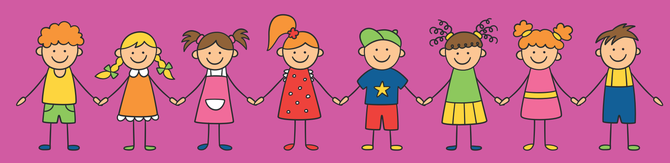
Using complex systems mapping to co-produce a local action plan for improving diet and healthy weight in the early years



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Background

NHS Dumfries and Galloway set out to develop and implement a systems-based approach to improving diet and healthy weight outcomes for children in their early years. They aimed to involve key local stakeholders leading key policy or operational actions in the development of a comprehensive system-wide diet and healthy weight action plan.

Methods

Three workshops were held which used complex systems mapping techniques to i) understand the key determinants of healthy weight in the early years ii) explore the connections between these issues and potential 'feedback loops' iii) gain consensus among stakeholders about potential system-wide interventions. The Intervention Level Framework was used to classify these interventions and stimulate further debate and refinement of the action plan. The process was evaluated independently through post-workshop questionnaires and focus groups.

Results

A complex system map was created by the stakeholders that described the system around healthy weight in the early years. This was used to draft a prioritised set of proposed system-wide actions that operated at different levels of the system. The process was found to be 'highly effective' in helping stakeholders explore a whole systems approach to diet and healthy weight by 67% of questionnaire responses (35/52) with the remaining 33% rating it as 'effective'. 59% of responses said they would be 'highly likely to use something they learned today in their work'. Qualitative non-participant observation and interview data highlighted three broad insights: positive aspects, some variability in expectations of 'systems' and tangible suggestions for improvements Two multiagency workshops have subsequently been held to prioritise the actions proposed in the systems mapping workshops and embed them in existing strategic contexts

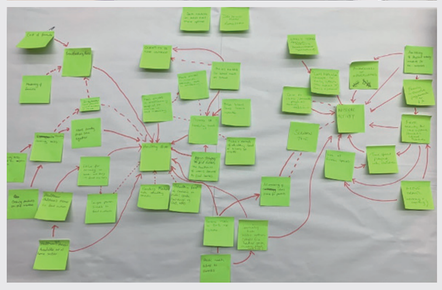
Conclusions and implications

Systems mapping can be a valuable tool to help in the co-production of action plans on complex public health issues, helping to engage stakeholders and plan system-wide actions.

Aim:

to initiate and deliver the first phases of a whole systems approach to diet and healthy weight in Dumfries and Galloway, focused on the early years.

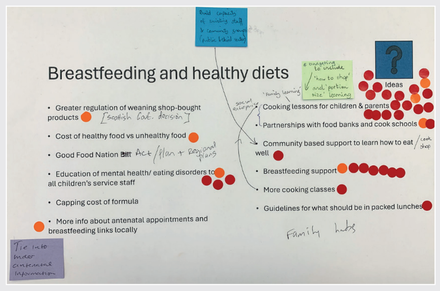
Workshop One



- Bring key people together
- Introduce the issue
- Draft basic system maps
- Combined into a single digital system map using Kumu (www.kumu.io)

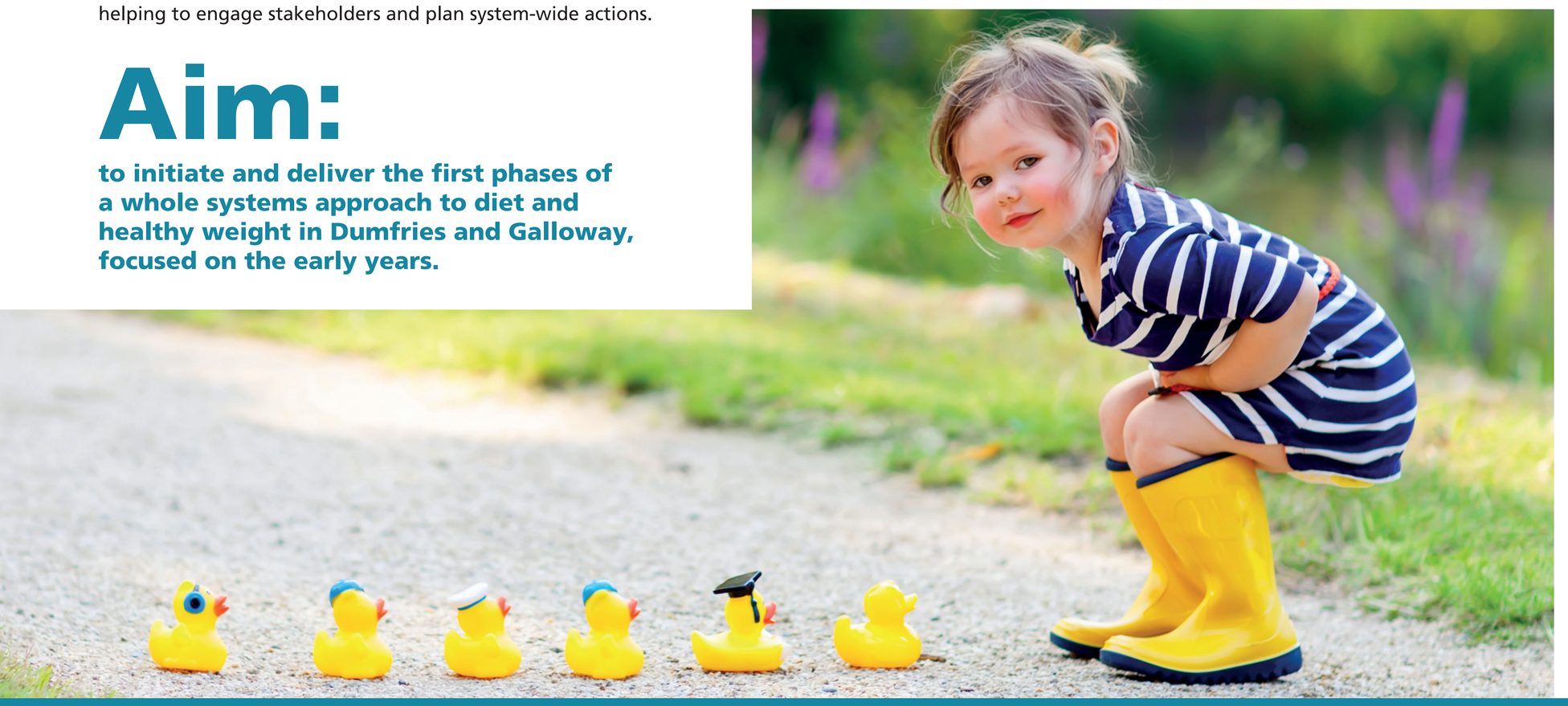
Workshop Two

- Refine the system map
- Consider system connections
- What do we do well already across the system?
- What needs to be done?
- Pink notes are things that we are already doing well.
- Green notes are new ideas



Workshop Three

- Finalise and agree a list of prioritized actions
- Make commitments for personal actions



Conclusions

- This project helped to engage local stakeholders in taking a systems approach to developing actions on healthy weight for the early years.
- The evaluations throughout showed the process to be supported and enjoyed by participants.
- The final – critical – stage is to agree an implementation approach for priority actions from April 2024. The actions should ideally:
  - Be taken from across the topics (ie touch on each area of the system)
  - Be implemented at different 'levels' of the system
  - Be determined locally, informed by local evidence and stakeholders

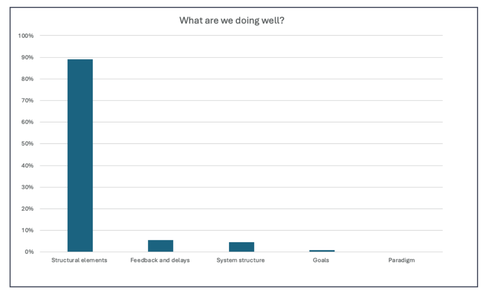
Intervention Level Framework (ILF)

Paradigm	Actions and ideas at this level propose to either shift or reinforce the current paradigm
Goals	Actions at this level focus or change the aim of the system
System Structure	Actions at this level will change the entire system structure by changing the linkages within the system or incorporating novel types of structural elements
Feedback and Delays	Actions at this level attempt to create new, or increase the gain around existing feedback loops
Structural Elements	Actions at this level affect specific subsystems, actors, or elements of the system.

- 5 'levels' of action
- Each type of action supports those above
- It is hypothesized that system change is more likely and will have greater impact with a combination of actions from each level

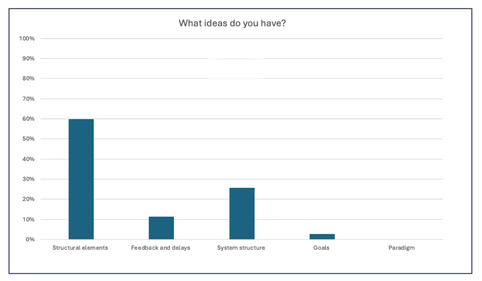
We used the ILF to classify the ideas that people had come up with in the last workshop.

This showed that the things people thought were going well across Dumfries and Galloway were mainly classed as 'structural elements' – so only affecting a small part of the system or specific groups of people.



In contrast, the ideas people came up with were more ambitious with ideas to set new goals and change system strutures.

This was used as a stimulus to further raise ambitions for actions across the system around healthy weight, and to consider feedback loops in the system: areas where actions can have greater impact.



Final system map of the factors influencing children's weight in the early years across Dumfries and Galloway, Scotland.