised names in each country and variability in terms of location and the provision of services (Wincott, 2005, 2006; Kidner, 2011; Sammons et al., 2016; RSM McClure Watters , 2015); and that a variety of organisations are involved in providing formal early years/nursery education and care, across the public and private sectors, for example: day nurseries, pre- or nursery schools, nursery playgroups, children's centres and registered childminders (West, 2015; Naumann *et al*, 2012).

In terms of differences in organisational forms, as already mentioned above, included studies highlighted a key difference in the organisational set up of inspection bodies for early years education, learning and care. In England, just one body - OFSTED – is responsible for registering and inspecting all types of early education and child care settings (public, independent for profit, non-profit and home-based childcare) (Naumann *et al*. 2013). In Northern Ireland, just one body, the Education & Training Inspectorate (ETI) is responsible for inspecting all education settings including pre-school settings. In both Scotland and Wales, two separate bodies exist, with one body responsible for education and one for child care (Naumann *et al.*, 2013; Wincott, 2005, 2006) – Education Scotland and the Care Inspectorate in the former (as already mentioned in the inspection measures section above); and Estyn and the Care and Social Services Inspectorate in the latter. In Scotland, registration with the Care Inspectorate is compulsory for all early learning and childcare settings that are operating more than 5 days/yr and more than 2hrs/day, with 9,859 early years services regulated by them in total in Scotland by the end of 2015 (including nurseries, playgroups, out of school care, and childminders) (Care Inspectorate 2016a, 2016b). As already reported above, given that Education Scotland also has a duty to inspect all local authority *funded* early learning and childcare services, both organisations work together to inspect such nurseries and playgroups (Care Inspectorate, 2016b). In Wales, collaboration between Estyn and the Care and Social Services Inspectorate is promoted through the new body Inspection Wales.

Funding, service delivery and commissioning mechanisms

Moving on from inspection now to funding, service delivery and commissioning mechanisms, we find evidence of divergence here, which is linked, in England at least, to way in which OFSTED inspections are tied to the funding of early years education and care. Here, the link between the regulatory framework in England and the funding system for early years is mentioned in included sources, which, it is argued, shapes the role of local authorities (Naumann *et al*. 2013; West, 2015). These sources suggested that England had a strong and centrally controlled regulatory framework, both in terms of the role that OFSTED played as the 'sole arbiter' of the quality of early education and

care and subsequently in how OFSTED's quality judgements shaped the funding of providers through the early years single formula via local authorities (Naumann *et al.* 2013; West, 2015). As West (2015) explained, 2014 statutory guidance for local authorities in England indicated that they 'must' rely 'solely' on the Ofsted inspection judgment in deciding whether to fund an early years education and care provider, ensuring therefore that the system is 'demand-led'. While the exact details of the formula can be developed locally (composed of a single base rate for all early education providers or a number of base rates differentiated by different providers) and includes a supplement for deprivation, it is argued that the result is a diminished role for English local authorities when compared with local authorities in Wales and Scotland, who have had much greater local discretion and control of funding and commissioning decisions, and thus local provision (West, 2015; Naumann *et al.*, 2013). As indicated in a descriptive paper by West (2015), in Scotland, local authorities are able to make their own decisions about which providers should receive early learning and childcare funding: they can either directly provide it through nursery classes within primary schools and nursery schools or, in contrast to England, and to meet demand, they can commission private and voluntary centres to provide early education places via formal procurement processes, service level agreements or grants (West, 2015). A Care Inspectorate (2016a, p.5) report indicated that such local authority discretion meant that they are now providing:

“additional flexibility around both the timing of sessions and their own commissioning policies, which is bringing more private nurseries, playgroups and childminders into early learning and childcare partnership, and thereby enhancing flexibility and choice further”.

Interestingly, a Care Inspectorate (2016b) report explicitly expressed a view not to pursue moves towards the English system in Scotland; reporting that “local commissioning makes sense for meeting local needs and we would not recommend that decision making on eligibility for services to receive early learning and childcare is transferred to the scrutiny body as in England”. The Care Inspectorate (2016b) report also indicated however, that LAs use a wide range of differing criteria to commission quality services receiving early learning and childcare funding in Scotland and recommended that ‘a common threshold with regard to quality’ is considered for such services in the future.

A further difference in terms of the funding and commissioning of services of direct relevance to child development in the early years relates to health visiting. Here, two included sources indicated that the transfer of commissioning responsibilities for health visiting services in England from the NHS to local authorities was a significant organisational and funding change (PHE, 2016). It was further reported that, under plans current at the time of writing this report, the public health grant (PHG) will also be replaced as part of a move to 100% business rate retention (BRR) by local authorities (PHE, 2016). In contrast, in Northern Ireland, health visiting services are provided by each Health and Social Care Trust in the country (RQIA, 2016).

One final point that was mentioned by Wincott (2005, 2006) was the use of more unified funding streams for children's services in Wales, as compared with a tendency to use single pots of funding in England – with Cymorth funding named here as an example of the bringing together of funding for childcare, Sure Start, play and some other services. As noted above, Cymorth funding has subsequently been absorbed into the mainstream Local Authority Revenue Support Grant in Wales (Welsh Government 2009).

Leadership and governance

A limited number of the included sources focused on the leadership and governance of policy action across the 'whole system' of child development in the early years. None of the included sources looked at leadership in any detail, rather leadership was referenced more sporadically within particular sources and we were able to extract excerpts about this topic, and no included studies directly compared leadership across the four nations. What follows is therefore a summary of what limited material was mentioned in relation to each nation, with comparisons made where that was possible.

In relation to Scotland, Naumann *et al.* (2013) highlighted that central leadership of early education, learning and childcare is integrated given that overall Ministerial responsibility lies with the Cabinet Secretary for Education and Lifelong Learning, who is responsible for education policy as a whole – this post is now the Cabinet Secretary for Education and Skills. Naumann *et al.* (2013) also noted that education and childcare were overseen by different Ministers. Importantly, this has more recently changed with the creation of a single post of Minister for Childcare and Early Years. NHS Health Scotland is however, also involved in leading, for example, the child health programme, and the ScotPHO (as mentioned above) and the Information Services Division Scotland lead on aspects of data and surveillance. There are similar leadership structures in Wales, with for example senior government responsibilities through the Cabinet Secretary for Education and the Minister for Children and Social Care. Public Health Wales has a key role as the national public health agency, reporting to the Cabinet Secretary for Health and a range of other organisations are also involved in the various different collaborations mentioned earlier in this section of the report.

In relation to England, two included sources noted that responsibility for early education and child care was, like Scotland, also largely integrated under one Department – the Department of Education – which had been the case since 1997 when responsibility for child care services moved across from the Department of Health and a whole range of responsibilities were brought together (Wincott, 2005, 2006; Pugh, 2010). The Department of Education oversees childcare and also the early years curriculum. Wincott (2005, 2006) noted that the placing of the Whitehall leadership of early education and care had, in the past, been subject to dispute, with disagreements as to whether it should be sited in Education or Work/Employment. Wincott (2005, 2006) further reported that, despite central government leadership being within the Department of Education, there had also historically been separate units, which had complicated organisational structures; one example being the national Sure

Start Unit which was set up as a cross-departmental body (e.g. involving Education; Health; Social Security; Environment; Culture, Media and Sport; Trade and Industry; Home Office) and housed in the (then) Department for Education and Skills (Belsky *et al.*, 2008). In a descriptive analysis, Smith (2007) further noted that the Treasury had taken on a leadership role (under New Labour) given the linkages made between early interventions, work and the labour market. The Department of Health however, also has a leadership role in some policy action, and Public Health England leads developments for the Healthy Child programme (PHE, 2016).

All this suggests a somewhat complicated leadership structure in Scotland and England. A situation that appears to be mirrored in Northern Ireland - a research and information service paper, suggested that responsibility for early years provision is spread across a range of departments and 'arm's-length bodies'; highlighting reports that had noted a 'lack of leadership and ownership' given that no one Government department has sole responsibility for provision Service (Perry, 2013). In a mapping report, the National Children's Bureau (2016) indicated that, in some cases, the Department of Health leads for certain elements of new collaborative government initiatives, such as the Early Intervention Transformation Programme.

In relation to local leadership, an OFSTED (2015, p.6) report pointed out that, with the transfer of public health to local authorities in England, many important levers to support change in the early years will now 'sit with local leaders'.

Workforce

As with the identified material on leadership and governance, a limited number of the included sources focused on the characteristics of the workforce who are involved in policy action to support child development in the pre-school years. Those sources that did touch on the characteristics of the workforce were primarily about the professionals involved in delivering child health programmes, particularly health visitors. Included sources emphasised that in all nations, health visitors were recognised as a core part of the workforce and had a key or pivotal role in supporting child development up to the time they started school (OFSTED, 2015; Scottish Government, 2015; Welsh Government, 2016c; Kidner 2011). As indicated in material on the health visiting pathway in Scotland 'Health professionals, particularly Health Visitors, have a vital role to play in supporting children and families in the first few years of a child's life' (Scottish Government, 2015). There was limited detail provided in included sources about the characteristics of the health visiting workforce. Some studies reported total workforce numbers, but these provide limited comparative insight without wider consideration of populations served and caseloads. Nevertheless, in terms of reporting what was found, Cowley *et al* (2009) reported that in 2007 there were 9057 whole time equivalent health visitor posts in England (less than in 1988 at 10 680 WTE), with caseloads ranging from 1:160 up to 1:1355 at that time. A PHE (2016) report indicated that the recent health visitor programme in England had increased the workforce by approximately 4,000. In relation to Scotland, one government briefing paper dating from 2011 suggested that, although health visitors were mentioned in early intervention

policies, there were around 1,500 health visitors in Scotland (Kidner, 2011). An ISD Scotland briefing paper reported between 1,047.9 (lower estimate) and 1,114.7 health visitor staff in post as at 31 March 2014 (ISD Scotland, 2016). In Northern Ireland, a workforce census completed in March 2017 showed 581 (496.6 WTE) health visitors/student health visitors within the health and social care workforce in the country (O'Hagan, 2017). Included sources did not mention health visitor numbers in Wales but one evaluation report noted the aim of a 1:110 health visitor caseload in Flying Start programme areas in Wales and that this had mostly been met (Morris *et al.* 2014; see also Welsh Government, 2016c). Within Healthy Child Wales Programme, there is a target of 1:250 health visitor caseloads.

Ways of working

As indicated earlier in the report, the starting heuristic model that was agreed at the stakeholder workshop identified a list of descriptors that were perceived to characterise key elements of public health work (see also Appendix 1). We took this list as the starting point for synthesising data relating to ways of working reported in the included sources of evidence. As with the main review, this process was challenging as the descriptors frequently overlapped, and references to these ways of working were often vague and lacked clarity. We did identify some data that mentioned generating evidence, providing a prevention-focus (early intervention), involving communities (co-producing and asset-based approach) and relationship-building or partnership working, but most of the included sources were about aspirations of or policy commitments to work in these ways, rather than studies which specifically focused on the extent to which this way of working was happening in practice. This is not, of course, to suggest that such studies do not exist, but rather that we did not identify any within the limits of the search process. As such then, many of the key points in terms of intended 'ways of working' have been discussed in the foregoing sections above.

In terms of points which have not already been addressed above however, on the topic of involving communities: two sources noted that Sure Start embedded a community development approach (Belsky *et al.*, 2008; Pugh, 2010); and one source noted that integrated children's centres in Wales entailed considerable involvement of the local community in identifying needs (National Foundation for Educational Research, 2010). It was also noted that the FRAIT tool was co-produced by health visitors (Welsh Government, 2016c) – an example of co-production by professionals not the public; and it is recognised more broadly that co-production is one of the key organizing principles for the NHS in Wales, involving the public, patients and professionals as equal partners in efforts to achieve health and wellbeing (PHW, 2016). In relation to Scotland, the importance role of community planning partnerships was mentioned in terms of local engagement and also partnership working (Mulholland *et al.*, 2016). Included sources also emphasised that the FNP was a strength or asset-based approach and, moreover, that this approach reflected a wider interest in rethinking public services within Scotland using more 'assets-based' approaches that seek to involve clients and communities in promoting their own health (Ormston *et al.*, 2014).

In terms of partnership working and relationship building, many of the key points and aspirations about this particular ‘way of working’ have been mentioned already in the ‘levels and types of policy action’ section above. To emphasise here, across all nations, the importance of partnership working was clearly recognised and indeed emphasised as being important at all levels – national through to local. None of the included studies however, explored day-to-day experiences of partnership working in any depth or detail. Included studies also emphasised aspirations across all nations for policy action to embed a prevention-focus and thus focus on early intervention.

Influencing Factors

As with the main systematic review, the included sources described an extensive range of factors which were highlighted as being influential in shaping policy action and systems relating to the child development in the pre-school years in four nations. These factors help to explain similarities and differences in the policy action taken and implemented in each nation, organisational structures and systems, and ways of working, which, in turn, may influence outcomes and impacts. The influencing factors were categorised into those relating to: geography of nation; factors relating to the population; politics; features of the organisation and leadership; the nature of public health; financing and resourcing; workforce; audit, data and evaluation; legal frameworks; international factors; and the media and interest groups. Few of included studies directly compared how particular factors had an influence across the UK nations, and so the discussion here is based largely on single country sources of evidence.

Geography of nations

A limited number of included sources (6) mentioned the way in which geographic factors had shaped policy action in Northern Ireland, Scotland or Wales (none of the included sources mentioned geographic influences in England). Geographic issues were highlighted as being important in both Scotland and Wales in shaping access to preferred or free offers of childcare (Morris *et al.*, 2014; Care Inspectorate, 2016b). In relation to Scotland, the Care Inspectorate (2016b) reported that childminders and playgroups were often more accessible geographically for parents than local authority or private/voluntary nurseries, especially in very remote communities; they reported however, that a lack of geographic availability of these different forms of provision had affected the Scottish expansion of free childcare to 600hrs. Ormston *et al.* (2014) noted a number of geographic factors which had shaped the delivery of the FNP in Scotland; indicating, for example, that the rurality and remoteness of some areas, poor weather, and also the mobility of clients had affected the ability of staff to carry out health visits in a timely manner, and shaped workload pressures. In relation to Northern Ireland, Montgomery *et al.* (2016) highlighted how the location in which parenting programmes, such as Mellow Parenting Programmes, were delivered were important; with effective delivery shaped by, for example, the use of sites that were familiar to parents and which also offered other facilities (such as Sure Start Centres). A similar issue was highlighted in relation to the Flying Start programme in Wales by the Welsh Government (2009) who reported that the provision of appropriately located and also appropriately configured premises had been a key constraint on the delivery of child care

entitlements; noting that this had taken time to resolve. On a similar theme, the National Foundation for Educational Research (2010) noted in relation to integrated children's centres in Wales that there had been a lack of facilities to support aspirations of open access play.

Factors relating to the population

The literature outlined how characteristics of the population was a fundamental influence on action relating to child development in the pre-school years, and particularly here how the living and working environment for families with young children and levels of poverty were connected to child development outcomes and indeed both longer term health and health inequalities. A number of similar, influencing factors were identified as operating in all countries of the UK. Cowley *et al.* (2009, p.131) highlighted, for example, the 'catalogue of need' for health visiting services to support child development outcomes in England, due to population factors such as an increasing number of children with special and complex needs and an increasing number of mothers experiencing mental health problems. Another source touched on wider demographic trends in Scotland, noting the rising under-5 population (Kidner, 2011). Perhaps the most evident highlighted factor relating to need was the prevailing high levels of poverty/child poverty and disadvantage in all nations, including the spatial patterning of this, which included sources emphasised fundamentally shaped child development outcomes, attainment gaps and life chances, and thus the need for policy action in each country to try to ameliorate its effects (see, for example, Centre for Effective Services, 2013; Dunlop, 2015; Bradshaw *et al.*, 2015; Cowley *et al.*, 2009; Knibbs *et al.*, 2013; Morris *et al.*, 2014; Smith, 2007; Sammons *et al.*, 2015; Maryat *et al.*, 2014).

On this point, a number of sources highlighted the significance of the wider economic context (ie. the backdrop of the recent economic downturn) in shaping poverty levels in Scotland, England and Wales (Pugh, 2010; Sammons *et al.*, 2015; Ormston *et al.* 2014; Welsh Government, 2015). Here, Sammons *et al.* (2015) noted further that the economic downturn was likely to have had a greater impact on vulnerable families and those living in disadvantaged areas, thus shaping the subsequent outcomes of specific policy actions such as children centres. Ormston *et al.* (2014) also noted how the poor economic backdrop had shaped the needs of clients engaged in the FNP in Scotland, meaning that the FNP team had needed to think creatively about how to support them. Another point on the significance of financial disadvantage to school readiness was made by Bradbury *et al.* (2015), who suggested that richer parents in England were more able to invest in 'edutainment' resources for their pre-school children, which meant that they arrived at school already flexible and enthusiastic about learning in multiple ways. Bradbury (2011, 2013) further noted that children who spoke English as an additional language were disadvantaged within the pre-school to school system in England given that it relied on verbal responses as evidence of learning (Bradbury, 2011, 2013).

A number of sources noted the costs of childcare for families in England (OFSTED, 2015; Smith, 2007) and also in Scotland (Naumann *et al.*, 2013). Naumann *et al.* (2013) here, noted that England and Scotland were amongst the most expensive in Europe in their particular study, with parents in Scotland often paying nearly as much as parents in Southern England but on lower incomes. This

situation is, of course, shaped by the ongoing policy action to expand the provision of free childcare places. Yet, it seems clear from included sources that there can still be ‘barriers’ for low income parents to take up quality early education and childcare, including free places. In relation to England for example, OFSTED (2015) noted that the take-up of funded places for 2 years olds (the extended eligibility for free childcare for children from disadvantaged backgrounds) had fallen short of expectations: by the end of January 2015, only 58% of all eligible children had taken up a funded early education place (less than the target of mid 70% takeup). The NAO (2016) further noted that take up of free places for 3 to 4 year olds was less in more deprived areas. In relation to Wales, Morris *et al.* (2014) noted that there had been variable uptake of the free childcare offer associated with Flying Start.

Included sources suggested that a range of different population factors could affect engagement with and take up of free education/childcare locally, as well as other pre-school services seeking to support child development. The NAO (2016) suggested that, in England, awareness of free entitlements was an issue in Bangladeshi, Somali and Polish communities and, in other cases, parental beliefs about children being too young to go to childcare had affected uptake. In relation to Scotland, the Care Inspectorate (2016b) highlighted that parental choice had affected the take up of the 600hrs entitlement in Scotland.

Other included sources highlighted how parental knowledge, perceptions of, and relationships with, particular staff, staff groups or services could shape engagement and uptake; and thus potentially child development outcomes over the longer-term. Here, for example, Melhuish *et al.* (2010) highlighted the general acceptance of health visitors by more disadvantaged families as being important within the Sure Start programme. An apparently positive take up of Flying Start health visiting services (Knibbs *et al.*, 2013) was also connected to positive views about health visitors, as well as, for example, the strong informal relationships that health visitors had been able to build up with families (Morris *et al.* 2014). Morris *et al.* (2014) also indicated however, that family engagement with Flying Start activities could be undermined by parents not getting on well with those delivering the programme, or if parents felt services were not clear or informative (Morris *et al.* 2014). Bradshaw *et al.* (2016) suggested that, in Scotland, parental engagement with Bookbug and PlayTalkRead had been shaped by the level of parental recognition of the benefits of learning/reading activities, which they indicated could be higher in more advantaged families (Bradshaw *et al.*, 2016).

In relation to Wales, it was reported that the participation of parents in activities at integrated children’s centres was supported by the non-threatening environment created by staff and the extent to which the centre was perceived as a place to interact socially (National Foundation for Educational Research, 2010). Montgomery *et al.* (2016) raised questions about whether some parenting programmes were suitable for parents from all backgrounds in Northern Ireland, noting difficulties in recruiting and retaining parents for the duration of some programmes. Interestingly, Montgomery *et al.* (2016) also highlighted more generally here, the need for a balance between meeting family needs

and not stigmatising parents; a point also made by Coles *et al.* (2016) in relation to the importance of perceptions of universalism (rather than targeted action which can be stigmatising) and by Melhuish and Barnes (2008) in relation to the area-based strategy of Sure Start.

One source noted the significance of intergenerational influence in relation to the FNP in West Lothian, Scotland, highlighting that the views of clients' 'own parents' about parenting affected the way they themselves were able to favour or follow advice from family nurses (Ormston *et al.*, 2014). A key challenge in dealing with these varied population-level needs and influences was noted by Montgomery *et al.* (2016) in relation to parenting programmes in Northern Ireland, who highlighted that the requirement for fidelity in some parenting programmes meant that the programme could not be adapted to meet local needs or in ways that might meet the specific needs of more vulnerable families; thus pointing to the importance of flexibility in local design.

A number of included studies highlighted the importance of key population factors shaping child development outcomes in the longer-term and upon which much policy action sought to affect change more directly. Of particular significance were factors such as the home learning environment and parental behaviour, negative parenting, and parental capacity and confidence; which many of the policy actions described in the sections above (e.g. parenting programmes, health visiting services, Sure Start, Flying Start and the FNP) have sought to change. Some of the included sources reported positive improvements in these 'intervening' population factors, and noted potential links to child development outcomes in the pre-school years and longer term. Montgomery *et al.* (2016) for example, reported a range of impacts associated with parenting programmes in Northern Ireland; noting, for example, positive effects of the IY programme on parental self-confidence about child development and improved parent-child relationships. Hutchings *et al.* (2017) also noted similar improvements in their trial of the effectiveness of the IY Toddler Parent Programme in Wales with parents of 1 and 2 year old children in Flying Start areas across Wales; highlighting that short-term intervention improvements in parental mental well-being and parental praise may have contributed to child development gains. Ormston *et al.* (2014) noted possible contributions of the FNP in West Lothian, Scotland to positive parenting. The evaluation of the Scottish Extended Pre-School Provision for Vulnerable Two Year Olds Pilot Programme reported that enhancing parenting capacity was likely to be a highly important outcome for impacting on children's development in the longer term (Woolfson and King, 2008). Evaluations of the Sure Start programme in England and Flying Start in Wales also noted positive changes in parental behaviour associated with the programme (Morris *et al.* 2014); including, for example, less negative parenting, as well as a better home environment (Melhuish *et al.* 2010; Melhuish, 2016).

On a different topic, one further population factor highlighted by Melhuish (2016) was the lack of wider public recognition of early years services in England. Melhuish (2016) connected this lack of recognition to the conscious political decision by the New Labour government to take forward action to get a universal early years infrastructure in place in England.

Political factors

A sizeable proportion of the included literature discussed how political influences had driven action to support child development in the pre-school years; for example, shaping the content of policy, the direction of or changes to the overall approach, or the prioritisation of early years issues. Similar to the main evidence review, there was comparatively little evidence relating to Northern Ireland.

A number of sources highlighted the significance of devolution and of the extent of devolved powers in Wales and Scotland. Taylor *et al.* (2015, 2016) reported that devolution was regarded as a political opportunity by the Welsh Government to take its own direction, and that this led, at least in part, to the development of the Foundation Stage in Wales (which, as mentioned above, was introduced from 2004). In relation to Scotland, Coles *et al.* (2016) highlighted the importance of Scottish powers in developing the Children and Young People (Scotland) Act 2014 in order to accelerate consistent implementation of GIRFEC and to put children's rights at the core of service delivery. On a different point, a briefing by Save the Children (2017) reported that the UK Government resisted amendments proposed by the Welsh Assembly Government to the Children Act 2004 that would have introduced the Convention on the Rights of the Child as a rights-based framework for service provision; noting, however, that the National Assembly managed to retrieve this position using subordinate legislative powers.

Other sources highlighted limits to Scottish and Welsh policy action to address child development and inequalities in the early years, given that cross-cutting issues relating to benefits, social security and employment issues were reserved matters (retained responsibilities of the UK Government in Westminster), yet can fundamentally reshape key wider determinants of child development such as poverty levels and income inequality (Coles *et al.*, 2016; Welsh Government, 2015; Naumann *et al.*, 2013). Here, it was argued that limited powers in these areas meant that it was difficult for the Scottish and Welsh Governments to ensure that wider enabling social and economic policies (such as forms of social security and income support) of relevance to Scottish and Welsh populations were in place (Geddes *et al.*, 2011; Welsh Government, 2015). It is recognised that this situation is changing given that, for example, the recent Scotland Act (2016) further devolves powers in key areas such as tax, employment support and welfare-related benefits, which may offer greater opportunity for the Scottish government to exert control over key wider determinants of child development and indeed wider public health. Further powers are also due to Wales in the coming years. These are thus key future areas of potential divergence in the system relating to child development in Scotland and Wales.

As reported above, included studies suggested that there had been high-level political commitment to child development in the pre-school years in each of the four nations since devolution. Taylor *et al.* (2015) noted, for example, that early education and childcare had been a priority for the newly devolved Welsh Government. Coles *et al.* (2016) highlighted the SNP's prioritisation of the early years as a key policy concern; and other sources explained how the commitments of senior figures in

New Labour (Pugh, 2010) ensured that family policy and early years education was an explicit part of its legislative programme and funding commitments (Lewis, 2010); with Sure Start a ‘flagship policy’ that fundamentally changed early years services (Belsky *et al.*, 2008). Melhuish (2016) suggested that the need for some form of state involvement in the early years had since been accepted by all parties across the political spectrum. As a result, later governments had continued to pursue some form of action in this policy area (Melhuish, 2016). On this point, OFSTED (2015) noted that the provision of early education and childcare for the youngest children had become a ‘major policy battleground’ in England, with key associated pledges in party manifestos and with childcare featuring in the Queen’s Speech.

Interestingly, Wincott (2005, 2006) suggested that several factors had actually conspired to make children politically visible in Wales and to put early years high on the policy agenda right from the start of devolution: 1) scandals linked to children in residential care in Wales; 2) the bilingual character of Wales, which politicised early years education and care (given that the Welsh language became tied into the sustainability of ECEC provision); and 3) the reception of the Welsh version of the National Childcare Strategy at Westminster by Welsh MPs. In a similar way, Smith (2007) argued that the national ‘scandal’ of the Victoria Climbié tragedy contributed to the political focus of the New Labour UK Government on the early years. Smith (2007) suggested that the political orientation of the New Labour UK government was also instrumental here, given that it led to treating family policy, childcare and the socialisation of young children as a matter of public, rather than private, concern. A similar point was made by Smith (2007) who argued that, driven by concerns about child poverty and inequalities in children’s life chances, New Labour reframed childcare as a matter of public policy and debate, rather than private decision – though was careful here about the role of the state and thus maintained concepts of individual ‘family responsibility’ and ‘choice’. Melhuish (2016) further suggested that political visibility of the early years in England had been furthered, at least in part, by the fact that different parts of government wanted early years services, albeit for different reasons: the Department for Education pushed for universal free part-time ECEC provision because evidence suggested that, for the general population of children, part-time was as beneficial as full-time; whilst other government departments wanted to use provision to increase parental (particularly maternal) employment. Melhuish (2016) argued that this led to the political motivation to increase the universal offer in England from 15 hrs/week to 30 hrs/week.

Key political differences between England, Scotland and Wales that were highlighted in a number of included studies were the relationship between central and local government, the degree of central government trust in local authorities, and differing (and sometimes confused, Pugh, 2010) political ideas about the appropriate roles of the state, market and individuals in early years provision (due to different degrees to commitment to free market ideology and social democratic welfare provision) (West, 2015; Wincott, 2005, 2006). West (2015) suggested that the role played by central government varied by jurisdiction; arguing that, in Wales and Scotland, there have tended to be: more favourable views about and higher degrees of trust in local authorities historically; closer relationships between

local authorities, civil servants and politicians than in England; and less of a political commitment to free-market ideology/more acceptance of the role of the state in educational provision. As a result, local authorities in Scotland and Wales have had more autonomy than in England, where central government has exerted a higher degree of control over funding and regulation and sought to limit local authority interventions in early education and childcare (Geddes *et al.*, 2011; West, 2015). It was argued that these political factors had manifested in the different ways in which early education, learning and childcare were funded and provided in England, Scotland and Wales (as noted above): that is to say, leading to the more demand-led and market-based system in England, in which local authorities were instructed to fund based on OFSTED's quality judgements; and a more locally autonomous system in Wales and Scotland, in which local authorities had greater discretion and control over funding, and thus over the mixed 'market' economy of early years provision (West, 2015; Naumann *et al.*, 2013; Ang, 2014). More broadly, Coles *et al.* (2016) highlighted Scotland's 'distinctive' political approach based more on collaboration, the creation of frameworks that allowed for local discretion and ideas about aspiration. Coles *et al.* (2016) reported that this had all been manifested in GIRFEC which, as noted above, had sought to shape Scottish policy action, including for the early years.

A number of included studies highlighted the way in which political ideas and central government control in England in particular had come to shape the early years foundation stage curriculum and associated assessment profile. Here, it was argued, for example, that the election of the Conservative-Liberal Democrat coalition government in 2010 had led to greater government control over, and the move towards, a more traditional curriculum focused on 'essential knowledge and concepts' (Roberts-Holmes, 2015; Bywayer and Sharples, 2012; Ellis and Moss, 2014). Bradbury (2011, 2013) argued that neoliberal political ideology and competitive values had shaped the assessment profile for the early years in England; noting that, in practice, it served to close down the possible ways of being recognised as a 'good learner' and set children up on paths to educational failure at a point when they had only just begun to learn. Ellis and Moss (2014) also suggested that the teaching of synthetic phonics as part of the early years curriculum had been politicised and subject to control by politicians in England. Ellis and Moss (2014) argued, for example, that during the Labour government's administration, moves to champion this mode of teaching by then Shadow Minister for Schools (coupled with the selective use of evidence) was a means to try to undermine the government's credibility in improving literacy. Finally, one included study suggested that an apparent awareness of differences in political ideas led the UK Labour government to embed children's centres in the welfare state by statute, so that they would be difficult to eradicate by any future government (Belsky *et al.*, 2008; Melhuish *et al.*, 2010).

Organisational influencing factors

Moving on now to organisational influencing factors, a number of included sources highlighted the significance of the complex organisational landscape for early years education and care provision in all nations of the UK in shaping the context for the development and implementation of policy

actions. Here, the mixed economy of different types of provision across the public, private and voluntary sectors in all countries was noted (ie. nurseries, childminders, nursery classes, play groups and so on) (see, for example, Naumann *et al.*, 2013; Melhuish, 2016; Care Inspectorate, 2016a, 2016b; Perry, 2016; Morris *et al.*, 2014; Dunlop, 2015). It was highlighted that these different provider organisations not only tended to offer a different kind of early education and care, but also of a different quality, which could shape the developmental outcomes of children and support provided to parents. In relation to England, a number of studies referred to variability in the quality of provision, either spatially or by type of provider. OFSTED (2015) reported that standards of provision were generally rising in England (with 85% of early years registered providers now good or outstanding – a significant increase of 18% in five years), but with variation across the English regions. Pugh (2010) noted that quality tended to be higher in maintained, rather than private/voluntary settings in England, and the NAO (2016) noted that more deprived areas tended to have lower quality early years settings (though reported that this had been improving). Smith (2007) further pointed to variation, but in terms of the spatial availability of pre-school *places* in England. The quality of early years provision was also mentioned in an included source in relation to Northern Ireland. Here, Perry (2016) reported that, in the period 2012-14, 23% of voluntary and private preschool settings and 10% of statutory settings inspected in Northern Ireland were *not* evaluated as good or better, indicating that this was likely to shape children's attainment. In Scotland, the Care Inspectorate (2016a, p.5) reported that inspection findings showed LA provision tended to achieve higher grades than private and voluntary sector settings across: quality of care and support, quality of environment, quality of staffing and quality of management and leadership.

Another key organisational influencing factor that was highlighted in included sources in relation to all nations was the nature of the relationship that existed between organisations involved in supporting child development in the early years. In Wales, the Welsh Government (2009) noted that longstanding relationships in some of the smaller local authorities and across all areas had meant that Children and Young People's Partnerships had established a high level of collaboration and trust among partners. It was also highlighted however, that there were concerns that NHS re-organisation could lead to less senior Trust representation on these key local partnerships (Welsh Government, 2009). In relation to Northern Ireland, RSM McClure Watters (2015) suggested that relationships between organisations across Sure Start projects had shaped the sharing of key data; with, for example, access to live birth data dependent on relationships that had been built at local level. RSM McClure Watters (2015) also suggested that Sure Start Projects that were located next to nurseries had closer relationships and better partnership working than those that were not and that, in some cases, sharing premises helped relationship development. In relation to Scotland, included sources noted the importance of previous experiences of joint working on relationship development and in the ability to plan across sectors (Cunningham-Burley *et al.* 2002; Ormston *et al.*, 2014). Ormston *et al.* (2014) suggested, for example, that this had been the case with the FNP in Scotland, with relationships shaped by prior experience, the extent of open communication, and the quality of family nurses work. Ormston *et al.*

(2014) noted that, where effective relationships were in place, this helped with programme set up and client transitions - either into wider services or back into universal services at the end of the FNP. Coles *et al.* (2016) highlighted that, in the early years system more broadly in Scotland, there were overlapping relationships, with multiple initiatives sometimes working at cross purposes and with limited coordination between activities; noting that these factors had slowed the implementation of GIRFEC activities into practice. Also highlighted as importance here was the scale of practice adjustment required for new practice to become embedded across all services – the scale of change necessitates time. Coles *et al.* (2016) further highlighted (linking to workforce as an influencing factor) that there had been considerable for interpretation within GIRFEC legislation and guidance, which had presented challenges for practitioners.

A number of sources highlighted the *particular* significance of the organisational relationship between pre-school providers and schools on children's transition experience and potentially developmental outcomes in the longer-term in England and Wales. In relation to England, it was noted that reception classes had a unique role in the education system, given that they were responsible for children's transition into formal schooling (Bradbury, 2011, 2013). OFSTED (2015) argued that one of the reasons some children started school at a disadvantage was because some schools did not have sufficiently effective relationships with feeder nurseries, pre-schools or childminders to ensure that every child had a good transition into school. Here, OFSTED (2015) indicated that less than 5,000 schools took 2-year-olds and, of those that did, the 2-year-olds attending were disproportionately from better off families. In terms of other associated factors shaping the transition experience, Ang (2014) noted that recent changes in curriculum and pedagogy between the early years and primary school, from a play-based to a more formal approach also lead to transition challenges for children when settling into a new school environment. Similarly to England, in Wales, the National Foundation for Educational Research (2010) highlighted the important role of the organisational relationships that existed between integrated children's centres and primary schools as this shaped the extent to which young children had been supported and prepared for a transition into formal schooling.

In terms of other influencing factors, a number of the included sources highlighted organisational challenges which shaped the implementation of policy action to support child development outcomes. In Scotland, the Care Inspectorate (2016b) reported that the complexity of organisational landscape, as well as a tight timeframe, had shaped the implementation of the expansion of childcare provision to 600hrs. It was reported that LAs had generally succeeded in making available the 600hrs for all eligible children but that the ability and way in which different LAs had responded had been important; with rates of uptake varying by LAs (Care Inspectorate, 2016b). Here, a Care Inspectorate (2016b) report noted that the process of scoping, recruiting and commissioning new services takes time and that many local authorities had, instead, needed to use and expand their own provision in the

first instance in order to meet the statutory deadline (Care Inspectorate, 2016b). It was pointed out that, where local authorities had been able to align the opening times of nursery and primary school provision, this had resulted in parental convenience, which supported the uptake of the free hours (Care Inspectorate, 2016a). Dunlop (2015) further reported that the expansion had been organisationally challenging for *all* providers in Scotland, who had to balance the need to increase the number of places, extend the hours, sustain quality of provision and manage flexibility to meet both child and family needs. In Northern Ireland, particular organisational challenges were highlighted in relation to the implementation of the Healthy Child, Healthy Future (HCHF) programme. Here, the RQIA (2016) reported that the new, integrated 3+ review contact had not been implemented by any Trust since the introduction of the revised programme in 2010 due, in part, to organisational service capacity issues. It is recognised however that, since the publication of this RQIA report, data collection for the 3+ review has started (September 2016). The RQIA (2016) also noted variances in the delivery of other contacts within the home setting in different Trusts (e.g. 2 yr health review, 4–4½yr review) as per the HCHF programme standards. The National Children’s Bureau (2016) noted that the delivery of IY programmes was also shaped by organisational capacity issues (relating to human resources and financial limitations) (National Children’s Bureau, 2016).

A few other included sources highlighted some further organisational influencing factors. In relation to England, Robling *et al.* (2016) noted that the FNP was shaped by differences in the availability or accessibility of many other statutory supportive health and social services (ie. the availability of ‘normal’ care), including community based family doctors, midwives, and public-health nurses, and, in most trial sites, specialist teenage pregnancy midwives. In relation to Wales, one included source highlighted that it could be difficult to convince organisations of the need for change; noting the limited impact of Cymorth funding on the way mainstream services were run (Welsh Government, 2009).

Finally, one source noted the significance of (what they called) the ‘split’ organisational system of providing early education, learning and care in Scotland and England (ie. in which there was a split system of early education for children aged 3 & 4 (or for age 2) and care services for younger children) (Naumann *et al.*, 2013, p. 144). Naumann *et al.* (2013) noted that in countries with such split systems, mothers had lower employment rates/were less likely to be full employment; arguing that, in Scotland and England, this was particularly so.

Leadership, governance and accountability

As noted in the leadership and governance section above, only a limited number of the included sources focused on the leadership and governance of policy action across the ‘whole system’ of child development in the early years. None of the included sources looked at leadership in any detail, rather leadership was referenced more sporadically within particular sources and we were able to extract excerpts about this topic. The section above has already alluded to ways in which issues of leadership and governance have shaped policy action across the four nations; noting, for example, that included

sources had highlighted the significance of: integrated responsibilities for early education, learning and childcare at Ministerial level in Scotland and England and the somewhat complicated leadership of the ‘whole policy system’ supporting child development in the pre-school years in practice in Scotland, England and Northern Ireland. A limited number of other influencing factors relating to leadership, governance and accountability were noted in the included sources will now be discussed below.

Two journal articles highlighted the significance of national leaders in England and Wales in advocating for policy action to support child development in the early years and in securing wider political support for change (e.g. Prime Minister/Chancellor in UK Labour government, and then Assembly Minister for Education and Lifelong Learning in Wales – Jane Davidson) (Wincott, 2006; Taylor *et al.*, 2016). Two other sources noted the importance of local level leadership or local champions for the early years. In England, White and Gibb (2013) noted that the Early Years Peer to Peer Support Programme was influenced by whether there were local champions for it in LAs. In Wales, Wainwright *et al.* (2016, p.521) noted the significance of coherent and consistent national through to local leadership in terms of the shaping the understanding of the Foundation Stage; indicating, for example, that:

“high levels of support in the schools from senior management alongside a structured training programme from the Welsh Government and consistent messages and support at an education authority level resulted in the teachers being clear about the nature of the Foundation Phase”.

Wainwright *et al.* (2016) noted also however, that there were mixed levels of fidelity in terms of implementing the Foundation Stage across Wales.

In terms of accountability, one source pointed to the uniquely powerful position of OFSTED to influence policy action in England given its role in ensuring the accountability of early years providers. Here, Neaum (2016) argued that OFSTED was able to enforce change and shape policy discourses and practice through its regime of inspection. Melhuish (2016) also noted the importance of the rigorous inspection/accountability regime in England, highlighting that it had ensured the avoidance of the poorest quality of early years provision. Melhuish (2016) noted further that there was still a need to improve overall quality but indicated that doing so would require investment in the early years workforce. In relation to Northern Ireland, one source noted the important influence of the ‘lack’ of a mechanism to assess the quality of the learning environment provided by Sure Start project, noting that the Education and Training Inspectorate in Northern Ireland did not include these settings in its inspection regime (RSM McClure Watters, 2015). RSM McClure Watters (2015) noted further that there were complex governance structures for Sure Start Projects in Northern Ireland, which affected risks and the effective oversight of local programmes.

Finally, a number of studies were critical of the early years assessment and accountability regime in England. It was argued, for example, that the current system of accountability represented a ‘deficit-focused’ approach to school readiness, which was too oriented on early assessment and performance targets and, moreover, that, in practice, it was leading to: a narrowing of early years pedagogy and a reductionist focus on numeracy and literacy (rather than a broader focus on more varied facets of child development) (Evans, 2013; Robert-Holmes, 2015); and the negative labelling of children as ‘already’ or ‘falling’ behind from an early age, which was detrimental to their future learning and development (Evans, 2013; Ang, 2014; Bradbury, 2011, 2013).

The nature of the issue

Emphasising points that have already been made above, Wincott (2005, 2006) highlighted the significance of early years education, learning and childcare as a policy issue that cross-cuts different sectors, such as: education, health, social services, social security, family policy, gender and employment. Here, Wincott (2005, 2006) argued that it is therefore a matter of ‘joined up’ policy making *par excellence* and poses challenges in working across traditional organisational boundaries. Again, relating to points that have been made earlier about political/devolved powers, Wincott (2005, 2006) went on to note that the cross-cutting nature of the early years serves to illustrate some of the ‘continuing territorial complexities of British policymaking’, given that some cross-cutting policy areas are devolved, whilst others (such as social security) remain reserved. It is recognised that there have been more recent changes here, linked to some of the political factors mentioned above, given that, for example, Scotland now has some welfare support and tax varying powers, and further tax powers are due to Wales in the coming years.

Financing and resourcing

A number of included studies discussed the way in which financing and resourcing issues influenced policy action to support child development in the pre-school years. The section above on ‘funding, service delivery and commissioning’ has already mentioned identified differences in terms of the funding and commissioning of early education, learning and childcare across the four nations; highlighting, in particular, identified differences between England, Scotland and Wales in terms of the extent of local authority involvement in funding and commissioning processes, linked to wider political factors (such as historic levels of trust between central and local government in each nation and levels of political commitment to free market ideology). Other sources highlighted the significance of the economic downturn, not only in shaping household resources/poverty levels in Scotland, England and Wales), but also in terms of the financing of, and associated financial pressures, on LAs and early years services (see, for example, Pugh, 2010; Sammons *et al.*, 2015; Ormston *et al.*, 2014; Welsh Government, 2015)

A number of included sources highlighted issues associated with the resourcing of children’s centres in Wales and England in particular. For example, a qualitative evaluation report by the National Foundation for Educational Research (2010) questioned the sustainability of funding of integrated

children's centres in each of the LAs in Wales, noting that decreased levels of funding from central and local sources combined with the impact of the economic recession had created financial pressures, despite a growing demand for services. An evaluation report by the National Foundation for Educational Research (2010) based on qualitative data indicated that centres increasingly relied on short-term grants, which did not cover costs such as staffing or insurance. In relation to England, Melhuish (2016) reported that, in general, there was now substantial government-funding of early childhood education and care and, moreover, that this was now 'part of the infrastructure' of supporting family life. However, Melhuish (2016) noted further the steady decline of children's centres in England, which had been shaped by a combination of financial and also political factors. As Melhuish (2016) argued: pushing for expansion before systems were ready and when funding was inadequate, followed by the global recession of 2008, with subsequent austerity cuts to public spending, and coupled with the defeat of the Labour government in 2010 all played a role. Similar to Melhuish (2016), in their study of the impact of children's centres in England, Sammons *et al.*, (2015) also noted that many centres had experienced restructuring and/or budget cuts, leading to changes or reductions in services or staff. Sammons *et al.* (2015) highlighted the influencing role here of austerity policies and decreasing expenditure on centres by LAs; noting here that information provided by the Local Government Association, and based on Department for Education returns, showed planned expenditure by English LAs on Sure Start and children's centres of £1.0 bn in 2011/12, falling to £0.95bn in 2012/13 (a decrease of 4.6%) and that Policy Exchange estimates suggested a reduction of spending on them of 28% from 2010 to 2013/14. These reductions in funding were despite impact evaluation evidence of the potentially valuable role played by some children's centres in promoting better child, mother and family outcomes (Sammons *et al.*, 2015). Perhaps unsurprisingly, Sammons *et al.* (2015, p. xxxiv) reported that impact analyses had identified "better family and mother outcomes for those families registered at a centre that was growing (with increased budget and expanded services), rather than centres that had cut budgets and restructured".

In terms of other financial influencing factors on policy action, some included sources mentioned the significance of ring-fencing versus mainstream funding. For example, the Welsh Government (2009) indicated the significance of the move of Cymorth funding from a ring-fenced programme to the mainstream LA revenue support grant in Wales, and how that may or may not serve to shape the delivery of mainstream services in Wales. In relation to England, as reported in the main evidence review and above, the ring-fencing of the public health grant has recently been removed and current plans suggest that the grant will be replaced as part of a move to 100% business rate retention by local authorities (PHE, 2016). As also noted above, as part of this wider LA change process, the commissioning and funding of health visiting services as part of the Healthy Child programme has moved from the NHS to LAs. These are 'fundamental' changes to the way in which the operations of local government are to be financed and their responsibility for local public health, and it is not yet known how these moves will impact services, including health visiting as part of the Healthy Child programme (PHE, 2016). There were, however, already reports of extensive plans for change

involving “reduced investment, increased integration, skill mixed teams and a greater focus on outcomes” (PHE, 2016, p.5). Lewis (2011) further mentioned the significance of ‘mainstreaming’, referring specifically to the move of Sure Start into a mainstream funded service: highlighting that this had significance cost implications given that funding for Children’s Centres was less than for Sure Start local programmes.

In relation to Northern Ireland, three sources touched upon financial influencing factors. As already indicated above, Montgomery *et al* (2016) suggest there is a complicated funding landscape for early years programmes. The National Children’s Bureau (2016) highlighted that short-term nature of commissioning and funding IY Years parenting programmes, noting how this restricted its delivery, and also reported an issue of under-budgeting for key resources like programme manuals, incentives recording equipment and crèche provision, which shaped local implementation of the IY programme. RSM McClure Watters (2015) highlighted the lack in consistent recording of financial data within the Sure Start Programme in Northern Ireland, which had shaped decision-making given the lack of ability to assess costs.

Three sources highlighted issues associated with the financing of early education and childcare. Naumann *et al.* (2013) noted the high volumes of public expenditure on education and childcare in England and Scotland, but also indicated that parental contributions were also high; reporting that, in their study, both countries were amongst the most expensive for parents across Europe. Smith (2007) also raised similar issues of costs, as well as an issue of sustainability of childcare services particularly in low income areas, where, it was argued, there was not high income parents who could pay fees and cross-subsidise provision. A recent report by the NAO (2016) on the entitlements to free early education and childcare in England also reported issues of financial viability and sustainability.

On these points, the NAO (2016) noted, for example, that while total funding for early education and care had increased, the average flat rate of early years funding per child had been frozen since 2013-2014, meaning that many providers had faced cuts in real terms of 4.5% (NAO, 2016). Partly as a result of this, providers had to rely on cross-subsidisation to be financially viable; that is to say, they had to rely on the purchase of extra hours by parents or the purchase of childcare for younger children in order to subsidise the free childcare places (NAO, 2016). In terms of other financial influencing factors, the NAO (2016) also highlighted that: 1) LA discretion in the amounts to allocate to providers meant there was spatial variability in the amounts given for per child funded childcare (sometimes up to £3000 per child); 2) it was not known how much it cost LAs to administer funding or provide central services; and 3) funding constraints of LAs meant that they had limited power to shape the local childcare market/offer incentives to get new providers locally (though had managed to help uptake of free 2yr old places for disadvantaged children) (NAO, 2016). In other words then, a number of issues in relation to the sustainability of the early education and care system in England were raised.

Finally, in relation to financial and resourcing influencing factors, the papers by Wincott (2005, 2006) noted budgetary constraints of the devolved governments had limited the extent to which public expenditure had been linked to policy priorities in relation to early education and care. Wincott (2005, 2006) also suggested that the devolved governments had (at that time of writing) been dominated by spending departments, which had weaker capacity to manage overall public expenditure and ability to match expenditure to policy priorities. It is recognised however that this source dates from over 10 years ago and much may have changed in terms of organisational capacity in the intervening period.

Workforce-related influencing factors

A considerable number of the included sources mentioned workforce-related influencing factors on policy action across the four nations; with examples of influences relating to the status and pay of key local practitioners (e.g. early years practitioners, health visitors), staffing levels/numbers and caseloads, time available for relationship-building, issues relating to recruitment and retention, workforce skills and/or qualifications, and the availability of training and support for learning.

A common influencing factor across all nations (and as already noted as important above), was the role played by health visitors in supporting action on child development in the pre-school years. Here, for example, OFSTED (2015) indicated that health visitors held ‘the key’ to promoting the uptake take-up of early years education from age 2 in England (with the universal 1-yr review the opportunity to do so). Interestingly, despite the recognised value of the role of health visitors in supporting child development across the four nations, a number of other included sources highlighted that the workforce was under significant pressure in England and Northern Ireland. Cowley *et al.* (2009) noted, for example, that there were 15% fewer health visitors in England in 2007 (9057 whole time equivalent; WTE) than in 1988 (10 680 WTE) – with caseloads ranging from 1:160 up to 1:1355 – and thus that it was not always feasible in terms of capacity to deliver enhanced services/additional visits if needed. It is recognised that, since this study was published, there has been a drive to recruit an additional 4,000+ health visitors in England (REF). More recently however, PHE (2016) reported that while the numbers of health visitors in NHS employment remained stable through 2015/16, they had since fallen slightly. Similar issues were highlighted in Northern Ireland in terms of the pressures on health visitors in the delivery of the Healthy Child, Healthy Future programme (RQIA, 2016). RQIA (2016) reported on a regional shortage of health visitors leading to reduced workforce capacity; with many Trusts unable to fill permanent funded and temporary vacancies. Difficulties were reported in all Trusts in Northern Ireland in ensuring that all relevant health review contacts were completed as intended (RQIA, 2015).

In relation to Wales, Morris *et al.* (2014) also noted issues with health visitor recruitment and retention, but it was suggested that this had affected the policy aim of a 1:110 caseload in Flying Start areas, which had mostly been met (see also Welsh Government, 2016c). Morris *et al.* (2014) noted that the significance of a reduced caseload for health visitors as part of the Flying Start programme, indicating that this had meant that visits with families were longer and more intensive and had

contributed to improved provision (due in part to the relationships that health visitors could build with families). Interestingly, in the context of their study of the impact of children's centre in England, Sammons *et al.* (2015) also noted the importance of extended contact with health visitors and links to beneficial impacts for the neediest families.

A number of other included sources mentioned issues relating to workforce numbers. Two sources highlighted human resource/staffing limitations and associated capacity constraints in delivering IY programmes in Northern Ireland (Montgomery *et al.*, 2016; National Children's Bureau 2016). In Wales, the Welsh Government (2009) reported issues with recruiting and retaining staff to support the delivery of Flying Start entitlements to early education and childcare, noting that this (along with having appropriately located and configured premises) were key constraints and had taken time to address. Taylor *et al.* (2016) discussed staffing in relation to the implementation of the Foundation Phase in Wales, noting that although recommend ratios of 1:8 for 3–5 year-olds were welcomed by practitioners (and moreover that practitioners working in the Foundation Phase had doubled between 2004/05 and 2011/12), less than half of nursery and reception classes/settings had met the recommended ratio in 2011/12 (Taylor *et al.* 2016). Interestingly, Taylor *et al.* (2016) further argued that in its implementation there had been 'greater preoccupation with adult-to-child ratios than there was with the kind of expertise that would be required in settings and classrooms' and this had shaped (undermined) the scaffolding of learning around more play-based, experiential learning.

A number of other sources noted the influence of expertise and skills in shaping the various different types of policy action to support child development in the pre-school years across the four nations. Naumann *et al.* (2013) indicated similarities between England and Scotland in terms of how the workforce was somewhat split according to whether the worker provided education or care services: Naumann *et al.* (2013) indicated that those working within early education were considered teachers, usually had higher level qualifications, and tended to have better pay and working conditions, whilst 'carers' tended to have lower level qualifications, less status and worse pay and working conditions. As noted above, there has been policy action in Scotland to try to 'overcome the traditional divide between 'education' and 'childcare' provision (Care Inspectorate, 2016a). A number of sources emphasised the influence of a well-qualified early years workforce for quality early education and care provision in the four nations (OFSTED, 2015; Melhuish, 2016; Taylor *et al.* 2016; Walsh *et al.* 2010; Pugh 2010; Smith, 2007). Two included sources noted the lack of a well-qualified early years workforce in England, highlighting that though some improvements had occurred, a limiting factor has been the increased pay that increased qualifications would require (Pugh, 2010; Melhuish, 2016). One qualitative evaluation report noted the importance of 'softer skills', highlighting that a supportive and caring approach by staff in integrated children's centres in Wales appeared to support the sociability and confidence of children (National Foundation for Educational Research, 2010). Other sources noted the importance of more specialist skills: Sammons *et al.* (2015) highlighted the influence of a lack of availability of staff with specialist skills in children's centre in England to support complex mental health or social problems; Smith (2007) noted that few early years providers,

especially childminders, were trained or able to cater for disabled children; and Rankin *et al.* (2015) noted the importance and difficulties in ensuring an appropriate skill mix of the early years workforce within available resources, to support individuals and teams to effectively respond and deal with a range of maternal and child vulnerability, complexity and risk factors.

The availability of learning support and/or opportunities for training was also highlighted as an important influencing factor across the four nations. In England and Scotland, opportunities for continuous learning or training were, for example, highlighted as important for the FNP team, as well as support from other professionals (Robling *et al.*, 2015, 2016; Ormston *et al.*, 2014). In Northern Ireland, the level of ongoing support provided for practitioners involved in delivering parenting programmes (including from programme originators for IY) shaped local delivery (Montgomery *et al.*, 2016; National Children's Bureau, 2016). In Wales, the quality of guidance materials and training opportunities provided to practitioners to implement the Foundation Phase was highlighted as important, shaping how teachers understood and sought to implement the new curriculum (Taylor *et al.*, 2016; Wainwright *et al.*, 2016). In Scotland, opportunities for training were highlighted as being important in the extended pre-school provision for vulnerable 2 year old pilot programme: staffing the new provision had meant extending the experience of most staff to a new area of child development as most had been used to working with 3-5 year olds (Woolfson and King, 2008). More recently, a similar point was made by the Care Inspectorate (2016b), who noted that outcomes for 2 year olds as part of the expanded entitlements to early learning and care in Scotland depended on practitioners having the right skill set to work with this age group of children: services which 'positively invested in staff skills' were in a better position to meet younger children's needs.

Workforce attitudes and perceptions, and how policy action resonated with these, was also highlighted as influential. Included sources noted how the views of early years practitioners/ teachers had shaped the reception of the new play-based curriculums in England, Wales, and Northern Ireland. Roberts-Holmes (2015) argued that the underlying principles of the early years foundation stage 'were enthusiastically embraced' by all sections of the early years workforce in England because active play-based and child-centred learning was deeply embedded in expectations about preschool in the UK and had a long history. Walsh *et al.* (2010) suggested that the Enriched Curriculum was enthusiastically embraced by teachers in Northern Ireland, which helped to shift their practice. While positive examples were highlighted in included sources about workforce responses to the Foundation Phase in Wales (Taylor *et al.*, 2016; Wainwright *et al.*, 2016), Taylor *et al.* (2016, p.306) argued that many practitioners continued to believe that 'the most appropriate way of developing literacy and numeracy skills [was] through direct and often didactic learning'.

Audit, data and evaluation

Moving on, a number of other included studies highlighted how informational issues had shaped the development and implementation of policy action to support child development in the pre-school years. Here, similar informational issues appeared to be highlighted across the four nations. A

number of sources indicated that previous research studies or evaluations of child development programmes (e.g. longitudinal studies, birth cohort studies, mixed method evaluations), and a growing international evidence base on the importance of early intervention had influenced the development of policy action across the four nations (e.g. Smith, 2007; Melhuish, 2016; Pugh, 2010; Kidner, 2011; Belsky *et al.*, 2008; Taylor *et al.*, 2015; Lewis, 2011). Here, for example, Belsky *et al.* (2008) noted that international evidence that showed the positive difference that comprehensive early years interventions could make was influential in the process of reviewing and developing the UK Labour government's area-based Sure Start intervention programme, and that later evaluative research evidence in 2005 (some of which was negative) contributed to a fundamental shift in policy, with Sure Start local programmes becoming children's centres. Melhuish (2016) emphasised, however, that also influential was the way in which the evidence base resonated with the UK government's political agenda at the time.

A number of included studies also highlighted various issues relating to the evaluation of programmes designed to support aspects of child development in the pre-school years. Some indicated difficulties in evaluating the effectiveness of early years-related policy, given that action (e.g. Flying Start and Sure Start/Children's Centres, the reform of the early years curriculum, targeted integrated support for vulnerable families) impacted on children's development through complex pathways, with potentially differential effects over different periods of time, and with observed changes often challenging to unpick and attribute (Knibbs *et al.*, 2013; Belsky *et al.*, 2008; Bradshaw *et al.*, 2016; Ormston *et al.*, 2014; McGuinness *et al.*, 2014; Maryat *et al.*, 2014; Melhuish *et al.*, 2010). Here, Sammons *et al.* (2015, p.134), for example, reported challenges with recent efforts to evaluate the impact of children's centres in England noting the influence of children's centres' "varied nature, the varied patterns of family use of services, and the way that the policy changed over time". Exemplifying the message in other sources, Sammons *et al.* (2015, p.134) emphasised that while complex statistical models could be used, it was "always possible that some other unmeasured factors were at work which could have influenced the results".

A number of the included studies highlighted how data availability (most often a lack of data) had shaped the monitoring and/or evaluation of policy action in all nations. Many of the included sources commented on limitations in early childhood monitoring systems, including a lack of baseline service or developmental data upon which to help track changes in outcomes (see, for example, NAO, 2016; Knibbs *et al.*, 2013; Kidner, 2011; Maryat *et al.*, 2014; RSM McClure Watters, 2015). For example, in Wales, Knibbs *et al.* (2013) noted that there was limited baseline data to track changes for children and families in Flying Start areas. Making a similar point, in their evaluation of Flying Start, Morris *et al.* (2014) found no statistically significant differences between Flying Start and non-Flying Start areas in terms of parental confidence, home environment or levels of parental support, but indicated that this might simply reflect the lack of pre-Flying Start data on parental outcomes. An evaluation report by the National Foundation for Educational

Research (2010) based on qualitative data highlighted a similar lack of systematic data/monitoring systems to capture impacts associated with integrated children's centres in Wales.

Similarly, in relation to Northern Ireland, an evaluation report by RSM McClure Watters (2015) noted that there was no consistent or systematic measurement of the social, emotional and cognitive development of children or literacy or numeracy skills, nor service data to understand whether the programme was reaching those most in need: all critical for understanding and unpicking the impact of Sure Start. A research and information service paper by Perry (2016) also highlighted the lack of baseline data to track the Northern Irish government's lead child development measure - % of children who are at the appropriate stage of development in their immediate pre-school year – noting however the ongoing work to address this through efforts to implement to new 3+ integrated review. Further, the National Children's Bureau (2016, p.51) noted a lack of monitoring and evaluation data for IY programmes in Northern Ireland; suggesting also that there was 'little evidence of how, if at all, any data [that was] gathered [was] subsequently analysed by practitioners, managers, funders or commissioners'.

Similarly, in relation to Scotland, Geddes *et al.* (2011) argued that information systems were currently inadequate for monitoring the proximal effects of early interventions, especially on cognitive-language and social-emotional development. Dunlop (2015) noted that, whilst Scottish policy indicated the kinds of competences early years staff might need in order to make a difference for children, the evidence on this was scant and research in Scotland did not yet look at the impact of improved qualifications on the experiences or outcomes of children. It is recognised however that this is a constantly changing area and there are ongoing developments on this in Scotland.

Data, monitoring and evaluation issues were also mentioned in England. PHE (2016) noted issues in terms of tracking the numbers of the health visiting workforce due to the current data system. The NAO (2016) reported difficulties in terms of linking early years developmental outcomes to early years settings given that data from the early years foundation stage profile was not linked to the early years settings that children had attended. The NAO (2016) also reported a lack of routine monitoring of the impact of free child care, which made it difficult to assess impact on later educational outcomes. Issues were also mentioned about gaps in understanding in England about the demand for childcare. Here, Smith (2007) noted that there was a lack of understanding about why early years provision was not taken up even when it was provided. The NAO (2016) also noted that English LAs did not have the information to manage the childcare market locally, with gaps in the understanding of demand and, moreover, little attempt made by LAs to understand the issues parents faced when they contacted family services. A similar point was made by the Care Inspectorate (2016b, p.12) in relation to Scottish LAs knowledge of childcare demand / what parents want:

“currently local authorities struggle to consult parents, particularly traditionally hard-to-reach working parents. While there are some examples of good practice, there is a need to establish effective and widespread methods for consulting parents across local authorities”.

Finally, Machin *et al.* (2013) reported difficulties in evaluating and thus comparing the education policies of the four nations (including in the early years) in terms of value for money; noting here that the increased focus on marketisation, choice and competition in England was, for example, very difficult to cost and, moreover, measuring the monetary and wider returns to policies in an accurate way was not only tricky, but also took time to observe.

Media and interest groups

There was limited reference to the role of the media or interest/pressures groups in the included sources of evidence for this review. It is recognised however, that there are likely to be other factors relating to the media and other examples of lobbying groups shaping aspects of the system relating to child development in the early years. Where these topics were mentioned, it was only in sources relating to England. In a descriptive paper by Ellis and Moss (2014), for example, the role of lobbying by phonics campaign groups (e.g. Reading Reform Foundation) was mentioned in relation to policy action to reform the curriculum in England. Another descriptive paper mentioned the ‘Too Much Too Soon’ public campaign - launched by a group of over 100 leading professionals (academics, teachers, practitioners, and education advisors) around September 2013 - who voiced concerns about ‘the dominance of ‘school readiness’ rhetoric’ in UK government policy and (what the author refers to as) ‘the government’s seeming perception of early years education as simply a preparation for school’ (Ang, 2014, p.189). It was further noted that the campaign revealed ‘strong disquiet’ among stakeholders in England about the use of baseline tests for children as young as 4 (Ang, 2014, p.190). In Scotland, there is a group called Upstart who has been involved in lobbying for a later school starting age.

Legal frameworks

As already mentioned at the start of this section of the report, a number of the included sources mentioned legislation as a key type of policy action to address issues relating to child development in the early years. The role of current and also historic legislation in shaping the role of particular organisations, such as local authorities, and also funding and commissioning arrangements has also already been discussed above. A limited number of sources particularly emphasised the strategic, influencing role of legal frameworks and it is perhaps useful to reemphasise these points here. In relation to England, the strategic move to ground children’s centres within a clear legal framework / in statute was highlighted as a means to incorporate them into the welfare state, thus insulating and them from future political attack (Lewis, 2011; Belsky *et al.*, 2008). In relation to Scotland, grounding GIRFEC in a clear legislative framework (ie. the Children and Young People (Scotland) Act 2014) was reported as a key way to influence implementation: accelerating progress and consistency across Scotland (Coles *et al.*, 2016). As mentioned above, during the writing of this report, and exemplifying

the points made above about legislative measures remaining in a process of constant transition, the Child Poverty (Scotland) Bill was passed (November) setting out statutory goals to meet in a bid to reduce the number of children experiencing the damaging effects of poverty by 2030.

International factors

Moving on, a limited number of the included sources mentioned international influencing factors. Wincott (2006) noted that the championing of early education and care by the OECD had helped to give this policy area political attention across the UK nations and, moreover, reflects wider international trends and policy interest in this in more developed countries as a key area of social policy development. Ang (2014) also suggested that UK policy developments resonated with emerging international policy trends. Ang (2014) argued further however, that the ‘school readiness’ emphasis in English policy - in which the early years tends to be seen as ‘preparation for school’ – is resulting in moves towards greater formalisation of children’s learning in pre-school in England, and a focus on assessment and learning outcomes. Ang (2014) suggested that this was driven by a strong ‘productivity agenda’, which is reflected in the rhetoric from ‘world organisations’. Naumann *et al.* (2013) highlighted the importance of earlier years provision to the EU’s agenda, noting recommendations and targets set by the EU in this area for member states –limited additional detail was provided as to how these EU developments had actually exerted influence on action across the UK. In relation to Scotland, Coles *et al* (2016) noted that wider international interest in the use of early intervention to improve child well-being had influenced Scottish policy action and that development of the evidence-based 3 assessment tools that form part of GIRFEC (the SHANARRI well-being indicators, Resilience Matrix, and My World Triangle) was informed by experience of the 2002 Department of Health Assessment Framework in England.

Included sources also highlighted the influence of high profile international reports and league tables in shaping policy action. For example, Bywater and Sharples (2012) indicated that Jonathan Bradshaw’s influential 2007 for UNICEF, in which the UK was ranked bottom out of 21 industrialised nations in a comprehensive comparison of child well-being, placed this issue in the media and policy spotlight, and led to debate around social and emotional learning and development. In relation to England in particular, Ang (2014) suggested that the slipping of England from 7th to 25th in international league tables at GCSE level contributed to the introduction of the foundation stage phonics screening check as a means to redress this and tackle a wider issue of literacy.

Two other sources highlighted the significant influencing role of the open curricula and early education approaches of other countries (e.g. Te Whāriki in New Zealand and Reggio Emilia in Italy) in influencing the development of the Foundation Stage curriculum in Wales in particular (Taylor *et al.*, 2016; Wainwright *et al.*, 2016).

Outcomes and Impacts

As reported in the methods section, we had planned to conduct direct quantitative comparisons across the four nations if there was directly comparable outcomes data relating to key national measures of

child development in the early years. We did not identify the existence of comparable long-term data directly focused on school readiness/child development in the early years (as is shown in Table 7) and so we decided not to proceed to quantitative summaries or direct comparisons across countries. As with the main systems review then, we searched for data in the included set of sources which related to comparisons of outcomes relating to child development across the four nations. We did not complete searches directly relating to ‘outcomes’ and very few of the included sources made comparisons across the UK. Given that there were few existing comparative studies in our included sources, we scrutinised the outcomes data reported within all of the included documents and report these here. We emphasise that this should not be considered a comprehensive representation of all possible outcomes of relevance and we do not report here on outcomes relating to other aspects of ‘healthy child development’ (e.g. healthy weight, dental health). Rather, it provides examples of similarities and differences as highlighted in included sources.

Two papers compared child development outcomes across the UK. One paper by Taylor *et al.* (2013) focused their analysis on data from the Millennium Cohort Study in order to compare the outcomes of the education systems across the UK. They highlighted considerable variation in child development outcomes by country, with no single ‘success’ story, and indicated that any ranking or judgement of countries depended on which measures of development were being considered. Taylor *et al.* (2013) also emphasised that, where significant differences in cognitive abilities were identified by country, these were relatively small compared to the influence of other regional or local influences; noting for example, that it was not clear if the apparent ‘benefit’ of living in England on literacy at age 7 could be attributed to distinctive education policies or reflected wider conditions, processes and influences at regional or local level. They thus emphasised the importance of taking account local geographies when comparing ‘national outcomes’. The other paper by Machin *et al.* (2013) looked at educational attainment broadly across the four nations. Within the paper, maths and reading scores at age 7 were compared across the UK nations, again using data from within the Millennium Cohort Survey. Machin *et al.* (2013) indicated that the scores across all four countries were similar (especially with regard to maths), and only a little lower for reading in Wales and Northern Ireland (a score of about 47, compared with about 50 in England and Scotland); with almost no gender difference in maths scores in any of the countries at age 7. Machin *et al.* (2013) further highlighted that all indicators showed large differences according to socio-economic status (as measured by pupils’ eligibility for free school meals) within each country of the UK; suggesting persistent inequalities in child development outcomes across all nations.

Persistent inequalities in child development outcomes were also highlighted in other included papers, although the studies focused on different child development measures and different children’s ages (and so cannot be taken as direct comparisons). Nevertheless, to give some examples here, a paper by Taylor *et al.* (2016), which built on 3-year mixed methods independent evaluation of the Foundation Phase in Wales, indicated, amongst other points, that the new curriculum had had very

limited impact on reducing differences in attainment of key groups of pupils— especially for boys and pupils eligible for free school meals. In relation to Scotland, a report by Bradshaw *et al.* (2015) using data from the Growing Up in Scotland study to compare the circumstances and experiences of children aged 3 in Scotland in 2007/08 with those at the same age in 2013, concluded that differences in ability according to measures of disadvantage remained and that there was little to indicate that inequality in terms of early language ability had narrowed much between the two cohorts. A report by OFSTED (2015) in relation to the early years in England indicated that there was no sign of the gap narrowing between more and less advantaged young children (a similar point was made in other included papers, see Social Mobility Commission 2016; Bradbury, 2011; Bradbury, 2013). None of the included sources mentioned inequalities here in relation to Northern Ireland.

Interestingly, some of the evaluations of specific policy initiatives relating to the early years that were included in the study did report that they could support more positive outcomes for children from more disadvantaged backgrounds. A recent evaluation of the Incredible Years Toddler Parenting Programme with parents of toddlers in disadvantaged (Flying Start) areas of Wales suggested that the programme showed ‘promise’ as an intervention for parents of toddlers living in disadvantaged communities (Hutchings *et al.*, 2017). In an evaluation of the Flying Start programme in Wales, Knibbs *et al.* (2013) suggested that it appeared to have been successful in bringing about parity between families living in the more disadvantaged Flying Start areas and relatively less disadvantaged comparison areas. Yet this finding was based on the assumption that families living in Flying Start areas started from a lower ‘base’ given that there was limited data to provide conclusive evidence that families in Flying Start areas started from a lower baseline position (before the programme) for the outcomes measured in the evaluation (Knibbs *et al.*, 2013). Sammons *et al.* (2015) reported in the impact strand of a recent evaluation of children’s centres in England that there was evidence demonstrating that children’s centres could and do have positive effects in promoting better family, mother and child outcomes, are able to target and support disadvantaged groups (impact as reach), and that they can promote better outcomes for the most disadvantaged families. Sammons *et al.* (2015) emphasised however, the important wider influence here of family poverty and income inequality, highlighting that children's centres were only able to help ameliorate, but not overcome the effects of high financial disadvantage.

Other sources that were included in the review mentioned a range of other child development outcomes. We do not report on them in detail here because of the extent of the variability in outcomes that were reported. It is perhaps useful, however, to highlight the range of outcome measures that were mentioned in order to illustrate their breadth. Included papers reported outcomes in relation to: perceptions of school readiness, social well being / social competence, emotional wellbeing / emotional competence, behavioural measures, developmental concerns, speech/language/communication, reading ability, physical literacy, and cognitive ability or other facet of learning. The breadth of these outcome measures serves to emphasise the point made at the start of

this outcomes section that comparing and making judgments of ‘success’ across the four nations in relation to child development outcomes will be very much shaped by the facets of child development that are selected to be compared. Whilst it is recognised that national measures either exist or are in development (as illustrated in the Table 7 above), it seems clear that these provide just one, partial insight into child development. Further, and as we show above, at present, the four nations define their key national measures of child development in the early years in different ways.

Moving on now to system-wide impacts, there was limited material in the included studies that directly compared the impacts of policy actions relating to child development in the early years across the four nations or the impacts of policy action within each nation. This may, in part, be due (as mentioned above) to the difficulties here in assessing impacts (as mentioned above) given the multitude of influencing factors that shape policy action and the long-time lag from action to impact. Indeed, in an evaluation of the Flying Start programme, for example, Morris *et al* (2014) indicated that longer term outcomes and impacts will not be known for a number of years. Furthermore, and as also already noted, we did not search specifically for papers on this topic, rather we extracted data on this within our included studies. Impacts in the included sources were instead expressed in terms of long-term ‘aspirations’. Here, it was reported in included sources that a key aspiration for policy action relating to child development in the early years in all nations over the long-term was to improve life-long outcomes and also to reduce health inequalities: that is to say, investing in the early years as a means to combat inequality in later life (see, for example, points made in: Welsh Government, 2015a, 2016a; PHW, 2016; PHW 2017; PHE, 2016b; Scottish Government, 2016; Northern Ireland Executive, 2011a and 2011b; Cowley *et al*, 2009; Geddes *et al*, 2011; Kidner, 2011; Centre for Effective Services, 2013). Connected here, in all nations there was an aspiration to reduce gaps in educational attainment between children from more and less affluent backgrounds (see, for example, Darbyshire *et al.*, 2014; Centre for Effective Services, 2013; Care Inspectorate, 2016; Welsh Government, 2016c.).

Section 5. Discussion

This research project aimed to examine the public health systems in each nation of the UK since devolution, and highlight examples of similarities and differences as a means to promote further learning and future cross-country dialogue. In addition, a ‘case study’ of a priority area for public health was used to further examine and validate the results of the system review. In so doing, the research has sought to elucidate complex system processes and outcomes, and thus add to understanding of why, where and how convergence and divergence in public health across the four nations has taken place, or might take place in the future.

The public health system

As explained in previous sections of this report, the research aimed to develop and refine a public health systems framework that was evidence-based, to act as a conduit for understanding convergence or divergence in public health across the four nations. Doing so involved two main aspects: firstly, the development of a ‘working’ model based on the grounded knowledge and experiences of a sample of key public health stakeholders across the four nations of the UK; and secondly, the testing and further development of this through systematic review evidence to develop a framework of elements which comprise the public health system across the four nations of the UK (repeated in Figure 10 below).

The framework provides a graphical description and summary of important elements of, and relationships within, the system relating to: origin and types of action, organizational structures and systems, ways of working, influencing factors and outcomes and impacts. The framework thus depicts potential pathways in the relationship between policy action (interventions/inputs), outcomes and impacts, and identifies potential moderators of that relationship.

The arrows which link the columns of the framework highlight the interrelated nature of the public health system, with influencing factors at its core, and elements of the system being in dynamic relationships with other elements. For example, the origin and types of action are determined by influencing factors, and in turn shape organisational structures and systems, and these then shape ways of working. The types of policy action, structures and systems, ways of working and influencing factors contribute to the outcomes and impacts that may be achieved. The framework also highlights where practitioner knowledge was not reflected in the included literature (the boxes that contain lighter-coloured text), in particular in relation to the terminology that was used to describe ways of working.

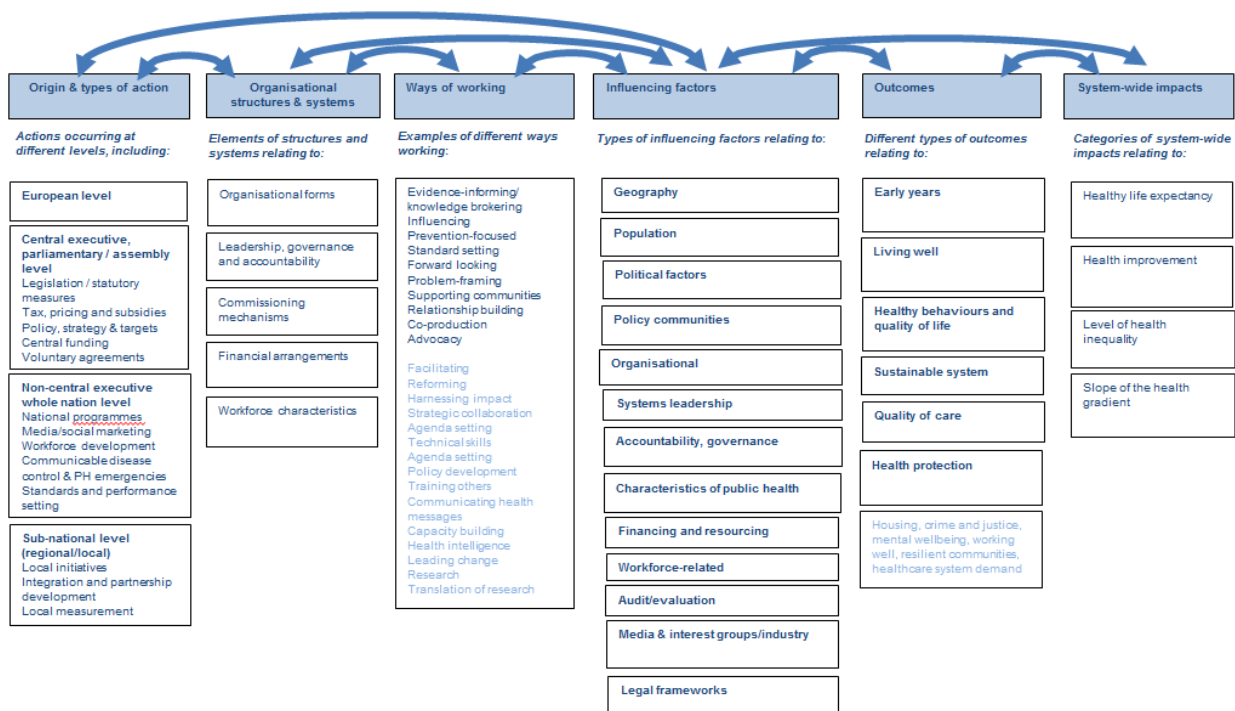


Figure 10. The public health systems framework.

Origin and types of action

System review

The review identified a range of examples of public health action originating at different points in the public health system. There was variance of author opinion regarding the extent of divergence in policy action since devolution. The key role of the central executive and parliamentary/assembly action in all nations of the UK was highlighted. Historic similarity was also reported across all nations in terms of limited clarity on public health policy, strategy, and targets for public health; though it was unclear the extent to which this can be said to apply in the current day given the dates of the included studies in relation to this particular aspect. A similar policy emphasis was also highlighted in relation to the importance of local initiatives, prevention/early intervention, and partnership working. The literature also emphasised some level of similarity of action between the nations in terms of achieving financial balance, increasing access to healthcare, and increasing service integration. It was unclear as to the extent of similarity or difference in relation to how all nations have pursued action in relation to health inequalities. Historic studies suggested some level of similarity in approaches, most particularly during the New Labour period, with tensions mentioned in regard to a focus on social determinants versus lifestyle behaviours and individual responsibility approaches across all nations. Yet more recent policy examples in Wales and Scotland perhaps suggest a shift in emphasis towards a focus more closely related to the wider determinants. It was unclear from included sources how these more recent developments were tracking through the public health systems in Wales and Scotland and this could potentially be a valuable area for further, more detailed comparison.

The review outlined how the changing political landscape is offering potential for more divergence in action at a central executive and parliamentary/assembly level, in particular in terms of legislation; with examples of recent, distinctive legislation enacted in Scotland and Wales as cases in point. Authors also highlighted how English policy, underpinned by a focus on competition, markets and choice, was driving divergence from other nations. It could be argued that this focus on competition was resulting in England diverging most from the other nations (which continue to retain values more akin to the original welfare state) rather than the devolved nations diverging from UK-wide public health action.

School readiness case study

The school readiness review supported many of the above-mentioned findings of the main review. Included sources emphasised that there had been exponential growth in policy action relating to the early years in all nations since devolution. While distinctive forms of legislation were identified as being in place in Wales and Scotland in particular (e.g. the Children and Young People (Scotland) Act 2014 which enshrined Scotland's Getting it Right for Every Child policy approach in law, and in Wales, the duties related to children's play that are placed on local authorities as well as the Wellbeing of Future Generations Act in Wales), much policy similarity was also identified across the four nations at all levels of the system. For example, all nations: emphasise the need for an early intervention focus and cross-sectoral approach to give children the best start in life; have adopted a play-based curriculum; have expanded entitlements to education/care; and provide integrated forms of family support, child health and parenting programmes, and health visiting services. Examples of subtle divergence were however, also highlighted too.

All countries have child health programmes that are broadly similar, yet subtle differences were identified in terms of distinctive tools or approaches for measuring and supporting child development, such as: the move to integrated reviews between education and health practitioners in England and Northern Ireland (for 2-2.5 year and 3+ reviews respectively); the SHANAARI wellbeing wheel in Scotland; and the use of a new Health Visiting Family Resilience Assessment Instrument Tool in Wales. There could be value in seeking to learn from these different tools and approaches.

Another example of divergence related to the way in which school readiness seems to be framed within current national policy, with differences here reflecting different or competing national conceptualisations or approaches to child development in the early years. Although somewhat caricatured, two different conceptualisations were identified in the included sources: 1) that it is about a child's learning in preparation for school and 2) that it is about a child's learning journey, wellbeing and preparation for life. The included literature suggested that Scotland had the most coherent policy approach here, focusing on the latter. In contrast, included sources highlighted tensions between these two perspectives in English (and to some extent Welsh) national policy; with a number of included sources criticizing the former policy perspective for being deficit-focused – focusing on what children

cannot do and thus on who is being ‘left behind’ – which, it was argued, bears out in practice in children being over-assessed and sometimes negatively labelled in the early years.

Another subtle difference was in relation to whether centrally backed pre-school provision was understood or presented as being about education, learning and/or childcare, and/or whether it is framed as a universal entitlement or earned right based on being ‘in work’. In Northern Ireland, the 1 year of non-compulsory pre-school education that is offered universally to all children in their immediate pre-school year is clearly considered education and not childcare. In Scotland, the universal provision of 600 hrs/yr for 3 to 4 year olds is presented as the *integrated* provision of early *learning* (not education) and *also* childcare. In comparison, in England and Wales, the universal entitlement for 3 to 4 yr olds is framed as early *education* and childcare, yet extended free entitlement is connected to parents being in work and thus comes across as an ‘earned’ form of childcare.

The school readiness review also highlighted how English policy underpinned by a focus on competition, markets and choice was driving divergence from other nations; for example, shaping different approaches to commissioning early education, learning and/or childcare (with England having a more demand-led and market-based system than the other nations), and also different approaches to the commissioning of health visitor services. Based on the included literature, it also appeared that recent policy approaches in Scotland and Wales were perhaps more distinctly focused on setting a framework for dealing with core wider determinants of child development; most particularly emphasising the importance of children’s rights and voice, and the need to address levels of poverty. As above then, it could be argued that England appears to be diverging the most from the other nations, rather than the devolved nations diverging from UK-wide public health action; and thus that, in some cases at least, the devolved nations have more in common with each other in relation to public health action than they do with England.

Organisational Structures and Systems

System review

The review outlined how different organisational forms across the four nations existed, but that these forms retained similar functions. The literature drew attention to the impact of extensive reorganisations in England, with the level of re-organisation being less in other nations. Northern Ireland was highlighted as being the only nation with full structural integration between NHS and social services but, in contrast with the other nations, having less relationship with local government. In terms of similarities between the nations, authors reported that all nations have national bodies for health protection, formal partnership bodies at different system levels, and similar leadership structures, with dispersed and complicated forms of leadership for public health.

In terms of divergence between nations, differences in local authority roles and commissioning mechanisms were highlighted, together with the emphasis in England on purchaser-provider split and the role of markets. In contrast to this direction taken in England, other nations were described as

having more emphasis on collaboration/integration, and responsibility for planning and commissioning across the system. There appears to be significance here, in terms of these differing planning to commissioning systems, in terms of the skills needed in the public health workforce, with questions as to whether there is a need for a differing public health skill mix across the UK (and particularly perhaps in England where skills linked to commissioning and competition may increasingly be required). Further, in terms of the characteristics of the workforce, there were reported to be revised understandings in all nations about who forms part of the workforce for public health and also recognition of the importance of a broad workforce for public health in all nations.

School readiness case study

The findings of the school readiness review again supported many of the findings of the main review: complicated forms of leadership for child development in the early years were identified; formal partnership bodies at different levels of the system were present; and a diverse workforce for supporting child development was recognized to some extent in each nation (including, for example, the work of health visitors, early years practitioners, teachers, nursery providers, childminders, children's services, public health specialists and more). In all nations, the vital role played by health visitors in supporting families and helping to improve early years child development outcomes seemed particularly apparent in policy rhetoric. Data from included sources suggested that health visitors were under particular pressures, particularly in England and Northern Ireland. Included sources did not contain much detail about workforce numbers and so detailed comparisons here were not possible in the context of this work. While some included papers referred to health visitor numbers and caseloads (in England and Wales in particular), the included data cannot be considered reliable or directly comparable.

Ways of working

System review

As explained in the methods and detailed findings sections (Sections 3 and 4) of this report, 'ways of working' were included in our initial public health systems framework, which was developed with stakeholder input. Ways of working were, however, often ill-defined in included sources, with a lack of clarity in terminology and overlapping meanings. Aspirations to work in particular ways (such as problem-solving, forward-looking and so on) to achieve public health outcomes were clearly identifiable at all policy levels, but there was little in the included sources about *how* or *whether* ways of working *would be* or *are being* achieved. For example, there was limited evidence on what the training needs for working in particular ways might be (for either public health specialists or the wider public health workforce) and also limited information about whether or how public health ways of working were measured or monitored in practice (such as through reflection on actual working practices). This is not to suggest that such material does not exist, but that we did not find much evidence of it in the context of this study. It does perhaps suggest however, that there is scope for the

public health workforce to evidence what it does more clearly and robustly in the future. Interestingly, one aspect which is not currently included in the public health systems framework is the technical knowledge of the public health workforce (e.g. in relation epidemiology, health protection, health economics, social research) and how this knowledge is applied in and through different ways of working in practice.

Interestingly, a selection of included sources across both reviews reflected on difficulties in embedding a prevention-focus within the public health systems of all nations. Yet the greatest proportion of the included sources in the main review mentioned ‘influencing’ as a core way of public health working, and particularly here, influencing debate, policy development and/or planning to commissioning. Partnership working was also frequently referred to. The emphasis on ‘influencing’ in the included sources suggests perhaps that this has become a core skill in modern public health practice across all nations of the UK, and thus that this needs to be a key area of focus for the continuing professional development of the public health workforce.

School readiness case study

The findings from the school readiness review in relation to ways of working were similar to those of the main review in that included sources mostly touched on aspirations to work in particular ways to support child development in the early years, with limited detail about *how* or *whether* these *would be* or *were being* achieved. There appeared to be a particular emphasis in the included sources on partnership working given the cross-cutting nature of early years policy action, suggesting that participation in partnerships is a key skill and that this area should perhaps be a focus of workforce development strategies in relation to early years child development. Significantly, a number of included sources connected policy action relating to child development in the early years with the prevention of later inequalities in health and other social and economic outcomes. Indeed, there appeared to be recognition in each UK nation, at least in terms of policy rhetoric, of the importance of such ‘preventative’ action to give children the best start in life. As such, this policy area as a whole is effectively an exemplar of a public health ‘prevention’ approach. The school readiness review revealed however, that there are perhaps questions about how policy is enacted into practice and thus about the extent of investment to support children in their early years, particularly in England; given, for example, identified influencing factors such as funding cuts to children centres, pressures on health visitors, and issues relating to the financial sustainability of early years provision. We return to these points in the influencing factors section and also in the final, concluding section of the report. It is worth emphasizing here however, that these points all seem to support the above-mentioned finding of the main review that, despite policy rhetoric about the importance of a prevention approach, there are challenges in embedding a prevention-focus within the public health systems of all UK nations in practice.

Influencing Factors

A wide range of influencing factors were identified in both the main public health systems review and the school readiness review, illustrating the complexity of action to improve public health in all of the four nations of the UK.

Factors relating to the population and geography

Systems review

Studies included in the main review emphasized population characteristics as a key influencing factor, shaping the direction of policy and/or service provision; for example, public knowledge or attitudes, levels of public support and demographic change were all highlighted as important within the public health system. The geography of the nations was also described as influential in terms of service provision to urban or rural, and dense or remote, populations.

School readiness case study

One of the most evident influencing factors in included sources in the school readiness review relating to the population was the prevailing level and spatial patterning of disadvantage or poverty, shaping the continued need for action across all nations and undermining parental resources to, for example, invest in home learning or afford quality early education, learning or childcare. Uncertainty was also reported in terms of understanding why different early years services were or were not taken up by families (including, for example, free early education / childcare). Positive perceptions and acceptance of health visitors was highlighted as particularly important in some sources.

Political factors

Main review

A wide range of significant political influences were highlighted in the main review which particularly shaped national policy priorities and the types of action taken to address public health issues in England, Scotland and Wales. Examples of political factors that were important were the extent of devolved powers, party politics, the significance of political ideas and also centre-local government relations. The review indicated that political factors were important drivers of moves towards divergence in public health policy between nations. It is important to note here however, that we found little evidence on political influencing factors in relation to Northern Ireland. This might be because less research is conducted on issues relating to the public health system in Northern Ireland (as mentioned in the limitations section of this report). It may also be the case that the suspension of the Northern Ireland Assembly two times since devolution and the associated focus of Northern Irish politics on dealing with post-conflict issues, means that limited attention is afforded politically to public health.

School readiness case study

As with the main review, a range of political influences were also highlighted within the public health systems relating to child development in the early years in England, Scotland and Wales, with limited evidence on political factors in relation to Northern Ireland. A number of sources highlighted the particular importance of cross-party political support for action in the early years in England, Scotland

and Wales since devolution in taking forward action in this area. As above, political ideas were also highlighted as a key influencing factor in England, Scotland and Wales, particularly ideas about the appropriate role of the state, markets, individuals in early years provision, as well as the degree of trust in local government, which was highlighted as being less in England, as compared with Scotland and Wales. Importantly, limits to policy action and securing system change in the devolved nations were highlighted because key cross-cutting issues such as welfare/social security and employment - which fundamentally reshape people's life opportunities and poverty levels - are reserved matters. Included sources emphasized that limited powers in these areas made it challenging for the Scottish and Welsh Governments to ensure that wider enabling social and economic policies (such as forms of social security and income support) are in place, which has limited the extent to which they can reshape wider determinants of child development, health and indeed health inequalities. It is recognised that this situation is changing given that, for example, the recent Scotland Act (2016) further devolves powers in key areas such as tax, employment support and welfare-related benefits; offering greater potential scope for the Scottish government to exert control over wider determinants of public health. Further powers are also due to Wales in the coming years. Much may depend however, on how these powers are deployed. The extension of these powers represents a key potential future area for divergence in the public health systems across the UK nations.

Financing and resourcing

Main review

The review identified a range of financing and resourcing issues as significant influencing factors across all nations and at all levels of the system. Commitments of funding were identified as linking, as least in part, to the status and political prioritization of public health in relation to healthcare, as well as the wider economic and political context. Under-investment in preventative action, funding cuts to public health (particularly in England), and issues relating to the sustainability of key public health-related services were all highlighted as important influencers across the four nations.

School readiness case study

Sources in the school readiness review highlighted the complicated funding landscape for action at local level in all nations (e.g. health and education funding, national and local funding opportunities, NHS and local authority funding), as well as a range of other financial or resourcing influencing factors within each system, such as: the potential significance of moves from ring-fenced to mainstream funding; the short-term nature of some funding; wider austerity policies; and issues of financial sustainability linked to funding cuts (e.g. to early education and child care, health visiting services and children's centres particularly in England). Significantly, substantive investment was highlighted in Wales in recent years in terms of the development of the early years curriculum and the Flying Start programme in the most deprived areas (which includes the provision of integrated forms of family support and enhanced health visiting services to families with children under 4).

Workforce-related

Main review

Included sources in the main review suggested that the skills and total numbers of the workforce were recognised as a key moderator of public health action in all nations. Difficulties in workforce planning were however, highlighted given the range of fields involved in supporting public health, as well as difficulties associated with recent organizational changes, particularly in England due to the move of public health staff from the NHS into local authorities. In all nations, overlaps and unclear roles and responsibilities were highlighted as an influencing factor within the public health systems of each nation.

School readiness case study

Sources in the school readiness review also highlighted the moderating role of the skills/numbers of the workforce within the public health system, yet highlighted the particularly significant role of health visitors in all nations. Issues related to the recruitment and retention of health visitors, as well as their caseload, were all highlighted as influencing factors in Wales, Northern Ireland and England (we found limited evidence on this topic in Scotland). Here, the caseload of health visitors was, for example, highlighted as important in shaping relationship development and engagement with families. A lower Flying Start health visitor caseload was linked to benefits for the most vulnerable families in Wales and significant pressures were reported for health visitors in England and Northern Ireland in particular. Traditional divides between 'education' and 'childcare' were also highlighted as important moderating factors, including how the divide links to the qualifications, status and pay of different members of the early years workforce.

Organisational and leadership

Main review

The review highlighted issues relating to organisational sustainability, as well as challenges relating to the relationships that exist between different organisations across each public health system of the UK. In relation to all of the UK nations, the complex and multi-layered nature of public health systems leadership and governance were raised, with potential for divergence due to the influential role of local rather than national leadership both within different regions of England, as well as between the nations. In England, the transfer to public health to local authorities in particular was described as creating unclear lines of leadership and governance, with potential for fragmentation of public health leadership.

School readiness case study

The case study review highlighted a complex organizational landscape for supporting child development in the early years in all nations. In all nations, it was reported that different organisations offer different quality early education, learning and/or childcare, with provision reported as being better in maintained/statutory settings across the UK. The organizational relationships that existed between pre-school to schools was noted as being significant in shaping the transition experience of children and thus whether children start school at a disadvantage. At a local level, the significance of

local champions in shaping and supporting implementation was highlighted. In relation to England in particular, the powerful leadership and shaping role of OFSTED was mentioned, as well as criticisms about England's 'deficit-focused' and narrow early years assessments practices which focused on literacy and numeracy- potentially leading to stigmatization and negative labelling, which risks undermining children's future development.

Nature of public health

Main review and school readiness case study

In both the main review and review of school readiness, similar issues were raised about the moderating effect of the nature of public health in terms of how different aspects of the public health system work, the limited evidence base for public health and whether and how public health is prioritised. Difficulties in evaluating 'complex' forms of public health action were reported in what is a 'complex' system, as well as associated challenges in demonstrating and attributing effects. Included sources also noted the lack of clarity regarding the nature of public health interventions and outcomes over time, given, for example, that there can be varied patterns of uptake and use by different people, that policy is often focused toward outcomes in the shorter, rather than longer term, and that policy can shift during implementation.

Audit, data and evaluation

Main review and school readiness case study

Linked very much to the points made above, in both reviews, a number of audit and evaluation issues were mentioned. A lack of baseline data and insufficient integrated monitoring systems to understand issues or track change were highlighted with, for example, limitations in early childhood monitoring systems identified in the school readiness review in all nations. Indeed, a lack of baseline service, workforce and child development data was mentioned, as well as limitations in regard to accessibility of data and data handling. Issues were also highlighted (related to the points already made above) about the long time lag between policy action and health outcomes, which made evaluating public health challenging. Significantly, in relation to child development in the early years in particular, it was noted that 'child development' may be defined as secondary outcomes in evaluations of policy action and this can serve to shape evaluative judgements of policy 'success' or 'failure'. Here, for example, it was noted in the evaluation of the Family Nurse Partnership (FNP) that the FNP was potentially more effective than normal care in promoting cognitive and language development up to child's second birthday, but assessing the developmental impacts of the FNP requires long-term follow up of outcomes (see Robling *et al.*, 2015). There might not always be the funding or commitment to follow up over a longer time scale and, in the intervening period, decisions may be made to disinvest in potentially promising forms of action on the basis of a lack of evidence of effect. This particular example highlights the significance of which outcomes of interest are prioritised in evaluation.

Outcomes and system-wide impacts

Main review

We did not specifically search for each outcome that may be evaluated in relation public health, but rather report the outcomes which were described in the included set of literature relating to public health systems in the four nations of the UK. Across both the main public health system review and the ‘school readiness’ review, there were limited data in the included sources regarding outcomes and impacts as compared across the four nations and thus no clear picture of whether one system was ‘moving ahead’ of the others (cf. Bevan *et al.*, 2014). While outcomes in the particular areas of tobacco control and vaccination rates were a noted success for all nations, differing systems of measurement in regard to outcomes relating to health inequalities were noted as making comparison challenging. Baseline characteristics of populations in the nations was highlighted as being important when endeavouring to make comparisons. Small improvement in Scotland for example, with a population who have particular poor health may be of more importance comparatively than data from England whose outcomes started from a higher level. Across all nations there was reported to be little historic emphasis on outcomes monitoring or discussion in relation to the social gradient in health, though it was unclear from our included sources the extent to which this had changed more recently (with Wales, for example, clearly having set targets relating to reducing the social gradient).

School readiness review

Similarly, in the school readiness review, there was a mixed picture of child development outcomes across the four nations suggesting that no single system can be judged either ‘better’ or ‘worse’ than another. Furthermore, it seemed apparent from the included sources that any judgment of ‘success’ of either the whole system or indeed particular forms of action depends on what is measured in relation to child development in the early years and how. England, Scotland and Northern Ireland all capture ASQ data as part of child health programmes, but no country comparisons were found in the review. There might be value in exploring the value of comparative work on ASQ data in the future. Other more distinctive tools or approaches for measuring and supporting child development were mentioned in included sources, such as the move to integrated reviews in England and Northern Ireland, the SHANAARI wellbeing wheel in Scotland, and Health Visiting Family Resilience Assessment Instrument Tool in Wales. There could be value in seeking to learn from the different tools and approaches here.

In terms of outcomes measures reported in the review, included sources reported on a range of different aspects of child development (e.g. cognitive and language skills, social and emotional development, independence/self-regulation, physical literacy) and in different ways. Where clear country differences in cognitive ability at age 7 were identified across the four nations, it was not clear whether this was due to ‘policy’ or to wider regional or local processes at work, and thus the wider conditions that children are born into (Taylor *et al.*, 2013). As with the main review then, it was not possible to make judgements about ‘better’ or ‘worse’ child development outcomes or indeed

system-wide impacts across the four nations in the context of this study. Having said that, one comparison that was made and a significant finding in terms of outcomes was the continuing developmental differences that exist for children in the early years according to socio-economic status in all UK nations. While a few of the included sources provided examples of promising policy actions for supporting better outcomes for the most disadvantaged families (e.g. Flying Start, Children Centres), evaluative challenges were highlighted, raising the risk of challenge. Yet the persistence of such socio-economic inequality serves to emphasise the pressing need for continued policy action to give children the best start in life across the UK.

Limitations

The systematic reviews and the associated development of the public health systems framework add to our understanding by highlighting examples of both similarity and difference across the public health systems of the UK; illustrating complicated pathways from policy action, through moderating factors, which shape outcomes and impacts, and meeting a primary aim of identifying areas for learning and further dialogue across the four nations. However, we recognise that there are a number of limitations to the work which are discussed below. These should be taken into account by readers when reflecting on the conclusions and suggested implications in the next section.

We sought to be inclusive across the reviews in terms of sources of evidence (including by study design and source type) and screened and included a large volume of literature. Searching for literature on the topic of public health systems and policy was challenging, due to the complex nature of public health concepts and the wide-ranging elements of healthcare and wider societal processes which may relate to public health but not be specifically referred to in evidence sources directly as “public health”. Searching for evidence related to policy for public health is also complicated by the fact that policy is constantly changing. The area of school readiness (child development in the early years) is for example a policy issue undergoing significant change. As such, findings from currently published sources (and academic material in particular) is limited by the fact that it may have been superseded by recent policy development. These challenges in the identification of relevant evidence for the reviews raise the possibility that relevant work and recent developments have been missed by our searches, including grey literature that may provide insight into policy action and system elements. However, a key purpose of the review was to provide an overview of the public health system in each nation of the UK, rather than identifying all literature relating to each element of public health. We recognise that we have not provided a complete presentation of current policy documents for each nation or a comprehensive depiction of all current policy initiatives, but rather have included examples of legislation, government papers and policy documents, national programmes and more from included sources, which illustrate broad types of policy action/policy approaches in the public health system and have allowed identification of examples of similarities and differences in the public health systems since devolution. We further recognise that, in the school readiness review, we defined the focus of this review narrowly as ‘child development in the early

years'. As such, we emphasise that it only explores one narrow subsection of a wider field of healthy child development and early years work, which includes issues such as healthy weight, breastfeeding, immunisation and many other areas of public health activity.

Another area where we recognise the limitations is in regard to the examination of outcomes. It is important to recognise that we did not specifically search for each outcome that may be evaluated in relation public health, but rather report the outcomes which were described in this set of literature relating to public health systems in the four nations of the UK. Included sources contained limited data regarding outcomes and impacts as compared across the four nations and thus no clear picture of whether one system was 'moving ahead' of the others (cf. Bevan *et al.*, 2014). We acknowledge that a study which specifically aims to identify literature relating to public health-related outcomes is likely to retrieve a greater volume of studies than we included. As we go on to emphasise in the next conclusion section, we have not sought to judge the public health systems of the UK in this study based on current and potentially narrowly defined outcomes, but rather to support a broader discussion about whether policy action has been reshaping the whole systems in favourable, health-promoting ways (Rutter *et al.*, 2017).

We endeavoured to reduce the risk of missing key work by the use of supplementary searching techniques including citation searching, reference list checking, and searching for key authors in the field. We also consulted with public health stakeholders in each UK nation to request additional citations of relevance, which proved to be particularly important for identification of grey literature in the school readiness review in particular. At each stage of the review we used a process of "sense checking" with a small sample of public health stakeholders, which was a valuable mechanism for checking how, and if the findings resonated or were at variance to grounded knowledge and experience.

The involvement of a sample of stakeholders in the research raises the potential for biases to have been introduced by selection of stakeholders with particular views, opinions or experiences. It is possible that, for example, a different "start model" may have been developed had the composition of stakeholders in the first workshop been different. While stakeholder involvement was an important element of the work, we would argue that the risk of potential bias was minimised by the use of transparent and replicable systematic review methods to identify evidence sources, and it was the wider evidence sources which underpinned development and refinement of the final public health systems framework. The study therefore brings together insights from stakeholder experience together with available literature. We recognise that a limitation of the framework we developed based on the literature relates to the emphasis of research/researchers on particular aspects of public health. For example, there was a particular interest and volume of literature in the areas of tobacco and alcohol use, while other areas of public health were relatively underreported.

We adopted a method of synthesis based on logic model methods to provide a system-based framework for presenting the review findings. There is the possibility that a visual output such as this may not be clearly understood by all, and the meaning of particular terms or phrases used within it may be subject to differing interpretations. We sought to maximise understanding by ‘sense checking’ the meaning of the terms in the diagram with a small sample of key public health stakeholders in each country of the UK during the research. We emphasise that the framework that has been developed should be seen as just one heuristic that can help us to understand and make sense of what is a complex public health reality, rather than a perfect representation.

While our search processes sought to be inclusive of a range of different types of evidence, this affected our ability to critically appraise included studies, given the predominance of descriptive sources. As indicated in the methods section, our approach to quality appraisal of studies used a process based on consideration of the hierarchy of evidence, highlighting studies of empirical design, and any particular limitations identified during the narrative reporting.

We initially aimed to only include literature which provided insight into the public health systems in all four nations of the UK by comparing and contrasting the systems in each country. However, we identified only a small volume of material which made these comparisons, and we therefore widened our included sources to those which related only to the aspects of public health system in a single country. In some cases, the abstracts for potentially relevant academic studies suggested that they related to all countries of the UK, but on closer scrutiny it was apparent that the content related only to a single nation. We recognise that the greatest volume of included sources relate to England in both reviews, and that there is notably only a small body of literature relating to Northern Ireland. As a result, evidence from Northern Ireland, in particular, is less well reflected in the study. We note this in our concluding section and this is reflected in our suggestion of further research in Northern Ireland in particular as part of a wider effort to evidence the value of public health work.

Section 6. Conclusions and implications

This final section of the report outlines and discusses key conclusions and implications arising from the study for policy and further research. Seven main areas are covered relating to: 1) the value of the public health systems framework that was produced in the research and the potential use of this framework in future research and evaluation; 2) the way in which action relating to child development in the early years can be regarded as a ‘prevention approach’ to public health but one that is seemingly under threat; 3) the significance of evidence gaps in understanding what the public health workforce does; 4) how influencing seems to be a key current way of public health working; 5) the significance of influencing at central executive and parliamentary/assembly level in terms of securing systems change for the benefit of public health; 6) the need to manage and lead a broad public health workforce; and finally, 7) the continuing scope to learn from examples of both convergence and divergence in the public health systems across the four nations. These seven areas are now discussed in turn.

1. A public health systems framework is a useful heuristic tool for comparison, the promotion of ‘systems-level’ dialogue and use in future evaluations.

Across both of the reviews, a range of policy examples were identified in included sources, illustrating the complex landscape for public health action across all four nations of the UK. In all UK nations, a range of types of policy action were identified at different levels that together contribute to change (cf. Dunlop, 2015). As indicated throughout the foregoing sections of this report, the examples of policy action identified have been represented as part of a wider public health system framework that was produced, tested and refined throughout the duration of this research. The final public health systems framework not only details the origin and broad types of policy action, but also a range of other key elements of the public health system through which policies are enacted, shaped and influenced. Indeed, it provides a visual representation of potential pathways in the relationship between policy action (interventions / inputs), outcomes and impacts, as well as potential moderators of that relationship. We present this framework as one of the key outputs of the project.

The development of the public health systems framework, with key input from public health stakeholders combined with systematic review evidence, has not only provided a systematic and robust mechanism to compare and contrast across the systems of the four nations of the UK (helping to identify and detail similarities and differences), but has also been a useful communication tool to promote dialogue: both within our research team and with country stakeholders. The final framework can thus be regarded as a valuable tool to represent public health as a system of interest. We emphasise here that it should be seen as just one heuristic to help further a process of understanding and making sense of what is a complex public health reality, rather than a perfect representation. The framework visually illustrates some of the complexity of policy action to improve public health, and

the accompanying narrative synthesis in the report elucidates examples of complex inter-relationships between policy action, system processes and outcomes across the four nations. Taken together, this work therefore emphasises the importance of approaching public health as a dynamic and changing system, and of the need to be mindful of the complex and intersecting ways in which policy action intersects with the wider context.

A number of challenges were highlighted in both reviews in terms of difficulties in evaluating complex policy action in what is a complex wider public health system. We argue that the public health systems framework that we have developed in this research is potentially useful here, as it can provide a starting point for the design of systems level evaluations. It sensitises to the inherent complexity of pathways of action to outcomes, for example, by illustrating feedbacks and inter-connections, and thus can be used as a tool to encourage reflection across the whole system shaping public health (cf. Hawe, 2017). In other words, we argue that it can help to support the ‘shift in thinking’ that Rutter *et al.* (2017) argue is required: “away from simple, linear, causal models, to consideration of the ways in which processes and outcomes at all points within a system drive change”. This kind of shift in thinking is important in order to change the nature of dialogue and questions about public health away from narrow questions about whether particular policies work, towards broader and potentially more meaningful discussions about whether action is reshaping the whole system in favourable, health-promoting ways (Rutter *et al.*, 2017).

We argue that this type of ‘systems-level’ dialogue would be useful to promote across the four nations of the UK: so that comparison is *less* about *judging* whether one nation is doing ‘better’ or ‘worse’ than another, and *more* about cross-country *learning* from each other: about how the configuration of, inter-connections between and feedback between different elements within different public health system are promoting change and where possible leverage points for system change might be. As Rutter *et al.* (2017) argue, supporting this kind of systems-level dialogue will not only require clear frameworks (such as the public health systems framework developed in this research), but also changes to the way in which research is funded, as well as the “development of robust tools, by use of a broad, multidisciplinary suite of methods for both intervention research and evidence synthesis”.

2. Child development in the early years is a key ‘prevention approach’ to public health in each UK nation but one that is subject to pressures.

Across both of the systematic reviews, it was clear that there is much policy focus and rhetoric around the importance of a prevention approach to public health and of the need to address both life-long health and health inequalities. The case study area of school readiness, which we defined more broadly as ‘child development in the early years’ is a key example of a prevention approach to public health given that early childhood is a critical stage in ongoing development and is connected to lifelong health and health and other inequalities. Indeed, a number of key studies have emphasised

that giving every child the best start in life is crucial to reducing inequalities (including health inequalities) across the life course (for example, Marmot *et al.* 2010; Hertzman and Wiens, 1996). Our findings suggest however, that action to support child development in the early years is subject to many issues, influences and pressures; and, moreover, that there are key influencing factors and challenges in England and Northern Ireland in particular including, for example, pressures relating to short-term funding or funding cuts to children's centres, issues of financial sustainability in relation to early education or childcare, and pressures on health visitors who are recognised as key members of the early years public health workforce. While positive developments were highlighted in England and Northern Ireland – such as the moves towards integrated reviews between health and education practitioners in the early years – and from which there could be valuable opportunities for future learning, our findings suggest that the legislative and policy context for the early years may perhaps be more positive in Scotland and Wales (given, for example, that GIRFEC provides an integrated framework for action in Scotland and, in Wales, recent investments in Flying Start, national programmes to support parenting and address child poverty, as well as the legal duties placed on local authorities to, amongst other things, address future wellbeing as well as issues of play). Yet, despite the positive examples, there are still continuing challenges; not least in terms of evaluating large-scale early years initiatives and programmes such as these. As a result, there would appear to be a precarious evidence base on which to form decisions about whether to continue particular forms of action and this raises the risk of challenge.

We suggest that there is potential scope to learn more the moves towards integrated reviews in England and Northern Ireland, as well as the recent shifts in the legislative and policy context in Scotland and Wales, tracking how these reshape the wider public health system, and to understand better and discuss across the four nations how influences relating to funding and evidencing effectiveness can and are being dealt with in practice. We suggest, more broadly, that the whole system relating to child development in the early years could usefully be followed up as a 'tracer' area of a prevention approach to public health, and thus as a key area for future systems comparison, learning and dialogue across the four nations.

3. There appear to be gaps in evidencing what the public health workforce does which undermines the status and priority accorded to public health across all UK nations.

Both reviews suggested that there are gaps in evidencing what the public health workforce does. As reported in the summary discussion above, ways of working were often ill-defined in included sources and, while aspirations to work in particular ways to help support system processes and thus outcomes over the longer-term, but there was little in the included sources about *how* or *whether* ways of working *would be* or *are being* achieved. Given there are apparent issues that exist in terms of the imbalance in status and priority accorded to public health in relation to health care, this seems like a

significant gap and pressing issue to address, across all nations of the UK. Indeed, further work to evidence what the public health workforce does, its value and contribution (in all its breadth) might be one (albeit limited) way to help redress the imbalance with healthcare, alter the nature of dialogue about health policy, and advocate for greater political commitment to and investment in public health.

We thus suggest further work could be commissioned to evidence what the public health workforce does, its value and contribution (in all its breadth). Doing so might usefully also involve consideration of the role of training in supporting activities and ways of public health working, whether there are gaps here and thus what the training needs might be (for public health specialists and/or the wider public health workforce) and whether and how it is possible to document, measure and monitor ways of public health working and the skills that are deployed in practice. It is recognized that the Faculty of Public Health continue to take forward work to assess public health capacity across the UK nations and to consider how to design education, training and qualifications within and across professions (see FPH, 2017a). Our findings lend support to such activity. The dynamic and broad nature of public health work means that this is likely to be a challenging task. Nevertheless, evidencing the value of the public health workforce seems imperative if the value of the public health workforce is to be more widely recognised by those who have responsibility for policy decisions.

On this point, it is important to note that the reviews found particular evidence gaps in terms of public health work in Northern Ireland, with a limited number of sources focusing not only on ways of working, but also on other elements of the system in this country. It seems apparent therefore that there is particular scope for further research on understanding and evidencing the role of the public health workforce and the operation of the wider system in Northern Ireland in particular.

4. Influencing is key way of public health working in all four nations of the UK.

Despite the lack of evidence about public health ways of working, the findings of both reviews suggest that influencing is at the core of modern public health practice in all nations of the UK, with a particular focus on influencing debate, policy decisions and/or commissioning processes. This implies that influencing should be recognized as a key public health skill across the UK nations and moreover that public health training should appropriately supports the development of this skill. Unfortunately, the findings from the reviews provided only limited insights here into the adequacy of existing training relating to influencing and (as suggested above) limited insight into how well the public health workforce actually manages to influence in practice. It is therefore not possible to comment in any detail here on the extent to which the public health workforce is ‘fit for purpose’ here. A recent report by the New Local Government Network (NLGN), published during the later stages of this project, sheds light on some of the different ways in which public health in local government in England is influencing the wider determinants of health (see Terry *et al.*, 2017). This type of research provides valuable insight into influencing as a key way of public health working. We argue that there

is potential value in further work like this, but which also considers the value and challenges associated with public health workforce influencing across *all* levels of the public health system in the different nations of the UK, as well as areas where there is potential to collectively, across nations, go further (cf. Terry *et al.*, 2017).

Given the identified importance of influencing as a key way of public health working in all nations, there seems to be more to learn about the extent to which other workforce skills (e.g. those that have more traditionally been regarded as core to public health working, such as critical appraisal) are being deployed in practice, including the extent to which these skills support and/or relate to influencing debate, policy decisions and/or commissioning processes. This could also include understanding more about the ways in which the public health workforce provide technical challenge and support in policy conception and development, including, for example, contributing to objective setting based on available evidence bases, baseline measures and plans for management, monitoring and evaluation.

5. Influencing at central executive or parliamentary/assembly level is important to affect system change for the benefit of public health across the UK nations.

While both reviews highlighted that considerable public health policy action takes place at sub-national levels in each nation of the UK, and that there have been moves to de-centre some aspects of decision-making (particularly in Scotland, Wales and England), the substantive role of action at central executive and/or parliamentary/assembly level was most apparent. Indeed, suggestions of public health ‘successes’ in both reviews (for example, the second-hand smoking bans and recent minimum unit pricing legislation in Scotland highlighted in the main review, and the play and wellbeing duties placed on authorities in Wales in the school readiness case study) have all originated at this point in the system. The review highlights that securing such legislative change was importantly shaped by a range of different factors; for example, the actions of lobbying groups, public attitudes, the way issues were framed in political dialogue, and the fact that there has been some devolution of legislative powers. It seems apparent that influencing central executive and parliamentary/assembly action is core to modern public health practice, and a key priority area for deploying public health skills in both the devolved nations and in Westminster if there is to be substantive policy action and system change for the benefit of public health. We suggest that tracking and evaluating the system-wide impacts of key recent legislative measures introduced in Wales and Scotland could potentially be a valuable future avenue for cross-UK learning.

While DPH’s have a fundamentally important role across the UK nations, as both the systematic reviews have shown, a wider public health workforce is also important and there are aspirations to work in broad partnerships across the four nations. Securing central level political action requires, amongst other things, the existence of coalitions of stakeholders, who not only share similar basic values and beliefs and thus collectively identify with one another, but also who collectively seek to

frame dialogue and advocate for change in timely ways and, moreover, in ways that resonate with central policy makers' knowledge, understanding and also constraints (see, for example, Cairney, 2012; Shiffman, 2007). The reviews perhaps raise questions about the extent to which this type of coalition or collective public health identity currently exists within or across the workforce in public health systems of the UK nations. The included evidence highlights considerable challenges in regard to understandings and evidence regarding public health, suggesting that more needs to be done to strengthen the collective identity and power of public health voices to affect changes in policy.

6. There are questions about how to lead a broad public health workforce in all UK nations.

Connected to this point above, we argue that leadership of the broad public health workforce is key here, given the broad and complex nature of many public health issues. Challenges were reported in both reviews in relation to the scope and extent of public health leadership across the four nations. Our findings thus raise questions about how best to manage and lead this broad workforce in coherent and effective ways across all levels of the public health system. Given the similar issues and leadership challenges across the four nations, it would seem pertinent to progress associated cross-country dialogue and learning on this topic.

7. There is continuing scope to learn from examples of both convergence and divergence in the public health systems across the four nations.

The systematic reviews completed in this research found examples of both similarities and differences across the public health systems of the UK. While examples of divergence were certainly found, and areas where it seems that the devolved nations perhaps have more in common with each other in relation to public health action than they do with England (with the greater focus of English policy on competition, markets and choice highlighted as driving English divergence), there were also many similarities; for example, in terms of types of policy action pursued, as well as influencing factors, issues and challenges. Given the varied examples of similarities and differences that were identified, it does not seem possible to definitively characterize the field of public health as a straight forward example of either convergence or divergence (cf. Simpson, 2017): the reality is much more complex. This finding is not unique to public health, with comparative analyses of other policy sectors finding similar evidence of both continuity and divergence since devolution (see, for example, Alcock, 2012; Mooney *et al.*, 2015). It is recognized however, that there is a constantly changing policy, institutional and political landscape across the UK nations, and that, with the advent of future negotiations relating to Brexit and with recent extensions of, and ongoing discussions about, devolved powers, it is possible that this situation could swiftly change.

Politics was highlighted in both reviews as a key influence across the public health systems of the UK. Our findings suggest that ongoing 'territorial complexities' across the political systems of the UK

(cf. Wincott 2005, 2006) complicate the development of policy to address some public health issues, but particularly relating to wider determinants of health and health inequalities in the devolved nations. Limits to policy action and thus securing system change in the devolved nations were particularly highlighted in the school readiness review, given that important cross-cutting issues (e.g. welfare support, social security, tax and employment) - which can fundamentally reshape poverty and income inequality as determinants of child development - are reserved matters; thus making it challenging for the Scottish and Welsh Governments to ensure that wider enabling social and economic policies are in place. Yet this situation is changing. As noted in the report, the recent Scotland Act (2016) further devolves some powers in key areas such as tax, employment support and welfare-related benefits and further tax varying powers are also due to Wales in coming years. Much may depend on how these powers are deployed. We suggest that tracking these developments and understanding how these serve to (re)shape the public health systems could be a valuable area for future research and cross-UK learning.

Finally, while learning is possible from identified examples of difference, the findings here suggest that there is also much that can be learned from the continuing similarities across the UK public health systems, including, for example, how best to respond to similar financial, organizational or workforce challenges and, potentially, how to advocate, influence and leverage change at points in each system that are most likely to yield benefits for public health. As noted in the limitations section above, this study identified very few comparative accounts relating to public health, across both reviews, which looked specifically across national boundaries. There is therefore continued scope for further comparative research across the UK and thus continued cross-UK learning from the ‘natural experiment’ of devolution (cf. Bevan *et al.* 2014) in the future. We suggest that spaces for learning could be strengthened across the public health systems in order to promote this.

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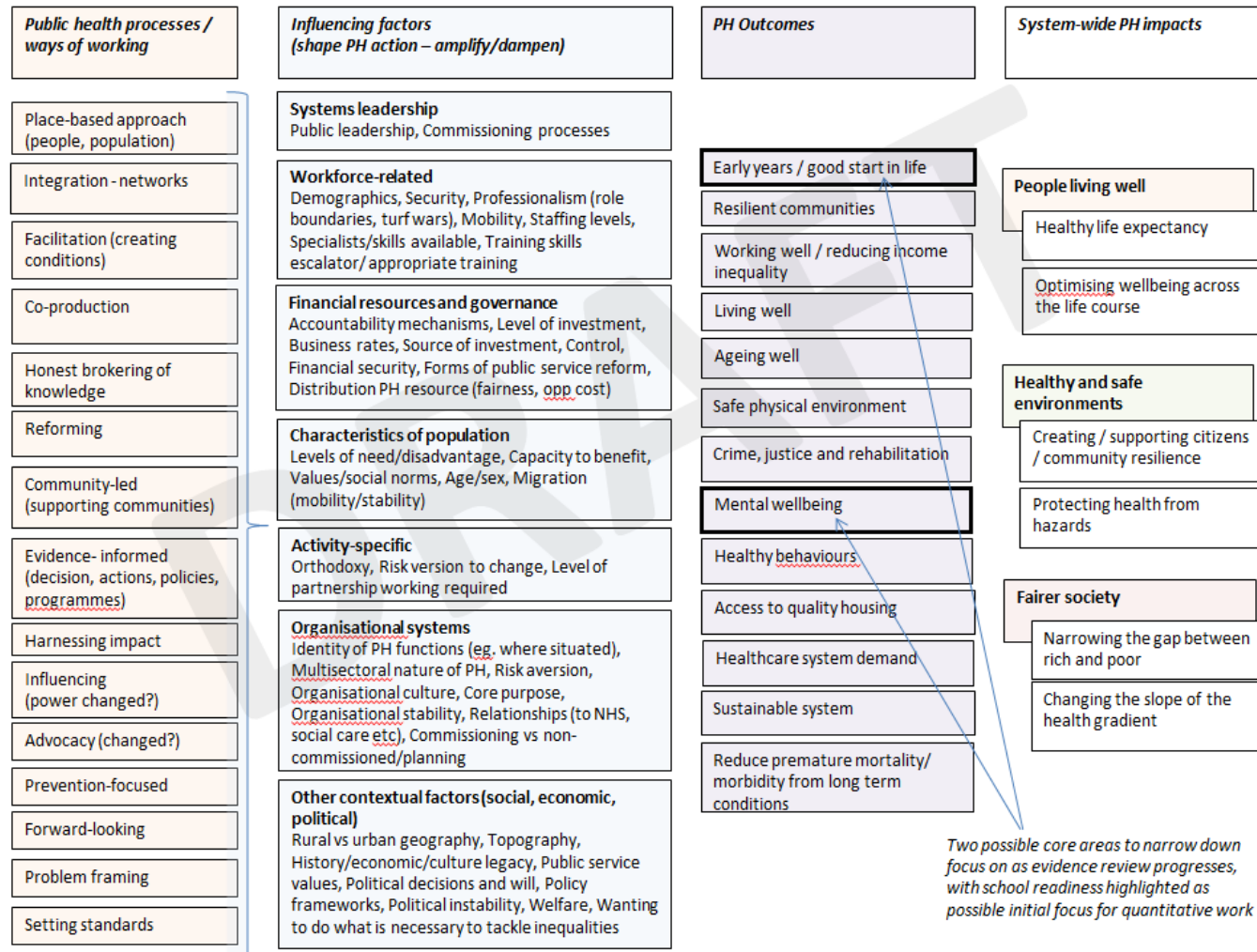
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<http://gov.wales/topics/health/publications/health/reports/healthvisiting/?lang=en>
- WELSH GOVERNMENT 2013 Building a Brighter Future: Early Years and Child Care Plan.
Available from: <http://dera.ioe.ac.uk/18045/1/130716-building-brighter-future-en.pdf>
- WELSH GOVERNMENT 2015a. Child Poverty Strategy for Wales
<http://gov.wales/docs/dsjlg/publications/150327-child-poverty-strategy-walesv2-en.pdf>
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- WELSH GOVERNMENT 2015b Early Years Outcomes Framework. Cardiff: Welsh Government.
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- WELSH GOVERNMENT 2016a Taking Wales Forward 2016-2021.
<http://gov.wales/docs/strategies/160920-taking-wales-forward-en.pdf>
- WELSH GOVERNMENT 2016b Well-being of Future Generations (Wales) Act 2015.
<http://gov.wales/topics/people-and-communities/people/future-generations-act/?lang=en>
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<http://gov.wales/docs/dhss/publications/160926healthy-childrenen.pdf>
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Appendix 1. Initial public health systems framework developed at the start of the project (at the stakeholder workshop)



Appendix 2. Data extraction form

Authors: Country: Study objectives:	PH policy area:				PH outcomes England: Northern Ireland: Scotland: Wales: PH impacts England: Northern Ireland: Scotland: Wales: Main author conclusions:																			
	PH processes / ways of working / activities:																							
Study design : <table border="1"> <tr> <td>Descriptive</td> <td></td> </tr> <tr> <td>Qualitative</td> <td>X</td> </tr> <tr> <td>Quantitative</td> <td></td> </tr> <tr> <td>Sys. review</td> <td></td> </tr> <tr> <td>Mxd methods</td> <td></td> </tr> <tr> <td>Other:</td> <td></td> </tr> </table>	Descriptive		Qualitative	X	Quantitative		Sys. review		Mxd methods		Other:		<table border="1"> <thead> <tr> <th>England</th> <th>NI</th> <th>Scotland</th> <th>Wales</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>	England	NI	Scotland	Wales							
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England	NI	Scotland	Wales																					
Study participants:																								
Contextual factors:																								
Data collection methods/sources:																								

Appendix 3. Studies excluded at full paper stage in the main public health systems review.

Source details	Reason for exclusion
Adedeji, O.T. and Jepps A. New ways of delivering the public health agenda – An evaluation of the Warm Homes, Healthy People ‘Wrapped Up’ project in Northamptonshire, England, <i>Public Health</i> , 128, 1, 101–104	Not national policy focus/short communication
Andrews, R. and S. Martin (2010). "Regional Variations in Public Service Outcomes: The Impact of Policy Divergence in England, Scotland and Wales." <i>Regional Studies</i> 44(8): 919-934.	Not specifically PH related
BALL R., KING D. and EISER D. (2012a) Assessing the relative healthcare needs of the UK’s devolved territories: a Scottish perspective, <i>Environment and Planning C: Government and Policy</i> 30(2), 322–346	Healthcare focus
Ball, Rob, David Eiser & David King (2015) Assessing Relative Spending Needs of Devolved Government: The Case of Healthcare Spending in the UK, <i>Regional Studies</i> , 49:2, 323-336, DOI: 10.1080/00343404.2013.779660	Healthcare focus
Bevan, G. 2016. What Can We Learn from the UK's "Natural Experiments" of the Benefits of Regions? <i>Healthcare papers</i> , 16 (1) 16-20.	Commentary medical healthcare focus, and nothing of relevance across four nations
Brown, Michael; Karatzias, Thanos; and Lisa O’Leary 2013 The health role of local area coordinators in Scotland: A mixed methods study, <i>Journal of Intellectual disabilities</i> .	Limited national policy focus
Condon, Louise, Hek, Gill, Harris, Francesca 2006 <i>Public Health, Health Promotion and the Health of People in Prison, Community practitioner</i>	Medical / healthcare focus
Coyle, E., Huws, D., Monaghan, S., Roddy, G., Seery, B., Staats, P., Thunhurst, C., Walker, P., Fleming, P. 2009 Transport and health - a five-country perspective, <i>Public Health</i> 113 e21-e23	Principally a short report on group’s activities with little comparative detail of relevance.
Donaldson LJ: 125 years of public health in the UK. <i>Journal of the Royal Society for the Promotion of Health</i> 2001, 121(3):146-151.	General background but historical focus – backward looking rather than reviewing recent development in PH approaches
Dooris M: Joining Up Settings for Health: A Valuable Investment for Strategic Partnerships? <i>Critical Public Health</i> 2004, 14(1):49-61.	More of review of the potential of a healthy settings approach than focusing on existing policy approaches
Elston, J. and N. Fulop (2002). "Perceptions of partnership. A documentary analysis of health improvement programmes." <i>Public Health</i> 116(4): 207-213.	Nothing of direct relevance to public health systems
Exworthy, M. (2001). "Primary care in the UK: understanding the dynamics of devolution." <i>Health & social care in the community</i> 9(5): 266-278.	Not specifically PH, more primary care focus exclude
Exworthy, M. and M. Powell (2004). "Big windows and little windows: implementation in the 'congested	More methodology than PH focus, used only as an example

state.'" Public Administration 82(2): 263-282.	
Exworthy M, Berney L, Powell M: 'How great expectations in Westminster may be dashed locally': the local implementation of national policy on health inequalities. Policy and Politics 2002, 30(1):79-96.	Nothing of relevance.
Fahey, D. K., <i>et al.</i> (2003). "User requirements and understanding of public health networks in England." Journal of Epidemiology and Community Health 57(12): 938-944.	Little data of relevance
Forbes, T., <i>et al.</i> (2010). "Implementing Health and Social Care Policy--England and Scotland Compared." Policy Studies 31(6): 591-611.	Not PH specific
Geller RJ: The first year of Health Improvement Programmes; views from Directors of Public Health. Journal of Public Health Medicine 2001, 23(1):57-64.	Date of focus of the research offers limited insight into PH policy approaches since devolution
Glasby, J., <i>et al.</i> (2010). "'Creating NHS local': the relationship between English local government and the National Health Service." Social Policy and Administration 44(3): 244-264.	Not PH specific exclude
Gillam S, Schamroth A: The community-oriented primary care experience in the United Kingdom. American Journal of Public Health 2002, 92(11):1721-1725.	Medical focus
Gorsky M, Lock K, Hogarth S: Public health and English local government: historical perspectives on the impact of 'returning home'. Journal of Public Health 2014, 36(4):546-551.	Historical focus and reflection on possible issues/less on investigating recent developments – limited content of relevance
Greer, S. L., <i>et al.</i> (2014). "'DEMOCRATIZING' PUBLIC SERVICES? REPRESENTATION AND ELECTIONS IN THE SCOTTISH NHS." Public Administration 92(4): 1090-1105.	Not directly relevant
Hamlin C, Sheard S: Revolutions in public health: 1848, and 1998? British Medical Journal 1998, 317(7158):587-591.	Historical focus and mention of green paper (intention focus) hence little of relevance on recent developments in PH approaches
Harris A, Martin R: The exercise of public health powers in an era of human rights: the particular problems of tuberculosis. Public Health 2004, 118(5):313-322.	Discursive paper arguing about significance/implications of HR Act in relation to PH powers – less on evidence about recent developments in PH policy.
Hendry, M., <i>et al.</i> (2008). "A survey of local health promotion initiatives for older people in Wales." BMC Public Health 8 (no pagination)(217).	Data old, not of relevance
Iacobucci G: Raiding the public health budget. BMJ (British Medical Journal) 2014, 348(7951):3.	News article/report
Leicester A, Levell P: Anti-smoking policies and smoker well-being: evidence from Britain. Institute for Fiscal Studies, IFS Working Papers: W13/13. 2013.	Nothing of relevance, focus on link between tobacco and well-being
Macdiarmid JI, Loe J, Douglas F, Ludbrook A, Comerford C, McNeill G: Developing a timeline for evaluating public health nutrition policy interventions. What are the outcomes and when should we expect to see them? Public Health Nutrition 2011, 14(4):729-739.	Principally a methodological paper on approaches to evaluation

MacKinnon D: Devolution, state restructuring and policy divergence in the UK. <i>Geographical Journal</i> 2015, 181(1):47-56.	Little of relevance
Maslin-Prothero, S. E., <i>et al.</i> (2008). "Four parts or one whole: The National Health Service (NHS) post-devolution." <i>Journal of Nursing Management</i> 16(6): 662-672.	Not directly relevant, policy overview
McAnaney, H., <i>et al.</i> (2010). "Translating evidence into practice: a shared priority in public health?" <i>Social Science and Medicine</i> 70(10): 1492-1500.	Focus on research rather than practice
Murphy, P. (2013). "Public health and health and wellbeing boards: antecedents, theory and development." <i>Perspectives in Public Health</i> 133(5): 248-253.	Historical focus, limited relevance of content on policy approaches
Mindell J, Boltong A: Supporting health impact assessment in practice. <i>Public Health</i> 2005, 119(4):246-252.	More a general discussion of HIA than a detailed consideration of recent developments in approach specific to one/more nations
Mitchell, C., <i>et al.</i> (2011). "Assessing the options for local government to use legal approaches to combat obesity in the UK: putting theory into practice." <i>Obesity Reviews</i> 12(8): 660-667.	Suggests what could be done rather than current system
Phillips G, Green J: Working for the public health: politics, localism and epistemologies of practice. <i>Sociology of Health & Illness</i> 2015, 37(4):491-505.	Discussed evidence based practice, nothing of relevance
Plews C, Billingham K, Rowe A: Public health nursing: barriers and opportunities. <i>Health and Social Care in the Community</i> 2000, 8(2):138-146.	Focus is on nursing in one region not national focus
Rowland, D., <i>et al.</i> (2002). "Prevention of deaths and injuries caused by house fires: survey of local authority smoke alarm policies." <i>Journal of Public Health Medicine</i> 24(3): 217-218.	Not directly relevant as is historical information and limited mention of PH directly
Ross W, Tomaney J: Devolution and Health Policy in England. <i>Regional Studies</i> 2001, 35(3):265-270.	Looking hypothetically at areas devolution of health policy in England less on existing policy approaches
Scott, G. and S. Wright (2012). "Devolution, social democratic visions and policy reality in Scotland." <i>Critical Social Policy</i> 32(3): 440-453.	Not directly relevant
Shaw J, MacKinnon D, Docherty I: Divergence or Convergence? Devolution and Transport Policy in the United Kingdom. <i>Environment and Planning C: Government and Policy</i> 2009, 27(3):546-567.	Transport focus not linked explicitly in paper to PH approaches
Todd S, Wilson D, McGuinness B, Craig D, Passmore AP: Northern Ireland dementia strategy. <i>International Journal of Geriatric Psychiatry</i> 2010, 25(9):902-904.	Medical focus on dementia 'patients'/care
Tritter JQ: Public and patient participation in health care and health policy in the United Kingdom. <i>Health Expectations</i> 2011, 14(2):220-223.	Data relate to patient and public involvement only, nothing of relevance
Vallgarda S: Governing people's lives: Strategies for improving the health of the nations in England, Denmark, Norway and Sweden. <i>European Journal of Public Health</i> 2001, 11(4):386-392.	Due to date of paper and content included on English strategy, as part of wider comparative study, there is limited insight on recent developments in policy approaches since devolution

<p>Whynes DK: Deprivation and self-reported health: are there 'Scottish effects' in England and Wales? <i>Journal of Public Health</i> 2009, 31(1):147-153.</p>	<p>No focus on policy approaches</p>
<p>Woods, K. J. (2004). "Political devolution and the health services in Great Britain." <i>International Journal of Health Services</i> 34(2): 323-339.</p>	<p>Health service very generally not PH</p>

Appendix 4. Sources excluded at full paper stage in the school readiness case study review.

Source details	Reason for exclusion
Basford, J. and C. Bath (2014). Playing the assessment game: an English early childhood education perspective. <i>Early years</i> 34(2): 119-132.	Focus is on policy demands of assessment on practitioners.
Brehony, K. J. (2005). Primary Schooling under New Labour: The Irresolvable Contradiction of Excellence and Enjoyment." <i>Oxford Review of Education</i> 31(1): 29-46.	Describes how New Labour's policies affected primary schools in England.
Farrell, B., <i>et al.</i> (2004). Partnership with parents and disabled children. HIA of the All-Inclusive Wraparound Project for children with a disability. <i>Environmental Impact Assessment Review</i> 24(2): 245-254.	Nothing of relevance.
Machin, S. and S. McNally (2011). The Evaluation of English Education Policies. CEE DP 131, Centre for the Economics of Education. London School of Economics and Political Science.	Exclude as focus is not child development in early years - little on that - focus is more whole school period.
Melhuish, E., <i>et al.</i> (2013). "Preschool affects longer term literacy and numeracy: results from a general population longitudinal study in Northern Ireland." <i>School Effectiveness and School Improvement</i> 24(2): 234-250.	Does not mention policy / more general study looking at links between preschool provision and literacy and other outcomes.
Paige-Smith, A. and J. Soler (2004). "Reading Recovery as an Example of Early Intervention in Early Years Literacy in England." <i>Education 3-13</i> 32(2): 25-31.	Focus very much historic and little of relevance on recent developments.
Parker, I. Early developments Bridging the gap between evidence and policy in early years education. London, IPPR.	Limited link to policy action / more on research.
Roberts- Holmes, G. and A. Bradbury (2016). Governance, accountability and the datafication of early years education in England. <i>British Educational Research Journal</i> 42(4): 600-613.	Focus is on the impact of assessment regimes on teachers
Roberts- Holmes, G. and A. Bradbury (2017). Primary schools and network governance: A policy analysis of reception baseline assessment." <i>British Educational Research Journal</i> , 43 (4): 671–682.	Focus is more on headteachers role in assessments
Rogers, S. and J. Rose (2007). Ready for Reception? The Advantages and Disadvantages of Single-Point Entry to School. <i>Early Years: An International Journal of Research and Development</i> 27(1): 47-63.	Little on policy approaches / more a review of research.
Waldfogel, J. and E. Washbrook (2011). Early Years Policy. <i>Child development research</i> , 1-12.	Focus on what policy levers 'could' most effectively address gaps in the early years, rather than looking specifically as existing policy approaches.
Whitebread, D. and S. Bingham (2013). School Readiness; a critical review of perspectives and evidence. Occasional Paper No. 2, TACTYC; Association for the Professional Development of Early Years Educators.	Critique of school readiness, not policy action focused.

Wingrave, M. and M. McMahon (2016). Professionalisation through academicisation: valuing and developing the early years sector in Scotland. <i>Professional Development in Education</i> 42(5): 710-731.	About teachers professional requirements in relation to Scottish early years curriculum and their response to that.
Wrigley, T. and L. Wormwell (2016). "Infantile accountability: When big data meet small children." <i>Improving Schools</i> 19(2): 105-118.	Focus is on accountability of schools, less on child development and is discussion around baseline tests.
Maynard, T. and S. Chicken (2010). Through a Different Lens: Exploring Reggio Emilia in a Welsh Context. <i>Early Years: An International Journal of Research and Development</i> 30(1): 29-39.	Focus is on teachers not child development in early years.
Maitles, H. and C. McAlpine (2012). I've adopted a tiger': Enhancing teaching and learning with infants through an active and integrated approach. <i>Education 3-13</i> 40(5): 515-531.	Focus is on teachers not child development in early years.
Macleod, F. J. and D. Jones (2000). Early childhood education in England and Wales: challenges and practices in the new millennium." <i>Early Child Development and Care</i> 164: 1-12.	Focus of the material is historic / pre devolution / not recent developments.