Supplementary Materials

Draft Parent Information Leaflet

This information sheet provides details of a landmark approach to improve the care of very preterm babies. Please read it carefully and ask us if anything is unclear.

Background: This neonatal unit is taking part in a large, national study to find out the best way to feed very preterm babies. This will involve using data that doctors and nurses record routinely for all babies admitted to neonatal units. This leaflet is to provide you with information. You do not need to do anything unless you do not wish us to use your baby's data.

You can "opt-out" at any time by telling [NAME OF STAFF MEMBER]. If you opt-out, your baby will continue to receive the same treatment and his or her care will not be affected. However, your baby's data will not be included in the analysis of the results.

What we are trying to find out: We ask all mothers who have a very preterm baby to express milk. However, if a mother has insufficient milk we do not know whether it is beneficial for a baby to receive pasteurised donated milk or formula specially made for preterm babies. We also do not know whether it is beneficial to very preterm babies to add extra protein and carbohydrate routinely to human milk. These are important questions affecting the care of all very preterm babies.

Why there is uncertainty: Preterm formula is made from cow's milk in a factory to strict regulatory standards. It has a consistent amount of nutrition and is used very widely. However, some clinicians believe cow's milk may increase the risks in very preterm babies of a gut inflammation called necrotising enterocolitis that can be very serious. About 3 in 100 very preterm babies in the UK develop severe necrotising enterocolitis.

Human milk provides more than just nutrition, for example, it has factors that strengthen immunity. However, human milk from a donor must be pasteurised to reduce the risk of transmitting infection. Pasteurisation reduces or destroys some beneficial properties of human milk; therefore, donor milk is not the same as milk from a baby's own mother. Pasteurised human donor milk is expensive and has very variable nutrition. This means that doctors may need to add extra protein and carbohydrate from cow's milk which some feel may also be a risk for necrotising enterocolitis.

What happens at present: Because we do not know which options are better for babies, some neonatal units use preterm formula and some use pasteurised human donor milk; some routinely add extra protein and carbohydrate to human milk feeds for very preterm babies and some do not. Overall, in the UK, the majority of babies receive their own mother's milk with some formula; less than 20% receive any donor milk, and about 40% receive some extra protein and carbohydrate.

How to resolve these uncertainties: The most reliable way to resolve uncertainties is by fairly allocating neonatal units to a feeding strategy, using a computer programme that makes the choice without influence so that half will use one approach and half will use the other, for each of the two uncertainties. This is ethical because it gives patients an equal, fair chance of receiving any of the alternative treatments. We will need to compare information from about 4700 babies to find out which options are more beneficial. In this neonatal unit we will be using [X] and [Y].

Other information: There are no risks to your baby from participation in this study because all feeding options are already widely used. Standard NHS indemnity operates in relation to the clinical treatment your baby receives. The UK Health Research Authority has approved the study. Imperial College London is coordinating the study and [x] is funding it. We will keep all details about your baby private. The only

people allowed to look at your baby's data are the team running the study and the regulatory authorities responsible for checking it is carried out correctly.

Thank you for reading this.

Supplementary Materials (Continued)

Revised Parent Information Leaflet

SIDE ONE

This information sheet provides details of a landmark approach to improve the care of very preterm babies.

This neonatal unit is taking part in a large, national study to find out the best way to feed very preterm babies (born at less than 29 weeks gestation).

This will involve using data that doctors and nurses record routinely for all babies admitted to neonatal units.

This sheet is to provide you with information. You do not need to do anything unless you do not wish us to use your baby's data.

You can "opt-out" at any time by telling [NAME OF STAFF MEMBER].

If you opt-out, your baby will continue to receive the same treatment and his or her care will not be affected. However, your baby's data will not be included in the analysis of the results.

If you are interested in learning more about why the study is taking place, please turn overleaf.

SIDE TWO

What we are trying to find out: We ask all mothers who have a very preterm baby to express milk, as we know this is the optimum way to feed neonates. However, breast-feeding a premature baby can often present challenges, despite their mother's effort and commitment. This means that sometimes a baby will need an additional source of nutrition. At present, we do not know whether it is beneficial for a baby to receive pasteurised donated milk or formula specially made for preterm babies. We also do not know whether it is beneficial to very preterm babies to add extra protein and carbohydrate routinely to human milk. These are important questions affecting the care of all very preterm babies.

Why there is uncertainty: Preterm formula is made from cow's milk in a factory to strict regulatory standards. It has a consistent amount of nutrition and is used very widely. However, some clinicians believe cow's milk may increase the risks in very preterm babies of a gut inflammation called necrotising enterocolitis that can be very serious. About 3 in 100 very preterm babies in the UK develop severe necrotising enterocolitis.

Human milk provides more than just nutrition, for example, it has factors that strengthen immunity. However, human milk from a donor must be pasteurised to reduce the risk of transmitting infection. Pasteurisation reduces or destroys some beneficial properties of human milk and for these and other reasons, donor milk is not the same as milk from a baby's own mother. Pasteurised human donor milk is expensive and has very variable nutrition. This means that doctors may need to add extra protein and carbohydrate from cow's milk which some feel may also be a risk for necrotising enterocolitis.

What happens at present: Because we do not know which options are better for babies, some neonatal units use preterm formula and some use pasteurised human donor milk; some routinely add extra protein and carbohydrate to human milk feeds for very preterm babies and some do not. Overall, in the UK, the majority of babies receive their own mother's milk with some formula; less than 20% receive any donor milk, and about 40% receive some extra protein and carbohydrate.

How to resolve these uncertainties: The most reliable way to resolve uncertainties is by fairly allocating neonatal units to a feeding strategy, using a computer programme that makes the choice without influence so that half will use one approach and half will use the other, for each of the two uncertainties. This is ethical because it gives patients an equal, fair chance of receiving any of the alternative treatments. We will need to compare information from about 4700 babies to find out which options are more beneficial. In this neonatal unit we will be using [X] and [Y].

Other information: There are no risks to your baby from participation in this study because all feeding options are already widely used. Standard NHS indemnity operates in relation to the clinical treatment your baby receives. The UK Health Research Authority has approved the study. Imperial College London is coordinating the study and [x] is funding it. We will keep all details about your baby private. The only people allowed to look at your baby's data are the team running the study and the regulatory authorities responsible for checking it is carried out correctly.

Once again, if you opt-out of the research study, your baby will continue to receive the same treatment and his or her care will not be affected.

Thank you for reading this. Please ask us if anything is unclear.

Supplementary Materials (Continued)

Completed Consolidated criteria for reporting qualitative research (COREQ)

Domain 1: Research team and reflexivity

Personal Characteristics

1. Interviewer/facilitator – Lammons and Moss

2. Credentials – Lammons, MA; Moss, PhD

3. Occupation: Lammons, PPI Research Lead; Moss, PPI Research Lead

4. Gender – Lammons, male; Moss, female

5. Experience and training – Lammons, Imperial College London PPI Training; Moss, original PPI research on improving outcomes for aphasia patients

Relationship with participants

6. Relationship established – No relationship was established between Lammons, Moss and participants prior to this research. Participants were recruited through the neoWONDER network of interested participants who had given consent to contact, which is managed by Battersby.

7. Participant knowledge of the researchers – Lammons and Moss clearly stated the research goals, vision, and purposes at the start of every focus group and interview. They asserted that their goals were to understand parent and former patient experiences, then use these to improve the trial's success in terms of recruitment, retention, relevance, and efficacy.

8. Interviewer characteristics – interviewers clearly stated their motivations and interests in the research topic throughout each focus group and interview. Interviewers shared personal experiences, such as parenthood or lack thereof which impacted their vision and understanding of these phenomena. Most importantly, researchers situated themselves as intermediaries who could receive critiques of the research design, then transmit these to improve the research's inclusivity and engagement with participants.

Domain 2: study design

Theoretical framework

9. Methodological orientation – Qualitative research, qualitative analysis, and patient and public involvement

Participant selection

10. Sampling – Participants were selected from the neoWONDER research participant network, managed by Battersby, which is a network of parents of premature babies and adults born

premature who have consented to contact for neonatal medicine related research studies. Given time constraints the research team faced, we opted for this as the most efficient, effective, convenient, and purposeful means for getting feedback on the COLLABORATE trial prior in tandem with its protocol development.

11. Method of approach – email invitation through neoWONDER research participant network, led by Battersby. Interested individuals who responded were offered participation times and dates.

12. Sample size – 9

13. Non-participation 4 showed interest in participating but did not attend due to various reasons, including illness or lack of clear confirmation; follow-up contact and rescheduling was attempted with all four of these individuals twice via email, but no responses were received to schedule additional meeting dates.

Setting

14. Setting of data collection – virtual focus groups and interviews held via Zoom and Microsoft Teams. Participants joined the sessions from their personal computers/devices at their homes.

15. Presence of non-participants – only research participants and researchers (Moss and Lammons) were present during sessions

16. Description of sample – participants were all female between the ages of 22 and 55; 7 were mothers of neonatal patients, 1 was a former neonatal patient, and 1 was a mother and former neonatal patient.

Data collection

17. Interview guide – a topic guide was created by Lammons and Moss which was shared with the broader research team. The guide was not pilot tested, nor did participants request a copy of the guide, though it was available upon request.

18. Repeat interviews – none were conducted

19. Audio/visual recording – sessions were video recorded using in-app recording functions of Zoom and/or Teams. Audio recordings were extracted from the videos and used to create transcriptions with Descript software. These transcriptions were edited for correctness and understanding, then video recordings were deleted. Audio recordings were saved. One session encountered extensive technical difficulties and was correspondingly conducted by Moss via phone. As a result of technical issues, this session was not recorded.

20. Field notes – Lammons and Moss took field notes during and after interview/focus group sessions. These were included in the NVivo workflow and theming process along with raw data.

21. Duration – Each session lasted roughly 90 minutes.

22. Data saturation – Moss and Lammons used Malterud et al.'s concept of "information power", or the theory that validity resides in data's strength and quality 23 to emphasize the depth and relevance of the data collected and presented.

23. Transcripts returned – transcripts were not returned to participants for comment and/or correction, though quotations used throughout the manuscript have been reviewed and verified by participants.

Domain 3: analysis and findings

Data analysis

24. Number of data coders – 2, Moss and Lammons

25. Description of the coding tree – The coding tree has not been included in the manuscript but is available on request.

26. Derivation of themes – Moss and Lammons used a "hybrid approach" of deductive themes identified prior to the data collection and inductive themes derived from the data itself.

27. Software – NVivo 1.3 (QSR Technologies)

28. Participant checking – Participants have been included in the writing process as co-authors and reviewers of findings. Their feedback has contributed to the extant draft.

Reporting

29. Quotations presented – Eleven quotations are presented in the results section in brief, with their corresponding long-form versions and identifying participant numbers in Table 2.

30. Data and findings consistent – Data has been used to guide findings, discussion, and analysis. Copies of transcripts and coding are available upon request.

31. Clarity of major themes – Quotes were clearly paired with theme headings and discussions for optimum clarification.

32. Clarity of minor themes – Quotes were clearly paired with theme headings and discussions for optimum clarification.