Eastern AHSN

Using logic models for project planning, implementation, and evaluation

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NHS

Outline of today's session

- Introduce logic models as a tool to aid intervention design, implementation & evaluation
- The purpose of using logic models – when and how
- Some guidance on how to develop a logic model
- Explore some examples of logic models
- Discussion and Q & A

Your context

- How do you plan to use logic models?
- How will logic models be useful in your own work/context?
- What do you hope to learn from this session?

Why use a logic model?

- To aid project planning and programme design
- To aid implementation
- To gain shared understandings of an intervention
- To aid communication & decision making with stakeholders
- To inform monitoring and evaluation
- For writing grant applications/proposals
- To share details and findings in a summary form

https://blog.jayyoms.com/

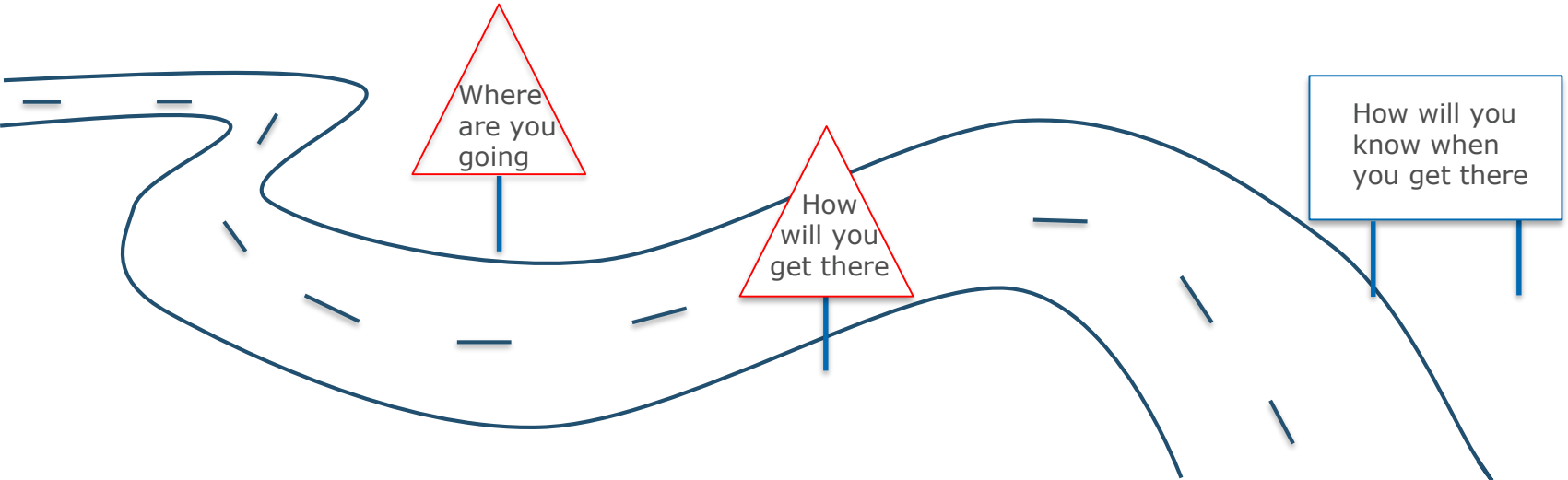
Logic Models

"A systematic and visual way to present and share your understanding of the relationships among the resources you have to operate the program, the activities you plan, and the changes and results you hope to achieve"

(W.K. Kellogg Foundation, 2004 Logic Model Development Guide)

The purpose of using a logic model:

- Identify & shows relationships between inputs, activities, output & long term strategic outcomes
- Show causal links between an identified need, what you do and how it makes a difference for target group(s) (theory or mechanism of change)
- Tell the story of the intervention – providing a road map of an intervention



Logic models provide a systematic process to help stakeholders identify:

- why an intervention is being conducted or programme delivered
- what activities & inputs are needed to achieve the planned outputs & outcomes
- what assumptions are being made
- any gaps, potential contradictions in the hypothesised causal mechanism, or where stakeholders differ in their understanding of the intervention
- risks and how they can be managed (e.g. impact on different pop groups)
- what data needs to be collected to monitor and evaluate the intervention, where to focus research

Inputs	Activities	Outputs	Outcomes	Impact
To accomplish our activities, we will need the following…	To address our problem, we will conduct the following activities…	We expect that if completed or underway these activities will produce the following evidence…	We expect that if completed or on-going these activities will lead to the following changes…	We expect these activities will lead to the following changes…
Anticipated delivery mechanisms Resources that will be used	Implementation components (What will you do, or did you do?) Mechanisms of change (How the intervention will work?)	Monitoring data (e.g. how many people participated?)	Short, medium and long term effects of your intervention	Longer term impacts

Based on WK Kellogg Foundation, 2004

A note on outputs, outcomes & impact

- **Outputs:** direct results of activities – the products delivered or produced by the planned activity
- **Outcomes:** A new operational state achieved (e.g. changes in attitude, behaviour or level of functioning)
- **Impacts (Benefits):** The measurable effects resulting from the outcomes, the organisational, community and/or system level changes from the intervention's activities & outcomes
- Make outputs, outcomes & impacts SMART
- Time scales (short, medium, or long term outcomes)

When can we use logic models?

During planning & development

– To identify how and why a programme can work

- Setting out the relationships and assumptions between what a programme will do and what changes it expects to deliver

- Identify gaps between underlying assumptions and the anticipated outcomes

- Feasibility & piloting

During implementation

– To manage and monitor implementation and which outputs and outcomes are being achieved.

- The logic model can be adapted to changes in the situation.

During evaluation

– To assess effectiveness

- To appraise implementation

-To communicate programme successes and challenges

To argue for programme continuation or expansion

- To inform other interventions

Key elements of a logic model

- Problem statement
- Assumptions
- Inputs outputs and outcomes

Theory of change …If …then statements

If I do _____ then I expect _____ will be the output/outcome

Some examples of logic models

- Logic models can have different formats
- Can be simple or very complex
- May focus more or less on theory of change, outcomes or intervention activities/implementation
- Used to plan/describe the intervention &/or to plan evaluation/research

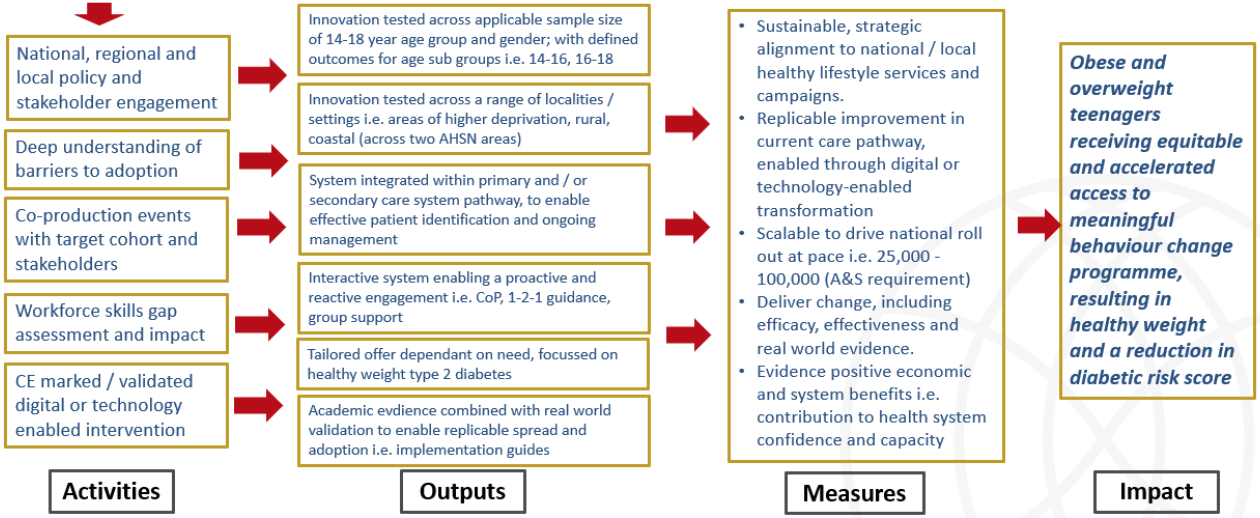
Logic model template for the regional Digital First Primary Care systems evaluation

Project/programme:			
Project Aim: **Project Rationale:**			
Inputs needed for project (Preparation)	**Activities for project implementation & evaluation (Discovery and Delivery)**	**Outputs (Reflection and Reporting)**	**Outcomes/Impacts (medium and longer-term)**
Description of project	What activities are needed to implement project?	Describe the project outputs	Will the project continue? Will the evaluation enable other systems to decide whether to take a similar approach?
Objectives	What measures are needed to understand if objectives have been met?	Describe the findings Benefits & Unintended outcomes	
Contextual influences	What additional information is needed to understand the context?	Describe influences	
Cross-cutting themes: Assumptions Health inequalities Review & feedback			

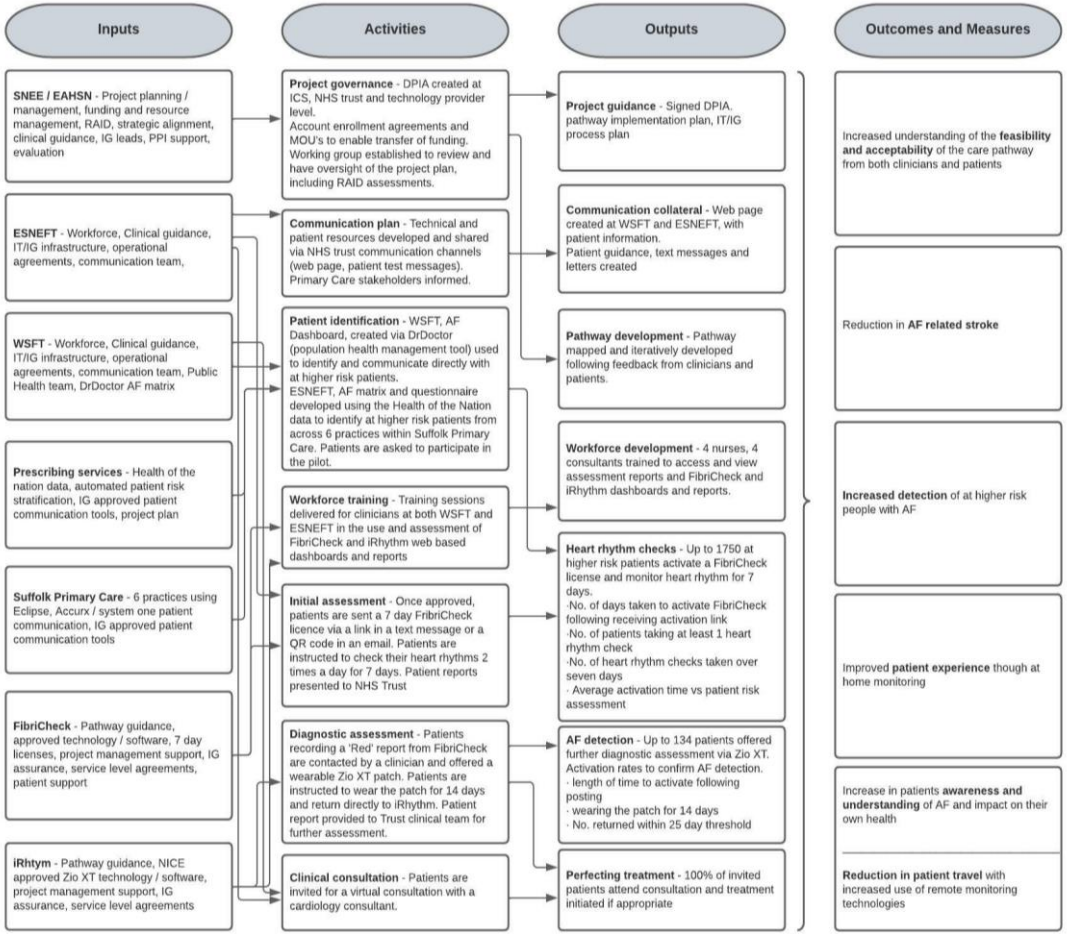
Teenage healthy weight programme - Logic Model

Problem: The prevalence of obese and overweight teenagers is increasing, whilst many national, regional and local policies focus on younger children or adults. Obesity-related health risks include type 2 diabetes (T2D). Teenage obesity and T2D represent a significant public health challenge and has been exacerbated as a result of COVID-19, impacting on everyday routines, eliciting changes in eating behaviours and physical activity levels.

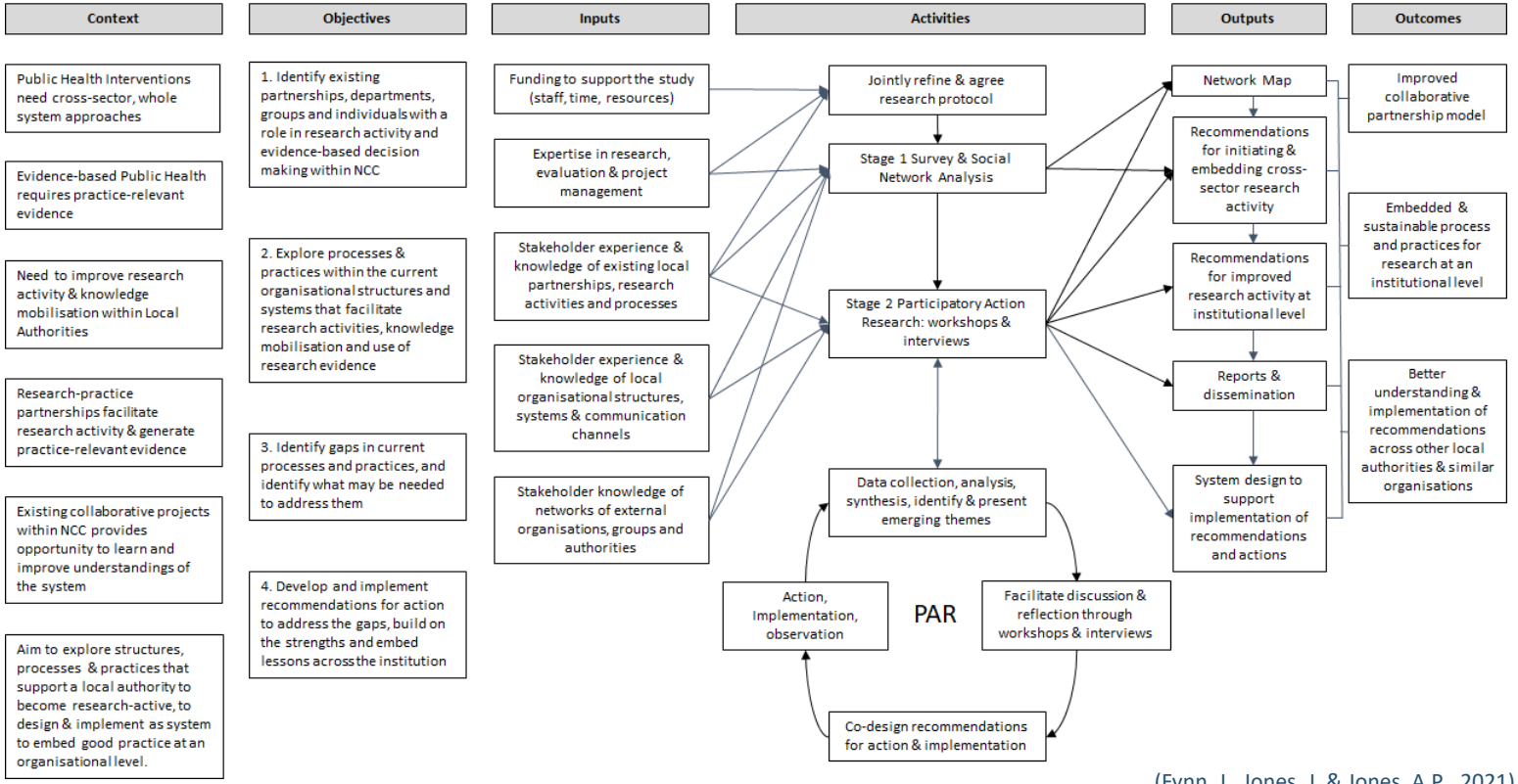
Aim: To pilot an innovation or test a pathway change that can be scaled up to deliver a national adoption and spread programme for teenagers who are obese or overweight, reducing the risk of T2D.



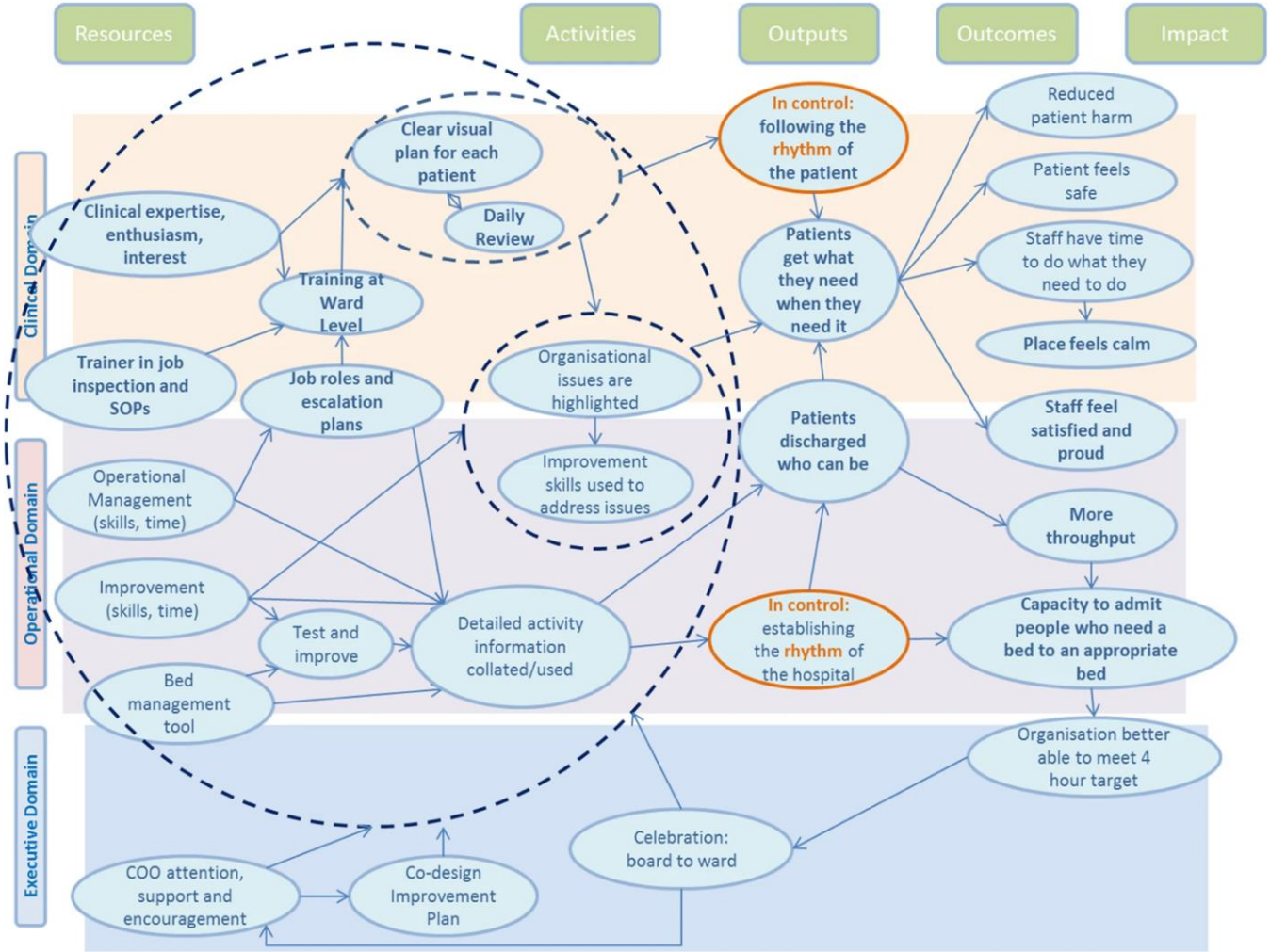
Logic model (extract) for SNEE AF implementation



Logic model to guide a research project to explore research activity in a local authority



(Fynn, J., Jones, J. & Jones, A.P., 2021)



https://bmcmedresmethodol.biomedcentral.com/articles/10.1186/s12874-019-0701-4/figures/4

What do you like, what don’t you like?

- Which models do you like,
- Why?

Developing a logic model

- Can be helpful to start with outcomes - What does the intervention aim to achieve? Think about what success looks like.

- What is the problem?, What causes the problem?, Who is affected by this problem? What does research and experience tell us about how to solve this problem?

- What is needed to achieve the outcomes?

- What are the underpinning assumptions?

- Are there any external factors that could affect delivery and implementation?

What is needed to achieve the outcomes?

Inputs & Activities

- Activities, what & how will you deliver the intervention?
- What resources are needed and how you will apply these to ensure implementation of intervention activities?
- What workforce is required and what training will they need? What will staff have to do?
- What changes need to be made to the pathway in order to implement the innovation? Any risks, or contextual factors to be considered?

Using the logic model to generate evaluation questions & measures

- Once you have thought about your outcomes and activities, think through how they could be measured
- Logic model can help you identify how you will measure and evaluate the intervention
  - What data will you need to monitor & evaluate outputs & outcomes?
  - What data will you need to collect to monitor & evaluate implementation (process)?

Thinking about some of the challenges of using logic models:

What challenges have you had when developing a logic model?

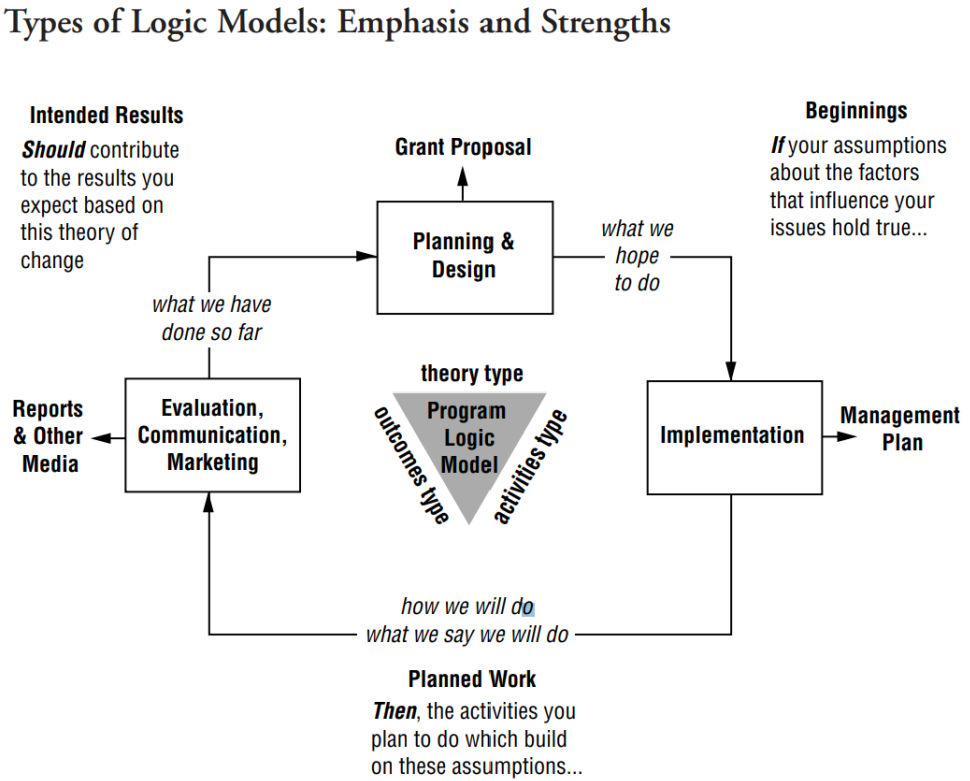
Or what challenges can you think of that you may face in using a logic model?

Challenges of using logic models:

- In complex interventions relationships not always linear
- Boundaries between inputs/activities/context not always clear
- Risks of over-simplifying, or making the logic model too complicated – deciding on the level of detail
- May mask unintended or negative outcomes/impacts
- May limit creativity, spontaneity & adaptability

Types of logic models
(W.K. Kellogg Foundation 2004)

- **Theory Approach** emphasise the theory of change that has influenced the design & plan for the program
- **Outcome approach** emphasise the connection between resources/activities & desired outcomes
- **Activities approach** links the planned activities, maps the implementation

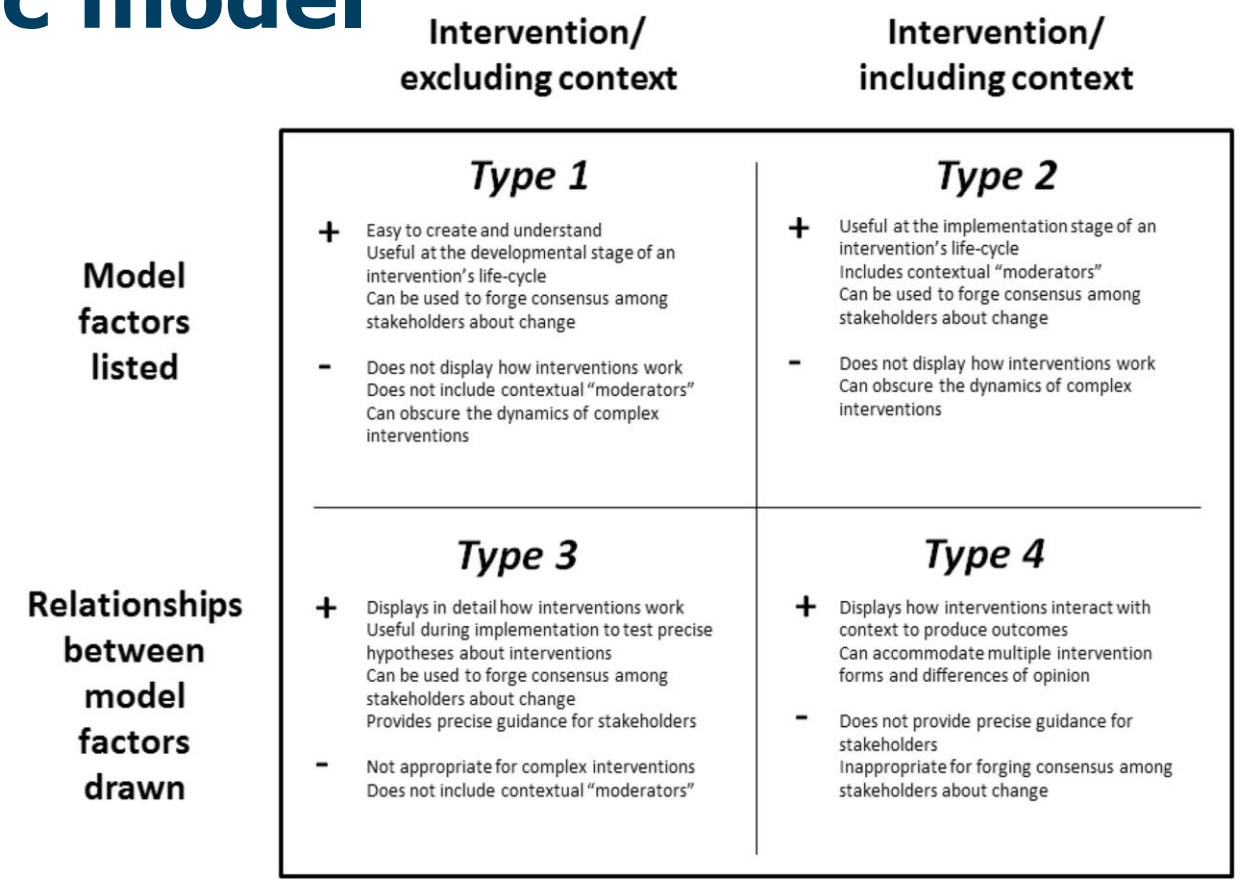


Types of logic model

Type 1 & 2 – basic columns as in Kellogg Foundation logic model (slide 9)

Type 3 – arrows to show how each component influences an outcome (slides 14-16 to varying extents)

Type 4 – Higher level representation of spectrum of factors that may influence success of an intervention



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Some tips & take home messages

- Determine the purpose & audience of the logic model - who will use it & for what
- Select the format which best suits your needs (No right or wrong)
- Involve stakeholders in developing and reviewing your logic model
- Take an iterative and collaborative approach
- Make outputs, outcomes, & impacts SMART where possible
- Think of the logic model as a living document – not static
    - Developing a logic model is a process, it requires practice & can change over time
    - Return to it during planning, implementation, evaluation and dissemination phases and update it

How will you use a logic model?

- Do you have a specific logic model you want to develop for a specific project?
- Think about:
- Outcomes – what difference will the intervention make/what is the intended change?
- Who is the target?
- Do you have a timescale for the outcomes?
- What is involved in implementing the intervention?

Any questions?

Supporting References for using logic models

Two talks on using a RE-AIM Logic Model to distil evaluation reports: https://youtu.be/6dw7Y2D5QAQ

W.K. Kellogg Foundation (2004). **Logic Model Development Guide** www.wkkf.org/resource-directory/resource/2006/02/wk-kellogg-foundation-logic-model-development-guide

Evaluation Support Scotland, Evaluation Support guide 1.2: Developing a Logic Model. www.evaluationsupportscotland.org.uk/media/uploads/resources/supportguide1.2logicmodelsjul09.pdf

Evaluation Works The NHS Evaluation Toolkit

Using logic models to assess digital health products (NHS Digital) https://digital.nhs.uk/blog/transformation-blog/2019/using-logic-models-to-assess-digital-health-products

Mills et al (2019) https://bmcmedresmethodol.biomedcentral.com/articles/10.1186/s12874-019-0701-4#citeas

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