

# BABY BUDDY SYMPOSIUM

## #IMEexpo

**Baby Buddy: a powerful tool to  
support maternity systems in the UK  
and beyond**

**12<sup>th</sup> November 2019**



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@BabyBuddyApp

# BABY BUDDY SYMPOSIUM #IMExpo



**Chair: Shabira Papain**

**@ShabiraPapain**

**Speakers: Carly Bond**  
**@BestBeginnings**

**Nicos Middleton**  
**@NicosMiddleton**

**Adrienne Gordon**  
**@AdrienneOz**





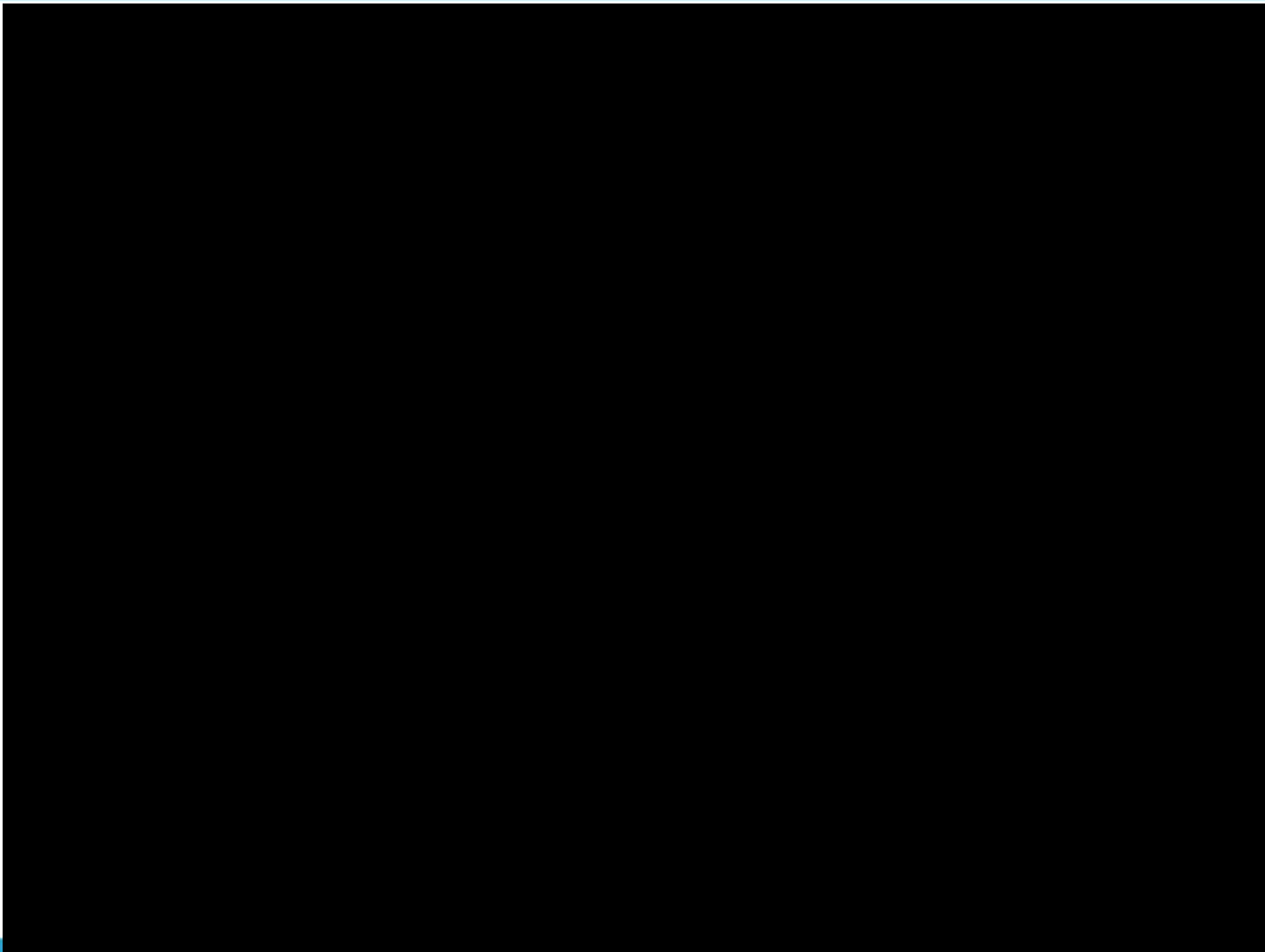
# Baby Buddy: a digital innovation that reduces inequalities and can transform maternity care in the UK

**Carly Bond**  
**Head of Operations**  
**Best Beginnings**



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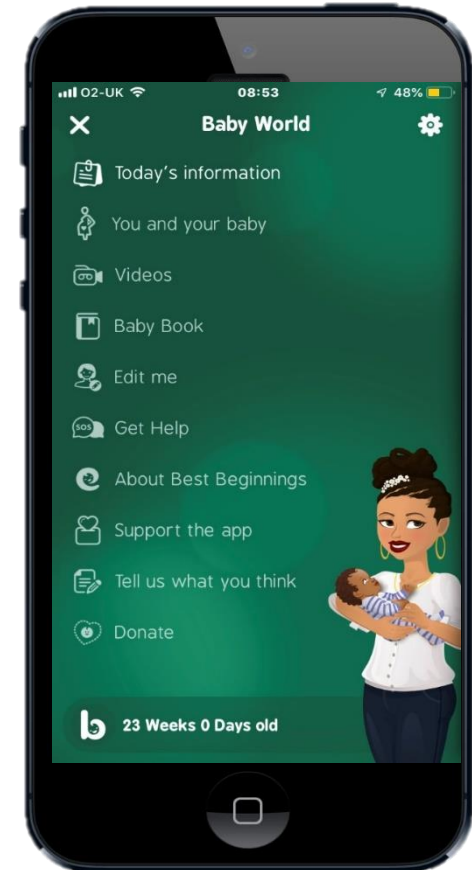
# Baby Buddy is on the NHS Library



## IT IS ENDORSED BY:



## IT HAS WON THESE AWARDS



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# Baby Buddy is having impact



Pregnant women & new mums from across the UK answering pop-up in-app questions to 31/10/2018, reported Baby Buddy:

- Easy to understand >99% (n= 13,099)
- Helps me look after my mental health 87% (n=3992)
- Helps me look after my physical health 90% (n=4041)
- Helps me feel closer to my baby 90% (n=3850)
- Helps me get more out of my appointments 86% (n=6884)



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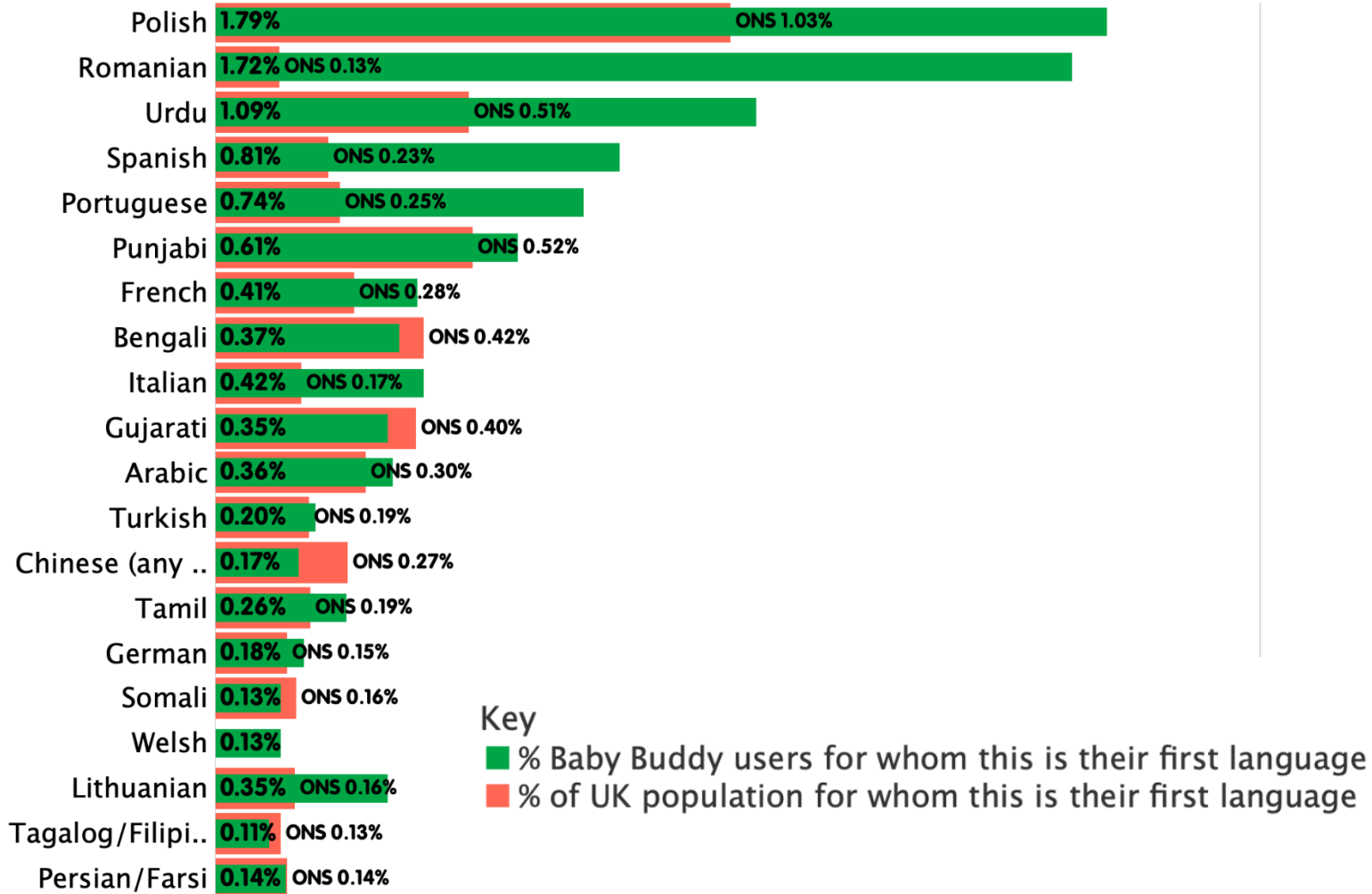
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Registered Baby Buddy users across the UK up to 31<sup>st</sup> August 2019 who answered the optional in-app pop-up question asking for your first language.

NB: Only respondents for whom English is not their first language are shown.



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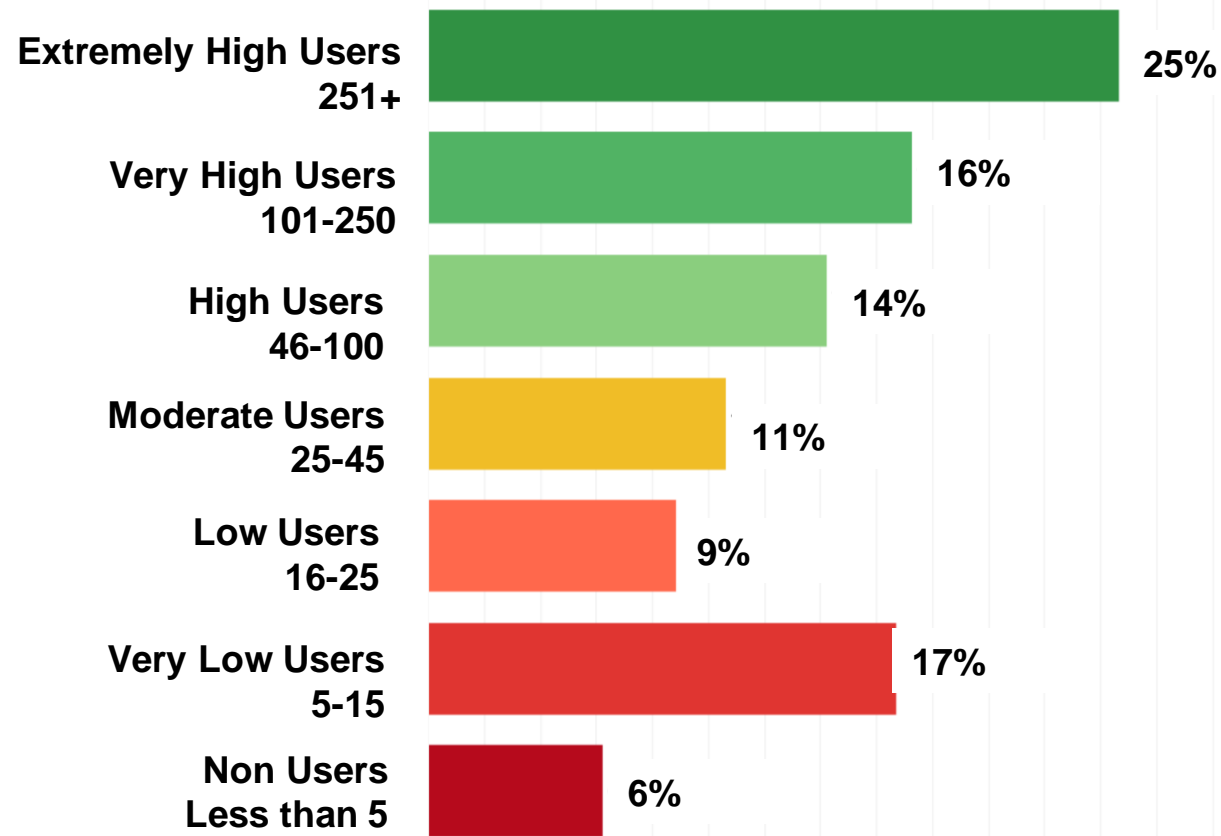
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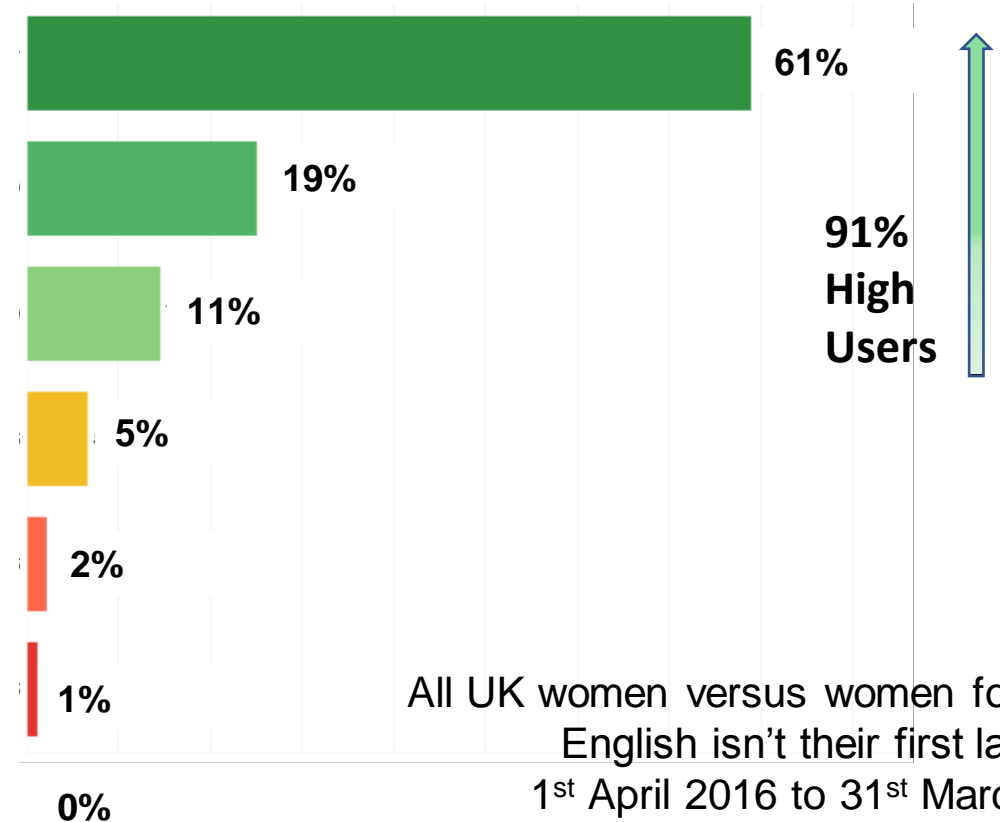
# Levels of usage of pregnant and new mum using Baby Buddy



## All UK



## English not 1<sup>st</sup> language



All UK women versus women for whom English isn't their first language  
1<sup>st</sup> April 2016 to 31<sup>st</sup> March 2018



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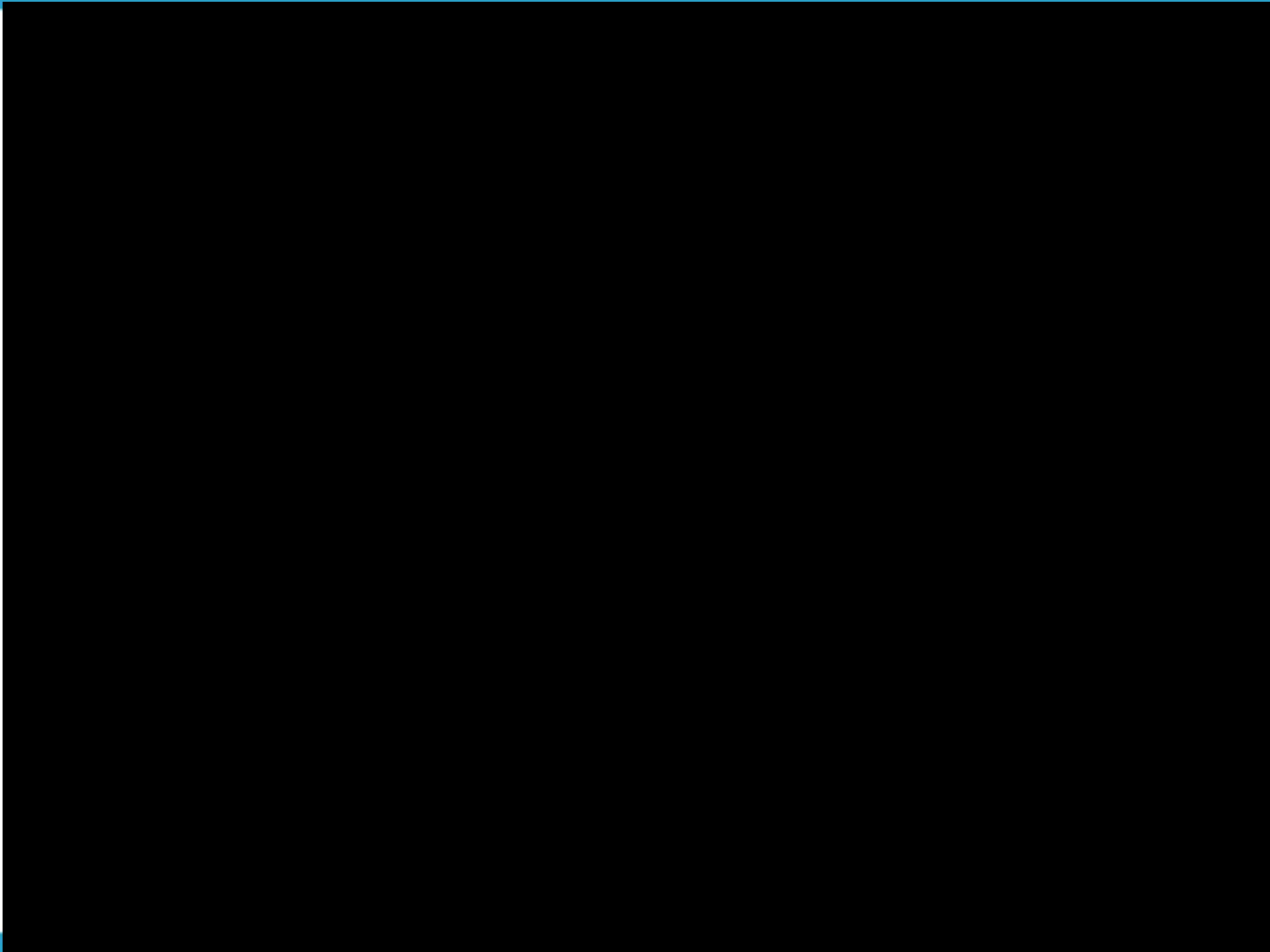
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## Baby Buddy Cyprus:

supporting the educational needs of parents and health professionals

Nicos Middleton, PhD, Associate Professor,  
Department of Nursing, School of Health Sciences



## Unsupportive system

*"I watched many YouTube videos. I found the information there better than anywhere else, you can learn different things."*

*"To find reliable data, you are checking, and you do a match, you match the information with the information your doctor gave you..."*

**Self-navigating  
in parallel  
worlds**

**Supplementing  
& Filtering**

*"I started seeing some things on the internet that were a little misinforming and I was seeking the advice of my doctor only, the doctor exclusively."*

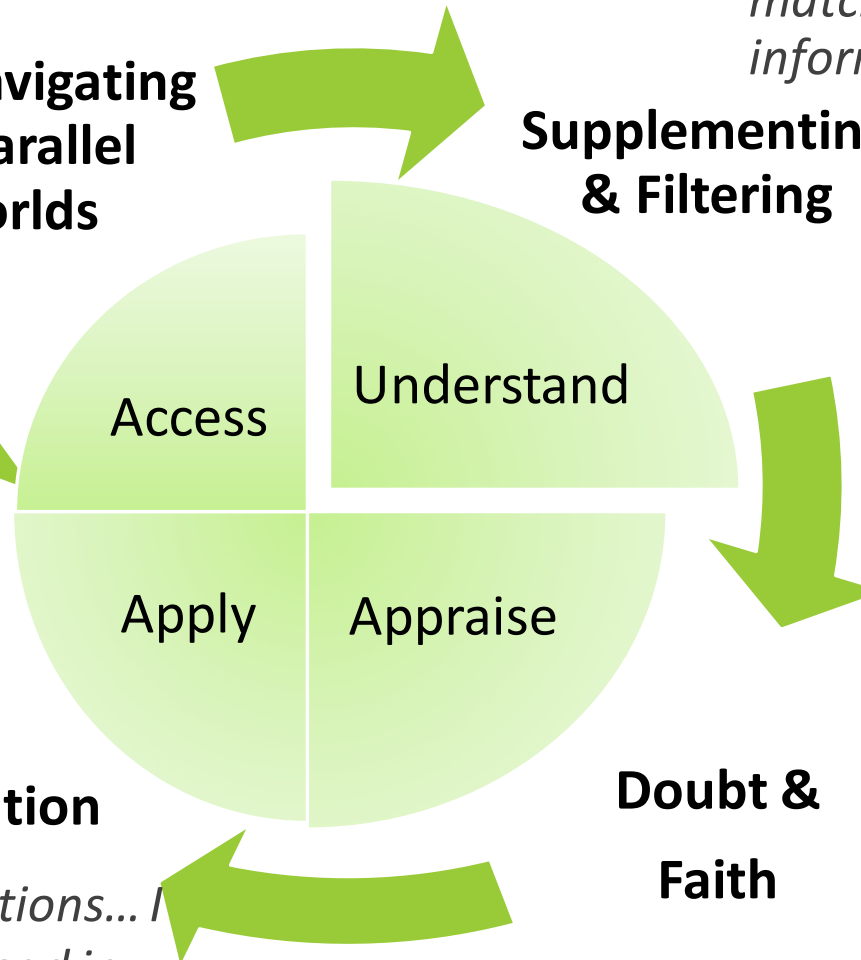
*"I wish to **voice** some questions, it is more constructive...eh for me"*

**Confident  
voice**

*"...how does someone get that **voice...? With confidence**. Especially if you are a first-time mum."*

**Doubt &  
Faith**

**Art of  
communication**



Access

Understand

Apply

Appraise

*"I tried more than one doctor...some of them were too much in a hurry, whether they are paediatricians or obstetricians, it's the same thing."*

*"...what helped me at the hospital was that one of the students palpated my abdomen and discussed about me with the midwife ...and I listened, this helped me understand many things...."*

*"If you prepare somehow, with a list of questions... I collected the questions that came into my head in order to take them to my doctor. So, if you take your questions, they may answer them"*

# Baby Buddy Cyprus



- ❑ Cooperation for innovation
- ❑ Strategic partnership (1 Sept 2017 – 31 Aug 2020).
- ❑ AIM: Create a version of Baby Buddy for Cyprus
  - ❑ cross-national relevance and transferability
  - ❑ from a higher- to a lower-resource setting
- ❑ Customize resource & tool
  - ❑ needs of local parents-to-be
  - ❑ educational role of health professionals



**Info:** [www.babybuddyforward.com](http://www.babybuddyforward.com)    **Beta version:** [babybuddy.com.cy](http://babybuddy.com.cy)

Hello, Nicos

Profile Settings

Your child was born on: **7 Oct. 2019**

Change Child's Birth date

Today's Information

Ask me

What does that mean?

Videos

Sign out

Submit feedback



## Today's information

2 days

### How often should I feed my baby?

Really often! You'll probably need to feed your baby every begin with. Your baby's stomach is only the size of his or tiny amount of milk at each feed. That means the baby g

Your baby will let you know when he or she is hungry. Loc

- the baby stirs and wriggles
- the baby turns his or her head from side to side
- the baby opens his or her mouth
- the baby licks his or her lips
- the baby sucks his or her fingers
- as a last resort, the baby will start crying.

Let the baby feed for as long as he or she wants each time - the baby will know when he or she is full and will come off your breast or fall asleep when he or she has finished. If the baby falls asleep after one breast, you can wake him or her up and offer the second breast. Some feeds may take ages, and sometimes he or she may want lots of shorter feeds close together.

## Welcome to Baby Buddy!

By your side on your journey to parenthood in Cyprus and Greece.

Choose your language:

English

Русский

Ελληνικά

Türkçe

العربية



### Partners



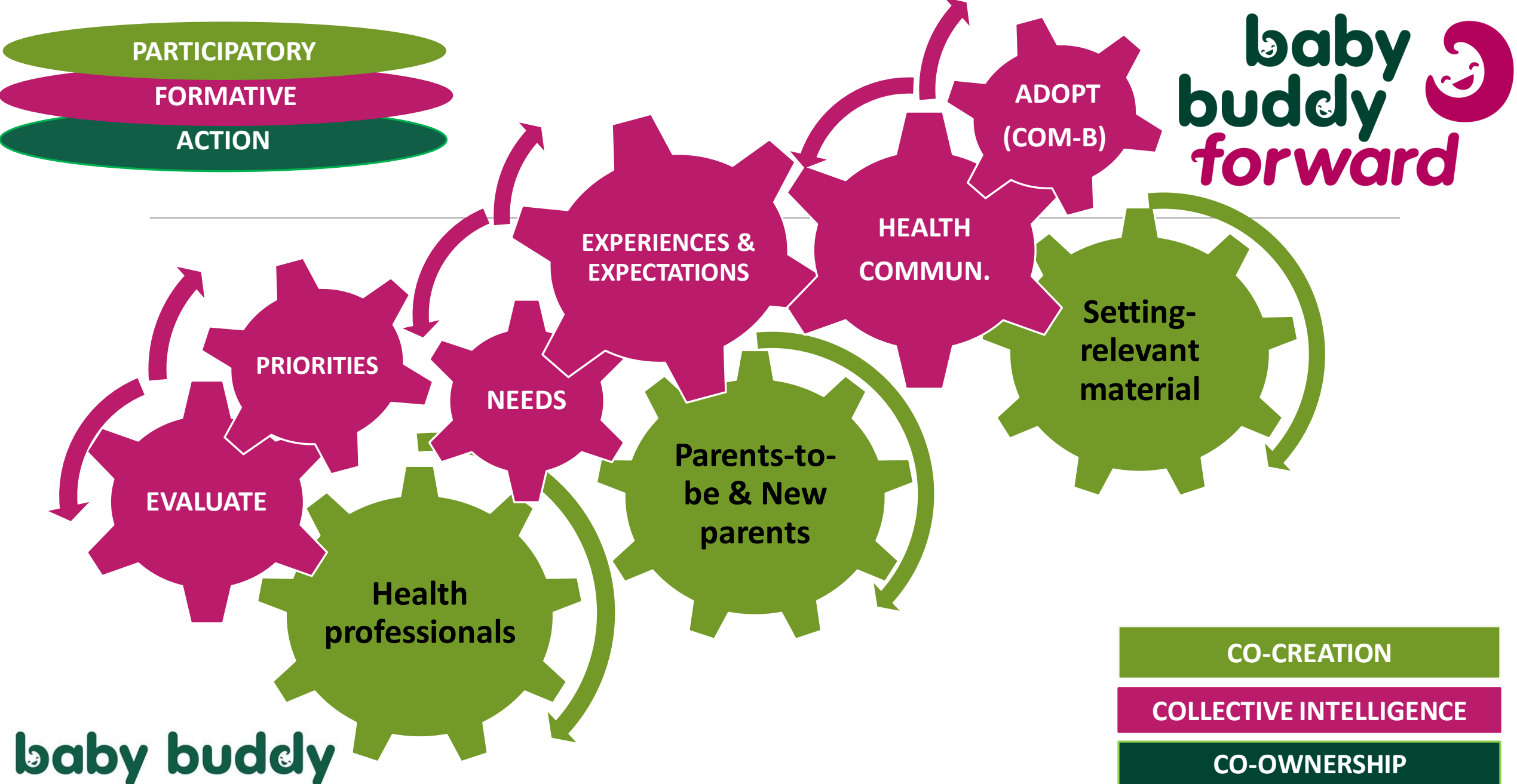
### Associates



# Cyprus Context: ~10000 births/year

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- **70%-30%** socioeconomic split between private-public
- **C/S ~60%** (>30% public), **Prematurity ~ 12%** Official MoH data
- **Medicalization:** Dominance in communication Hadjigeorgiou & Coxon. Midwifery 2014
- **Antenatal classes:** low participation (1 in 3) *Stylianides et al Int J Caring Sciences 2016*
- **Baby-Friendly:** fragmented practices Hadjiona et al *Midwifery* 2016
- **Exclusive breastfeeding:** <20% 48 hours, <5% 6months Economou et al *Public Health Nutr* 2018
- **Postpartum depression:** ~30% at 6 weeks; C/S, social gradient *Stylianides et al Int J Caring Sciences 2016*
- **Experience of labour:** ~5.7 (SD 3.0) on 1-10 VAS *Stylianides et al PhD thesis 2015*

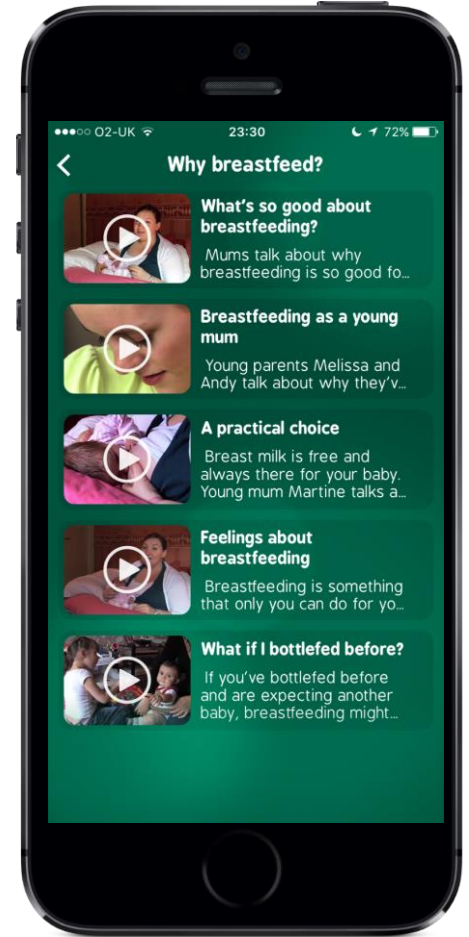


High	Relatively high	Relatively low	Low	CVI-S UA
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← RELEVANCE →

← SUITABILITY →

High	146 (52.9%) across themes	12 (4.3%)			158 (57%)
Relatively high	57 (20.7%) <div>Things are not done like this over here!</div>	61 (22.1%) <div>Very UK-specific<ul style="list-style-type: none"><li>Services: home birth, MBU</li><li>Benefits &amp; schemes</li></ul></div>			75 (27%)
Relatively low	<div>We don't do things like this over here!</div> <div>Context is not right for people to relate!</div>				29 (11%)
Low	<div>Not quite the whole issue!</div>				14 (5%)
CVI-S UA	203 (74%)	59 (21%)	12 (4%)	2 (0.7%)	276 100%





**Nominal Group  
Technique**  
55 topics



**174 topics,**  
**18 sections**  
**5 themes**  
  
**Pregnancy**  
**Childbirth**  
**Infant Care**  
**Special topics**  
**Social & Legal**

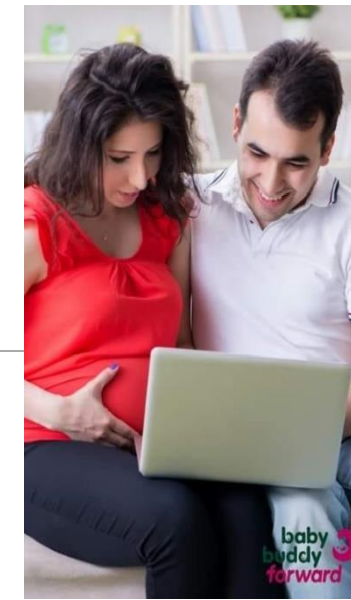
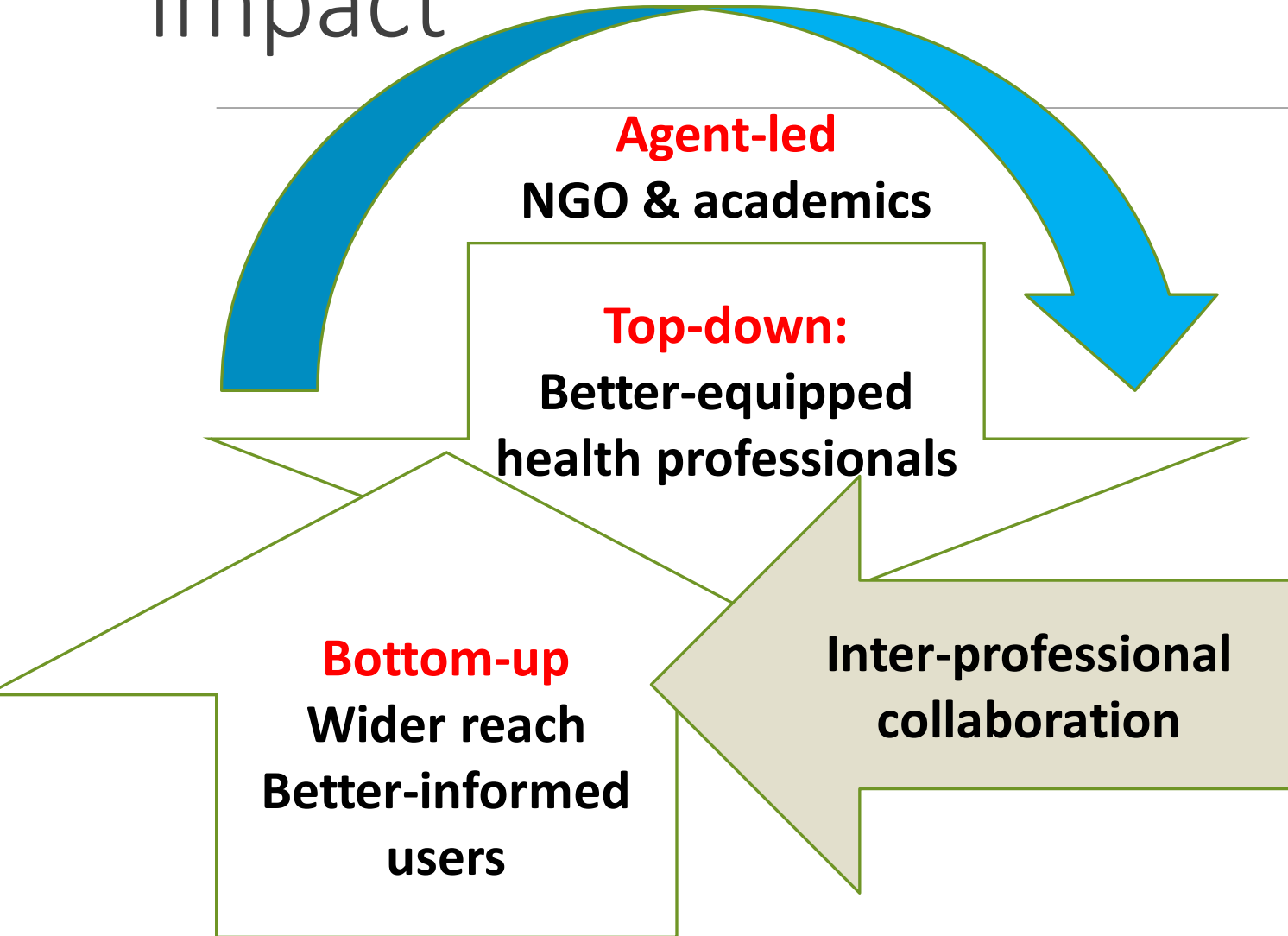


**Round A**  
**193 Health Professionals**  
**275 Mums-to-be & New mums**  
  
**Breastfeeding**  
**Prematurity**  
**Mental Health**



**Round B**  
**Of TOP 34**  
**→ 91.2%**  
**Of TOP 101**  
**→ 80%**  
**mapped to**  
**daily messages**  
**and/or video**  
**content in BB**

# Impact



“...I really enjoyed meeting everybody, that we were asked, that we shared experiences, it makes us all better...”

Midwife

“ I believe...it is through teamwork we can achieve much more. We are all different pieces of the same puzzle”

Pediatrician

## >700 participants in the activities of creating Baby Buddy Cyprus

- Core and extended Baby Buddy team
- Professionals associations & National Committee for Breastfeeding
- 400 mums-to-be/ new mums
- 220 health professionals(*focus groups/eDelphi*)
- 40 health professionals and new parents featuring in videos



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By your side on your journey to parenthood

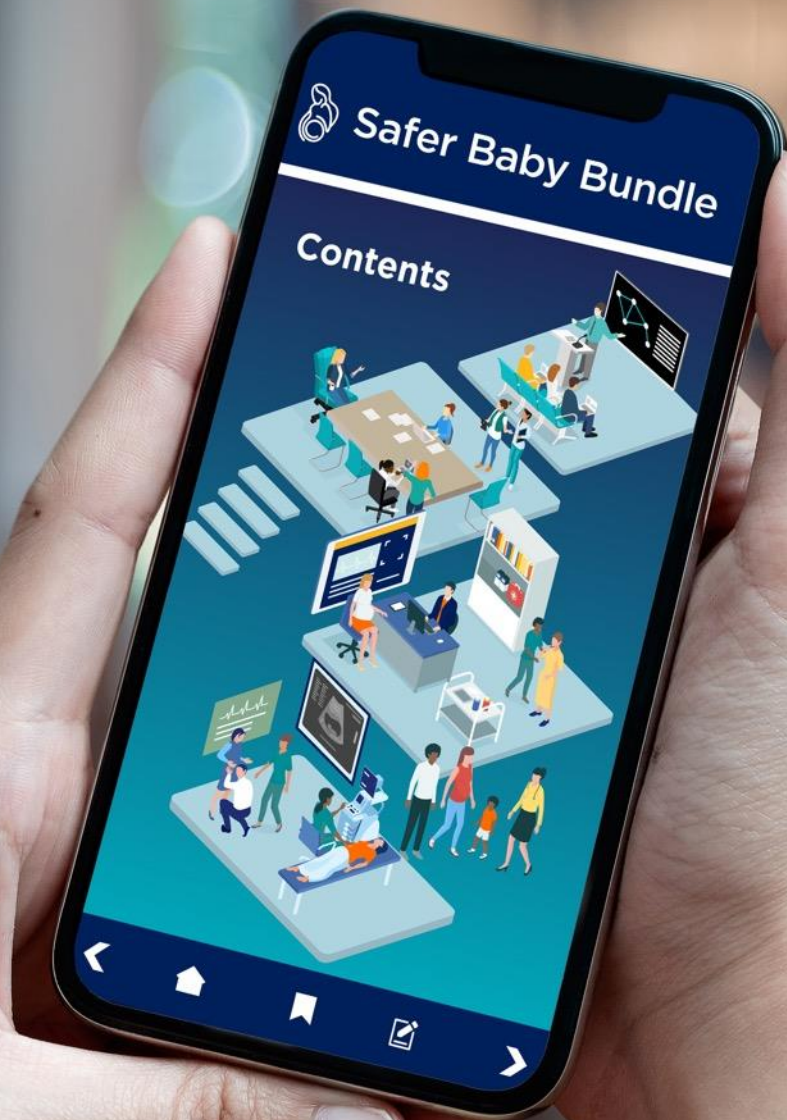


# Baby Buddy Australia: supporting the implementation of the Safer Baby Bundle

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Adrienne Gordon on behalf of the Stillbirth CRE





# Safer Baby Bundle

WORKING TOGETHER TO REDUCE STILLBIRTH

# What is the Safer Baby Bundle?

The Safer Baby Bundle is a national initiative with five evidence-based elements to address key areas where improved practice can reduce the number of stillborn babies.



- Smoking Cessation



- Fetal Growth Restriction (FGR)



- Decreased Fetal Movement (DFM)



- Side Sleeping



- Timing of Birth



## GOAL

**Reduce stillbirth from 28 weeks' gestation by 20% by 2023.**



# Why we need the SBB

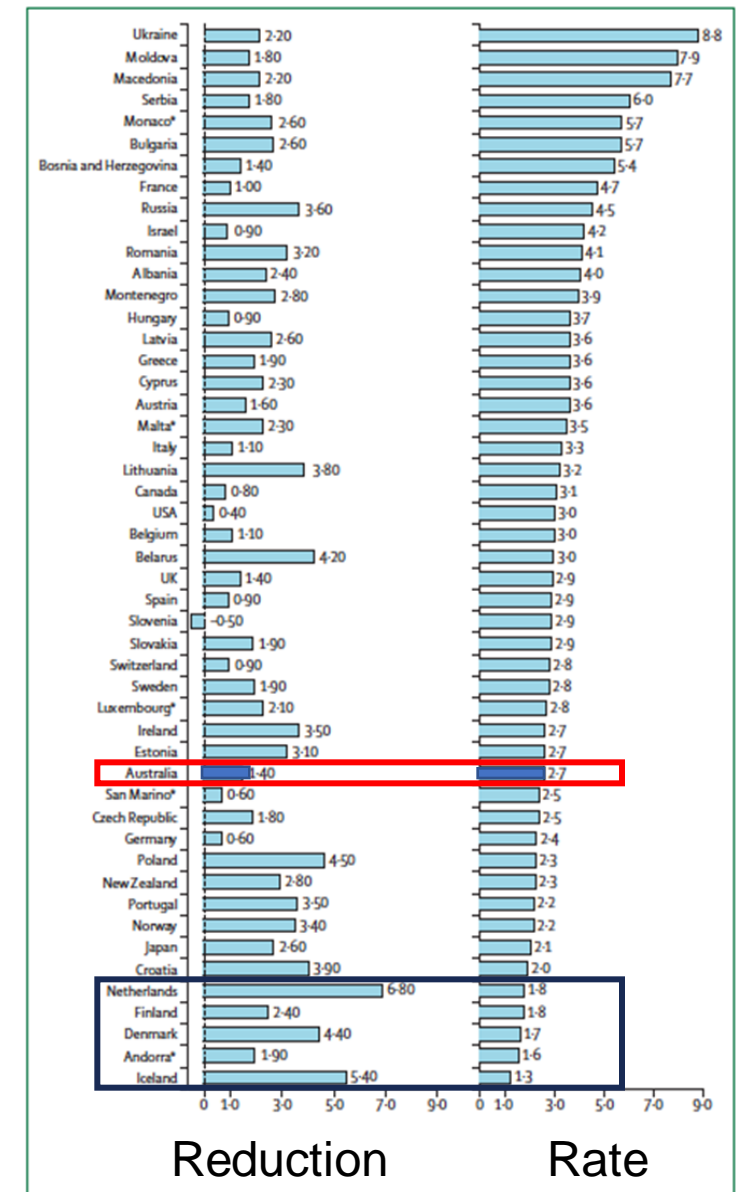
Globally - 3.5/1000 (8.8-1.3)

1.8% Average Rate Reduction (ARR) ( $6.8 \pm 0.5$ )

Australia

1.4% reduction: 2.7/1000 ranked 15<sup>th</sup>

Australia stillbirth rates now 35% higher than six best performing countries (< 2/1000)



# We know that bundles of care can save lives

## Saving Babies Lives Care Bundle (SBLCB) UK



**Saving Babies' Lives**  
*A care bundle for reducing stillbirth*

**20%**  
**REDUCTION**  
**IN STILLBIRTHS**

## Scottish Patient Safety Program (SPSP) Scotland

### SPSP Maternity and Children

End of phase report  
August 2016



**19%**  
**REDUCTION**  
**IN STILLBIRTHS**



# The Safer Baby Bundle for Australia



## Smoking Cessation

Supporting women to stop smoking in pregnancy.

#Quit4Baby



## Fetal Growth Restriction (FGR)

Improving screening and surveillance for fetal growth restriction.

#GrowingMatters



## Decreased Fetal Movements (DFM)

Improving awareness and management of decreased fetal movement.

#MovementsMatter



## Side Sleeping

Improving awareness of maternal safe sleeping position.

#SleepOnSide



## Timing of Birth

Improving decision-making around timing of birth for women with risk factors.

#LetsTalkTiming

## Resources for each element includes:

- Best practice recommendations
- Implementation tools including clinical checklists and care pathways
- A measurement strategy including Key Performance Indicators (KPIs) and audit tools
- An educational program for health care professionals (both eLearning and face-to-face training)
- Educational resources for women



## Safer Baby Bundle Launch - Parliament House, 15 October 2019



**Online learning for all maternity health care professionals**



# Educational materials accredited for CPD points by



**The Royal Australian  
and New Zealand  
College of Obstetricians  
and Gynaecologists**

**Australian College of  
Rural & Remote Medicine**  
WORLD LEADERS IN RURAL PRACTICE



Please note: RACGP accreditation process is underway and CPD points will be available soon. If you have any queries about how to secure CPD points, contact your professional association or employer.

<https://learn.stillbirthcre.org.au>





**Designed for use on all mobile devices**



**Helpful case studies to reinforce learning**



**Frequently asked question:**

"I heard if I have something to eat or drink that will get my baby moving again, is that right?"



**Recommended answer:**

"It's a common myth that having something to eat or drink will stimulate your baby to move. This does NOT work and may waste time. If you are concerned you should contact your health care provider or maternity unit for assessment immediately."

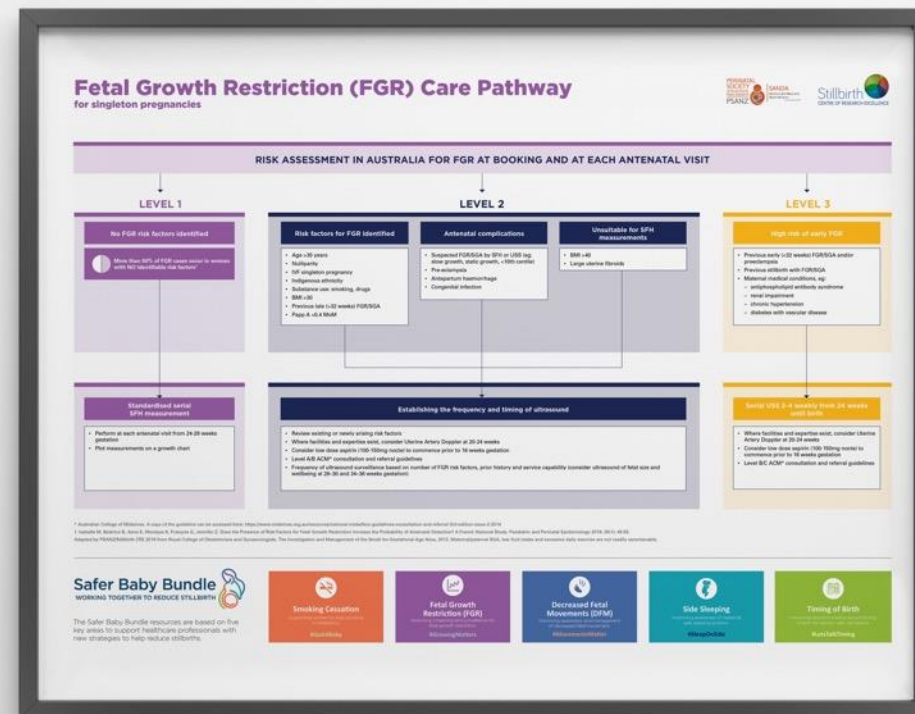
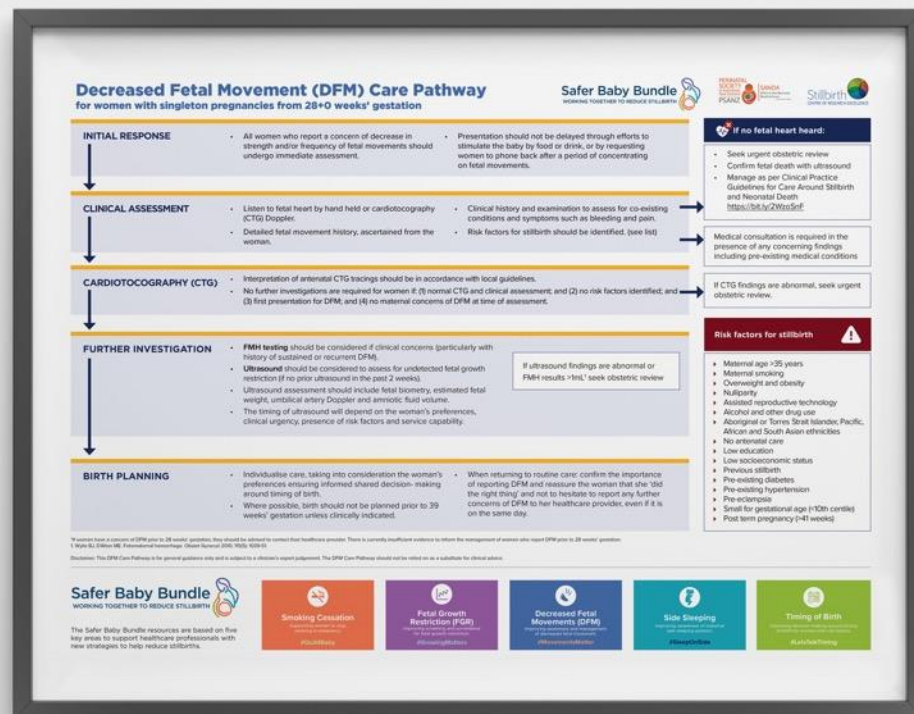


**Key Points:**

- Dispell myth
- Contact health care possible if LFM

**Videos and tools to support effective communication with patients**

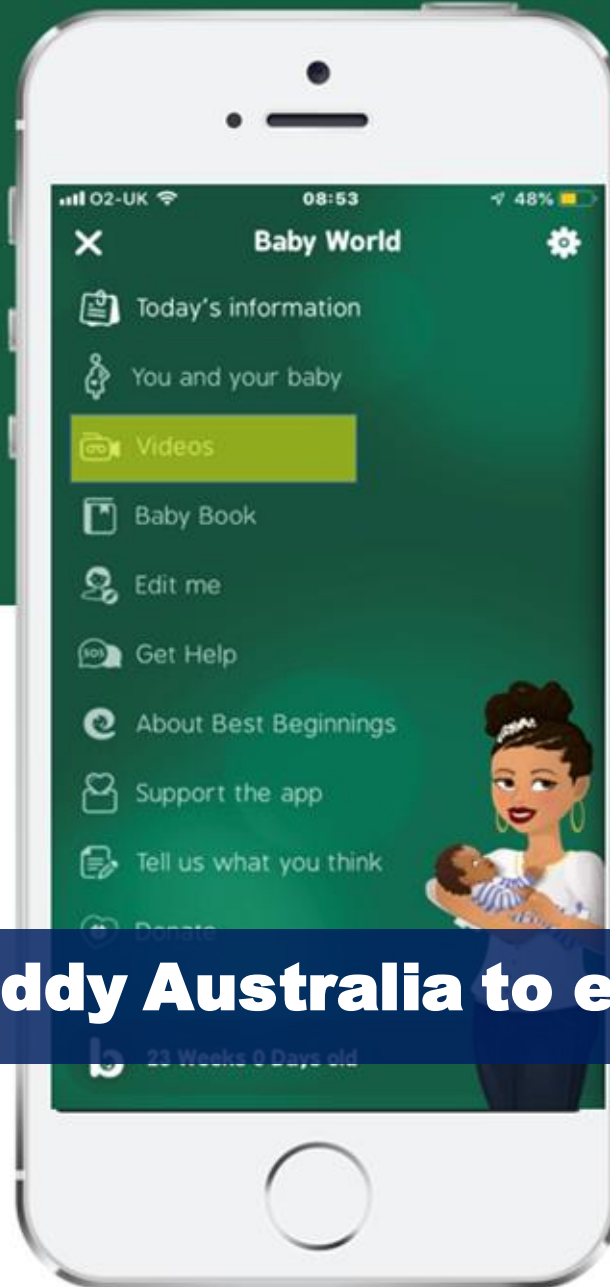




# Care pathway posters to support clinical decision-making

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buddy™



## Co-Creation of Baby Buddy Australia to empower women



**Building on the UK Our Chance Campaign**

**best  
beginnings**

**baby  
buddy**



#SleepOnSide

## Sleep on side when baby's inside

from 28 weeks of pregnancy

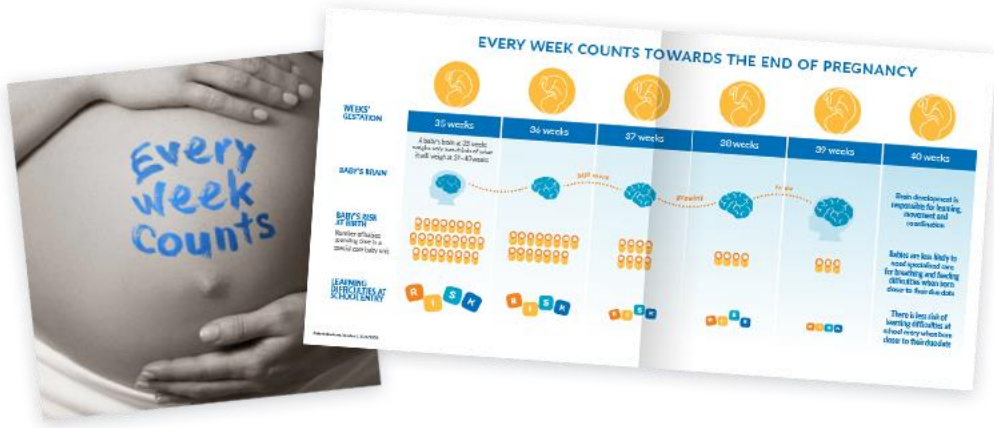
Research shows that going to sleep on your side from 28 weeks of pregnancy halves your risk of stillbirth compared with sleeping on your back.

FIND OUT MORE: [sleeponside.org.au](https://sleeponside.org.au)

### Sleeping comfortably with your bump

Physiotherapist Clare Bamping gives pregnant mum Emma some tips on how to sleep comfortably with a big bump.

## Adaptation of existing content



## Co-Creation of new content

PLANNED LAUNCH FOR BABY BUDDY AUSTRALIA

Queensland, AUSTRALIA

# DRIVING CHANGE

in Stillbirth, SIDS and Infant Deaths

# Safer Baby Bundle endorsed by the Stillbirth CRE and



Australian College of  
Rural & Remote Medicine  
WORLD LEADERS IN RURAL PRACTICE



Clinical Excellence  
Queensland



Queensland  
Government



The Royal Australian  
and New Zealand  
College of Obstetricians  
and Gynaecologists  
Excellence in Women's Health



Safer Baby Bundle  
WORKING TOGETHER TO REDUCE STILLBIRTH



# Baby Buddy: a powerful tool to support maternity systems in the UK and beyond



## PANEL DISCUSSION

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# BABY BUDDY SYMPOSIUM



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# Appendices



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# The Bumps and BaBies Longitudinal Study (BaBBLeS): a multi-site cohort study of first-time mothers to evaluate the effectiveness of the Baby Buddy app

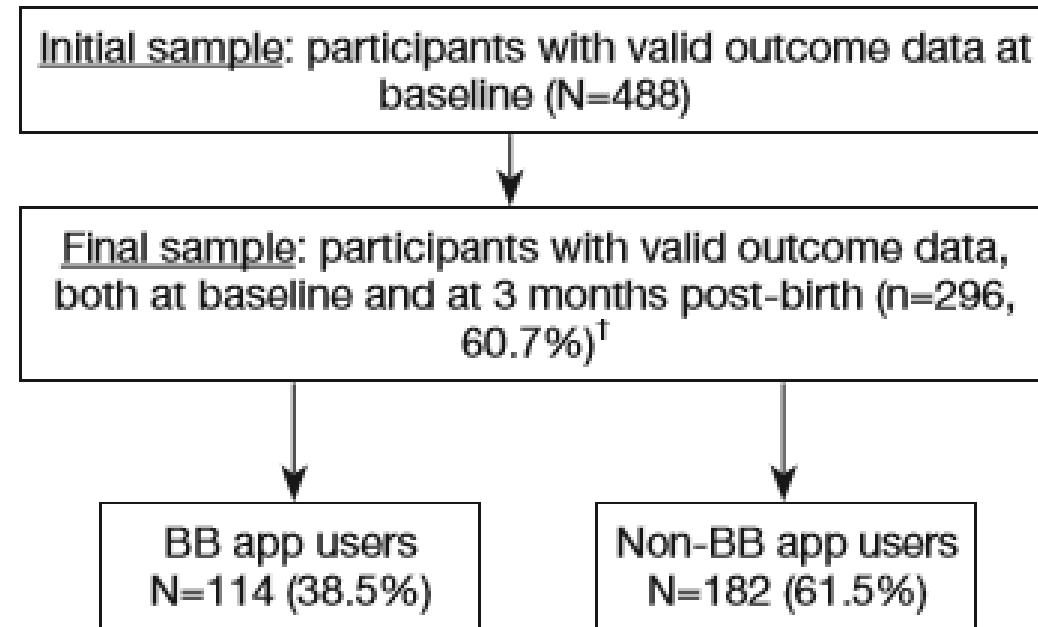
Toity Deave<sup>1#</sup>, Samuel Ginja<sup>2#</sup>, Trudy Goodenough<sup>1</sup>, Elizabeth Bailey<sup>3</sup>, Lukasz Piwek<sup>4</sup>, Jane Coad<sup>3</sup>, Crispin Day<sup>5</sup>, Samantha Nightingale<sup>3</sup>, Sally Kendall<sup>6</sup>, Raghu Lingam<sup>7</sup>

<sup>1</sup>Centre for Academic Child Health, Faculty of Health & Applied Sciences, University of the West of England Bristol, Bristol, UK; <sup>2</sup>School of Psychology, Faculty of Life & Health Sciences, Ulster University, Coleraine, Northern Ireland; <sup>3</sup>Centre for Innovative Research Across the Life-Course (CIRAL), Coventry University, Coventry, UK; <sup>4</sup>Division of Information, Decisions and Operations, School of Management, University of Bath, Bath, UK; <sup>5</sup>King's Health Partners, Child & Adolescent Mental Health Service Research Unit, Guy's Munro Centre, London, UK; <sup>6</sup>Centre for Health Services Studies, University of Kent, Canterbury, UK; <sup>7</sup>School of Women's & Children's Health, University of New South Wales, Randwick, New South Wales, Australia

*Contributions:* (I) Conception and design: T Deave, R Lingam, J Coad, S Kendall, C Day; (II) Administrative support: T Goodenough, S Ginja; (III) Provision of study materials or patients: T Deave, T Goodenough, S Ginja, E Bailey, S Nightingale; (IV) Collection and assembly of data: T Goodenough, S Ginja, L Piwek, E Bailey, S Nightingale; (V) Data analysis and interpretation: S Ginja, T Deave, E Bailey, S Nightingale, J Coad, R Lingam, L Piwek, C Day, S Kendall; (VI) Manuscript writing: All authors; (VII) Final approval of manuscript: All authors.

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**Figure 1** Participant flow in the BaBBLeS study. BaBBLeS, the Bumps and BaBies Longitudinal Study; BB, Baby Buddy. <sup>†</sup>, 192 participants did not have valid outcome data at both baseline and 3 months post-birth.

Deave T, Ginja S, Goodenough T, Bailey E, Piwek L, Coad J, Day C, Nightingale S, Kendall S, Lingam R. The Bumps and BaBies Longitudinal Study (BaBBLeS): a multi-site cohort study of first-time mothers to evaluate the effectiveness of the Baby Buddy app. mHealth 2019.

**Table 6** Reported breastfeeding\* in the final sample

Reported breastfeeding	Baby Buddy user (N=114), n (%)	Non-Baby Buddy user (N=182), n (%)	Differences between app users and non-app users
Any breastfeeding at 1 week post-birth	100 (87.7)	141 (79.2)	$\chi^2(1) = 3.49$ , P=0.062
Any breastfeeding at 1 month post-birth	95 (84.8)	121 (67.6)	$\chi^2(1) = 10.68$ , P=0.001*
Any breastfeeding at 3 months post-birth	69 (61.6)	93 (51.4)	$\chi^2(1) = 2.93$ , P=0.087
Exclusive breastfeeding at 1 week post-birth	65 (57.0)	91 (51.1)	$\chi^2(1) = 0.97$ , P=0.325
Exclusive breastfeeding at 1 month post-birth	55 (49.1)	67 (37.4)	$\chi^2(1) = 3.86$ , P=0.050
Exclusive breastfeeding at 3 months post-birth	49 (43.8)	61 (33.7)	$\chi^2(1) = 2.98$ , P=0.084

\*, breastfeeding includes both breastfeeding as the exclusive feeding method as well as breastfeeding in combination with formula milk compared to formula milk only or not sure.

Deave T, Ginja S, Goodenough T, Bailey E, Piwek L, Coad J, Day C, Nightingale S, Kendall S, Lingam R. The Bumps and BaBies Longitudinal Study (BaBBLeS): a multi-site cohort study of first-time mothers to evaluate the effectiveness of the Baby Buddy app. mHealth 2019.

**Table 7** Odds ratios for breastfeeding and Baby Buddy use

Reported breastfeeding	Model	N	Baby Buddy use		
			OR (SE)	95% CI	P value
Any breastfeeding at 1 week post-birth	Model 1	292	1.87 (0.64)	0.96 to 3.65	0.065
	Model 2	280	2.25 (0.93)	1.00 to 5.06	0.051
Any breastfeeding at 1 month post-birth	Model 1	291	2.68 (0.82)	1.46 to 4.90	0.001*
	Model 2	275	3.08 (1.14)	1.49 to 6.35	0.002*
Any breastfeeding at 3 months post-birth	Model 1	293	1.52 (0.37)	0.94 to 2.45	0.088
	Model 2	276	1.72 (0.49)	0.99 to 2.99	0.054
Exclusive breastfeeding at 1 week post-birth	Model 1	292	1.27 (0.31)	0.79 to 2.04	0.325
	Model 2	280	1.13 (0.30)	0.67 to 1.90	0.649
Exclusive breastfeeding at 1 month post-birth	Model 1	291	1.61 (0.39)	1.00 to 2.60	0.050
	Model 2	275	1.65 (0.45)	0.97 to 2.80	0.067
Exclusive breastfeeding at 3 months post-birth	Model 1	293	1.53 (0.38)	0.94 to 2.48	0.085
	Model 2	276	1.79 (0.52)	1.02 to 3.16	0.044*

Baby Buddy users are those who reported using the Baby Buddy app at one time-point or more. Any breastfeeding includes both breastfeeding as the exclusive feeding method as well as breastfeeding in combination with formula milk; exclusive breastfeeding refers to those women who reported breastfeeding as the only feeding method. Model 1: Breastfeeding and Baby Buddy use, unadjusted; Model 2: same as model 1, adjusted for IMD decile, education, technology use (MTUAS total mean score), use of pregnancy/parenthood apps (any), and baseline intention to breastfeed. \*,  $P < 0.05$ . IMD, index of multiple deprivation; MTUAS, Media and Technology Usage and Attitudes Scale; OR, odds ratio; SE, standard error.

Deave T, Ginja S, Goodenough T, Bailey E, Piwek L, Coad J, Day C, Nightingale S, Kendall S, Lingam R. The Bumps and BaBies Longitudinal Study (BaBBLeS): a multi-site cohort study of first-time mothers to evaluate the effectiveness of the Baby Buddy app. mHealth 2019.

Together we can make  
a difference for future  
generations



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