SUPPLEMENTARY FILE 3 – Details on recruitment, data collection and analysis, VIP-IDEAL, 2022

A Recruitment details

As mentioned in the main file, we recruited participants with support from the National Institute for Health and Care Research Clinical Research Network (NIHR CRN, including the newly established NIHR CRN Direct Delivery Team South London) and patient and public involvement (PPI) contributors via clinics and within the community.

We screened participants whom we had approached during parent-child sessions or who had come in touch with us in response to other recruitment efforts (e.g. posters, text messages, WhatsApp or email lists) for eligibility. (As mentioned in the main file, pregnant/postpartum women were eligible if they were at least 16-years old, lived and/or received healthcare in South London and were pregnant or had given birth to a baby any time after April 2021; healthcare providers or other relevant stakeholders were eligible, if they regularly provided services to pregnant/post-partum women and/or might have an influence on the current or future uptake of maternal vaccinations in South London).

An initial 55 pregnant/post-partum women (out of 62 individuals screened) were eligible, among whom six individuals were unresponsive, two declined (for time reasons and unwillingness to disclose any personal information) and 47 were willing to participate. After 31 interviews, however, data saturation was achieved. Although data saturation had already been reached after the interviews, we also conducted one FGD (with seven participants). We included a total of 38 pregnant/post-partum individuals (five pregnant and 34 post-partum women). Recruitment details are provided in Table A1 below.

Table S1 – Recruitment of VIP-IDEAL study participants (pregnant/post-partum women, total N=38)

Recruitment via	**Interviewees (n)**	**FGD participants (n)**	**Total**
GP clinics	7	5	12
Parent-child groups	9	0	9
Social media*	5	0	5
Poster*	5	1	6
Word of mouth	5	1	6
Total	31	7	38

* The poster and social media advertisements were designed with support from PPI contributors of black, white non-British and mixed ethnic groups. They suggested/chose poster colours and photos that they thought would appeal to potential participants from different backgrounds, including black, white non-British, mixed and other backgrounds. To account for differing levels of digital skills of potential participants, PPI contributors also suggested that posters should include both a barcode leading to the study website and slips with contact information to remove.

All healthcare providers that had responded to our recruitment efforts via email were eligible and participated, including 12 midwives, one maternal support worker and two GPs, with one GP, who recently had a baby, interviewed twice, but counted only once (in the post-partum women group,

although eligible for both groups). We stopped recruitment of midwives after data saturation was reached, and recruitment of GPs after it emerged during interviews and PPI work that they played a comparably minor role only in maternal vaccinations in London. For additional insight on emerging themes we also spoke to nine other service providers, among whom two pharmacists, one pharmacy manager/vaccinator, one public health specialist, one community engagement and one digital health data specialist agreed to participate.

B Details on data collection and analysis

According to participants' preferences, interviews were conducted either via video call (n=33), telephone (n=6) or face-to-face at participants' homes or nearby public spaces (n=12), and lasted 22-93 minutes (about 50 minutes on average). For logistic reasons, we held the FGD via video call (130 min). All participants received 20£ as a thank you for taking part.

We had budgeted for professional translation/interpretation services, and the researchers themselves also speak further languages. Translation/interpretation had only been necessary, however, for two South-American participants. Another participant preferred her husband to help with interpreting from Persian to English where needed. Otherwise, no other adult non-participants were present during the interviews/FGD, but many pregnant/post-partum women had their babies/older siblings with them, which usually disrupted the discussions only slightly.

One researcher (SB) obtained informed consent and completed all interviews and two researchers (SB & OOA) facilitated the FGD, introducing themselves as university public health researchers, not involved in clinical NHS work. Both SB & OOA completed a positionality statement prior to conducting the qualitative research, and maintained self-reflexivity not only during field work, but also during analysis, aiming to avoid imposing own assumptions and pre-defined theories onto participants' narratives(Darwin Holmes 2020).

The interviews and FGD followed semi-structured topic guides that explored maternal vaccine-related experiences, information sources, knowledge, attitudes, beliefs, behaviour, recommendations for improvements and factors that (may) enable or impede current and future vaccine uptake and intervention development (Additional file 4).

The interviews and FGD were audio recorded, transcribed verbatim, then anonymised, stored, coded and analysed in a qualitative data analysis software (NVivo12). We followed the six steps of thematic analysis (in an iterative way and alongside data collection), including 1. familiarizing ourselves with the data, 2. generating initial codes, 3. searching for themes, 5. defining and naming themes, and 6. producing the report(Braun and Clarke 2006). During coding and theme development we used both an inductive and deductive (informed by theory/ literature, Figure A1) approach, with a clear audit trail of when/where which approach has been taken(Braun and Clarke 2006, Nowell, Norris et al. 2017, Xu and Zammit 2020). During the early stages the research team developed a provisional coding framework and an initial sample of transcripts was coded by two people for consistency checks. Then, one researcher (SB) coded all remaining transcripts, but transcripts from younger participants were 'duplicate read' by the youngest team member (AI) and transcripts from black participants by a black team member (OOA) and subsequently discussed. We followed guidance by Nowell et al (2017(Nowell, Norris et al. 2017)) to establish trustworthiness during each phase of thematic analysis, including through peer debriefing, reflexive journaling, documentation of reflective thoughts and documentation of team meetings. We also searched for deviant cases and conducted interviews with pregnant/post-partum women and midwives until no relevant new themes emerged.

References

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