

# “Secrets of the right research question”

# Welcome!

*This workshop is a collaboration between*

*MPFT PRIDE project and Keele University with support from the NIHR Research Design Service  
(West Midlands)*



# “Secrets of the right research question”

## *Workshop facilitators*

*Paul Campbell (Lead: PRIDE project, MPFT)*

*Jay Tavernor (PRIDE project manager, MPFT)*

*Gulshan Tajuria (Senior Research Assistant PRIDE project, MPFT)*

*Ross Wilkie (Director, Public Health Programme, Keele University)*

*Lindsey Cooke (Regional Manager, Research Design Service, West Midlands)*



# “Secrets of the right research question”

Evidenced Based Public Health (EBPH) has made significant contributions; however at times there is no “best evidence” to draw from, or that available best evidence will not fit your context.



*Diagram courtesy of “Brownson et al. Evidence-based public health: a fundamental concept for public health practice. Annu Rev Public Health. 2009;30:175-201”.*



# “Secrets of the right research question”

## EBPH

*Is not EBM, it is much more complex!*

*A common issue in defining PH research is that it can be too broad, reflecting the complexity, leading to answers that are broad, complex, and difficult to interpret*

***Aim: to help you to refine the research questions you wish to answer so that they are sufficiently clear, specific, detailed, and testable***

*Table courtesy of “Brownson et al. Evidence-based public health: a fundamental concept for public health practice. Annu Rev Public Health. 2009;30:175-201”.*

Category	Examples
Individual	Education level
	Basic human needs <sup>a</sup>
	Personal health history
Interpersonal	Family health history
	Support from peers
	Social capital
Organizational	Staff composition
	Staff expertise
	Physical infrastructure
	Organizational culture
Sociocultural	Social norms
	Values
	Cultural traditions
	History
Political and economic	Political will
	Political ideology
	Lobbying and special interests
	Costs and benefits



# “Secrets of the right research question”

## *Task 1 (whole group)*

*What are the public health priorities and issues for you and your team?*



# “Secrets of the right research question”

## *Task 2 (split off into groups)*

*Each group to choose one priority to work on – write down everything you can about the priority or issue, noting the complexities*



# “Secrets of the right research question”

*Task 3 – the **Red Top** tabloid editor*

*From your description of the priority/issue  
create a “headline” of what you want to do  
using 7 words or less*



# “Secrets of the right research question”

## *Task 4*

*“To be or not to be, that is the research question”*





# “Secrets of the right research question”

## *Refining your question using **PICO***

**P** – *(Population, Problem)*

**I** – *(Intervention or Exposure)*

**C** – *(Comparison or Control)*

**O** – *(Outcome)*



# “Secrets of the right research question”

## *Refining your question using **PICO***

### **P**

- *Who is the population you want to study (whole, sub-community, individuals)?*
- *Describe/define population – age range, gender, background, where located*



# “Secrets of the right research question”

## *Refining your question using **PICO***

**I**

- *What is the “intervention” or “exposure”, essentially the factor that leads to a change?*
- *How will this factor be measured, what is the criteria?*



# “Secrets of the right research question”

## Refining your question using **PICO**

**C**

- *What is the “comparison”, how will you know the intervention/exposure makes a change, what are the details/specifics?*
- *Will you compare to those without the intervention/exposure, will it be a before and after in a single group?*



# “Secrets of the right research question”

## *Refining your question using **PICO***

**O**

- *What is the “outcome” and how will it be measured, what are the specifics*
- *How strong is the linkage between intervention/exposure and outcome (might there be other reasons for change)?*



# “Secrets of the right research question”

*Use your PICO to now write your research question*

*Key points to consider –*

- Can the question be written in a single sentence*
- Does it specify the population*
- Does it state the intervention/exposure*
- Is there a comparison group*
- Is there a clear outcome (specified)*

***Often written: The effectiveness/risk of (I/E) versus (C) for (O) in (P)***



# “Secrets of the right research question”

## *Refining your research question using FINER*

***F** – is it feasible*

***I** – is it of interest*

***N** – is it novel*

***E** – is it ethical*

***R** – is it relevant*



# “Secrets of the right research question”

## Useful resources

- *Richardson WS, Wilson MC, Nishikawa J, Hayward RSA. The well-built clinical question: a key to evidence-based decisions [Editorial]. ACP J Club 1995;123(3):A12-3.*
- [http://ph.cochrane.org/sites/ph.cochrane.org/files/public/uploads/Unit\\_Five.pdf](http://ph.cochrane.org/sites/ph.cochrane.org/files/public/uploads/Unit_Five.pdf)
- *Centre for Health Evidence: “Users’ Guides to Evidence Based Practice”*  
<http://www.cche.net/usersguides/start.asp#Questions>
- *Guidelines for graduate students: “Choosing and refining a research topic”*  
<http://www.fiu.edu/~kowitz/topic.html>
- *How to write Specific Aims: <http://www.theresearchassistant.com/tutorial/4-4.asp>*
- [https://libguides.cedarville.edu/picoquestion/what\\_is\\_pico](https://libguides.cedarville.edu/picoquestion/what_is_pico)





# “Secrets of the right research question”

## Example

Are mass media interventions effective in preventing smoking in young people?

Problem, population	Intervention	Comparison	Outcome	Types of studies
Young people, under 25 years of age	<ol style="list-style-type: none"><li>1. Television</li><li>2. Radio</li><li>3. Newspapers</li><li>4. Billboards</li><li>5. Posters</li><li>6. Leaflets</li><li>7. Booklets</li></ol>	No intervention	<ol style="list-style-type: none"><li>1. objective measures of smoking</li><li>2. self-reported smoking behaviour</li><li>3. Intermediate measures (intentions, attitudes, knowledge)</li><li>4. Process measures (eg. media reach)</li></ol>	<ol style="list-style-type: none"><li>1. RCT (and quasi-RCT)</li><li>2. Controlled before and after studies</li><li>3. Time series designs</li></ol>

Courtesy: [http://ph.cochrane.org/sites/ph.cochrane.org/files/public/uploads/Unit\\_Five.pdf](http://ph.cochrane.org/sites/ph.cochrane.org/files/public/uploads/Unit_Five.pdf)



# “Secrets of the right research question”

## Q & A



***PRIDE contact - [prideproject@mpft.nhs.uk](mailto:prideproject@mpft.nhs.uk)***

