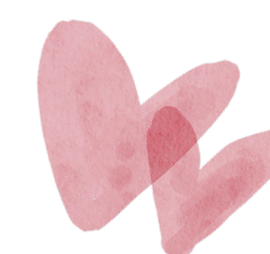


## in an Evidence Synthesis Project.



### Anti-sickness medicines for preventing Chemotherapy-Induced Nausea and Vomiting (CINV) in children and young people.

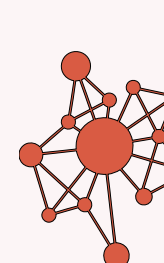


For her PhD, Dr Ruth Walker used **evidence synthesis methods** (which bring together findings from different studies) to overcome a lack of evidence in children, and better understand which **anti-sickness medicines** work best for children to prevent chemotherapy-induced nausea and vomiting (CINV).

**She involved people with lived experience of CINV at key points throughout the project.**

### Which evidence synthesis methods were applied and why?

Four methods of evidence synthesis were used, which may help us better understand how well medicines work in children, even when data is lacking:



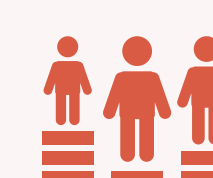
**Network Meta-Analysis (NMA)**  
Published results were combined to compare several medicines at once, and make 'indirect comparisons' where medicines not included in the same clinical trial can be compared.



**Information-sharing models**  
Adult evidence was included in the NMA to see if this improved understanding of how well medicines work in children (we didn't assume the medicines would work the same as in adults).



**Multivariate synthesis**  
Data on related outcomes were combined across studies to improve our understanding of how well medicines work for outcomes that are poorly reported.



**Individual participant data (IPD) analysis**  
Raw data from studies were combined to understand how children's characteristics (like age, cancer type and treatments) alter how well medicines work.



### WHERE AND HOW WERE CHILDREN, YOUNG PEOPLE, AND FAMILIES INVOLVED?

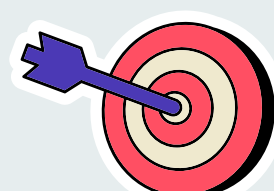


#### 1 DEVELOPING THE GRANT APPLICATION



Three parents and one adult who had CINV as a child reviewed the language in the application and decided how best to share our study findings.

#### 2 IDENTIFYING IMPORTANT OUTCOMES



Three parents and one adult who had CINV as a child told us which outcomes mattered when taking anti-sickness medicines as a child (This can differ from what is important to adults!).

#### 3 INTERPRETING FINDINGS



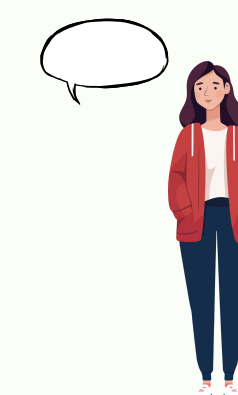
Three children and five parents helped us to understand what the findings meant in everyday life.

#### 4 SHARING THE FINDINGS



Four children and six parents helped us to design an animation video to share the findings of the study

#### 5 FEEDBACK



One young person made a short video for researchers about what works well when involving children and what could be improved.

People were involved through a mixture of online meetings and in-person sessions held at the Candlelighters' support centre near Leeds Children's Hospital.

### THE IMPACT THIS HAD ON THE PROJECT

#### A STRONGER GRANT APPLICATION & A BETTER DISSEMINATION PLAN



People's lived experience helped to better convey the importance of the project. It was felt a short animation video was the best way to share findings!

#### RESEARCH SHAPED AROUND OUTCOMES THAT MATTER MOST TO CHILDREN.



Quality-of-life-related outcomes were highlighted. Published data and IPD on these outcomes were sought for analysis. Where missing, evidence gaps were highlighted.

#### BETTER INTERPRETATION AND CONTEXT



Our conversations helped us better understand trade-offs between medicines' benefits and their unintended effects. This shaped our discussion of findings and recommendations for future research.

#### AN ACCESSIBLE AND MORE RELATABLE VIDEO



Feedback helped to us focus on what matters to children and families, use language accessible to a broad age range, and include images that were more reflective of life on the children's wards.

#### IMPROVING FUTURE INVOLVEMENT



Feedback highlighted the importance of involving children early in the research cycle, providing safe and familiar environments, using engaging activities and holding separate events for involving younger and older children, when possible.

### Final reflections from the researchers

Involving children with lived experience in evidence synthesis projects can help shape the focus and interpretation of the research. This makes it more useful to those who it will affect, and can help identify evidence gaps. Focusing on the broad concept of what statistical methods aim to achieve, rather than how they are conducted, can help reach a broader age range of children. Patient support charities can be invaluable for reaching and involving children and families, and we thank **Candlelighters** for supporting our involvement work throughout.