

## The Assets-based infant feeding help Before and After birth (ABA) intervention for improving breastfeeding initiation and continuation

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1 **The Assets-based infant feeding help Before and After birth (ABA) intervention**  
2 **for improving breastfeeding initiation and continuation: feasibility study**  
3 **results**

4

5 **Abstract**

6 The UK has low breastfeeding rates, with socioeconomic disparities. The Assets-  
7 based feeding help Before and After birth (ABA) intervention was designed to be  
8 inclusive and improve infant feeding behaviours. ABA is underpinned by the  
9 behaviour change wheel and offers an assets-based approach focusing on positive  
10 capabilities of individuals and communities, including use of a Genogram. This study  
11 aimed to investigate feasibility of intervention delivery within a randomised controlled  
12 trial (RCT).

13 Nulliparous women  $\geq 16$  years, (n=103) from two English sites were recruited and  
14 randomised to either intervention or usual care. The intervention – delivered through  
15 face-to-face, telephone and text message by trained Infant Feeding Helpers (IFHs) –  
16 ran from 30-weeks' gestation until 5-months postnatal. Outcomes included  
17 recruitment rates and follow-up at 3-days, 8-weeks and 6-months postnatal, with  
18 collection of future full trial outcomes via questionnaires. A mixed-methods process  
19 evaluation included qualitative interviews with 30 women, 13 IFHs and 17 maternity  
20 providers; IFH contact logs; and fidelity checking of antenatal contact recordings.

21 This study successfully recruited women, including teenagers, from  
22 socioeconomically disadvantaged areas; postnatal follow-up rates were 68.0%,  
23 85.4% and 80.6% at 3-days, 8-weeks and 6-months respectively. Breastfeeding at 8-  
24 weeks was obtained for 95.1% using routine data for non-responders. It was

25 possible to recruit and train peer supporters to deliver the intervention with adequate  
26 fidelity. The ABA intervention was acceptable to women, IFHs and maternity  
27 services. There was minimal contamination and no evidence of intervention-related  
28 harm.

29 In conclusion, the intervention is feasible to deliver within an RCT, and a definitive  
30 trial required.

31 **Keywords**

32 Breastfeeding, assets-based approach, behaviour change theory, peer support,  
33 randomised controlled trial, infant feeding

34 **Introduction**

35 Despite the benefits of breastfeeding for infants and mothers (Victora et al., 2016),  
36 the UK experiences a high drop off in breastfeeding in the two weeks following birth,  
37 very low proportions of babies exclusively breastfed to four or six months, and  
38 marked socio-economic inequalities in breastfeeding (McAndrew et al., 2012).

39 There is strong systematic review evidence that providing additional support to  
40 women who want to breastfeed increases breastfeeding duration (McFadden et al.,  
41 2017). In the UK, provision of breastfeeding peer support is recommended among  
42 disadvantaged populations (Department of Health and Department for Children  
43 Schools and Families 2009, National Institute for Health and Care Excellence 2008);  
44 but the coverage is variable (Grant et al., 2018). However, UK breastfeeding peer  
45 support trials have not demonstrated efficacy, possibly due to insufficiently intensive  
46 interventions, postnatal contact not commencing until after the crucial first 48 hours  
47 post hospital discharge, and contact being reactive rather than proactive (Jolly et al.,  
48 2012).

49 Evidence suggests more intensive contact (Jolly et al., 2012b, McFadden et al.,  
50 2017) and early contact postnatally (Hoddinott, Craig, Maclennan, Boyers, & Vale,  
51 2012a, Ingram, MacArthur, Khan, Deeks, & Jolly, 2010) are important characteristics  
52 of effective breastfeeding support. Proactive contact was found to be effective when  
53 delivered by peer supporters (Dennis, Hodnett, Gallop, & Chalmers, 2002; Forster et  
54 al., 2019), and promising in a feasibility study of an infant feeding team (Hoddinott,  
55 Craig, Britten, & McInnes, 2012c; Hoddinott, Craig, Maclennan, Boyers, & Vale,  
56 2012a). Woman-centred rather than breastfeeding-focussed support may improve  
57 acceptability to women (Hoddinott, Craig, Britten, & McInnes, 2012c; Trickey &

58 Newburn, 2014). In cultures such as the UK, where mixed feeding is common,  
59 inclusion of help with formula feeding in peer support may be important to reduce the  
60 risk of alienating women and improve reach and retention of any intervention  
61 (Thomson, Ebisch-Burton and Flacking., 2015; Trickey & Newburn, 2014). The ABA  
62 intervention combined all these components within an assets-based approach  
63 (Aradon, 2007, McLean, 2011) underpinned by behaviour change theory which  
64 considered the capability, opportunity and motivation for infant feeding mode in line  
65 with the COM-B model of the Behaviour Change Wheel framework (Michie, Atkins, &  
66 West, 2014). Assets based approaches and behaviour change theory are  
67 complimentary. The assets-based approach informed the style and principles of  
68 intervention delivery, and the Behaviour Change Wheel informed intervention  
69 content in the form of specific Behaviour Change Techniques (BCTs) based on  
70 behavioural theory.

71 Assets-based approaches to public health concentrate on positive capabilities, rather  
72 than deficits or needs, and aim to understand and maximise the strengths of  
73 individual and community resources (Aradon, 2007, McLean, 2011). Breastfeeding  
74 assets include resources that are both intrinsic (especially self-efficacy related to  
75 feeding and the willingness to ask for and accept help) and extrinsic (including social  
76 support from a partner, friends and family; social networks of women who have  
77 breastfed and community assets such as breastfeeding groups and peer  
78 supporters).

79 The overall aim of this study was to determine the feasibility of delivering the ABA  
80 intervention within a randomised controlled trial (RCT). The trial protocol is published  
81 (Jolly et al., 2018) with progression criteria for a full trial. This paper reports the  
82 feasibility study findings relating to the following objectives:

- 83 • To determine intervention uptake and engagement; fidelity of intervention  
84 delivery, contamination, and acceptability to the mothers, infant feeding  
85 helpers (IFHs) and other maternity services providers;
- 86 • To determine the feasibility of the RCT processes: recruit women from socio-  
87 economically disadvantaged populations, including teenagers and those living  
88 in areas of low breastfeeding prevalence; retain women in the study;  
89 determine the variability of the primary outcome for a future RCT; explore  
90 women’s perspectives on trial processes; describe feeding support received  
91 by the ‘usual care group’; and to determine the feasibility of data collection to  
92 assess the future cost-effectiveness of the intervention.
- 93 • To explore delivery by paid and volunteer feeding helpers, particularly  
94 acceptability and fidelity of the intervention.

95

96 **Key Messages**

- 97 1. The ABA intervention was acceptable to women, Infant Feeding Helpers and  
98 maternity providers and feasible to deliver within a randomised controlled trial  
99 with adequate fidelity. The intervention should be tested for effectiveness and  
100 cost-effectiveness in a definitive randomised controlled trial.
- 101 2. Researchers approaching women in community antenatal clinics successfully  
102 recruited teenagers and women living in socioeconomically disadvantaged areas.  
103 Introducing the research as an ‘infant feeding’ study enabled recruitment of  
104 women intending to formula feed.
- 105 3. Infant Feeding Helpers were able to offer a woman-centred approach using  
106 assets-based conversations that included behaviour change techniques.

107 4. There was notable difference between the two study sites in terms of level of  
108 contact between Infant Feeding Helpers and women. Context-specific factors are  
109 important in explaining some of this difference.

110

## 111 **Methods**

### 112 ***Study Design***

113 An individually randomised controlled feasibility trial was undertaken with women  
114 randomised on a 1:1 ratio to either the ABA intervention or the comparator (usual  
115 care).

### 116 ***Setting and Participants***

117 The study was undertaken at two distinct geographical sites in England, selected  
118 because they had contrasting volunteer and paid peer support services operating, as  
119 well as relatively high levels of socioeconomic disadvantage and low rates of  
120 breastfeeding initiation and continuation. Women were eligible if they were aged 16  
121 years or older and pregnant with their first child. Potential participants were provided  
122 with study information by community midwives at around 25-28 weeks gestation and  
123 subsequently approached by a researcher at antenatal clinics to gain informed  
124 consent and complete a short baseline questionnaire including questions on  
125 demographics, feeding intentions and wellbeing. We aimed to recruit at least 100  
126 women to the study (50 per site).

### 127 ***Randomisation***

128 At Site A, an independent statistician devised a block randomisation list stratified by  
129 age group (<25 or ≥25 years), inaccessible to the recruiting researcher. Once a  
130 woman had given consent and completed the baseline questionnaire, the researcher  
131 telephoned the randomisation line.

132 At Site B, a different process was required to make sure that the number of women  
133 randomised to the intervention arm matched volunteer peer supporter availability and  
134 capacity in each sub-locality. A clinical trials unit devised a database to randomise  
135 (simultaneously) blocks of women from each sub-locality, following recruitment. In  
136 the case of there being an odd number of women, allocation favoured the  
137 intervention. An independent researcher performed the randomisation.

### 138 ***Intervention***

139 Women allocated to the intervention arm were assigned an IFH, an existing peer  
140 supporter who had received a full-day training in delivery of the ABA intervention. HT  
141 led on the development of training materials and training delivery with input from Dr  
142 Kirsty Darwent (Programme Director, Family Therapy Training Network Ltd). The  
143 training aimed to (1) promote competence and confidence in intervention delivery,  
144 and (2) facilitate understanding of the study to improve fidelity of intervention  
145 delivery. The involved simulations and role-play of contact with women alongside  
146 group-based learning activities. Full details of the intervention and training are  
147 available (Jolly et al., 2018). At Site A, the intervention was delivered by a paid peer  
148 support service, whereas at Site B the peer support service was provided by  
149 volunteers.

150 The intervention offered proactive, woman-centred support using an assets-based  
151 approach and incorporating behaviour change techniques (BCTs). Woman-centred



152 support recognises each woman as an individual and supports her to make her own  
153 decision about how she feeds her baby. Core BCTs for the antenatal part of the  
154 intervention were 'social support' and 'restructuring the social environment'. Based  
155 on the COM-B model, the core BCTs are targeting Motivation (reflective) and  
156 Opportunity (social). The assets-based and women-centred approach also targeted  
157 Motivation (reflective) as well as Capability (psychological). Social support could be  
158 targeted by the IFH encouraging a woman to draw on family and friends for support  
159 or by providing direct support; restructuring the social environment could be targeted  
160 by encouraging a woman to attend a postnatal group. More information on  
161 intervention development including the full list of BCTs can be found in the protocol  
162 paper (Jolly, et al., 2018).

163 The intervention commenced between 30-32 weeks gestation when IFHs contacted  
164 women to offer a face-to-face meeting to discuss infant feeding. This antenatal  
165 meeting took place either at the woman's home (Site A only) or at a mutually  
166 convenient location, such as a café or Children's Centre. IFHs introduced the  
167 intervention and explored the woman's assets for infant feeding. This conversation  
168 led to co-production of a 'Genogram' (family and social network diagram adapted  
169 from Darwent, McInnes & Swanson, 2016) of support available to the woman,  
170 incorporating the wider community-based assets for infant feeding. Women were  
171 encouraged to use this support network to engage in conversations about infant  
172 feeding before and after birth. IFHs also provided women with a specially designed  
173 leaflet detailing help available locally to support infant feeding and to develop social  
174 networks, and offered to accompany women to a local breastfeeding drop-in session  
175 before birth.

176 The intervention continued with monthly telephone conversations/text messages  
177 during pregnancy, aiming to build strong rapport and encouraging the woman to let  
178 the IFH know once she had given birth, in order to commence postnatal support.  
179 Postnatally, daily telephone/text message contact was provided for the first two  
180 weeks, decreasing in frequency from two to eight weeks, and monthly text messages  
181 were sent at 3, 4 and 5 months. Home visits (Site A) or meetings at convenient  
182 locations were arranged. Women were able to stop contacts at any point. If a woman  
183 ceased breastfeeding, the IFH established that the woman was confident in formula  
184 feeding and support discontinued.

#### 185 ***Comparator***

186 Women assigned to the comparator arm received the usual care provided for infant  
187 feeding within their locality. This did not include any proactive support from peer  
188 supporters either antenatally or postnatally. Women were given a leaflet detailing  
189 usual care services to support infant feeding.

#### 190 ***Assessment of feasibility of delivery and acceptability of the intervention***

191 A process evaluation was undertaken to assess (1) feasibility of intervention delivery,  
192 including protocol fidelity, and (2) intervention acceptability to women, IFHs and  
193 maternity services.

194 Process measures included: (1) Programme reach, assessed by recruitment and  
195 retention rates and demographic characteristics of participants, (2) Fidelity of  
196 delivery and use of assets for feeding support, assessed by content analysis of  
197 recorded antenatal meetings, IFH activity logs and qualitative interviews with women  
198 and IFHs, (3) Views of women, IFHs and representatives from local maternity

199 services on intervention acceptability, assessed through qualitative interviews and  
200 (4) Presence of social desirability bias, assessed through comparison of IFH activity  
201 logs, qualitative interviews with women and IFHs, and feeding method reported at 8-  
202 weeks.

### 203 ***Qualitative methods / analysis***

204 Thirty women (21 intervention: Site A=10, Site B=11) were interviewed postnatally at  
205 home mainly after 8-week follow-up, purposively sampled for diversity (including  
206 teenagers (n=3), women in areas of socioeconomic disadvantage, women with  
207 different feeding experiences (gauged from 8-week questionnaire), and women with  
208 different levels of intervention engagement) to explore their experiences of the  
209 intervention. Control participants were asked about experiences of 'usual care'.  
210 Possible cases of contamination between intervention and control groups were  
211 explored with all women.

212 Focus groups were held after completion of the intervention with IFHs at each site  
213 (n=9) (followed by one-to-one telephone interviews for those unable to attend (n=4)).  
214 They investigated intervention acceptability, satisfaction with the training,  
215 experiences of intervention delivery and any perceived barriers or facilitators to  
216 effective delivery.

217 Focus groups and interviews were also undertaken with maternity care providers  
218 (n=17), including community midwives and Infant Feeding staff. These explored  
219 perceptions of the intervention, any impact of intervention provision on existing  
220 services, and any possible cases of contamination.

221 Interviews and focus groups were carried out by researchers from psychology, public  
222 health and midwifery backgrounds and with training in qualitative research methods  
223 (JC, DJ, JI and GT). JI and GT also have experience of research/evaluation into  
224 breastfeeding peer support. JC and DJ who carried out the women's interviews and  
225 with JI the maternity services interviews/focus groups had met the women and some  
226 of the community midwives previously at recruitment. GT who led on the IFH focus  
227 groups/interviews had no previous contact with IFHs.

228 Discussions with women lasted between 45 and 90 minutes. IFH focus groups lasted  
229 ~90 minutes and IFH interviews were about 30-60 minutes. Maternity services focus  
230 groups and interviews lasted 30-60 minutes. Reflective notes were made after each  
231 interview. All interviews were voice-recorded and transcribed verbatim. Transcripts  
232 were checked for accuracy and anonymised.

233 We undertook thematic analysis (Braun & Clarke, 2006) of the qualitative data using  
234 NVivo 11 (QSR International Pty Ltd. Version 11, 2015). First, three researchers (JC,  
235 DJ and GT) listened to the recordings and read/re-read the transcripts of four  
236 participant interviews (one intervention and one usual care from each site) before  
237 independently conducting line-by-line inductive coding. Codes were discussed and  
238 developed into an initial coding framework of themes and sub-themes. JC and DJ  
239 then coded the remaining transcripts using the coding framework, which was  
240 iteratively refined to accommodate new themes. There were frequent discussions  
241 between the three researchers during the development of the coding framework and  
242 before the final coding framework was agreed by the wider team (JC, DJ, GT, JI, SD,  
243 KJ).

244 For each of the women's interviews, BCTs delivered by IFHs were coded as  
245 standalone themes, based on reports of the IFH behaviour, regardless of participant  
246 response. BCTs delivered by people other than the IFHs (e.g. midwives) were not  
247 coded in this analysis.

#### 248 ***Assessment of fidelity***

249 IFHs were asked to audio-record antenatal visits. Recordings were analysed against  
250 fidelity criteria and a checklist of core/non-core BCTs. Additionally, qualitative  
251 interviews with women were checked for reports of BCTs and woman-centredness.

252 IFHs were asked to log each contact with women, recording mode of contact and  
253 response received.

#### 254 ***Outcomes for a future trial***

255 Data were collected on breastfeeding, health-related and economic outcomes to  
256 explore feasibility of data collection for a future definitive trial. These included the  
257 proposed primary outcome for a definitive trial – any breastfeeding at 8-weeks – and  
258 a number of secondary outcomes: breastfeeding initiation; exclusive breastfeeding at  
259 6-8 weeks; any/exclusive breastfeeding at 6-months; duration of any breastfeeding  
260 (if ceased); maternal wellbeing (Warwick-Edinburgh Mental Well-being Scale)  
261 (Tennant et al., 2007) at 8-weeks and 6-months, maternal satisfaction with feeding  
262 experience and support (single-item scale from Hoddinott Hoddinott, Craig,  
263 Maclennan, Boyers, & Vale, 2012a), use of health and feeding support services and  
264 receipt of benefits at 8-weeks.

265 Outcome data were collected at three time-points. At 2-3 days postnatally,  
266 participants were sent a text message asking them to respond with their feeding

267 method since birth (formula milk, breastmilk or both). At 8-weeks and 6-months  
268 postnatally, women were sent a questionnaire to complete and return by post (or by  
269 telephone if preferred). Women were sent a £25 shopping voucher following return of  
270 the 6-month questionnaire. Routinely collected health visitor data were accessed for  
271 missing 8-week feeding outcomes.

## 272 ***Sample Size***

273 We calculated that a sample size of 100 women would allow a reasonable level of  
274 precision in estimation of feasibility outcomes, enabling bounds for 95% confidence  
275 intervals (CIs) for recruitment, follow-up and questionnaire completion to be within  
276 15% of the estimate calculated using an estimate of 50% for all outcomes.

## 277 ***Statistical Analysis***

278 We used STATA 15 (Texas, USA) for statistical analysis. Descriptive statistics were  
279 used to outline participant characteristics by site and randomisation allocation.

280 To measure trial feasibility, we reported recruitment and follow-up rates (with 95%  
281 binomial exact CIs) and data completeness. We described number and method of  
282 IFH contacts with women in the intervention and control arms to assess level of  
283 intervention delivery and any contamination in the control group.

284 Although this study was not powered to ascertain differences between intervention  
285 and control arms, we calculated percentages (with 95% CIs) for breastfeeding and  
286 health-related outcome measures. The variability in the primary outcome between  
287 IFHs was assessed by calculating the intra-cluster correlation coefficient (ICC) using  
288 a null linear model with a random effect for IFH. These data will inform sample size  
289 calculation for a future definitive trial. We describe women's characteristics by

290 allocation group and present summaries for each outcome measure. Primary  
291 analysis was by modified intention to treat, which included all randomly assigned  
292 patients with available data on the primary endpoint (self-report or routinely  
293 collected).

#### 294 ***Ethical considerations***

295 Ethical approval was received in November 2016 from South West – Cornwall and  
296 Plymouth Research Ethics Committee (16/SW/0336). The study was registered with  
297 the International Standard Randomised Controlled Trial Register  
298 (ISRCTN14760978).

299

#### 300 **Results**

##### 301 ***Participant recruitment and follow-up***

302 Of 135 eligible women invited to participate, 103 (76.3%, 95% CIs: 68.2-83.2%)  
303 consented and were randomly assigned to the intervention (n=50) and usual care  
304 (n=53) groups (Figure 1). Recruitment took place February-May 2017 at Site A and  
305 April-August 2017 at Site B. Recruitment finished when at least 50 women had been  
306 recruited from each site.

307 Participant characteristics are shown in Table 1. The sample included nine  
308 teenagers (8.7%), and 38 women (37.3%) from the two most deprived Index of  
309 Multiple Deprivation quintiles. Fourteen women (13.9%) intended to feed their baby  
310 either 'formula milk only' or 'mainly formula'.

311 Late birth notifications (median age of baby when IFH notified of birth=3 days, IQR 0,  
312 30) resulted in delays sending out the postnatal text to collect feeding status at 2-3  
313 days. We were able to send a postnatal text to 84/103 (81.6%) women within 10  
314 days of birth and received responses from 70 (68%, 95% CI: 58.0-76.8%) women.

315 Follow up questionnaires were returned by 88 (85.4%, 95% CI: 77.1-91.6%) and 83  
316 (80.6%, 95% CI: 71.6-87.7%) women at 8-weeks and 6-months respectively. We  
317 accessed routine health visitor data for an additional 10 participants who did not  
318 return their 8-week questionnaire, meaning we had available data on 'any  
319 breastfeeding at 8-weeks' for 95.1% (95% CI: 89.0-98.4%) of women.

320 Comparison of demographic characteristics of responders and non-responders  
321 revealed that non-responders were: younger; more were White British, single and  
322 breastfeeding at 8-weeks; and, fewer were employed, educated to degree level, and  
323 reported intention to breastfeed at baseline [Web-table 1].

324 Two women withdrew from the study (one immediately after randomisation – no  
325 reason given, and one between the two follow-ups – no longer wanted to  
326 participate). One woman suffered a stillbirth and was withdrawn by the study team.

### 327 ***Women's and maternity services providers' views on recruitment and*** 328 ***randomisation processes***

329 All the women interviewed found the recruitment processes and timing acceptable



330 but would not have wanted to be approached before the 20-week scan.

331 *I didn't really want to acknowledge until the 20-week scan, ... 12-weeks... I*  
332 *don't think I was even thinking about post birth. (Participant 16 – Intervention,*  
333 *Site B)*

334 While there were variations as to when women received the study leaflet - some  
335 received the leaflet early, others received it on the day of recruitment - this did not  
336 affect women's willingness to be involved, although there was a preference for  
337 receiving the invitation earlier.

338 *I guess if the midwife of the previous appointment said there's a feeding study*  
339 *going on, this is the leaflet about what they are doing, they're going to be here*  
340 *next time and they might want to have a chat with you, then I suppose that*  
341 *could have given me a bit more time to have a think about it. But I wasn't*  
342 *really thinking I wish I had more time to think about it or anything like that.*  
343 *(Participant 17 – Usual care, Site B)*

344 Women provided diverse responses regarding midwifery staff involvement in study  
345 recruitment. Some felt it was more important to discuss the purpose and  
346 practicalities with the researcher, whilst others felt that midwifery endorsement  
347 helped to authenticate the study.

348 *I probably wouldn't have done anything if it was just you [researcher] if I was*  
349 *honest, it was because my midwife said... this is a research would you want to*  
350 *take part?... it was nice to have that confirmation that it is an actual study*  
351 *going on. (Participant 28 – Usual care, Site B)*

352 Overall, women across both study arms found the randomisation process to be  
353 acceptable. Women wanted to be part of a study, which may or may not have direct  
354 personal benefits, but might make a difference to others.

355 *The study for us I just wanted to be part of it in regards to if it helps somebody*  
356 *else, if it helps us in the future, but if it helps somebody then it's worth being*  
357 *part of. (Participant 2 – Intervention, Site A)*

358 The midwives did not experience any particular difficulties in giving women the  
359 leaflets or introducing the study. They valued the researcher's presence and their  
360 knowledge and time to explain the study. None of the midwives interviewed  
361 experienced any problems in women not wanting to participate. This they believed  
362 could be attributed in part to their personal introductions, such as *'we've got a study'*,  
363 thereby demonstrating their endorsement. Some professionals also considered  
364 women were willing to participate due to the general approach being *'infant feeding*  
365 *rather than just breastfeeding'*.

### 366 ***Infant Feeding Helper recruitment and training***

367 We were able to recruit a sufficient number of existing peer supporters to the ABA  
368 IFH role, with 13 out of a possible 16 peer supporters agreeing to be involved.

369 Although, overall, IFHs reported the ABA training to be acceptable, IFHs at Site B  
370 were generally more positive about it than IFHs at Site A:

371 *The role play was really useful... and doing the genogram was really useful,*  
372 *having a bit of the formula section was really useful because... it's not*  
373 *something I know a lot about, but that was helpful. (IFH – Site B, Focus*  
374 *Group)*

375 IFHs at Site A felt that the training offered little new to them and were uncertain  
376 about the perceived 'prescriptive' nature of the intervention:

377 *I thought the whole conversation thing [role play] was a little bit patronising,*  
378 *because it's what we do anyway... it was a bit like we knew how to sit and talk*  
379 *to mums, so other than that though it was fine. (IFH – Site A, Interview)*

### 380 **Intervention delivery and uptake**

381 IFH activity logs were provided for 49/50 (98%) women. The missing log related to a  
382 woman the IFH had been unable to contact. IFHs attempted to contact all women  
383 assigned to the intervention arm to offer an antenatal visit (Table 2). In total 39/50  
384 (78%) women completed an antenatal meeting, four (8%) could not be contacted,  
385 four (8%) gave birth prematurely before contact was established, two (4%) withdrew  
386 from the intervention and one (2%) declined. No women took up the offer to be  
387 accompanied to a breastfeeding group antenatally.

388 Postnatally, IFHs attempted to contact 46/49 (93.9%) women to offer support, with  
389 24/49 (49.0%) contacted within 48 hours of birth; one woman had a stillbirth so is  
390 omitted from the denominator. Forty women (81.6%) received postnatal support, five  
391 (10%) could not be contacted and one woman declined support. At Site A, IFHs  
392 reported home visits to 7/24 (29.2%) women postnatally. In the first two postnatal  
393 weeks the IFH sent a text/call on a median of 4 days (IQR 2,8). The median number  
394 of days in which two-way contact between IFH and a woman occurred was 2 days  
395 (IQR 1,7) in the first 2-weeks postnatally, and 2 days (IQR 0,4) from 2-8-weeks  
396 postnatally. For women known to be breastfeeding in the first two weeks postnatally,  
397 IFHs made or attempted contact on 57.2% of possible days after they had been  
398 notified of birth. Between 8-weeks and 5-months postnatally, 24/49 women (49.0%)

399 received some support. There was notable variation between sites, with Site B IFHs  
400 maintaining a considerably higher level of contact. Many women reported that they  
401 preferred to text.

402 *...text message was better because at that point I was always feeding him, so*  
403 *it was quite difficult to get the phone, so with the text it was more easy*  
404 *because I just answer when I could and she [IFH] the same. (Participant 27,*  
405 *Site B)*

#### 406 ***Intervention fidelity***

407 Fidelity checking was undertaken on 18 recordings of antenatal meetings (two Site  
408 A; 16 Site B). Results suggest that woman-centred assets-based conversations,  
409 including BCTs, can be delivered by IFHs. Analysis of qualitative interviews with  
410 women showed IFHs were able to offer a woman-centred approach. There was  
411 evidence of delivery of the core BCTs 'social support' and 'restructuring the social  
412 environment' (reported in 18/21 and 20/21 interviews with intervention women  
413 respectively). IFHs completed a genogram with 38 of the 39 women who took part in  
414 an antenatal meeting.

#### 415 ***Intervention acceptability***

416 Qualitative analysis showed the intervention was acceptable to women, IFHs and  
417 maternity services at both sites.

418 Women valued the opportunity of support from someone with similar experiences  
419 and learning about what was available.

420 *I think just having that additional person to talk to makes you feel less alone*  
421 *..... so it puts you at ease really about how you can actually do it. I think*

422 *that's essentially what you want, you want someone to have the same*  
423 *experiences as you, you want someone to be like no it's fine, you're okay.*  
424 *(Participant 2 Site A)*

425 Overall IFHs appreciated the chance to meet women antenatally, to continue contact  
426 for several months, and offer woman-centred support.

427 *When you first started meeting antenatally, you were excited about it, and*  
428 *planning where to meet, and meeting these women. We were so amazed by*  
429 *the diversity of the women and that was really powerful, and how different*  
430 *they were to women we were meeting in our ordinary groups ..., they were*  
431 *really different. (IFH manager Site B focus group)*

432 The antenatal meetings between women and their IFHs were described as relaxed  
433 discussions with an opportunity to have a 'chat' about infant feeding whatever their  
434 preference.

435 *It sometimes opens up that conversation .., it might be easier this way, so*  
436 *definitely having that information at least we know then and we don't look like*  
437 *we're just the breastfeeding police kind of thing, we can speak to them about*  
438 *what they want to do as well. So, it's good I suppose. (IFH3 Site A focus*  
439 *group)*

440 Women provided mostly positive views about the mapping exercise (genogram).

441 *She did a really useful thing actually, which was we did a map of people in my*  
442 *life that I could ask any help for feeding advice and things like that...and just it*  
443 *just made me rethink and evaluate how much I appreciate having some family*  
444 *closer by. (Participant 23 - Site B)*

445

446 Postnatally women appreciated the proactive contacts from their helpers and valued  
447 the range of methods of contact with the IFH, whether by phone, text or in person.  
448 With some of the women identifying the importance of the support on their infant  
449 feeding experiences.

450 *I genuinely believe if it wasn't for the study and for [IFH] and introducing me to*  
451 *the breast friends' group, I don't think I would have got this far and certainly*  
452 *not breastfeeding exclusively. (Participant 19 Site B)*

453 Midwives also reported on the complementary role of the intervention with usual  
454 care.

455 *I think it would help us as well knowing that actually they are being supported*  
456 *that if we haven't got that time necessarily that they are still being supported.*  
457 *(Maternity services Site A focus group)*

#### 458 **Usual care**

459 Peer support services at a woman's request existed at both sites prior to and during  
460 this study. Of 42 women in the usual care arm responding to a question at 8-weeks  
461 on use of feeding support services for advice on infant feeding, seven (16.7%)  
462 reported accessing support from an infant feeding counsellor/breastfeeding  
463 supporter and 11 (26.2%) had attended a breastfeeding group (web-table 2).

#### 464 **Contamination and adverse events**

465 We identified one case of contamination. One woman at Site B reported sharing the  
466 assets leaflet with friends who were in the usual care group. The impact of this is

467 likely to have been low as the assets leaflet represents only one component of the  
468 intervention. There were no reported adverse events related to the intervention.

### 469 ***Outcomes for a definitive trial***

470 Whilst recognising that this feasibility trial was not powered to detect differences  
471 between study arms, we found the proportion of intervention women reporting  
472 breastfeeding initiation and any breastfeeding at 8-weeks and 6-months was  
473 consistently higher than in the usual care group (Table 3). There was no evidence of  
474 social desirability bias. Wellbeing and satisfaction with support are reported in web-  
475 table 2. We demonstrated the feasibility of data collection for a future cost-  
476 effectiveness analysis; use of feeding support services are reported in web-table 2.

### 477 **Discussion**

478 This study aimed to determine the feasibility of delivering the ABA intervention in a  
479 definitive RCT. Our results indicate that (1) we were successful in recruiting women  
480 from areas of socioeconomic disadvantage and teenagers, with adequate follow up  
481 rates; (2) it was feasible to recruit and train existing peer supporters to the new ABA  
482 role, and they were able to deliver the intervention with satisfactory fidelity,  
483 incorporating the delivery of core BCTs in line with behavioural theory and a woman-  
484 centred approach; (3) the intervention was acceptable to women, IFHs and maternity  
485 services; and (4) there were no harms associated with the intervention, and  
486 contamination was low. To our knowledge, this is the first infant feeding study in the  
487 UK to provide woman-centred infant feeding support to women regardless of feeding  
488 intention using an assets-based approach.

489 Whilst systematic reviews of peer support report benefit (McFadden et al., 2017) UK  
490 trials of breastfeeding peer support have not been effective (Jolly et al., 2012). Many  
491 of the trials in systematic reviews are from low-income countries, the usual care  
492 group received a lower level of support for feeding than is standard care in the UK  
493 and the interventions were often more intensive than delivered in UK trials (Jolly et  
494 al., 2012) hence the need to further explore effectiveness of feeding peer support in  
495 the UK.

496 An uncontrolled UK feasibility trial of a breastfeeding peer support intervention  
497 including motivational interviewing by paid peer supporters (Mam-Kind study)  
498 (Copeland et al., 2018) and a feasibility RCT of proactive and reactive telephone  
499 support for breastfeeding women living in disadvantaged areas (FEST) study  
500 (Hoddinott et al., 2012a, 2012b) were both shown to be feasible and acceptable.  
501 Detailed process evaluations of these studies enable comparisons to be drawn with  
502 the ABA study.

503 The ABA recruitment method (researcher approaching potentially eligible women in  
504 community antenatal clinics) was more successful than the approach taken in the  
505 Mam-Kind study where community midwives were asked to pass on women's details  
506 to the research team for recruitment. In the ABA study, our recruitment rate was  
507 76%, versus 24% in Mam-Kind. We also recruited a higher proportion of teenagers,  
508 women with lower educational attainment and women from ethnic minorities,  
509 possibly in part due to Mam-Kind's exclusion of women not planning to breastfeed.  
510 The Mam-Kind study contacted a higher proportion of women within 48-hours of birth  
511 (73% compared to 48% in ABA). Within Mam-Kind the midwife supervising the peer  
512 support teams encouraged hospital midwives to notify peer supporters of births.  
513 Reasonable intervention fidelity was achieved in both the Mam-Kind and ABA



514 studies. Mam-Kind reported difficulties for peer supporters in moving away from  
515 information-giving to a more collaborative approach. This resonated with the ABA  
516 study's experience of working with paid peer supporters. Some women in the Mam-  
517 Kind study reported that cessation of support at 14-days (with facilitated transition to  
518 a breastfeeding/community support group) felt somewhat abrupt, adding validation to  
519 the ABA approach of a longer support period and a more gradual withdrawal of  
520 support to encourage breastfeeding maintenance.

521 In the FEST intervention a feeding team met women face to face after birth in  
522 hospital and aimed to provide daily proactive telephone calls to breastfeeding  
523 women (n=35) in the week following hospital discharge, with the option of continuing  
524 daily calls up until 14-days; a median of eight proactive calls/woman occurred in the  
525 14-days following hospital discharge. In the ABA study, the number of days where  
526 two-way contact was established between woman and IFH in the first two-weeks  
527 postnatally varied from zero to 14, with a median of two. A lower level of two-way  
528 contact compared to FEST was partly due to delays in birth notifications. Also, the  
529 inclusive nature of the ABA intervention meant that women who were formula  
530 feeding required less day-to-day support and the woman-centred approach meant  
531 that contact frequency was negotiated. This was particularly the case at Site A, with  
532 a lower proportion of women breastfeeding.

533 Contextual differences between the two ABA study sites may also have contributed  
534 to the lower overall contact between IFHs and women at Site A, where there were  
535 several preterm births and more women living in socio-economically disadvantaged  
536 and challenging circumstances, as well as uncertainty about the continuation of their  
537 peer support service. Also, at Site A paid IFHs provided support primarily within

538 office hours, whereas at Site B volunteer IFHs were more flexible in their approach to  
539 contacting women in the evenings and at weekends.

#### 540 **Strengths and limitations**

541 This study used robust methods including a usual care group and a comprehensive  
542 process evaluation. Delays in birth notifications were a limitation, resulting in delays  
543 in collection of postnatal feeding status data and delivery of the postnatal  
544 intervention for some women, which has been a recurring challenge in previous UK  
545 trials of peer support (Graffy, Taylor, Williams, & Eldridge, 2004, Jolly et al., 2012).  
546 All qualitative interviews were with women who returned an 8-week questionnaire.  
547 This could have led to positive bias in the responses of interviewees, as the socio-  
548 demographic characteristics of non-responders at 8-weeks were those known to be  
549 associated with lower rates of breastfeeding (McAndrew et al., 2012). For the fidelity  
550 assessment we only had two recorded antenatal meetings from Site A due to IFH  
551 concerns that recording might affect the interaction. Thus the fidelity results can only  
552 be applied with confidence to Site B. The qualitative researchers had different health  
553 related backgrounds, and some had prior experience of evaluating peer support.  
554 These qualities increased the robustness of the analysis. It is possible that IFHs may  
555 have altered the support they provided to any usual care women who they saw in a  
556 breastfeeding group (26.2% of usual care responders attended a breastfeeding  
557 group). However, the use of the genogram and initial discussion of local assets took  
558 place antenatally. No usual care women had antenatal contact with the IFHs and no  
559 contamination was reported by IFHs.

#### 560 **Recommendations for future research**

561 We met our criteria for progression to a future trial: the intervention was acceptable  
562 to women, IFHs and health service staff; we recruited more than 75 women in 5  
563 months; at least 5% of women recruited were teenagers; over 75% of the women in  
564 the intervention group received a contact in both the antenatal and postnatal periods  
565 and over 75% received the assets-based contact; and data on any breastfeeding  
566 was obtained for over 80% of participants at 8 weeks and 6 months. Thus we  
567 consider that the ABA intervention was feasible to deliver within an RCT and a future  
568 definitive RCT is required to determine effectiveness and cost-effectiveness. UK  
569 collection of routine data for feeding method at 8-weeks by health visitors facilitates  
570 high completion for the proposed primary outcome in a full trial.

571 Contamination was low in this feasibility study, so we recommend an individually  
572 randomised trial with clustering by IFH accounted for in the sample size calculation  
573 for the intervention arm.

574 For future intervention delivery, we would need to identify localities with existing peer  
575 support services with stable commissioning and good managerial support to enable  
576 adoption of the ABA approach. Whilst a cluster RCT would reduce contamination  
577 between the intervention and comparator group, the required sample size would  
578 render such a trial not cost-effective. We therefore recommend an individually  
579 randomised trial with any breastfeeding at 8-weeks as the primary outcome. Such a  
580 trial would need a large sample size (>2500), and large number of sites to enhance  
581 generalisability; this would enable us to explore differences in delivery and outcomes  
582 in different contexts. Randomisation should be stratified by site to take into account  
583 different population characteristics and delivery. We recommend targeting areas with  
584 low breastfeeding rates in a future trial and we would investigate how to obtain more  
585 timely birth notification.

586 A challenge relating to the study includes recording the antenatal interaction  
587 between the IFH and women. Interestingly, most women asked in Site B were happy  
588 for the discussion to be recorded anonymously (i.e. no identifying data was  
589 recorded). Concerns were only raised by the IFHs in Site A who did not ask women  
590 whether they would be willing for the recording to take place. The recordings  
591 provided valuable information about fidelity of delivery. Moving forward to a definitive  
592 trial we would recommend that anonymised recording of some interactions take  
593 place and that women are specifically asked whether they would agree to this  
594 recording on the consent form.

## 595 **Conclusion**

596 This study has demonstrated that it is feasible to deliver the ABA intervention within  
597 an RCT with adequate fidelity. It is feasible to recruit teenagers, women from  
598 socioeconomically disadvantaged areas, and women planning to formula feed.  
599 Women were willing to be randomised and follow-up rates were satisfactory. The  
600 intervention was acceptable to women, IFHs and maternity services. There is a need  
601 for a future definitive trial to test both effectiveness and cost-effectiveness of the  
602 intervention in improving rates of breastfeeding initiation and continuation.

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680 **Table 1: Demographic and delivery characteristics of participants**

	Site A			Site B			Overall		
Characteristic	Intervention N=25	Usual care N=28	All N=53	Intervention N=25	Usual care N=25	All N=50	Intervention N=50	Usual care N=53	All N=103
<b>Age at baseline (years), mean (SD)</b>	27.9 (5.2)	27.7 (5.9)	27.8 (5.5)	29.2 (20.5)	29.3 (5.6)	29.3 (5.4)	28.6 (5.2)	28.5 (5.8)	28.5 (5.5)
<b>Age range, minimum-maximum (years)</b>	17.7-37.7	17.9-39.0	17.7-39.0	20.5-43.0	17.9-42.9	17.9-43.0	17.7-43.0	17.9-42.9	17.7-43.0
Missing, n (%)	0 (0)	1 (3.6)	1 (1.9)	0 (0)	0 (0)	0 (0)	0 (0)	1 (1.9)	1 (1.0)
<b>Ethnicity, n (%)</b>									
White British	21 (84.0)	22 (81.5)	43 (82.7)	22 (88.0)	23 (92.0)	45 (90.0)	43 (86.0)	45 (86.5)	88 (86.3)
White Other	1 (4.0)	3 (11.1)	4 (7.7)	2 (8.0)	1 (4.0)	3 (6.0)	3 (6.0)	4 (7.7)	7 (6.9)
Asian	0 (0)	0 (0)	0 (0)	0 (0)	1 (4.0)	1 (2.0)	0 (0)	1 (1.9)	1 (1.0)
Black African	0 (0)	1 (3.7)	1 (1.9)	0 (0)	0 (0)	0 (0)	0 (0)	1 (1.9)	1 (1.0)
Black Caribbean	1 (4.0)	0 (0)	1 (1.9)	0 (0)	0 (0)	0 (0)	1 (2.0)	1 (1.9)	1 (1.0)
Mixed	1 (4.0)	1 (3.7)	2 (3.9)	1 (4.0)	0 (0)	1 (2.0)	2 (4.0)	1 (1.9)	3 (2.9)
Other	1 (4.0)	0 (0)	1 (1.9)	0 (0)	0 (0)	0 (0)	1 (2.0)	0 (0)	1 (1.0)
Missing	0 (0)	1 (3.6)	1 (1.9)	0 (0)	0 (0)	0 (0)	0 (0)	1 (1.9)	1 (1.0)
<b>Employment status, n (%)</b>									

In paid work	18 (72.0)	25 (92.6)	43 (82.7)	22 (88.0)	25 (100)	47 (94.0)	40 (80.0)	50 (96.2)	90 (88.2)
Unemployed	6 (24.0)	1 (3.7)	7 (13.5)	2 (8.0)	0 (0)	2 (4.0)	8 (16.0)	1 (1.9)	9 (8.8)
Full-time education or training	0 (0)	1 (3.7)	1 (1.9)	1 (4.0)	0 (0)	1 (2.0)	1 (2.0)	1 (2.0)	2 (2.0)
Missing	0 (0)	1 (3.6)	1 (1.9)	0 (0)	0 (0)	0 (0)	0 (0)	1 (1.9)	1 (1.0)
<b>Highest level of Qualification, n (%)</b>									
No formal qualification	1 (4.0)	0 (0)	1 (1.9)	0 (0)	0 (0)	0 (0)	1 (2.0)	0 (0)	1 (1.0)
GCSE or equivalent	6 (24.0)	5 (18.5)	11 (21.2)	6 (24.0)	5 (20.0)	11 (22.0)	12 (24.0)	10 (19.2)	22 (21.6)
A/AS-level or equivalent	8 (32.0)	6 (22.2)	14 (26.9)	12 (48.0)	7 (28.0)	19 (38.0)	20 (40.0)	13 (25.0)	33 (32.4)
Degree level or higher	10 (40.0)	16 (59.3)	26 (50.0)	7 (28.0)	13 (52.0)	20 (40.0)	17 (34.0)	29 (55.8)	46 (45.1)
Missing	0 (0)	1 (3.6)	1 (1.9)	0 (0)	0 (0)	0 (0)	0 (0)	1 (1.9)	1 (1.0)
<b>Relationship status, n (%)</b>									
Married/registered civil partnership	9 (36.0)	12 (46.2)	21 (41.2)	13 (52.0)	14 (56.0)	27 (54.0)	22 (44.0)	26 (51.0)	48 (47.5)
Living together	9 (36.0)	11 (42.3)	20 (39.2)	9 (36.0)	9 (36.0)	18 (36.0)	18 (36.0)	20 (39.2)	38 (37.6)
Single	7 (28.0)	3 (11.5)	10 (19.6)	3 (12.0)	2 (8.0)	5 (10.0)	10 (20.0)	5 (9.8)	15 (14.9)
Missing	0 (0)	2 (7.1)	2 (3.8)	0 (0)	0 (0)	0 (0)	0 (0)	2 (3.8)	2 (1.9)
<b>Index of Multiple Deprivation quintile, n (%)</b>									
1 (most deprived)	13 (52.0)	11 (40.7)	24 (46.2)	1 (4.0)	0 (0)	1 (2.0)	14 (28.0)	11 (21.2)	25 (24.5)
2	3 (12.0)	6 (22.2)	9 (17.3)	2 (8.0)	2 (8.0)	4 (8.0)	5 (10.0)	8 (15.4)	13 (12.8)



3	1 (4.0)	7 (25.9)	8 (15.4)	8 (32.0)	3 (12.0)	11 (22.0)	9 (18.0)	10 (19.2)	19 (18.6)
4	7 (28.0)	3 (11.1)	10 (19.2)	6 (24.0)	11 (44.0)	17 (34.0)	13 (26.0)	14 (26.9)	27 (26.5)
5 (least deprived)	1 (4.0)	0 (0)	1 (1.9)	8 (32.0)	9 (36.0)	17 (34.0)	9 (18.0)	9 (17.3)	18 (17.7)
<b>Maternal wellbeing (WEMWBS), mean (SD)</b>	54.1 (9.8)	55.0 (9.2)	54.6 (9.4)	53.4 (6.2)	53.7 (8.4)	53.6 (7.3)	53.7 (8.1)	54.4 (8.7)	54.1 (8.4)
Missing, n (%)	0 (0)	1 (3.6)	1 (1.9)	0 (0)	0 (0)	0 (0)	0 (0)	1 (1.9)	1 (1.0)
<b>Intention to feed, n (%)</b>									
Breastmilk only	10 (40.0)	9 (33.3)	19 (36.5)	7 (28.0)	9 (37.5)	16 (32.7)	17 (34.0)	18 (35.3)	35 (34.7)
Mainly breastmilk	7 (28.0)	7 (25.9)	14 (26.9)	10 (40.0)	6 (25.0)	16 (32.7)	17 (34.0)	13 (25.5)	30 (29.7)
Half and half	4 (16.0)	6 (22.2)	10 (19.2)	6 (24.0)	6 (25.0)	12 (24.5)	10 (20.0)	12 (23.5)	22 (21.8)
Mainly formula	2 (8.0)	2 (7.4)	4 (7.7)	1 (4.0)	0 (0)	1 (2.0)	3 (6.0)	2 (3.9)	5 (5.0)
Formula milk only	2 (8.0)	3 (11.1)	5 (9.6)	1 (4.0)	3 (12.5)	4 (8.2)	3 (6.0)	6 (11.8)	9 (8.9)
Missing	0 (0)	1 (3.6)	1 (1.9)	0 (0)	1 (4.0)	1 (2.0)	0 (0)	2 (3.8)	2 (1.9)
<b>How participant was fed as a baby, n (%)</b>									
Breastfed entirely	7 (28.0)	8 (29.6)	15 (28.9)	9 (36.0)	12 (48.0)	21 (42.0)	16 (32.0)	20 (38.5)	36 (35.3)
Formula fed entirely	8 (32.0)	13 (48.2)	21 (40.4)	5 (20.0)	3 (12.0)	8 (16.0)	13 (26.0)	16 (30.8)	29 (28.4)
Mixed feeding	10 (40.0)	5 (18.5)	15 (28.9)	7 (28.0)	6 (24.0)	13 (26.0)	17 (34.0)	11 (21.2)	28 (27.5)
Don't know	0	1 (3.7)	1 (1.9)	4 (16.0)	4 (16.0)	8 (16.0)	4 (8.0)	5 (9.6)	9 (8.8)
Missing	0 (0)	1 (3.6)	1 (1.9)	0 (0)	0 (0)	0 (0)	0 (0)	1 (1.9)	1 (1.0)
<b>Knows anyone who has</b>	22 (88.0)	25 (92.6)	47 (90.4)	21 (84.0)	25 (100)	46 (92.0)	43 (86.0)	50 (96.2)	93 (91.2)

<b>breastfed their baby, n (%)</b>									
Missing	0 (0)	1 (3.6)	1 (1.9)	0 (0)	0 (0)	0 (0)	0 (0)	1 (1.9)	1 (1.0)
<b>Gestational age at birth (weeks), mean (SD)</b>	39.0 (2.3)	40.1 (1.2)	39.6 (1.9)	39.7 (1.7)	39.3 (1.8)	39.5 (1.8)	39.4 (2.0)	39.7 (1.6)	39.5 (1.8)
Missing	1 (2.0)	1 (3.6)	2 (3.8)	0 (0)	0 (0)	0 (0)	1 (2.0)	1 (1.9)	2 (1.9)
<b>Premature baby, n (%)</b>	5 (20.8)	0 (0)	5 (9.8)	2 (8.0)	2 (8.0)	4 (8.0)	7 (14.3)	2 (3.9)	9 (8.9)
Missing	1 (2.0)	1 (3.6)	2 (3.8)	0 (0)	0 (0)	0 (0)	1 (2.0)	1 (1.9)	2 (1.9)
<b>Mode of delivery, n (%)</b>									
Vaginal birth	5 (26.3)	10 (50.0)	15 (38.5)	10 (47.6)	12 (50.0)	22 (48.9)	15 (37.5)	22 (50.0)	37 (44.1)
C-section (planned)	1 (5.3)	1 (5.0)	2 (5.1)	2 (9.5)	2 (8.3)	4 (8.9)	3 (7.5)	3 (6.8)	6 (7.1)
C-section (emergency)	4 (21.1)	4 (20.0)	8 (20.5)	4 (19.1)	6 (25.0)	10 (22.2)	8 (20.0)	10 (22.7)	18 (21.4)
Forceps, ventouse, vacuum delivery	9 (47.4)	5 (25.0)	14 (35.9)	5 (23.8)	4 (16.7)	9 (20.0)	14 (35.0)	9 (20.5)	23 (27.4)
Missing	6 (24.0)	8 (28.6)	14 (26.4)	4 (16.0)	1 (4.0)	5 (10.0)	10 (20.0)	9 (17.0)	19 (18.4)
<b>Duration of mother hospital stay, n (%)</b>									
<24hrs	3 (15.8)	6 (30.0)	9 (23.1)	5 (23.8)	4 (16.7)	9 (20.0)	8 (20.0)	10 (22.7)	18 (21.4)
24-48hrs	11 (57.9)	6 (30.0)	17 (43.6)	7 (33.3)	6 (25.0)	13 (28.9)	18 (45.0)	12 (27.3)	30 (35.7)
>48hrs	5 (26.3)	7 (35.0)	12 (30.8)	9 (42.9)	14 (58.3)	23 (51.1)	14 (35.0)	21 (47.7)	35 (41.7)
Home birth	0	1 (5.0)	1 (2.6)	0 (0)	0 (0)	0 (0)	0 (0)	1 (2.3)	1 (1.2)
Missing	6 (24.0)	8 (28.6)	14 (26.4)	4 (16.0)	1 (4.0)	5 (10.0)	10 (20.0)	9 (17.0)	19 (18.4)

<b>Baby admitted to neonatal unit, n (%)</b>	4 (21.1)	2 (10.0)	6 (15.4)	3 (14.3)	2 (8.3)	5 (11.1)	7 (17.5)	4 (9.1)	11 (13.1)
Missing	6 (24.0)	8 (28.6)	14 (26.4)	4 (16.0)	1 (4.0)	5 (10.0)	10 (20.0)	9 (17.0)	19 (18.4)

681 WEMWBS = Warwick-Edinburgh Mental Wellbeing Scale<sup>97</sup> (score ranging from 14-70; 70 indicates highest level of mental wellbeing)

682 Table 2: **Infant Feeding Helper reported contact with women**

	Site A	Site B	Overall
Antenatal contact attempted	25/25 (100%)	25/25 (100%)	50/50 (100%)
Antenatal visit completed	17/25 (68%)	22/25 (88%)	39/50 (78%)
Postnatal contact attempted <sup>a</sup>	24/24 (100%)	22/25 (88%)	46/49 (93.9%)
Postnatal support provided	18/24 (75%)	22/25 (88%)	40/49 (81.6%)
Contact attempted by Infant Feeding Helper within 48 hours of birth	6/24 (25%)	18/25 (72%)	24/49 (49%)
Number of days contact made/attempted by IFH in 14 days postnatal, median (IQR)	N=24 2.5 (1.5,3)	N=25 8 (4,14)	N=49 4 (2,8)
Number of days two-way contact established in 14 days postnatal, median (IQR)	N=24 1 (0,2)	N=25 7 (3,13)	N=49 2 (1,7)
Number (%) of days contact made/attempted by IFH in 14 days postnatal (denominator women who were known to be breastfeeding (from 8wQ) that IFH had been informed about birth)	Eligible days for support=162 <sup>b</sup> 29 (17.9%)	Eligible days for support=235 <sup>c</sup> 198 (84.3%)	Eligible days for support=397 227 (57.2%)
Number of two-way contact days from 2-8 weeks postnatal, median (IQR)	N=24 1 (0,2)	N=25 4 (1,7)	N=49 2 (0,4)
Support provided 8-weeks to 5-months	9/24 (37.5%)	15/25 (60%)	24/49 (49.0%)

683 <sup>a</sup> one woman suffered stillbirth and was withdrawn from the study

684 <sup>b</sup> excludes stillbirth (n=1), no 8-week questionnaire data (n=4), no IFH notes available (n=1)

685 <sup>c</sup> excludes declined support (n=2), out of the country (n=1)

686 **Table 3: Estimates from feasibility study: breastfeeding initiation, any and exclusive breastfeeding**  
 687 **at 8 weeks and 6 months**

	Intervention N=50		Usual care N=53		All N=103	
	n/N	% (95%CI)	n/N	% (95%CI)	n/N	% (95%CI)
Breastfeeding initiation	35/41	85.4 (70.8, 94.4)	36/47	76.6 (62.0, 87.7)	71/88	80.7 (70.9, 88.3)
Any breastfeeding at 8 weeks	23/41	56.1 (39.7, 71.5)	22/47	46.8 (32.1, 61.9)	45/88	51.1 (40.2, 61.9)
Any breastfeeding at 8 weeks (including health visitor data) <sup>1</sup>	24/48	50.0 (35.2, 64.8)	22/50	44.0 (30.0, 58.7)	46/98	46.9 (36.8, 57.3)
Any breastfeeding at 6 months	18/39	46.2 (30.1, 62.8)	16/44	36.4 (22.4, 52.2)	34/83	41.0 (30.3, 52.3)
Exclusive breastfeeding at 6-8 weeks (last 24hrs)	16/41	39.0 (24.2, 55.5)	17/47	36.2 (22.7, 51.5)	33/88	37.5 (27.4, 48.5)
Exclusive breastfeeding at 6-8 weeks (since birth)	11/41	26.8 (14.2, 42.9)	12/47	25.5 (13.9, 40.3)	23/88	26.1 (17.3, 36.6)
Exclusive breastfeeding at 6 months (last 24hrs definition)	12/39	30.8 (17.0, 47.6)	13/44	29.5 (16.8, 45.2)	25/83	30.1 (20.5, 41.2)
Exclusive breastfeeding at 6 months (no other food/drink ever definition)	3/39	7.7 (1.6, 20.9)	2/44	4.5 (0.5, 20.9)	5/83	6.0 (2.0, 13.5)

688  
 689 <sup>1</sup>ICC for infant feeding helpers 0.039  
 690