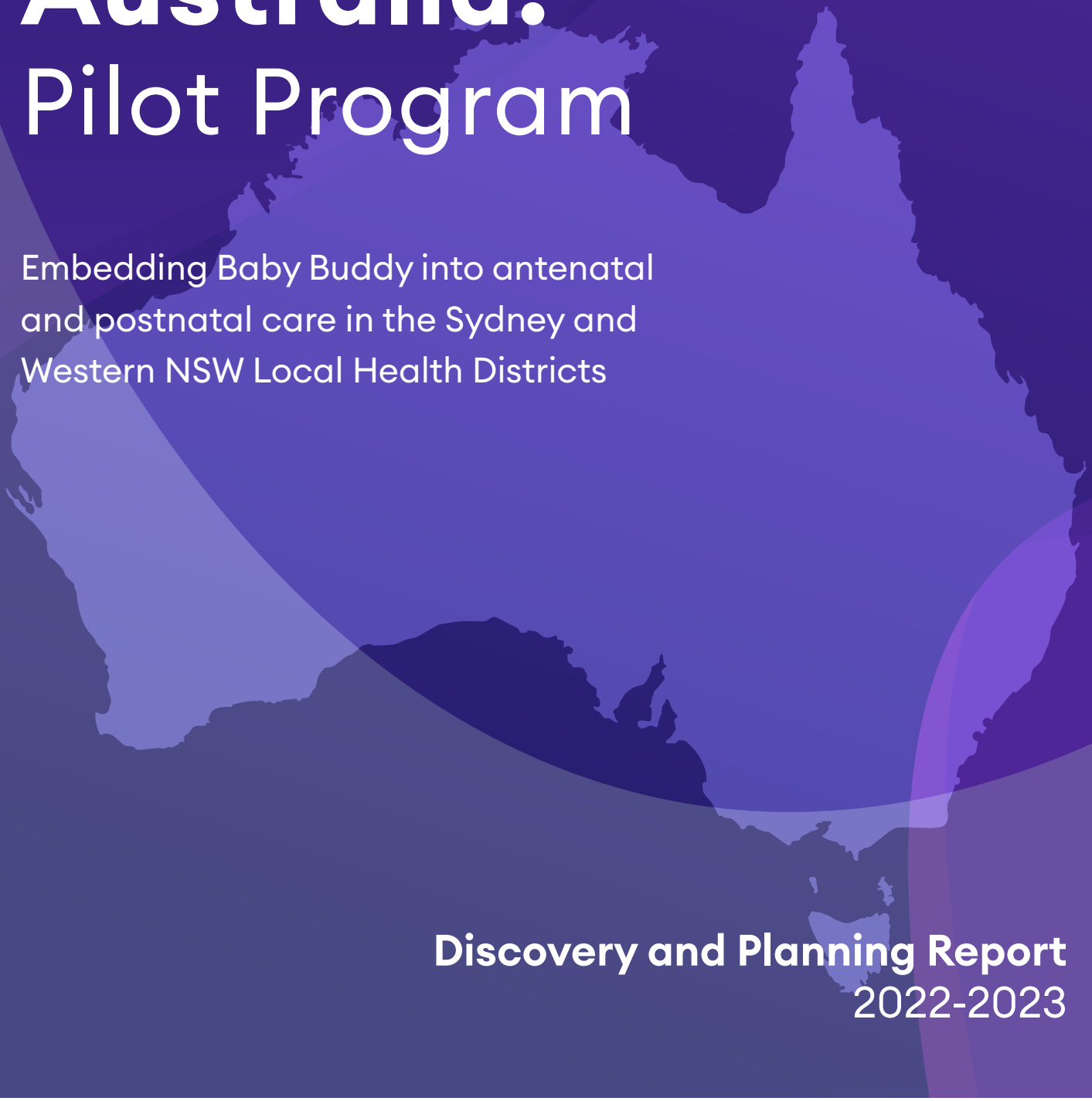
baby buddy australia

Baby Buddy Australia: Pilot Program

Embedding Baby Buddy into antenatal and postnatal care in the Sydney and Western NSW Local Health Districts



Discovery and Planning Report 2022-2023

THE UNIVERSITY OF SYDNEY

Stillbirth CENTRE OF RESEARCH EXCELLENCE

Safer Baby WORKING TOGETHER TO REDUCE STILLBIRTH

best beginnings creators of baby buddy

“Protection” By Leona McGrath © Stillbirth CRE (Centre for Research Excellence) (2022)

Baby Buddy Australia acknowledges the Traditional owners of the lands and waters of Australia, and their ongoing custodianship. We pay our respects to their Ancestors and their descendants, who continue cultural and spiritual connections to Country. We acknowledge the diversity of Aboriginal and Torres Strait islander cultures, language, and practices, and acknowledge that it is vital that all health services respectfully provide a culturally positive health care experience for Aboriginal and Torres Strait Islander people.

NOV 2021

- Create Study Protocol ABBAA1
- Submit Ethics
- Begin Content Review and Adaptation
- Steering Committee meeting meeting

FEB 2022

- ABBAA1 ethics approved
- Steering Committee meeting
- Meeting with Royal Prince Alfred Executive to plan ABBAA1 conduct
- Advertising and recruitment of ABBAA1
- Focus groups conducted

MAR 2022

- Review of all video content by team and Steering Committee
- Adaptation of Frequently Asked Questions
- Focus Group recordings transcribed and thematic analysis conducted
- Steering Committee meeting
- Brisbane to meet with CRE Indigenous researchers and co-design scripts for smoking cessation videos

APR 2022

- Application to AH&MRC to include Indigenous participants in ABBAA1
- Refine smoking cessation scripts and develop further scripts for other elements
- Steering Committee meeting
- Meet with Department of Health to provide results of ABBAA1

MAY 2022

- Obtain quotes from production company for films
- First engagement presentation Canterbury Hospital
- Develop protocol for ABBAA2 – pilot study

JUN 2022

- First engagement meeting at RPAH for ABBAA2

JUL 2022

- ABBAA2 ethics submitted

AUG 2022

- Engagement meeting with Western NSW Local Health District for ABBAA2 and determination of study sites
- AM&MRC ethics approval received for ABBAA1

SEP 2022

- Submission to AH&MRC for ABBAA21

OCT 2022

- Present ABBAA1 findings and project plan at national CAPEA (Childbirth And Parenting Educators Australia) conference
- Coleman Productions engaged to produce videos

NOV 2022

- Stillbirth CRE Equity and Diversity Forum – present Baby Buddy project and ABBAA1 findings
- Brisbane to meet with Indigenous Researchers to co-design scripts with Aboriginal “actors” (Baby Movement, Side Sleep)
- Begin filming Smoking Cessation films

JAN 2023

- Engagement meetings with RPAH and Canterbury Hospital
- Steering Committee meeting
- Final review of scripts
- AH&MRC ethics approval for ABBAA2

FEB 2023

- Filming of new scripts
- Roundtables Orange Hospital – participants from Parkes, Forbes and AIMHS
- Staff workshops with WNSWLHD
- Steering Committee meeting

MAR 2023

- Filming finalised
- Mudgee Hospital roundtable site visit
- Mudgee staff training workshop
- Parkes, Forbes and Cowra staff training workshops and parent engagement
- Roundtable and staff workshop at Royal Prince Alfred Hospital
- Roundtable and staff workshop at Canterbury Hospital

APR 2023

- Development of Care Pathways for each site

MAY 2023

- Site visits Canterbury and RPAH (engagement with staff and families via patient clinics and parent education sessions)
- Site visits to Concord and Forrest Lodge MGP
- RPAH1 Green Square opening with Baby Buddy promotion

JUN 2023

- Baby Buddy Launch RPAH and Canterbury

JUL 2023

- Annual Women’s and Children’s Health Update – promote Baby Buddy
- Site Visit to WNSWLHD for Indigenous consultation – feedback on App and new content.

Table of Contents

Acknowledgements

We would like to thank Julie Inman, Pam Keed, Katie Taylor, Fleur Brennan, Charlotte Hauville, Melissa Ousby, Anne Jessett, Judith Driscoll, Grace Valenti, Claire Davenport, Rosemary Nunn, and Jennifer Child for contributing to the co-production process of the ABBAA2 pilot.

For continued guidance, we are grateful to: The Stillbirth CRE, including the Indigenous Advisory Group, Migrant and Refugee Project Management Groups, and Education Committee.

Thank you to the The Baby Buddy Australia Steering Committee members and expert video reviewers: Caroline Homer, Meghan Weller, Jane Warland, Vanessa Postle, Bithia O'Brien, Alice De Piccoli, Antonia Shand, Nicola Cadbury, Skye Stewart, Ann Price-Davies, Jac Meyers, Billie Bonevski, Natasha Nassar, Allison Gretch, Tionie Newth, Charlotte Hespe, Kym Rae, Derek McCormak, Loretta Musgrave, Rupesh Guatam, Vicki Flenady, Deanna Stuart Butler, Krystie Veldkamp, Candace Dower, Julie Inman, Rosalie Nunn, Mia Birkner, and Charlene Thornton.

Thank you to the "actors" who kindly appeared in the new video content: Ben and Jasmine, Vanessa Postle, Amellia Fernandez, Candace Dower, Renee Bani, Bithia O'Brien, Ritu Mogra, Bernice Afranie, Saskia Downie, Louise Ryall, and Melanie Tulloch..

We would also like to thank all the parents, healthcare professionals and individuals for attending and contributing to the roundtable events, and for agreeing to be interviewed.

The University of Sydney
Baby Buddy Australia

Introduction

The Stillbirth Centre of Research Excellence and the University of Sydney have partnered with UK charity Best Beginnings to use the pregnancy and parenting app, Baby Buddy to increase awareness of stillbirth risk and prevention. The project was funded by the Education and Awareness Grant awarded to the Stillbirth CRE by the Department of Health.

The Stillbirth CRE, funded by the National Health and Medical Research council, was established to address Stillbirth in Australia through a national program of research and implementation. As the largest government funded collaborative research group, the Stillbirth CRE is dedicated to the generation of new knowledge and implementation of best clinical practice and care after stillbirth in Australia. The Stillbirth CRE, in partnership with health departments Australia wide, have launched a national initiative, Safer Baby, using the latest research to provide pregnant women with best practice care and improved information about how to have a safer pregnancy and reduce their risk of stillbirth.

Best Beginnings is a UK charity established to help give every child in the UK the best start in life and reduce inequalities in outcomes. The charity launched the Baby Buddy app in 2014 as a primary vehicle for reaching and supporting parents. Baby Buddy is a multi-award-winning app that is approved by the National Health Service (NHS) and endorsed by many Royal Colleges. It contains flexible evidence-based resources that have been proven to inform, support and empower parents, influencing their health outcomes and promote collaborative working in the health and social care sectors.

In line with the First 2000 Days Framework and the Safer Baby initiative, the adapted Baby Buddy Australia app has the potential to:

- Improve access to quality information for parents from early pregnancy until the first four weeks after birth.
- Further equality of access to information and support for families based on the principle of progressive universalism.
- Improve parents' experiences of pregnancy and parenthood during the perinatal period by providing emotional support and signposting to resources and services that enhance their social support networks.
- Contribute to improved maternal and neonatal health outcomes, by both motivating and empowering families to enhance their own health by ensuring they know when and where to turn to for support, advice and care when needed, including when specialist help is required.
- Recognise the pressures that maternity care providers face in managing workload while helping to find creative solutions to supporting the care they provide.

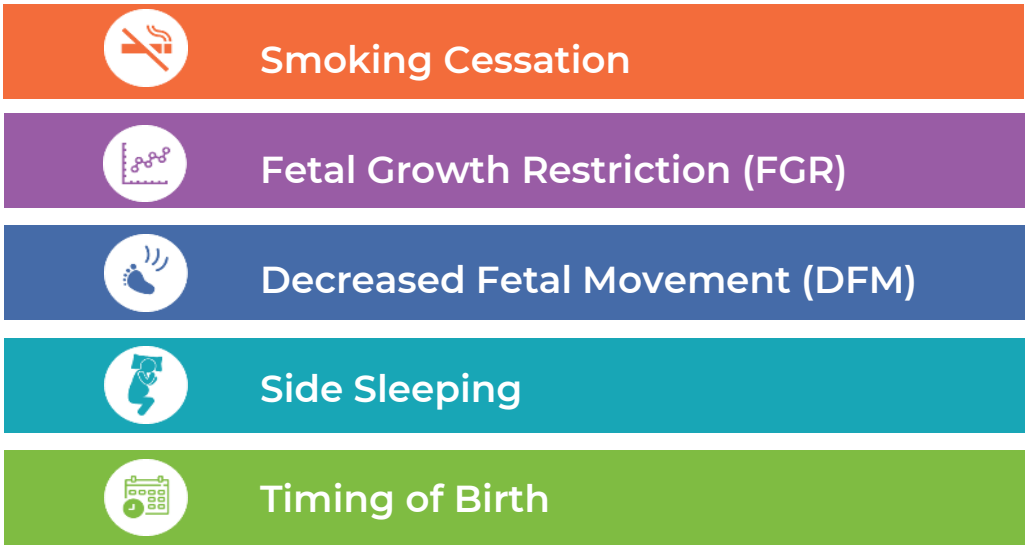
The Safer Baby Bundle

Stillbirth is one health outcome that can potentially be reduced by raised awareness of modifiable risk factors.

The Safer Baby Bundle has been developed by the Centre of Research Excellence and identifies five elements to reduce stillbirth, aiming to address gaps between what is known and what is done in maternity care to prevent stillbirth. Three of the elements are directly targeted at maternal behaviour change or awareness. The elements are:

- Supporting women to stop smoking in pregnancy.
- Improving detection and management of fetal growth restriction.
- Raising awareness and improving care for women with decreased fetal movements.
- Improving awareness of maternal safe going to sleep position in late pregnancy.
- Improving decision making about the timing of birth for women with risk factors for stillbirth.

Funding has been received from the Australian Dept of Health to adapt Baby Buddy for the Australian setting with a focus on enhancing the implementation of the Stillbirth Prevention Bundle of Care. The adapted Baby Buddy Australia app presents a novel platform to promote the Safer Baby Bundle and increase awareness of modifiable risk factors for Stillbirth in late pregnancy.



Background

For many new and expectant parents, pregnancy is the impetus for seeking health information and adopting positive behaviour change. Recent history has shown us that access to health professionals can be impeded by an array of factors, not least for those who face social, economic, or cultural disadvantage.

There is growing recognition worldwide that digital health technology has enormous potential to provide health information, especially to vulnerable and priority populations for whom barriers exist when accessing information that may not be culturally sensitive or trauma informed. There is a plethora of pregnancy mobile Apps available in Australia, however there is potential for harm and misinformation, as much of the App content is unregulated. Provision of Apps that contain no advertising is costly, reducing availability for disadvantaged families. Additionally, although there are national government supported health resources available on the web, these are not easily accessed by families with low health literacy, or those who may not be able to navigate the internet. A mobile phone application has the potential advantage of being easily accessible, visually pleasing, and interactive.

The Baby Buddy smartphone app was developed by charity Best Beginnings and launched in 2014 in the UK. The app is freely available and has been developed to provide evidence-based information to parents, promote contact with health professionals and to increase confidence and self-efficacy in users. The app can be personalised to the social circumstances of the user and contains a “professional mode” allowing health professionals to use the app with a consumer view. Baby Buddy offers a unique opportunity to provide new and expectant parents of all social and educational demographics access to health information, including health promotion and harm reduction strategies that have the potential to improve outcomes.

Baby Buddy has the potential to provide individualised information at a state, local health district and even hospital level. The app has the functionality to allow users to enter their postcode or preferred hospital/health service and access information that is tailored to that area, removing the requirement for each area to organise the distribution of printed health information, improving access and equity, and reducing cost. For this pilot such functionality was not enabled.

Baby Buddy increases access to vital early pregnancy information that families may not have had opportunities to learn about, especially if they live in a rural or remote area. Information on a range of topics, including smoking and vaping cessation, FASD and the dangers of alcohol use in early pregnancy, illicit drug use and optimal dietary considerations are potentially missed or provided too late with traditional care, especially when there are issues with access to medical services, including GPs. Information on local options of care and birthing choices are minimised, depending on the information provided to women by their GP. Providing universal opportunity for families to use Baby Buddy may improve their capacity to make informed decisions about their health and their care options, provide information on things like local health research/clinical trials, and increase access to antenatal education, relieving pressure from already overburdened GPs.

The project was multi-faceted and conducted in two phases.

- **Phase 1: November 21 – April 23: Evaluation and Adaptation, Engagement and Planning and Creation of new content**
- **Phase 2: May 23- August 23: App Pilot, Promotion and Engagement and Evaluation**

The Baby Buddy project had four key objectives:

1. Parent Consultation
Focus Groups
ABBAA1

2.Adaptation of current content and creation of new videos

3.Engagement and Training of staff

4.Promotion and Piloting
ABBAA2

Adapting the Baby Buddy for Australia

The University of Sydney, in collaboration with the Stillbirth CRE, partnered with Best Beginnings to adapt Baby Buddy for Australia. The Baby Buddy content was adapted to an Australian context ensuring that the App's daily messages contain information that is appropriate for Australia and is aligned with the National Pregnancy Care Guidelines.

The original evidence-based content for Baby Buddy was produced in co-creation with professionals and parents, and then endorsed by professional organisations. In the adaptation for Australia, the information has only been altered to ensure that there are links to Australian web content and Australian resources, and that the recommendations (where appropriate) are reflective of Australian practice. In some instances, language was changed to include words and phrases that were part of the Australian vernacular.

The UK version of Baby Buddy contained over 400 videos. These were all reviewed by the study steering committee, consisting maternity care professional's representative of: Obstetricians, paediatrician/neonatologist, physiotherapist, general practitioners, dieticians, psychologists, and midwives (including those who specialise in lactation, parent education, and working with women who have experienced loss). Each video was reviewed by an expert in the subject area and its suitability for Australia was assessed. Videos not suitable were removed.

In making the Australian version of the app a suitable platform to provide information about the Safer Baby Bundle (SBB), additional steps were taken. Within the daily messaging links to the SBB webpage have been added throughout the app, wherever risk of stillbirth is either discussed or there is opportunity to highlight modifiable risk factors for stillbirth. Wherever information on stillbirth risk or reduction of risk has been added, the messaging has, where possible, been taken from the CRE resources, which have been developed in consultation with expert panels and parents. Further, the Baby Buddy "Discover" section in the Australian version of the app now has specific information related to the SBB, including the most current information for parents, as well as links to the CRE site and new video content with SBB messages.

Throughout the original version of the app there are multiple articles and videos that support stillbirth reduction and awareness of risk factors. To assess whether the video content was suitable for Australian audiences, and to gain feedback and suggestions to inform new video content production, the videos were viewed by pregnant women attending the Sydney Local Health District during focus groups and interviews.

What was reviewed?

282 pieces of daily information for all family combinations

29 pieces of postnatal information for two feeding intentions

781 Frequently Asked Questions

15 sections for "more support"

437 Videos reviewed

Examining the suitability of existing video content

The original Baby Buddy app contained over 400 videos, providing comprehensive information throughout pregnancy and the postnatal period, supporting the Daily Information, articles, and topics in Discover. Among the video collection were 11 that supported an element of the Safer Baby Bundle (smoking cessation, baby movement, timing of birth, side sleeping and fetal growth).

We wished to determine the acceptability of the current video content that pertained to the Safer Baby bundle elements, to inform the development of new videos that were specific to the Australian version of the app. To this end, we designed a study, ABBAA – Adapting the Baby Buddy for Australia. We wished to gain an in-depth understanding of the social and cultural requirements of Australian Baby Buddy users. To achieve this, we used purposeful sampling to recruit participants from diverse backgrounds, including those who identify as Aboriginal and/or Torres Strait Islander. Women were able to participate in the study if they were pregnant and planning to give birth in either the SLHD or WNSWLHD, had sufficient English to participate in the focus group and understand the app content, were over 18 years old. Ethics approval was obtained from the Sydney Local Health District Human Research Ethics committee (X21-0468 & 2022/ETH00079) and the AH&MRC Human Research Ethics Committee (1953/22).

Due to Covid-19 restrictions, focus groups and or interviews were required to take place via a secure online platform. This meant that potential participants who did not have access to a computer or adequate internet facilities were excluded.

Focus groups and interviews were conducted with 10 women attending the Sydney Local Health District to determine suitability of the 11 videos with content that supported the SBB.

Age	**Average age 36 years**
Education Level	High – 5 had post graduate qualifications
Country of Birth	Australia (n=4), Japan, NZ, UK, USA, East Asia, Europe (n=1)
Ethnicity	European (n=6), American (n=1), Middle Eastern (n=2), East Asian (n=1)
Language other than English at home	Two participants spoke a language other than English at home

Table 1 – Participant characteristics.

Participants were asked to view each video and provide feedback. Focus groups and interviews were recorded and transcribed. Using thematic analysis, feedback was obtained for each video. Focus group questions are provided in Table 1.

Engagement Questions	• **What sorts of ways do you get information about what is normal for pregnancy?** • **Do you use a pregnancy app?** • **Which one/s do you use?** • **Do you use websites to get information about your pregnancy?** • **Which ones do you use?**
Video Specific Questions	• Do you think the content is relevant for parents in Australia? Why/why not? • Do you think the content is suitable for parents in Australia? Why/why not? • Do you think this message might help change behaviour? Why/why not? • What changes do you think are required for an Australian setting?

Table 2 – focus group/interview questions.

What did we find?

Overall feedback was that the videos were of high quality and interesting to watch. Of particular importance was that all resources shown (posters and pamphlets etc) needed to be Australian, and that the timing of tests and scans mentioned in the videos should be aligned with Australian clinical guidelines. There was concern that recommendations made in some videos might be UK specific and not relevant to Australia – how would women determine what was accurate. One last piece of feedback related to options of care. The UK videos frequently mention contacting the midwife – which may not be applicable to all Australian women.

Feedback	
Acceptable for Australia	9
Relevant for Australia	7
Able to affect behaviour change	5

Table 2 - feedback from focus groups

Based on the above feedback, six videos were not included in the Australian version of Baby Buddy, and scripts for eleven new videos, each representing an element of the SBB, were developed.

Creation of new video content

When creating the Australian video content, the project team kept the style of the existing videos in mind as they were well received by the focus groups. Scripts were developed to be as representative of clinical scenarios that Australian women might experience as part of their care. All scripts were assessed for readability to ensure that the language was clear, concise and easy to understand without losing meaning. In keeping with the desired feeling of authenticity, staff members from the Sydney Local Health District were asked to appear in the videos, as were local community members.

Aboriginal and Torres Strait Islander content

Aboriginal and Torres Strait Islander mothers and babies still experience poorer outcomes than non-Indigenous Australians, despite efforts to reduce inequity in health care provision. A key determinant of maternal and child health outcomes is quality antenatal and postnatal care and education. Although quality maternity care services exist Australia wide, Aboriginal women are less likely to utilize them due to multiple socio-economic factors including cost, geography and a lack of cultural safety.

> **Um, I believe seeing an Aboriginal midwife makes it seem more trustworthy, especially to some people. Seeing an Aboriginal midwife, you know, in my whole life, I've always been told, like, we as Indigenous people actually don't end up getting as far along in so many fields. Seeing people actually achieve goals is really good.**
>
> Participant 4 - WNSWLHD

Baby Buddy has the potential to provide health information to families and support health professionals caring for Aboriginal women, as the technology is able to address geographical and financial barriers. In an effort to address cultural safety, it was important that there be engagement of Indigenous people in this project, and that Aboriginal families and health care providers be included in any new content. The project team specifically created scripts for new video content with Aboriginal staff and community members in mind, resulting in six new videos with Aboriginal representation (three midwives and three community members). Scenarios for the six videos were created by the project team, then scripts were developed in close consultation with Aboriginal members of the Stillbirth CRE research team and the Aboriginal Reference Group formed for the project, who offered their feedback on each scenario and use of language. Finalised scripts were then reviewed by the wider team.

> **People in the community feel more comfortable seeing an Aboriginal midwife, so it's good to see them in the videos"**
>
> Participant 3 - WNSWLHD

Top left: Midwife Candace; Bottom left: Louise & Baby; Right: Louise and midwife Renee

> **Yeah. No, it's good that, yeah, that they're using Aboriginal people, because you're not really seeing many. Aboriginal people being used in stuff like that.**
>
> Participant 1 - WNSWLHD

Script review process

Once developed, the scripts were reviewed by the following process:

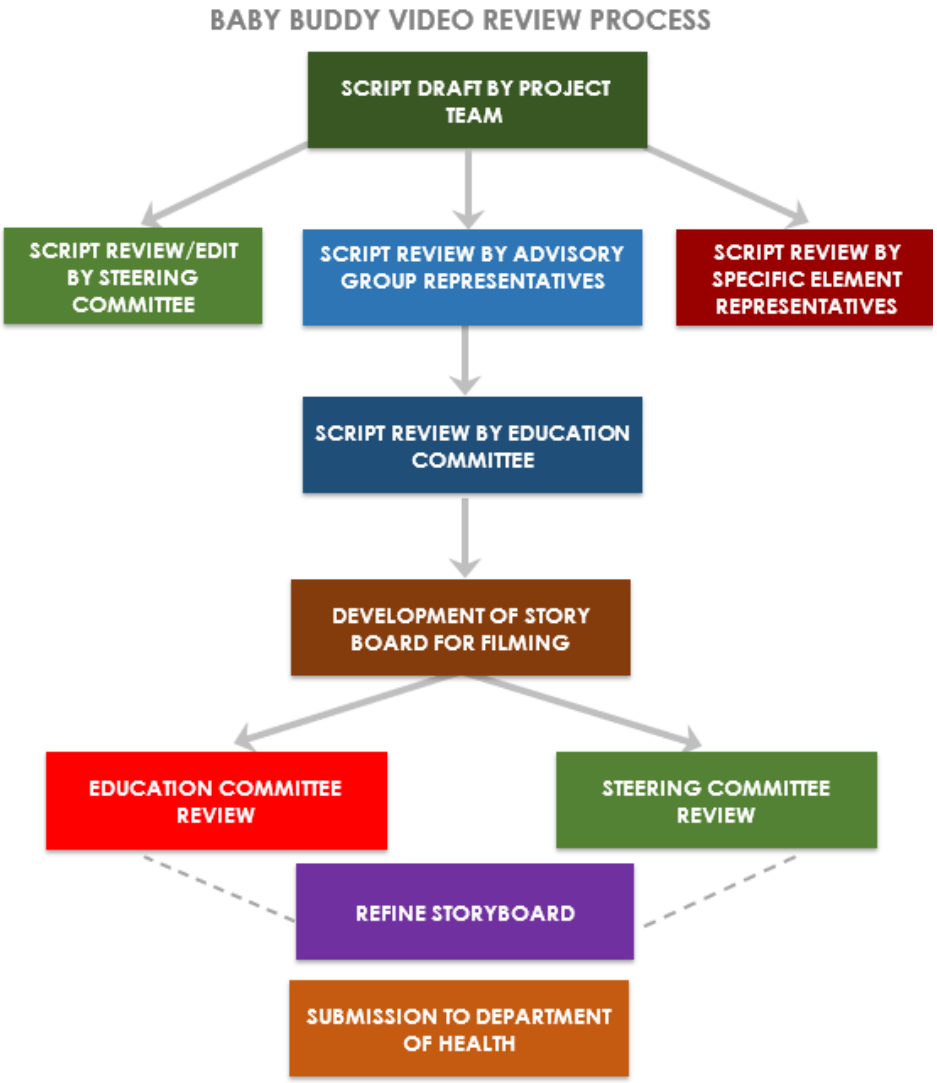


Figure 1 - script review process

Following a review of the UK video content, in combination with feedback from focus groups, it was determined that eleven new videos be created to adequately represent the SBB. Feedback from the focus groups highlighted the need for cultural diversity in the new videos, particularly representation of Indigenous Australians.

Scripts for new video content were developed for each element of the Safer Baby Bundle as described below:

Smoking Cessation

Although there were smoking cessation videos in the original app, feedback from the focus groups indicated that Australian versions of these videos were required. According to the Australian Institute of Health and Welfare, in 2021, 1 in 10, mothers reported smoking at some point in pregnancy. Among other negative health *outcomes* in pregnancy, smoking is a major cause of Stillbirth in Australia and smoking cessation can be a sensitive topic for some women and clinicians. As smoking is highest in Indigenous women (42%) smoking cessation scripts were developed with Indigenous people particularly in mind.

Smoking in pregnancy - Ask, advise, help

Using the existing UK version as an example, the Australian Smoking Cessation videos *("Smoking in Pregnancy – Ask, Advise, Help", "Smoking in pregnancy – Help to Quit "and "Carbon monoxide testing – how is smoking affecting my baby and me?"*) were developed.

Smoking in pregnancy - Help to quit

Each video was based on an Aboriginal family, Jasmine and Ben, and midwife Bithia. Jasmine and Ben are smokers who want to quit smoking and ask Bithia for support. The script was then reviewed by the CRE Indigenous Advisory group who advised on appropriate use of language and terminology. The final video *"Quitting for bub – how I stopped smoking in pregnancy*" is a first-hand account from a young Aboriginal girl, Louise, explaining how she quit smoking and what helped her to quit. As this account was in Louise's own words, it was not reviewed until completion.

Carbon monoxide testing - how is smoking affecting my baby and me?

> **It was, like, very motivational, like, didn't give up. Like, if I was to smoke, I'd look at that and think, oh, cool, I'd want to quit for my child, like, you know**
>
> Participant 1, WNSWLHD.

Quitting for bub – how I stopped smoking in pregnancy

> **Like if people are open to the idea of quitting smoking, like, obviously, if they're not open to the idea they're not going to give it a second thought, but if they open to the idea of it , listening to that could really influence their decision"**
>
> Participant 5 - WNSWLHD

Monica– My experience of shared decision making and the birth of Felix

Monitoring Baby's Growth

Two videos were created for this element. Two videos, *"Jessica – When my baby stopped growing*" and "*Monica – My experience of shared decision making and the birth of Felix*". The script for *Jessica – When my baby stopped growing* was developed to reflect a clinical scenario of when fetal growth restriction is detected. The first version of the script was reviewed by Dr Ritu Mogra, Fetal Medicine Staff Specialist at Royal Prince Alfred Hospital, who kindly appeared as herself in the video. Following Dr Mogra's feedback, the script was further developed to ensure clinical accuracy before being distributed for further review. The video *Monica – my experience of shared decision making, and the birth of Felix* was an authentic account of Monica's experience of the birth of her son following a diagnosis of fetal growth restriction.

Jessica - When my baby stopped growing

Movements Matter

Two videos for this element were produced, *Louise - Baby movements matter* and *Saskia – when my baby stopped moving.* The script for *Louise – Baby movements matter* was based on the Stillbirth CRE SBB flyer where common myths about baby movement are presented. An evaluation of the reach and impact of Still Six Lives showed that incorrect information regarding fetal movement still persists within both the community and the health professional population. It was important to address this by presenting a scenario where a young woman discusses these myths with a midwife, giving the midwife the opportunity to reiterate health messaging by providing the correct information. In the video, Louise, a pregnant Aboriginal woman, discusses what she has heard about fetal movement with her trusted carer, an Aboriginal midwife Renee.

Saskia - when my baby's movements changed

Louise - Baby movements matter

Since watching these and reading stuff about movement, I like try to focus on it a little bit more and notice what movement I am feeling"

Participant 4 WNSWLHD

The second film, *Saskia – when my baby stopped moving,* demonstrates a typical clinical scenario where Saskia presents to hospital having not observed normal fetal movement. She is reassured by midwife Bernie, who follows the recommended clinical guidelines for absent or reduced fetal movement. The video was designed to reinforce public health messaging and the script was built on the wording of the CRE flyer for Movements Matter.

> "I like that she, um, the midwife was explaining and answering Louise's questions, like, so Louise had concerns that she's heard this from a family member, so, um, the midwife, Rene, told Louise, like, you know, proper evidence based, like, no, this is, this is not right, this is, yeah, I just liked how she, Didn't go on to make Louise feel silly for believing that. Like she gave her the proper answers and everything".
>
> Participant 1, WNSWLHD. Louise – Baby Movements Matter

Side sleeping from 28 weeks

Only one film was created for this element. There were no films already existing in the app promoting side sleep for stillbirth risk reduction. Again, a typical clinical scenario was drawn upon where Aboriginal woman Candace mentions to Aboriginal midwife Krystie, that when she lies on her back for too long, she feels sick. This leads to a discussion why side sleep is recommended from 28 weeks. Chan et.al. identified that the recommendation to go to sleep on the side from 28 weeks was well known in Australia so only one new video was produced.

Candace - Sleep on your side when baby's inside

> **I didn't know that sleeping on your side can cause stillbirth. I just got told to sleep on my side because it would, like, stop the blood flow. I didn't think that it's cause stillbirth and stuff"**
>
> Participant 2 – WNSWLHD

Jessica - Discussing timing of birth

Timing of Birth

The rising rate of induction of labour in Australia, and the subsequent increase in caesarean section, made it imperative that a balanced representation of a clinical scenarios where timing of birth is discussed be provided. An opportunity to demonstrate appropriate shared decision making by a midwife and an obstetrician led to the creation of two videos. In *Amelia – Making choices about timing of birth,* midwife Vanessa and pregnant woman Amelia discuss that Amelia has risk factors for stillbirth and that she might consider reducing her risk by planning the timing of her baby's birth. We do not know what her risk factors are, nor do we find out her final decision, rather we watch a discussion where questions are asked and answered without pressure, helping to support an informed decision by Amelia. This is in contrast to *Jessica – discussing timing of birth,* where Dr Mogra has identified that Jessica has a growth restricted fetus and based on her clinical findings, recommends a planned birth. It was important to show two different clinical scenarios in this instance to reflect common clinical scenarios.

As each script was written it was first offered to the Steering Committee and then by the review committee of each SBB element that was represented, followed by review by Advisory group representatives (Migrant and Refugee or Indigenous). Once this feedback was considered, the scripts were then circulated to the Stillbirth CRE Education committee. Once the review process was complete, story boards were developed for each script and then reviewed by the Education Committee and the Department of Health representatives.

Following extensive review as above, the scripts were finalised, and video production began. Completed videos were reviewed and published in Baby Buddy Australia.

Planning and Engagement

The adapted version of Baby Buddy Australia was piloted in two NSW local health districts, The Sydney Local Health District (Royal Prince Alfred Hospital and The Canterbury Hospital) and the Western NSW Local Health District (Mudgee Hospital, Cowra Hospital, Parkes, and Forbes Health Services). Funding to support a research midwife in each LHD to "champion" the pilot was agreed for a period of three months. Prior to commencement of the pilot, a process of engagement and planning was undertaken. Following is a summary of the work undertaken in the first phase of the pilot – Engagement and Planning.

Pilot sites: Parkes, Mudgee, Forbes, Royal Prince Alfred, and Canterbury Hospital

Aims of engagement and the approach

The Engagement and Planning phase was intended to assess the current provision of information and support for families in the Sydney and Western NSW local health districts, particularly in relation to the forementioned sites, to understand how best Baby Buddy can support and enhance existing services. Throughout this phase, the building blocks for the pilot implementation were established and co-produced with stakeholders from the sites during meetings and two roundtable events.

This engagement and planning phase gave the opportunity to explore how awareness and usage of Baby Buddy could be encouraged among pregnant women as well as what support health professionals might need to use the Baby Buddy effectively with parents. The identification of perceived benefits of Baby Buddy for both health care professionals and pregnant women helped to inform the rollout of the pilot study.

In line with embedding processes by Best Beginnings in the UK, the methodology for the first phase of the pilot was based on 'appreciative enquiry' and co-production values. Initial planning meetings were held online and followed by four roundtable events, two in each LHD (RPAH and The Canterbury Hospital, Mudgee and Orange Hospitals) with representatives from each site in attendance. The roundtable events comprised a presentation on Baby Buddy Australia and the intended pilot study, followed by group discussions that were facilitated with notes taken. At each event, the focus was on presentations of pregnant women for occasions of care followed by how Baby Buddy Australia could help to support the work of the health care professional. The final session was focused on ideas, opportunities, and the identification of potential barriers. Most attendees at each event were Midwives.

Top: Adrienne Gordon;
Bottom left to right: Team at Mudgee and Mudgee workshop

Feedback from roundtables and interviews

The need for improved information and support for families was identified, along with a lack of available resources, sometimes due to geographical distance or reduced capacity within the LHD, including staffing issues, was noted as a barrier to providing maternity care. Frustration from health professionals at the limited time available for appointments was raised, especially in relation to the discussion of sensitive topics like family and partner violence, perinatal mental health and stillbirth. In general, the ability to provide informal antenatal and postnatal education was impacted in all sites, health care professionals were aware that with restricted time and resources it was not always possible to support parents to the degree required. This suggested an opportunity for Baby Buddy to play a role in complementing the information health professionals were able to provide.
All the attendees were aware that many of the families in their care were using digital sources to acquire health information and that the mobile phone apps in Australia were unregulated. Some attendees were familiar with Baby Buddy Australia and had downloaded it prior to the meetings. Those who were familiar with the app were enthusiastic in their support of Baby Buddy Australia.

Responses to Baby Buddy

Following the presentation on the adaptation of Baby Buddy to suit Australian users, an interactive education session on features of the app was undertaken. Many attendees had been invited to download the app prior to the session and were able to navigate the app on their personal devices. Those without app access (the app was not publicly released at this time) were able to follow the session on a projector screen as a team member demonstrated the functionality live. Each attendee was provided with a printed guide to Baby Buddy Australia to highlight functionality and facilitate optimal use of the app.

Overwhelmingly, feedback from attendees was positive, most agreeing that Baby Buddy Australia would support The First 2000 days Framework by complementing the care being provided at each site.

Some key strengths of the app were identified:

- Up to date, evidence-based information: this was seen as crucial and reassuring.
- Accessible and equitable: being free and without advertising increases accessibility, making health provision equitable for all social and financial demographics.
- Comprehensive: a trusted source of information from early pregnancy through to the first four weeks postpartum.
- Inclusive to most demographics: pathways for different types of families as well as for both parents. Avatars do however need updating for Australia – noted that there was no Asian, Aboriginal or Torres Strait Islander representation.
- Tailored: information able to be personalised – including infant feeding. Ability to create shared spaces, take notes and create personalised plans – including a birth plan and birth reflection. Ability to ask questions and seek further information as well as to access Australian resources via added links.
- Friendly and reassuring in tone: straightforward language positive and reassuring.

In addition, at all sites there was interest and enthusiasm at the potential for Baby Buddy Australia to deliver health district specific information if the app was supported in the future. There was a desire to include site specific information for families, including community support groups and resources. There was interest in the potential for inclusion of locally produced health promotion material, both written and video, to support the needs of the individual communities represented in each district. The ability to tailor the app experience for each site was seen as potentially contributing to reducing waste and improving access to information and services, a one-stop-shop for consumers and health professionals alike.

Potential role of Baby Buddy

Health professionals noted that Baby Buddy has the potential to support parents in decision-making and promote self-care, potentially affecting health behaviour.
Across the roundtable and interviews, some areas of impact – where Baby Buddy would be particularly complimentary to maternity care, were identified.

Early pregnancy (0-13 weeks): in all sites it was noted that there is reduced contact and input with health care professionals in early pregnancy. Pregnancy was often confirmed by the General Practitioner (GP), who then was responsible for ordering any tests or screening tools and providing information on options of maternity care. It was perceived that GP bias/knowledge influenced the information women received, particularly in relation to models of care that were available to women. Lack of consultation time impacted on early pregnancy education, particularly in relation to information on diet and use of supplements (folic acid, Vit D) and alcohol/drug use in pregnancy and smoking cessation. Baby Buddy provides information in early pregnancy on potential options of pregnancy and birth care (able to be tailored to specific LHD's in future iterations) and has daily information, articles, and video content to support diet and exercise, supplement recommendations according to Australian guidelines. Non-judgemental information on smoking cessation and drug and alcohol use appears throughout the app in daily information messaging from early pregnancy, and is also available via the search function and in the Discover section. Newly created video content on smoking cessation and carbon monoxide screening has been tailored to an Australian audience, with messaging specifically created to provide cultural safety for Indigenous Australians.

Mid pregnancy (13-26 weeks): contact with maternity care providers is still infrequent at this time across all sites. Of specific mention was the difficulty of providing a plethora of information at the "Booking Visit" which generally occurred between 16 and 20 weeks with most models of care. Aside from obtaining general health history and pregnancy information, most staff conducted psychosocial screening at this visit (mental health and domestic violence screening). It is common for partners to attend this initial hospital visit which made psychosocial screening difficult at times. The midwives were pleased to learn that the Baby Buddy has information on perinatal mental health and family violence within the app, which also contains articles, videos, and links to services available in Australia. The midwives felt that being able to highlight these sections of the app or share them through the sharing function of the app, might prove to be helpful when partners were present and staff were unable to speak with women alone. The daily information that appears in mid pregnancy provides information on common pregnancy ailments, including what might be particularly concerning and require medical attention. There is also information on routine scans and tests that are offered at this time in the pregnancy.

Later pregnancy: More frequent contact with maternity care providers was noted at this time. Baby Buddy is able to reinforce information provided at these appointments, particularly around feeding intentions, birth planning/antenatal education, self-care, preparing for the realities of parenthood and perinatal mental health. Information on timing of birth and shared decision making is available in the Discover section of Baby Buddy and was seen as a valuable tool for helping women navigate suggestions around timing of birth discussions with caregivers.

Birth: Although infrequent, some women present to hospital having had no formal antenatal education. The information on birth choices, options for pain relief and labour processes was seen as important in being able to support staff to educate these women, and others who may benefit from a refresher, so that they can make informed choices for their labour and birth. This was seen as having particular benefit for women who are admitted for induction of labour.

First four weeks postnatal: For many families there is a lag between discharge from hospital and connection with the Child and Family Health service. This ranges from

two to eight weeks postpartum. Once a woman has given birth and informs Baby Buddy, she will receive daily information relevant to her postnatal recovery and care of her baby. Postnatal information is accessible at any time via Discover.

The pathways developed at these roundtable meetings are available in **Appendix A.**

There was also felt to be a strong role for Baby Buddy throughout the maternity and parenting period in terms of supporting mental health and wellbeing of both parents.

Positioning Baby Buddy

The roundtables revealed several different ways of talking about Baby Buddy in order to communicate its role and ensure its appeal for parents in all sites.

There were two key themes:

- **Personalisation/tailoring**: a space for parents to learn and to share information with each other, tailored around them to support their family's needs and priorities.
- **Empowering and reassuring**: Baby Buddy offers a one-stop-shop for information, helping parents to feel in control of the information they need so that they understand the process they're going through and what is coming up for them and their baby.

The maternity care providers did voice concerns over the capacity of the workforce to commit to what they viewed as "yet another research project", albeit an information source, and incorporate it into their interactions with parents and families.

Given this it will be important to ensure that the potential benefits that Baby Buddy offers maternity care providers in their work, the following reassurances were offered.

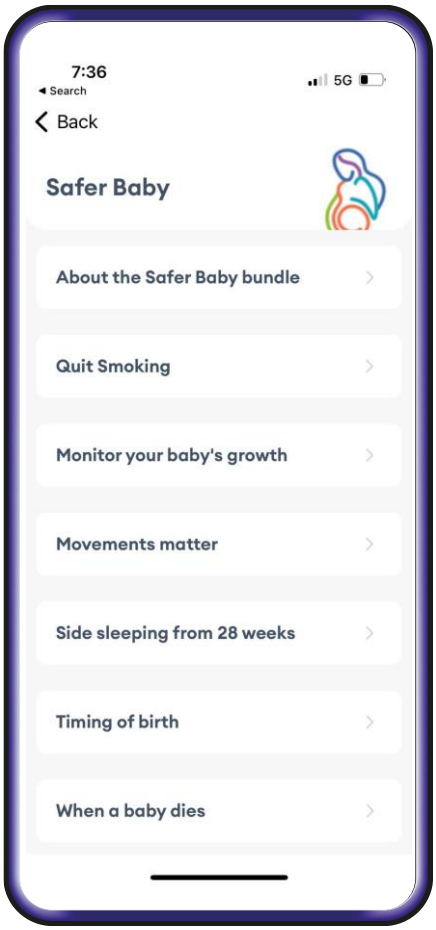
- Baby Buddy is consistent with Australian clinical guidelines and is supported by links to Australian services. Baby Buddy is there to support and enhance the reach of reputable resources that families with low literacy may not otherwise access.
- Baby Buddy might help services to deliver to key targets or criteria (e.g. Baby Friendly Initiative, increasing breastfeeding rates, reducing stillbirth/infant mortality etc.)
- The app can help to reduce maternity care provider workload i.e. by providing accessible, reliable information in bite-sized, daily increments, plus deeper dives, enabling more informed conversations and best use of limited contact time. Reducing isolation and anxiety and the need for longer contacts with midwives, Aboriginal health workers, GPs or child and family health workers.
- It can reduce missed appointments with reminders of all appointments.
- Can reinforce goal setting/behaviour change around smoking, healthy eating, exercise, gestational diabetes, mental health, pelvic floor exercises.
- Will support and reinforce key messages around times and topics outlined in timing section above.

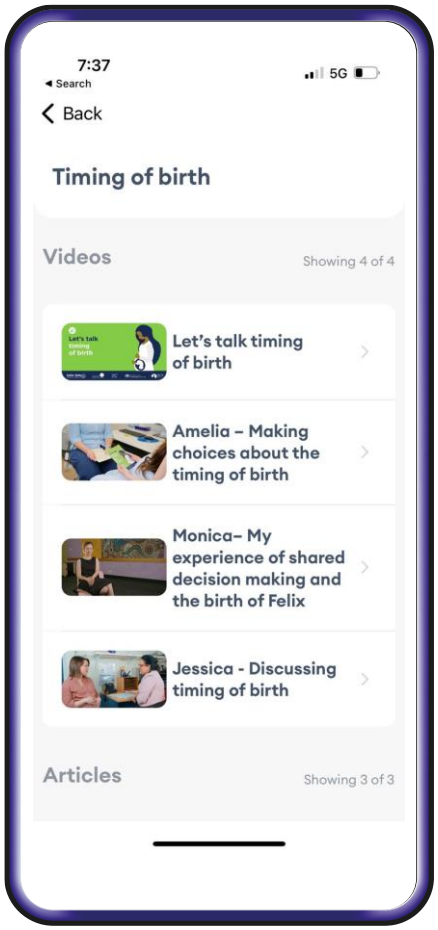
Beyond the pilot period

Throughout the interviews and roundtables, we explored the challenges and possible ways forward for the Embedding Phase of the work.

Interviews with parents (not at roundtables) identified that embedding would be improved by raising awareness of Baby Buddy and encouraging downloading, registration and then usage in early pregnancy. Beyond this pilot period, there is strong interest and rationale for parents to have the app as early as possible in pregnancy and suggestions for how that might be achieved included using contact points such as GPs, pregnancy tests, pharmacies, self-referral websites and booking-in emails. Awareness and usage are then expected to be reinforced throughout the maternity and parenting journey by midwives, Aboriginal health workers, child and family health nurses, family services and through other comms such as local social media and websites.

Maternity care providers will need to be informed about Baby Buddy and supported to use it during interactions with families.





Piloting the App: ABBAA2

Once the adaptation process was complete, and all ethical considerations were met (2022/ETH01380 and AH&MRC 2017/22), piloting the app began in May 2023.

Aims and Objectives

The overarching aim of this project is to determine whether the Baby Buddy Australia App has the potential to increase knowledge and understanding of the Safer Baby bundle and the modifiable risk factors for stillbirth.

We hypothesized that Baby Buddy Australia would appeal to both pregnant women, their families and maternity care providers, providing a platform that would:

1. Improve knowledge of the Safer Baby bundle and stillbirth prevention strategies.
2. Increase the confidence of maternity care providers.
3. Increase self-efficacy and confidence in parents.

Secondary Objectives

1. Increase clinician confidence in discussing stillbirth risk factors.
2. Determine overall acceptance of Baby Buddy to Australian users.

Method

This study used a cross-sectional design, with pre and post implementation surveys of pregnant women and health care providers. Surveys included questions to assess knowledge of the SBB, stillbirth risks and risk reduction, among pregnant women and maternity health care providers before and after exposure to the Baby Buddy App. The post implementation survey also examined the quality of the app according to users using the uMARS tool – a validated tool to assess the quality of health apps, which was attached to the survey.

The study “Champion” for each site received training and attended a workshop run by the research team on effective use of Baby Buddy Australia. Workshops were be held at each site to work with staff to plan their pilot, conduct training on best use of the app and to provide support materials. Participants who were maternity care providers were invited to complete the pre-implementation survey at these workshops.

With the support of the Champions, the maternity care providers were asked to encourage pregnant women to use the app and to download the app themselves by providing them with a study flyer containing a QR code. Once scanned, app users were be asked if they are giving birth/working in an identified study site. If they were, they were then asked to select which one via a drop-down box. They then encountered a link to a pre-implementation survey on REDCap, a secure data base management system. The survey took approximately 10 minutes to complete. No identifying information (name or date of birth) was collected, ensuring that the information was not identifiable.

Participants indicated whether they were a pregnant woman or maternity health care provider at the beginning of the survey which led to specific questionnaire for each group by use of branching logic. Once the survey was complete, the user was provided with instructions on how to download the app. After the study period, each user received another survey link to complete a post-implementation survey.

Results

The purpose of this evaluation is to provide information on the Baby Buddy Pilot project, specifically around whether Baby Buddy might increase awareness of the Safer Baby Bundle and included stillbirth prevention messages; specifically, this report considers the following:

1. Changes in knowledge of behaviours that can reduce the risk of stillbirth among Australian pregnant women and health care providers
2. The level of recognition of the Safer Baby Bundle
3. Overall feedback on the user experience of the Baby Buddy App

This evaluation is comprised of two surveys – baseline (pre-pilot) and post-pilot and in app analytics of the Baby Buddy app. Within each pilot site, pregnant women and health care providers were encouraged to complete the baseline survey at initial planning meetings and prior to app usage. The post-pilot survey was available from the end of July. The survey contained questions to detect knowledge of stillbirth risk and preventive actions, and preferences for provision of information during pregnancy.

Participants were recruited through the pilot sites and through the app.

Baseline Pre-pilot Survey
May - June
N=621
Pregnant users – 524
Health Care Providers - 97

Post-pilot Survey
Aug 2023
N=34

Demographics at baseline for Pregnant Users and Health Care Providers

	Pregnant (n=524)	Health Care Provider (n = 97)
Age Group		
<25	27 (5.2%)	10 (10.3%)
25-34	299 (57.1%)	26 (26.8%)
35-44	189 (36.1%)	26 (26.8%)
45-54	3 (0.6%)	17 (17.5%)
55 or more	0	16 (16.5%)
Prefer not to say	6 (1.1%)	2 (2.1%)
Ethnicity		
Aboriginal and/or Torres Strait Islander	11 (2.1%)	3 (3.1%)
Caucasian/ European	239 (45.6%)	52 (53.6%)
Central or South American	11 (2.1%)	1 (1%)
East Asian (including Japanese, Chinese, Korean)	45 (8.6%)	8 (8.2%)

Mainland Southeast Asian (including Cambodian, Lao, Viet, Thai, Malay, Filipino, Indonesian)	43 (8.2%)	0
Māori or Pacific Islander	8 (1.5%)	0
Middle Eastern or North African	24 (4.6%)	4 (4.1%)
South Asian (including Indian, Pakistani, Bangladeshi, Sri Lankan)	71 (13.5%)	5 (5.2%)
Sub-Saharan African	0	2 (2.1%)
Other	30 (5.7%)	1 (1%)
English as a first language		
	354 (67.6%)	80 (82.5%)
Area of residence or practice		
Metropolitan	414 (79%)	71 (73%)
Regional/Rural	94 (18%)	25 (26%)
Remote	14 (2.7%)	1 (1%)

Knowledge at baseline

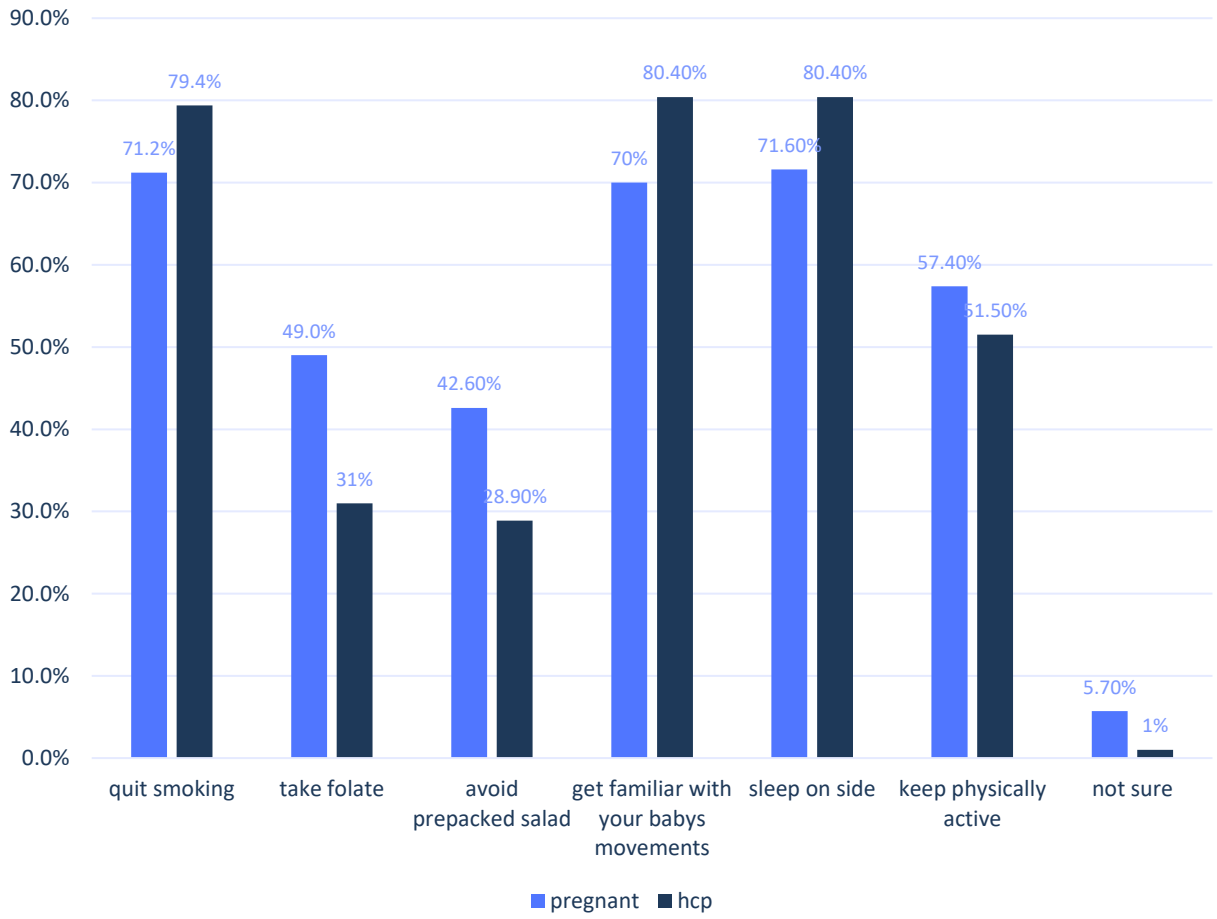


Figure 2 - Responses to which of the following can reduce the risk of stillbirth from 28 weeks?

Knowledge of preventive actions at baseline of pregnant women and health care providers

Sleep Position

Safest Sleeping Positions	Pregnant (524)	Health Care Provider (97)
Back	0.8%	0.0%
Tummy	0.4%	0.0%
Right	16.6%	19.6%
Left	43.3%	36.1%
Either	43.3%	53.6%
Unsure	2.3%	1.0%

Why is your choice the safest?	Pregnant (524)	Health Care Provider (97)
Most comfortable for me/them	18.7%	7.2%
Less likely to feel sick	3.4%	13.4%
May reduce the risk of stillbirth	65.8%	80.4%
Don't know	1.0%	0.2%

Fetal Movements

What happens to baby movements towards end of pregnancy?	Pregnant (524)	Health Care Provider (97)
Movements stop	0.2%	0.0%
Babies move less as less room	16.0%	4.1%
Babies move more often	21.9%	3.1%

What to do/advise if baby moving less?	Pregnant (524)	Health Care Provider (97)
Lie on side and count for 2 hours	16.2%	5.2%
Contact hospital or hcp immediately	66.6%	78.4%
Use a home doppler to check baby	2.3%	0
Wait until the next day to see if it gets better	2.3%	0

Have a cold drink or something to eat	18.7%	8.2%

Smoking Actions

If you are pregnant/caring for a pregnant woman who smoke you can reduce risk by:	Pregnant (524)	Health Care Provider (97)
Get help to quit	79.6%	62.9%
Doing nothing – doesn't harm the baby	0.2%	1%
Smoke outside and get family and friends to do so	1.5%	23.7%
Use an e-cigarette instead	1%	0

Timing of birth

Planned birth is…	Pregnant (524)	Health Care Provider (97)
Sometimes recommended if risk factors for stillbirth	58.8%	75.3%
A good idea that allows a family to plan ahead	18.9%	7.2%
Happens so that maternity staff can manage time better	5.3%	2.1%
Recommended for healthy women having their first baby	10.9%	6.2%

The decision for planned birth is made by:	Pregnant (524)	Health Care Provider (97)
A Dr or midwife	22.3%	13.4%
A woman's partner	2.7%	3.1%
Hospital admin staff	0.2%	1.0%
The pregnant woman with help from her Dr or midwife	60.9%	77.3%
Unsure	4.8%	0%

Fetal Growth

Important to monitor babys growth because…	Pregnant (524)	Health Care Provider (97)
This can decide between caesarean or vaginal birth	10.1%	4.1%
A planned birth can happen earlier if the baby is too big	7.8%	7.2%
Slower than expected growth can be picked up and monitored	22.9%	40.2%
All of the above	58%	42.3%

The best way to make sure baby is growing properly is…	Pregnant (524)	Health Care Provider (97)
Compare your bump size to others	1%	0%
Attend antenatal appt so babys growth can be measured	77.5%	82.5%
Eat for 2 so that baby is big enough	0.8%	0%
Request lots of ultrasounds as these are the most accurate	6.5%	3.1%

Limitations

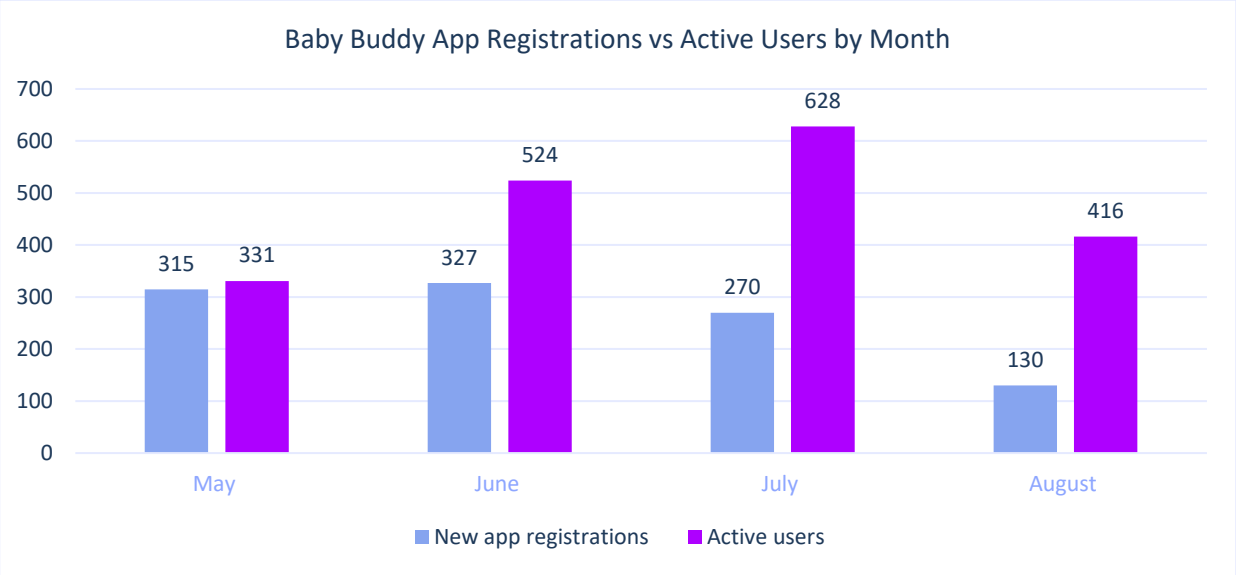
This report only includes preliminary findings of the pre/post pilot analysis and outlines the baseline differences; and more insight will be gained into whether the app improves these from further data analyses once more people have completed the post pilot survey. To date only 34 people have completed the post pilot survey secondary to a short pilot period. This number needs to be larger in order to provide meaningful comparative data and data collection is ongoing.

Baby Buddy app Analytics

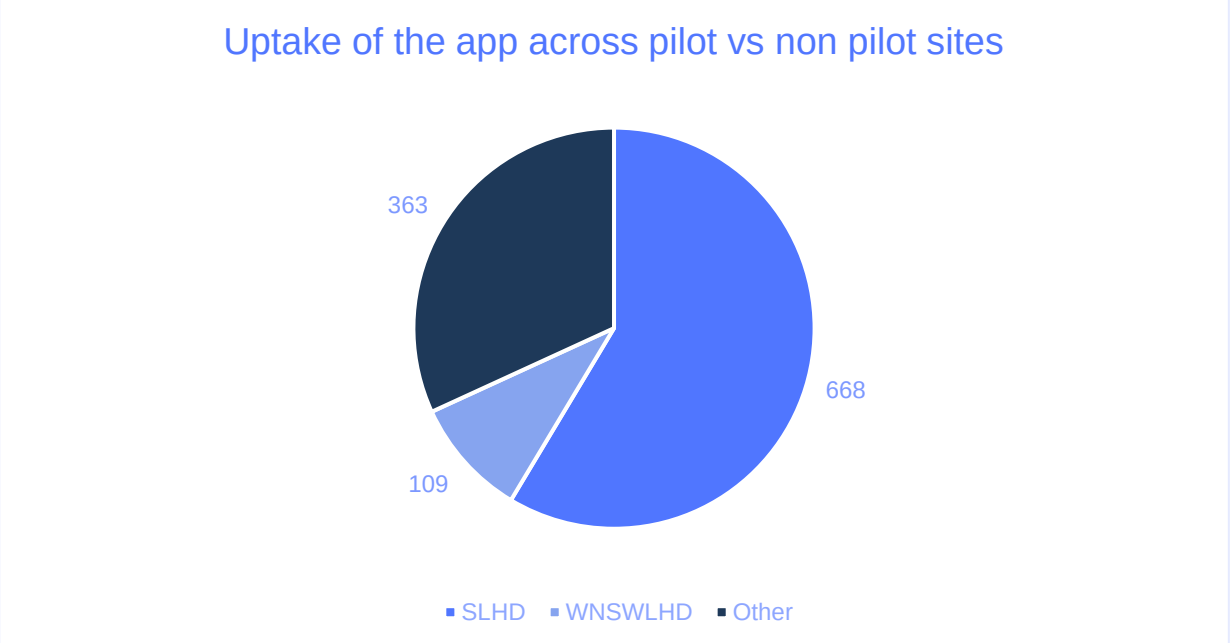
Data reporting period: 1st May 2023- 21st August 2023

The Baby Buddy app has had a total of **1119 registrations in Australia** over the pilot period.

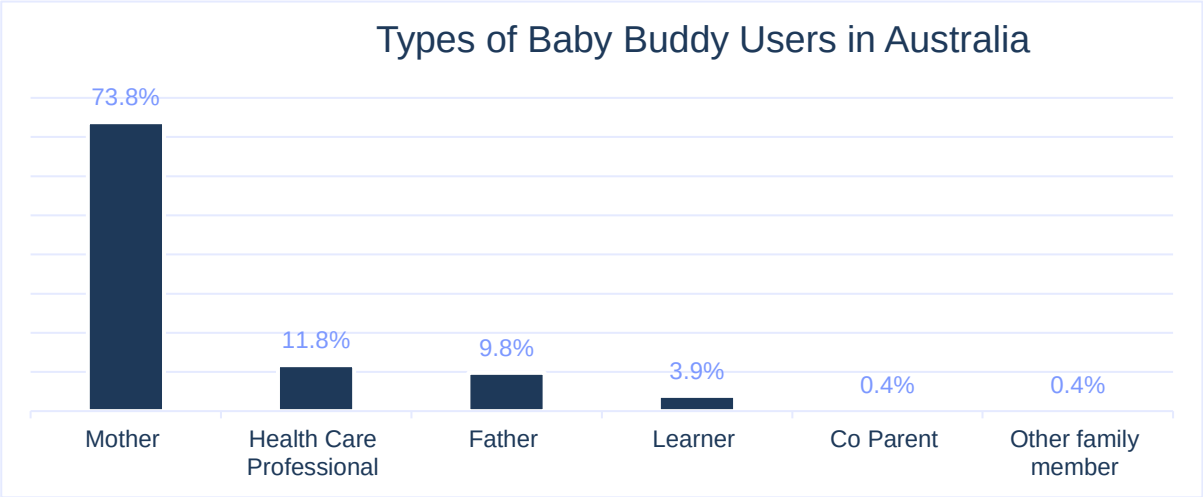
Monthly registrations and active users



Location of users – Pilot Vs Non pilot sites

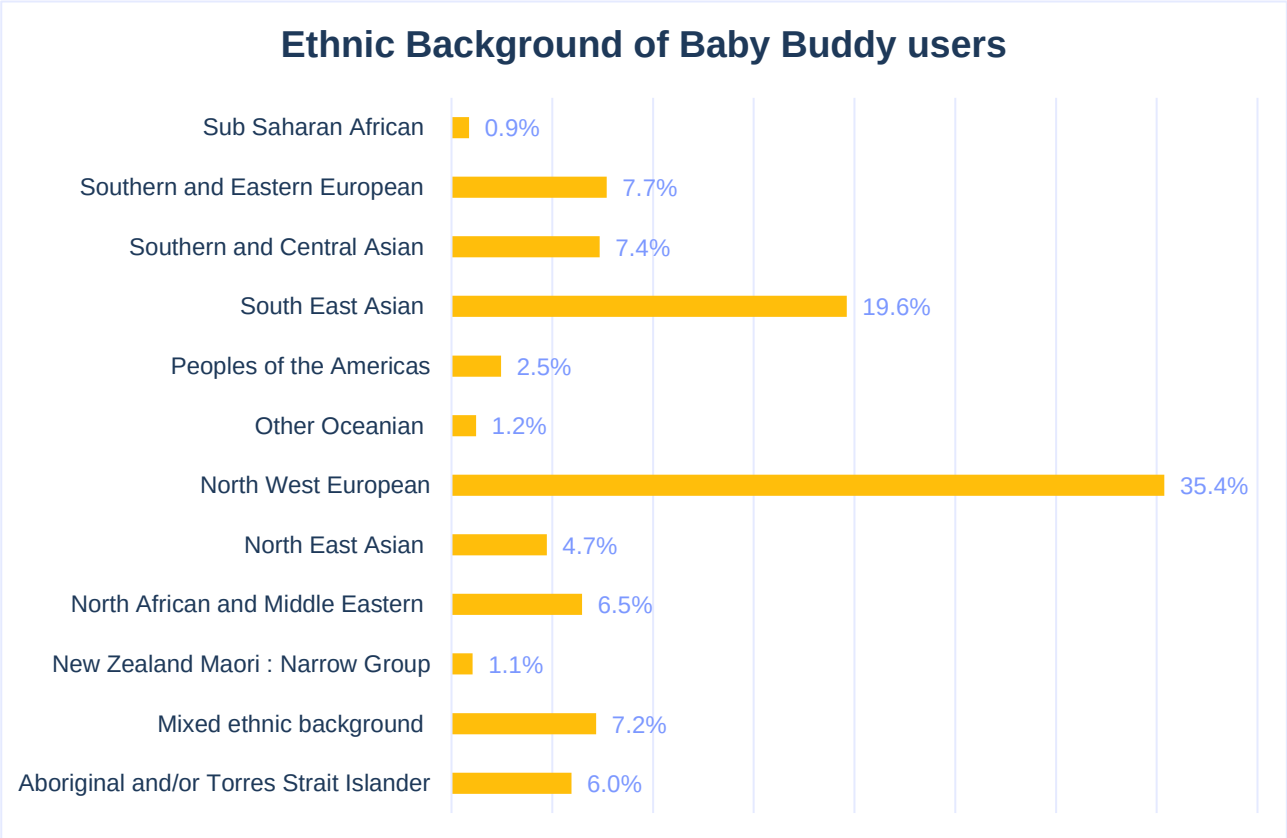


Type of Baby Buddy Users



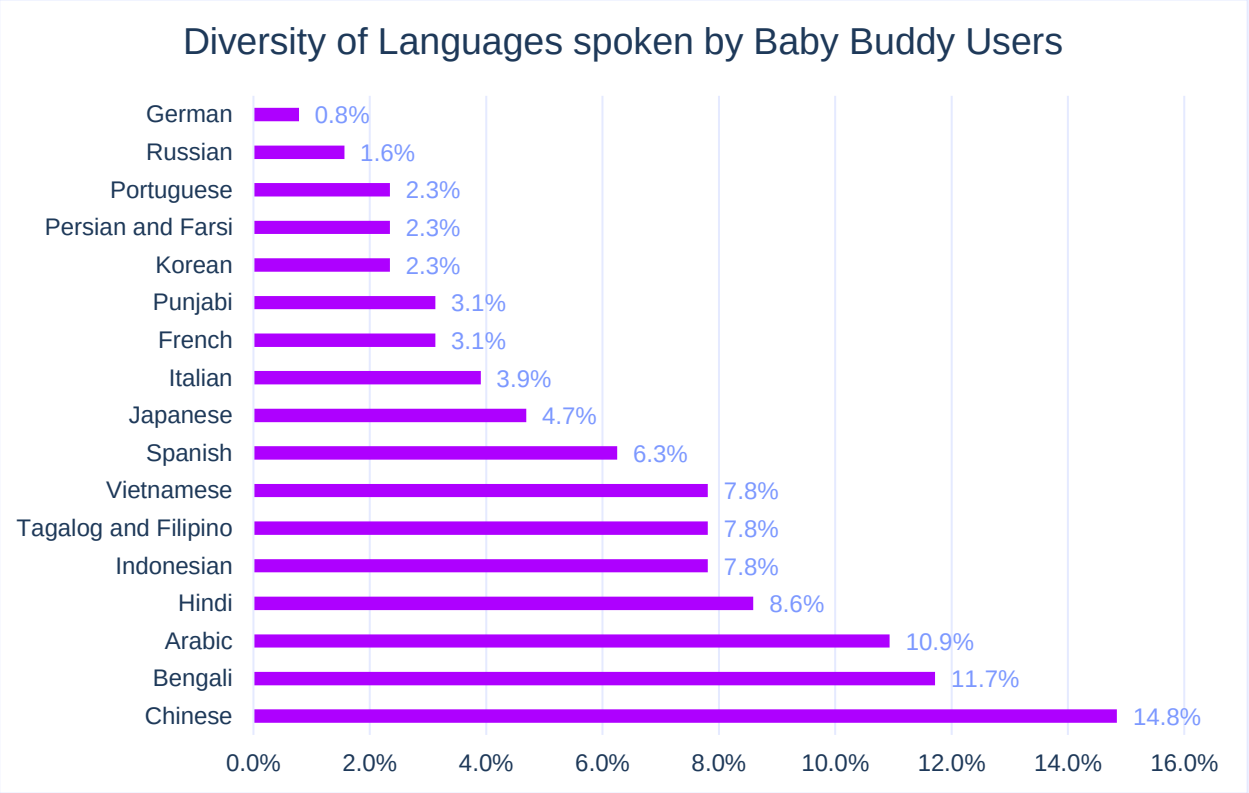
Baby Buddy users by ethnic group

564 users withheld their ethnicity or stated that it was unknown. Of those who shared their ethnic group;



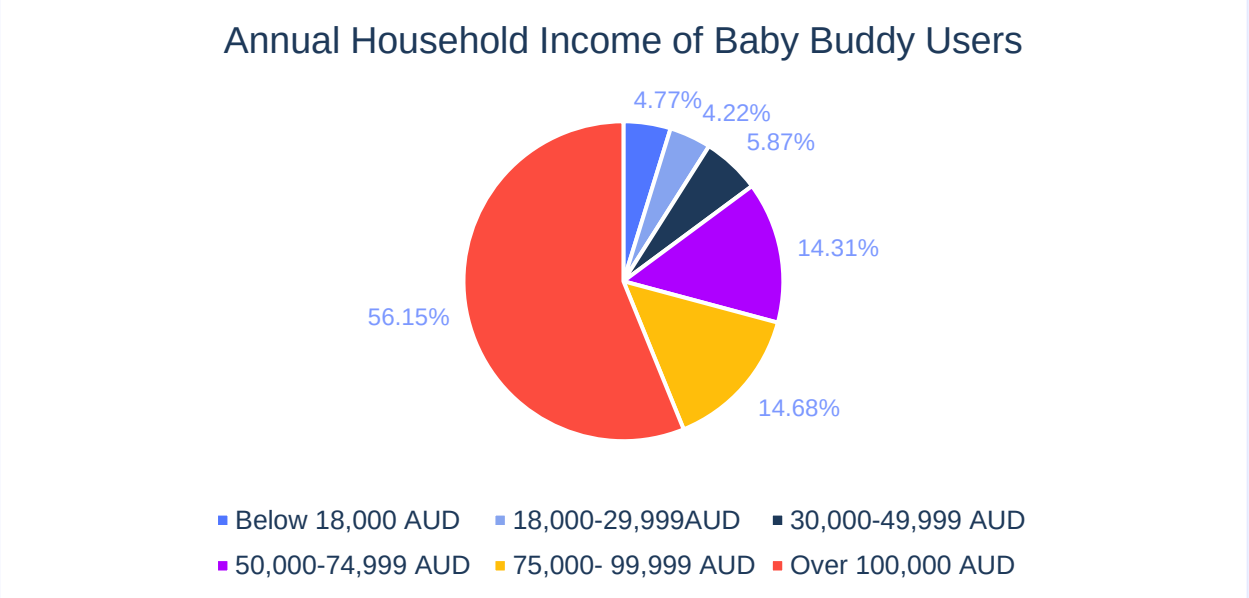
Languages spoken by Baby Buddy users

61.22% of the users spoke English as their first language, 38.16% stated Other or unknown and 0.63% withheld their response. The following summary indicates the diversity of languages spoken by the Baby Buddy users in Australia.



Baby Buddy users by annual household income

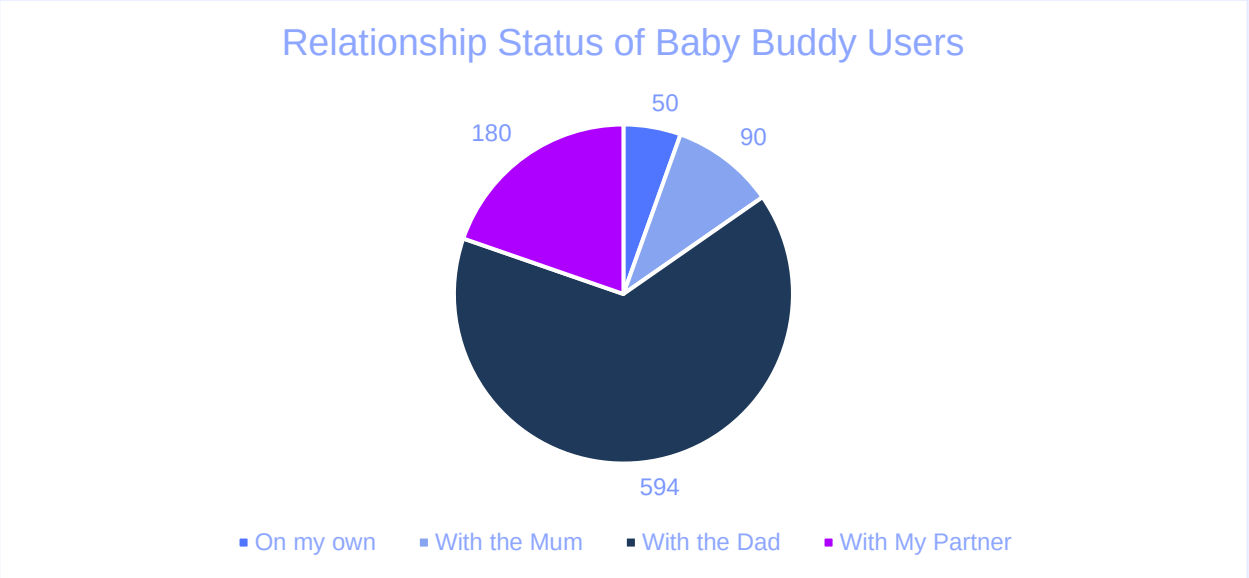
565 users withheld their income information.



Baby Buddy users and current main occupation

68% of the users were in a paid job, with 10.4% on parental leave. 5.3% were students and less than 3% of the users were in an unpaid job, doing an apprenticeship or not employed due to an illness.

Relationship status of Baby Buddy users



Uptake of film and written content in the Baby Buddy app

Th videos on the app has been viewed **3310 times** and the written articles were viewed **4023 times** on the app.

Top 10 films	Top 10 articles
MRI scan at 18 weeks	When should I start my antenatal care?
How to do pelvic floor exercises	How many antenatal appointments will I have?
How can you prepare for birth?	Should I have the whooping cough vaccine when I'm pregnant?
Middle three months	Introduction to your baby's movements
Packing your hospital bag	What if I wake up on my back?
MRI scan at 36 weeks	When does the baby's head engage?
What your baby is telling you	What should I do when my labour starts?
How to have a safer pregnancy	What's the best position to sleep in when I'm pregnant?
Louise - Baby movements matter	Every Week Counts
MRI scan at 21 weeks	What should I do in early labour

Searching for content and information on the Baby Buddy app

Top search terms on the Baby Buddy app can be seen in the word cloud below

Promotion of Baby Buddy Australia

Promotion of Baby Buddy Australia across all sites was done through a range of activities, including social media promotion, printed posters and flyers, and engagement with consumers and health care providers.

Each site was provided with Posters, brochures, and Baby Buddy stickers for use on antenatal cards. Workshops were held at all sites where staff were informed about the functionality of the app and provided with printed material to support the workshops. Posters were placed in patient waiting areas, rooms, and bathrooms. Brochures were given to patients in information packs when booking into the hospital and distributed with study flyers with QR codes for the pre-implementation survey access. Local Child and Family Health Care Centres also displayed the posters and distributed the brochures.

Although not officially launched due to the restricted pilot period, there were numerous "soft" launches at each site and social media releases.

Social Media

Key objectives of the promotion included:

- Increase awareness of the app in all sites
- Optimise engagement with Baby Buddy Australia from pregnant women and their families and maternity care providers.
- Encourage use of app through consistent and continued promotion.

Baby Buddy Australia was promoted via Best Beginnings, the Sydney Local Health District, Western NSW Local Health District, and the Stillbirth CRE social media platforms, including Facebook, Twitter, and Instagram.

Insights and lessons learned

A post pilot interview was conducted with midwives from all three sites, either as focus groups or individually when more practicable. The following interview questions were asked.

- Did you use the app at all?
- What worked well with the Baby Buddy pilot in your site?
- What do you think were barriers to App use?
- What would you want to see if the app became permanently available?
- Do you think an Indigenous specific app would be of benefit? Why?
- If the app could be made specific for your district/hospital, would that make it more useful?

Most midwives had used the app personally, however all agreed that they did not use it extensively. The midwives who spent more time experiencing the app were more likely to share features with their clients. Many had recommended the app to their friends who were pregnant or considering a pregnancy. There was general agreement that being familiar with the app and its functionality was of benefit to families in their care. Having to use their personal devices was seen as a barrier to downloading the app.

> “I love it! It is such a great app. I have been showing it to all my women, especially the information on birth and breastfeeding. It has been great for education".
>
> Midwife RPAH

> “The midwives have to download the app onto their own devices as the hospital devises don’t support it”
>
> Midwife WNSW LHD

Overall, the midwives responded positively to the app, feeling that it enhanced their support for families. Simple language and short sharp messages were identified as being valuable.

"I love showing the Safer Baby section. Our hospital is not part of the Bundle, so having information on stillbirth is great"
Midwife, RPAH

"I think it is great to be able to show women a video, wspecially one they can watch at home later, especially if language is a problem"
Midwife Canterbury

"You can streamline information to a one stop shop where we, at each appointment, with structured certain topics, you can point them to the app, the one resource. Then their education is going to be hugely increased because it's easy. We love easy" Midwife WNSWLHD

When asked about barriers to uptake of the app, the midwives identified issues with staff, the women themselves and time. Some midwives would not recommend the app to women as they had not downloaded the app themselves. When asked why they did not download it they identified being too busy. Many women had already purchased, or were using a free version, of another app that had been recommended by friends and could not be persuaded to try Baby Buddy. Too many resources and lack of time were highlighted as barriers, as was fragmented care.

""The booking appointment is already so jam packed that sometimes, by the time you have maybe gone through a challenging booking, sometimes the information just gets pushed to the next appointment and then it might get missed. We are just so pushed for time"
Midwife WNSWLHD

"I don't think our doctors promoted it in any way, shape or form"
Midwife WNSWLHD

"If a woman already has a pregnancy app, she isn't going to try something different, especially if she has paid for it. So many of our women already have an app by the time we see them"
Midwife RPAH

There was enthusiasm for Baby Buddy becoming permanently available, however it was identified that for best benefit families would need to have access to the app in early pregnancy. Wider advertising, especially with GP's would increase uptake.
All midwives who worked with Aboriginal families felt that an Indigenous specific version would be appreciated and preferred by Indigenous women.

"An Indigenous version might be more trustworthy to the community, people like seeing their own people, people who look like them. Aboriginal people are no different".
Midwife RPAH

"I think a Aboriginal version would be shared with the woman's family more. Probably the whole community"
Aboriginal Health Worker

Making Baby Buddy available and adapted specifically for each LHD would make it highly desirable to all the midwives. It was felt that this would reduce the rate of inconsistent advice and messaging and reinforce health behaviours specific to each district. Improving education and access to services using an app would reduce inequity and improve efficiency.

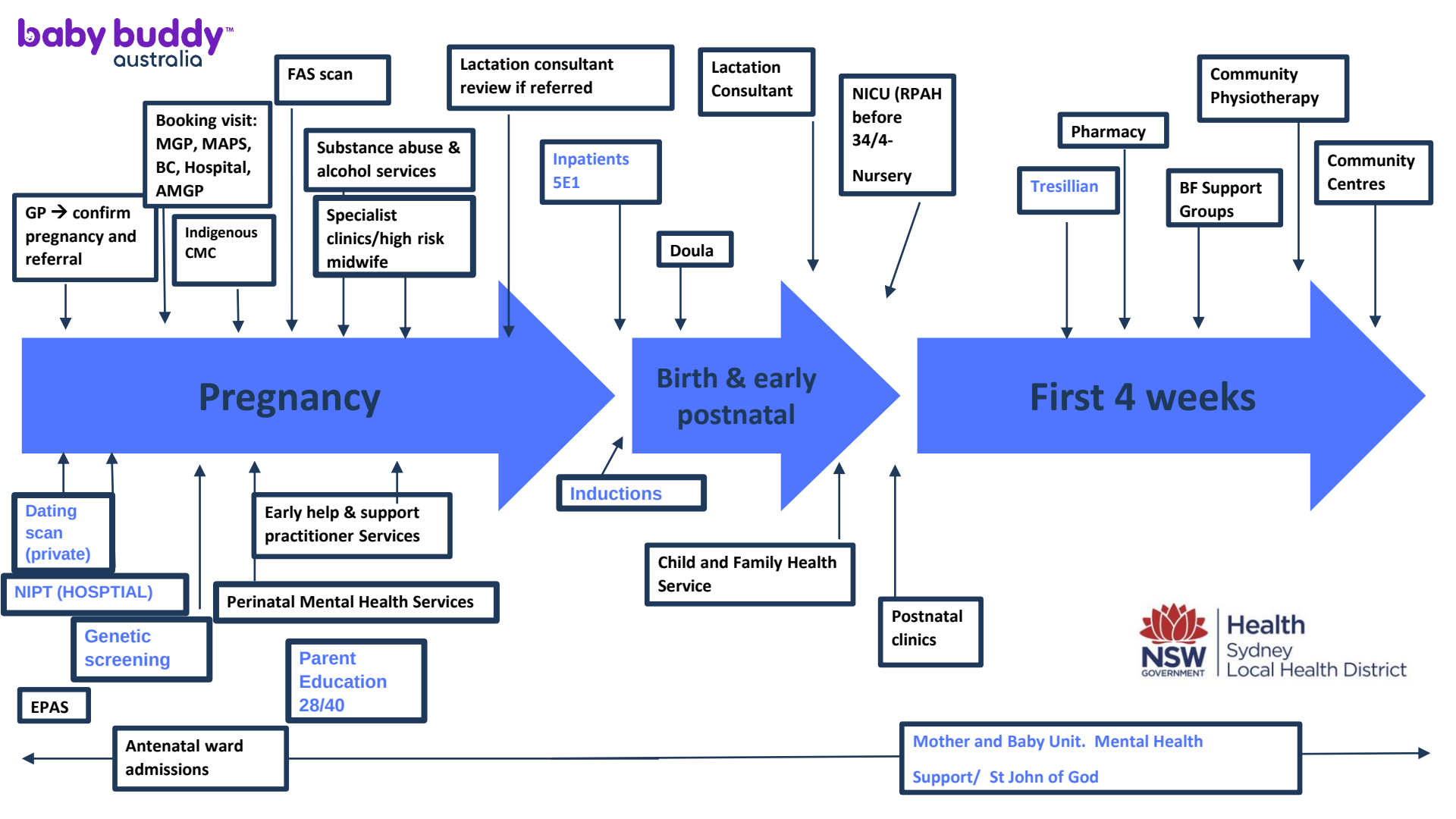
"It would be so great to have all the resources available in our district accessible via the app. Imagine how much time we would save and everyone would have access to services, not relying on someone pointing them out"
Midwife RPAH

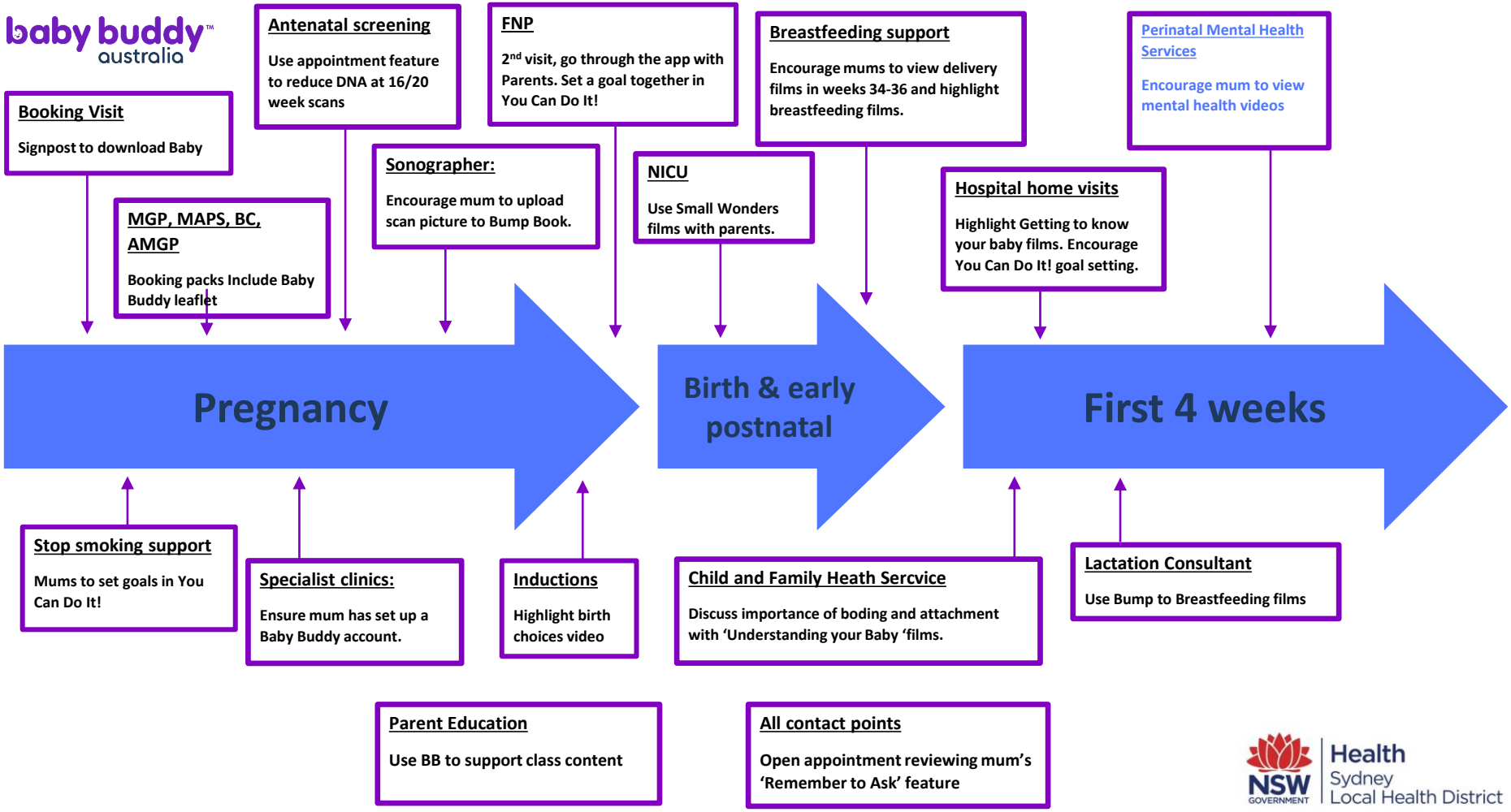
"I think we give out a whole ream of information, I actually think if we step back, if we had a more direct, simpler way of giving out information to women, like with the app, we could do a bit more for them. We could really point them in the right direction, not expect them to find the information for themselves when there is so much information to go through"
Midwife WNSWLHD

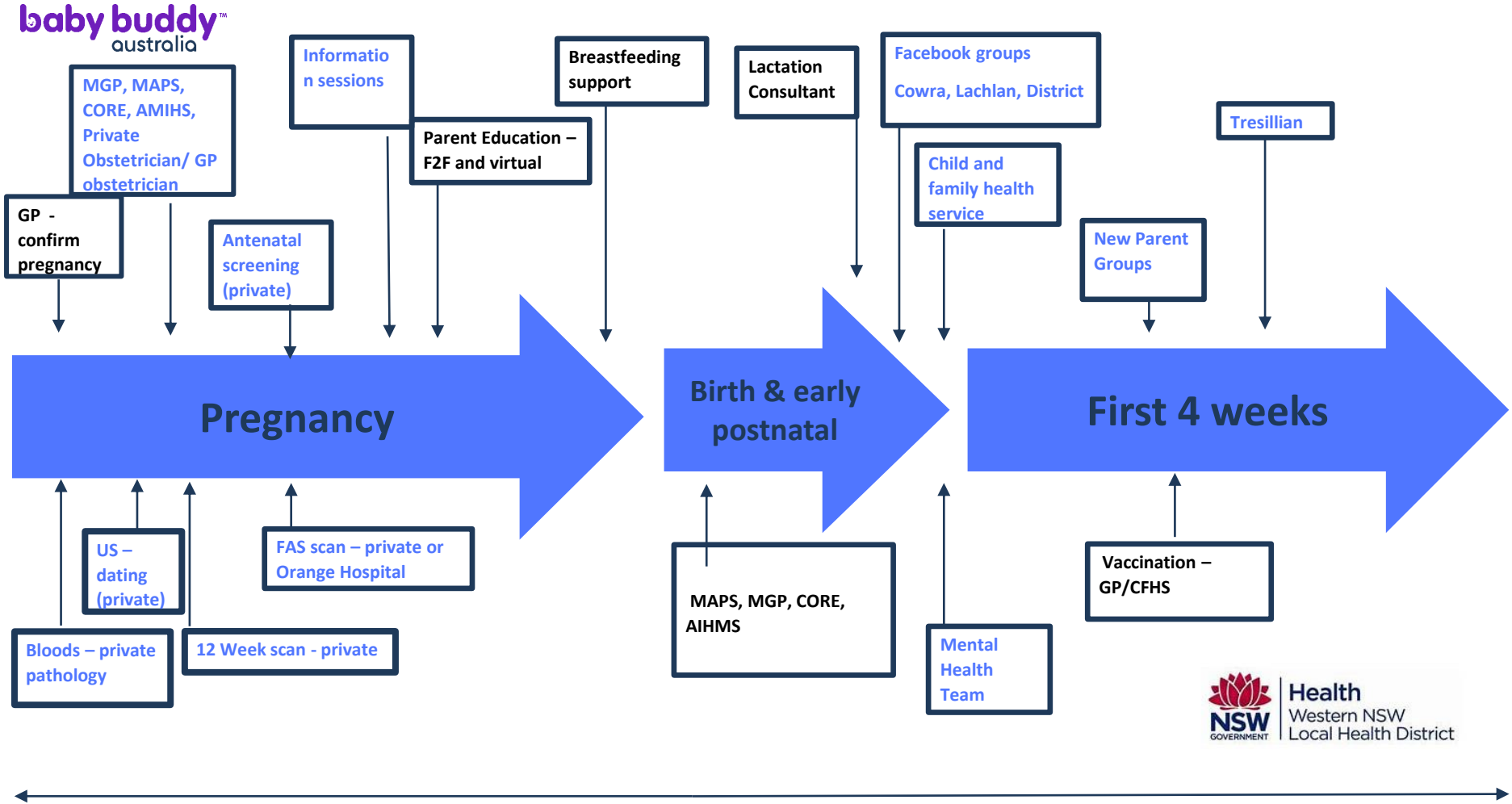
"I sometimes think we waste so much time and money on educational resources that no one looks at. We used to hand out paper, then it all went online. I am sure no one ever looks at it to be honest" Midwife RPAH

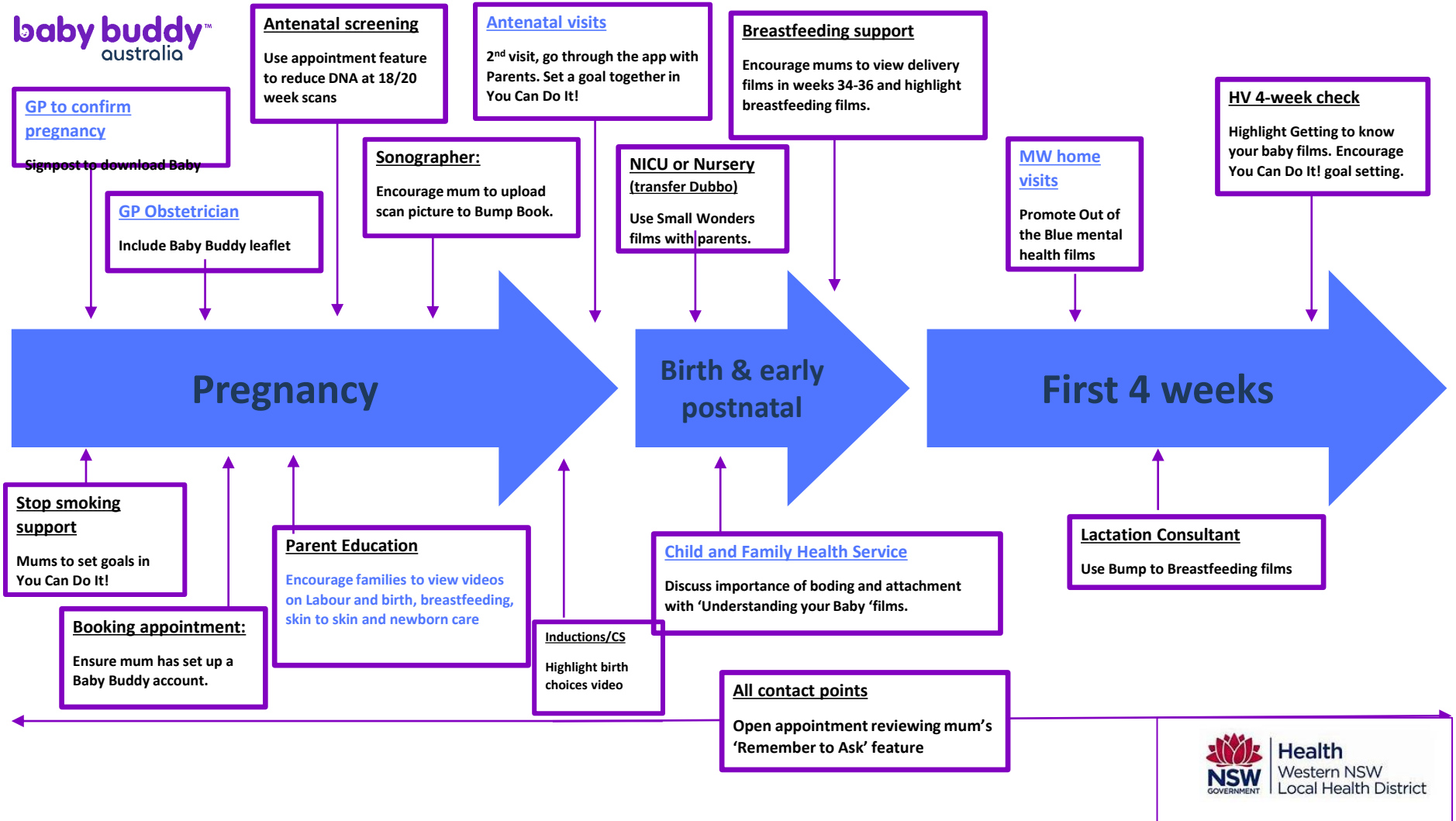
Appendix A

The pathways developed at the roundtable meetings


baby buddy australia
FAS scan
Lactation consultant review if referred
Lactation Consultant
NICU (RPAH before 34/4-
Nursery
Community Physiotherapy
Pharmacy
Booking visit: MGP, MAPS, BC, Hospital, AMGP
Substance abuse & alcohol services
Inpatients 5E1
Tresillian
BF Support Groups
Community Centres
GP → confirm pregnancy and referral
Indigenous CMC
Specialist clinics/high risk midwife
Doula
Pregnancy
Birth & early postnatal
First 4 weeks
Dating scan (private)
Early help & support practitioner Services
Inductions
NIPT (HOSPTIAL)
Perinatal Mental Health Services
Child and Family Health Service
Postnatal clinics
Genetic screening
Parent Education 28/40
EPAS
Antenatal ward admissions
Mother and Baby Unit. Mental Health Support/ St John of God
NSW GOVERNMENT Health
Sydney Local Health District


baby buddy australia
Booking Visit
Signpost to download Baby
Antenatal screening
Use appointment feature to reduce DNA at 16/20 week scans
MGP, MAPS, BC, AMGP
Booking packs Include Baby Buddy leaflet
Sonographer:
Encourage mum to upload scan picture to Bump Book.
FNP
2nd visit, go through the app with Parents. Set a goal together in You Can Do It!
NICU
Use Small Wonders films with parents.
Breastfeeding support
Encourage mums to view delivery films in weeks 34-36 and highlight breastfeeding films.
Hospital home visits
Highlight Getting to know your baby films. Encourage You Can Do It! goal setting.
Perinatal Mental Health Services
Encourage mum to view mental health videos
Pregnancy
Birth & early postnatal
First 4 weeks
Stop smoking support
Mums to set goals in You Can Do It!
Specialist clinics:
Ensure mum has set up a Baby Buddy account.
Inductions
Highlight birth choices video
Child and Family Heath Sercvice
Discuss importance of boding and attachment with 'Understanding your Baby 'films.
Lactation Consultant
Use Bump to Breastfeeding films
Parent Education
Use BB to support class content
All contact points
Open appointment reviewing mum's 'Remember to Ask' feature
NSW GOVERNMENT
Health
Sydney
Local Health District


baby buddy australia
MGP, MAPS, CORE, AMIHS, Private Obstetrician/ GP obstetrician
Informatio n sessions
Breastfeeding support
Lactation Consultant
Facebook groups
Cowra, Lachlan, District
Tresillian
GP - confirm pregnancy
Parent Education – F2F and virtual
Child and family health service
Antenatal screening (private)
New Parent Groups
Pregnancy
Birth & early postnatal
First 4 weeks
US – dating (private)
FAS scan – private or Orange Hospital
MAPS, MGP, CORE, AIHMS
Vaccination – GP/CFHS
Bloods – private pathology
12 Week scan - private
Mental Health Team
NSW GOVERNMENT
Health
Western NSW
Local Health District


baby buddy australia
GP to confirm pregnancy
Signpost to download Baby
GP Obstetrician
Include Baby Buddy leaflet
Antenatal screening
Use appointment feature to reduce DNA at 18/20 week scans
Sonographer:
Encourage mum to upload scan picture to Bump Book.
Antenatal visits
2nd visit, go through the app with Parents. Set a goal together in You Can Do It!
NICU or Nursery (transfer Dubbo)
Use Small Wonders films with parents.
Breastfeeding support
Encourage mums to view delivery films in weeks 34-36 and highlight breastfeeding films.
MW home visits
Promote Out of the Blue mental health films
HV 4-week check
Highlight Getting to know your baby films. Encourage You Can Do It! goal setting.
Pregnancy
Birth & early postnatal
First 4 weeks
Stop smoking support
Mums to set goals in You Can Do It!
Booking appointment:
Ensure mum has set up a Baby Buddy account.
Parent Education
Encourage families to view videos on Labour and birth, breastfeeding, skin to skin and newborn care
Inductions/CS
Highlight birth choices video
Child and Family Health Service
Discuss importance of boding and attachment with 'Understanding your Baby 'films.
Lactation Consultant
Use Bump to Breastfeeding films
All contact points
Open appointment reviewing mum's 'Remember to Ask' feature
NSW GOVERNMENT Health
Western NSW Local Health District