

# THINKING IN PICTURES: THE WHAT, WHY AND HOW OF LOGIC MODELS

## Seminar overview

- Introduction to logic models (Ruth)
- Worked examples of logic models in the NHS (Alison)
- Q&A / general discussion (all)

## Logic Models – A brief Introduction

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## Outline

- Why we need logic models and what they are
- Principles for developing logic models
- A brief exercise

*\*Please feel free to interject along the way!*

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## Why we need logic models and what they are

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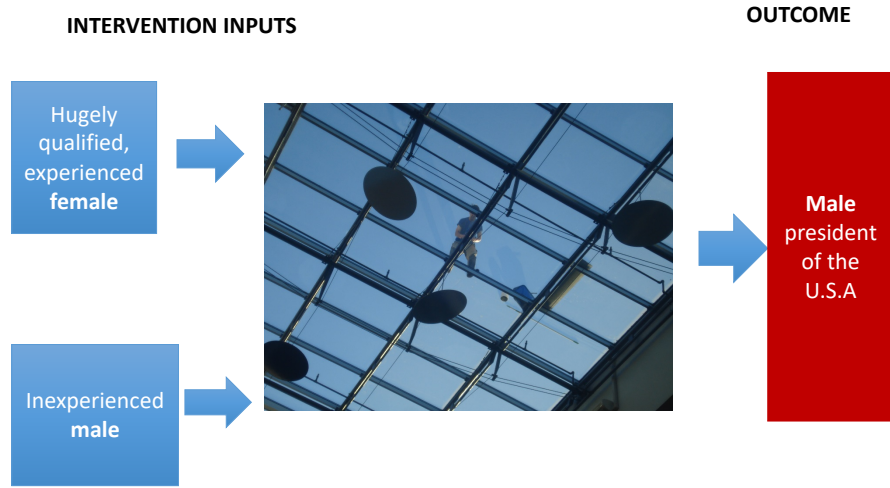
## When evidence informed decision-making goes wrong

- **Default = identify what works and replicate it** [Craig et al., 2008]
  - Lure of 'accredited' interventions /programmes (e.g. Blueprints for Violence Prevention)
- **Programme evaluations/research studies are snapshots of one time and space**
  - E.g. an RCT can tell us what works 'here and now' not if they work 'elsewhere, then'
- **EIDM needs more than 'what works' but for 'whom, and why'**
  - i.e we need programme theory!

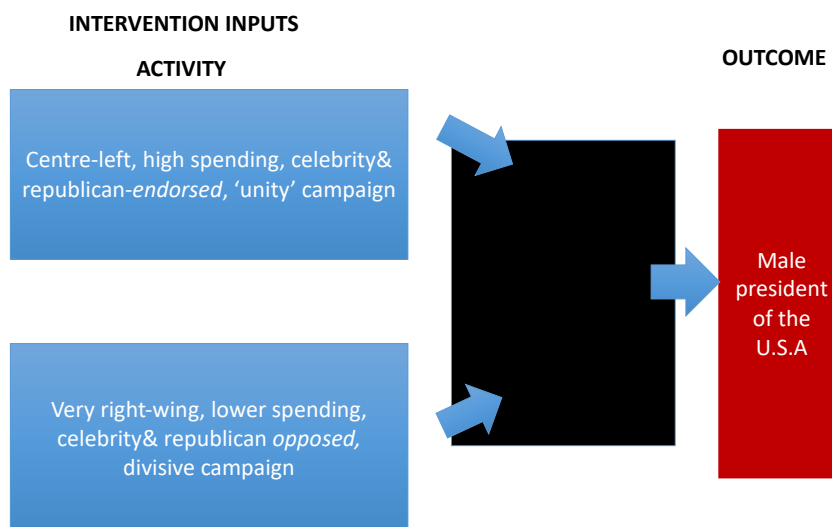
## What is programme theory?

- Causal assumptions linking action to intended outcomes
- Could be formal (e.g. diffusions of innovations, theory of planned behaviour) **but...**
- All interventions are 'theories incarnate' [Pawson and Tilley 1997]
  - Represent assumptions (often implicit) about how a problem exists and how changing something will improve it
- Language varies e.g.
  - Intervention theory, programme logic, change mechanisms, programme theory, theory of change

**Leaving out the programme theory, can lead us to wrong/incomplete conclusions....e.g.:**



**We also need sufficient detail to understand the programme logic...e.g.:**



## Enter logic models...what are they?

*“a graphic description of a system...designed to identify important elements and relationships within that system”*

[Anderson et al 2010]

- Help design and articulate programme theory
- Systematic, visual way to present the relationships among programme resources, activities and intended changes
- Good communication tools to share and check understanding

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## Why do we need logic models of programme theory?

- Support successful design, selection, implementation, adaptation, management & evaluation of programmes
- By helping you understand...
  - What needs to happen to make the programme work
  - If the programme addresses the causes of the problem in your local context
  - How the *form* of an intervention can be tailored without losing its *function* [so it can be successful in its local context]
  - What needs to be measured to check the programme is working

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## Mapping for evaluation and implementation

Logic models help map out your plan for assessing effects and processes (implementation)

- Key outcomes you need to measure to test your intervention theory? Measures will you use?
- Who are you trying to reach?
- What are you relying on to be implemented and by whom?
- Are there any key implementation challenges which may lead the causal chain to break down?
- Does implementation lead to different causal mechanisms occur?

## Remember dark logic too

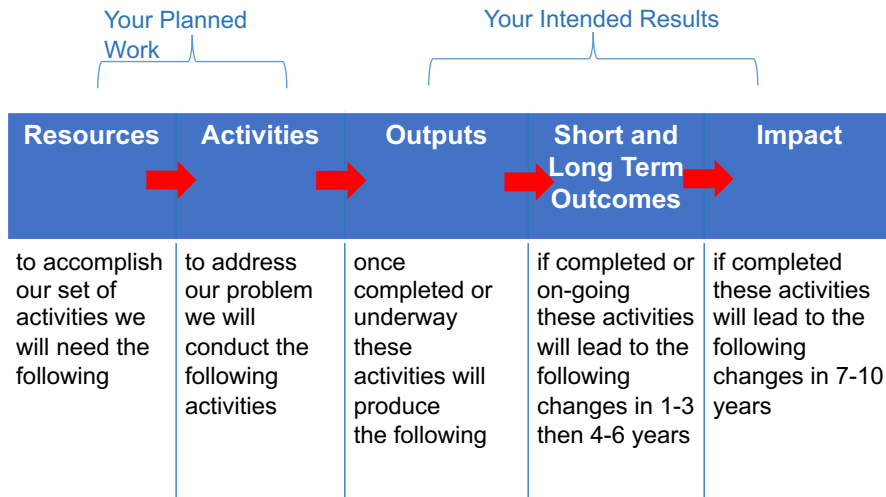
- Need to theorise *all* (intended and unintended) outcomes
- Plans for how harms could be avoided and detected; or if they are outweighed by the benefits
- There are no unintended outcomes, just limitations in our ability to anticipate them!
  - Think...widening inequalities, opportunity costs, psychological harm and stigma [Lorenc 2014]
  - See 'Dark Logic' models [Bonell et al 2014]

# Principles for developing logic models

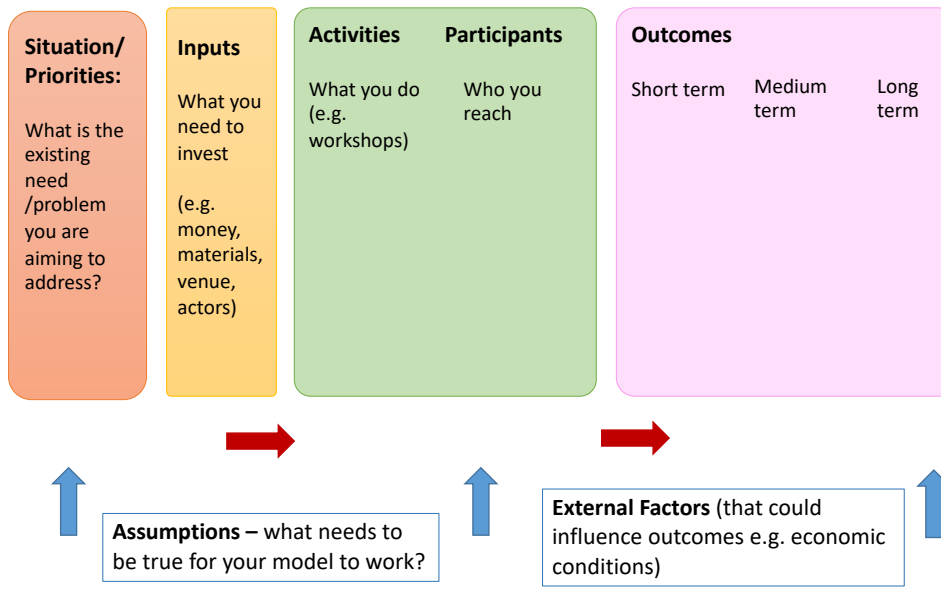
## Tips and templates

- Ideally – need one at the programme inception, then refined through implementation and evaluation
- Templates can be helpful start
  - E.g. Weaver's Triangle, Kellogg Foundation, Wisconsin model
- Trial and error to work out what best suits your situation
- Work from the outer (causes of the problem; targeted outcomes) → inner (e.g. activities; short-term outcomes)
- Arrows usually imply causality

## WK Kellogg Foundation [2004]



## Wisconsin Model [see Taylor-Powell 1996]







## Potential pitfalls: wrong programme theory for the context

- **Context** = Everything outside of the intervention (i.e. not just the setting, but others such as determinants of the problem [Craig et al 2018])
- Models often don't represent or theorise the pre-existing context or cause of the problem
- This can mean interventions, often informed by popular theories (e.g. theory of planned behaviour), are applied to the wrong context – and fail
- See [Moore et al 2018] 'What theory for whom and in which context?'

## In summary...

- Theorising how programmes/interventions 'work, for whom, in what context and why' is critical
  - Helps ensure successful planning, selection, implementation, management and evaluation
- Logic models are helpful visual tools for designing and summarising programme theory
- Clear communication tools for enhancing stakeholder engagement – so could unveil new insights/misunderstandings
- Forget logic models at your peril!
  - Need to be adequately considered and draw on appropriate knowledge
  - Start early in the life of a programme, and keep refining
  - They can also be used to map the theory of the problem, not just the theory of the programme

## References and further reading

Anderson L et al (2010). Using logic models to capture complexity in systematic review

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Hawe P et al. Theorising Interventions as Events in Systems. *Am J Community Psychol* (2009) 43:267–276

Kellogg Foundation (2004). Using Logic Models to Bring Together Planning, Evaluation, and Action Logic Model Development Guide. 2004

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Taylor-Powell et al (1996): Planning a program evaluation. Retrieved April 2002, University of Wisconsin-Extension-Cooperative Extension, Program Development and Evaluation Unit