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Process lessons from evaluating a combined continuity of carer and home birth scheme

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6 Process lessons from evaluating a combined continuity of carer and
7 home birth scheme

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17

18

19 **Abstract**

20 **Introduction**

21 Continuity of midwifery carer improves outcomes, but there is significant variation in how such
22 schemes are implemented and evaluated cross-culturally. The Angus home birth scheme in
23 Scotland incorporates continuity of carer throughout pregnancy, labour, birth and the postnatal
24 period.

25 **Methods**

26 Manual maternity case note review to evaluate the 80% continuity of carer and 3% planned
27 home birth rate targets.

28

29 **Results**

30 Of 1,466 women booking for maternity care, 69 joined the scheme. Forty-four had a planned
31 home birth (3% overall), of whom seven were originally deemed ineligible. Of the 44, eight
32 (18%) also achieved 80% continuity of carer with the primary midwife; by including a home
33 birth team colleague the continuity rate rose to 73%. Women whose care achieved home birth
34 and continuity targets had lower deprivation scores. Eligibility issues, women's changing
35 circumstances and data recording lapses were complicating issues.

36 **Conclusions**

37 Targets must be both feasible and meaningful and should be complemented by assessing a broad
38 range of outcomes while viewing the scheme holistically. By expanding eligibility criteria, the
39 home birth rate target was met; including input from a home birth team colleague in the
40 calculation meant the continuity target was nearly met. With dedicated and competent staff,
41 adequate resource and political support, and when considered in the round, the scheme's
42 viability within local services was confirmed. Other generalizable learning points included the

43 need to standardise definitions and data recording methods. Comparability across schemes
44 helps grow the evidence base so that the links between processes and outcomes can be
45 identified.

46

47

48 **Keywords**

49 Continuity of carer Home birth Maternal choice

50 Caseload midwifery Socio-economic inequality Record keeping

51

52 **Background**

53 Continuity of midwifery care is known to improve clinical and psychosocial outcomes¹⁻⁴ and
54 to be cost-effective.^{5,6} While not a new concept,⁷ the United Kingdom's (UK) renewed policy
55 focus on implementing continuity of carer^{8,9} includes a drive to identify robust evaluation
56 mechanisms. In England, the Maternity Transformation Programme¹⁰ is designed to deliver
57 *Better Births*⁸, while in Scotland an Implementation Programme Board¹¹ co-ordinates the
58 adoption of the Scottish Government's *Best Start*⁹ recommendations. Principal among these is
59 ensuring continuity of carer within a high quality and accessible family-centred care package.

60 Continuity of carer schemes vary, but most involve care by a primary midwife, together with a
61 'buddy midwife' who deputises when required;¹² both provide the same care. While all new
62 schemes' targets must be evaluated (in this case 80% for continuity of carer and 3% for planned
63 home birth), the definitions for several key elements are only now being broadly agreed upon.
64 As such, the evaluation process is complex.¹³ There is also a danger of confusing process and
65 outcome variables. Continuity of carer – the process – is only a means to achieving improved
66 clinical and psychosocial outcomes. However, most studies do not explicitly measure the
67 continuity of care or carer provided, leaving unanswered the question of whether the claimed
68 benefits are subject to either a dose-response or a certain threshold of continuity.

69 The advantages and disadvantages of planned home birth have long been debated.¹² Choice
70 about place of birth is advocated within UK national policy guidelines.^{9,14} However, in practice,
71 real choice is often restricted¹² with the evidence on safety and choice hotly contested.¹⁵ Home
72 birth rates vary around the UK from virtually nil in some areas to as high as 10% in others.¹⁶
73 Any home birth scheme must be able to demonstrate that it is offered equitably. While not
74 unchallenged,¹⁷ the idea that home birth is a middle class preserve has been noted
75 internationally.¹⁸⁻²⁰ In this paper, we present the evaluation of a new scheme offering planned
76 home birth within a package involving continuity of carer throughout pregnancy, childbirth and

77 the postnatal period as an awareness raising exercise for others planning continuity of carer or
78 combined home birth and continuity schemes.

79

80 *The local context*

81 The planned home birth rate in NHS (National Health Service) Tayside – one of 14 regional
82 Health Boards in Scotland – is historically low: in 2015 it was 0.28% (12/4285 births). To
83 address this issue in Angus - a county within Tayside with an annual birth rate of circa 1,000 -
84 local midwifery management introduced a caseloading continuity of midwifery carer package
85 incorporating planned home birth. The Angus Home Birth (AHB) scheme ('the Angus scheme')
86 was initially offered only to parous women deemed 'low risk', consistent with the Birthplace
87 in England study criteria¹² (which informed guidance from the National Institute for Health and
88 Care Excellence [NICE]²¹). Approximately 30% of pregnant women in Angus were deemed
89 eligible.

90 Two part-time midwives (0.5 whole-time-equivalent [WTE]) started this caseload scheme,
91 splitting the workload equally. The two principal targets were: 1) a 3% home birth rate (county-
92 wide, about 30 births annually); and 2) at least 80% continuity of carer by the primary midwife
93 throughout pregnancy, labour and the postnatal period. Another community midwife from the
94 wider community team provided care if neither primary nor 'buddy' midwife could attend
95 antenatally or postnatally, and also provided 'on call' home birth cover when required. Both
96 original Angus scheme midwives left in the initial 18 months for reasons unrelated to the
97 scheme and were replaced by three midwives initially working part-time (0.5 WTE), now full-
98 time. All the midwives in the home birth team and the wider community team had undergone
99 the same midwifery education and training, worked for the same employer, and were subject to
100 the same working guidelines.

101

102 *The evaluation*

103 This paper reports our evaluation of the Angus scheme in relation to its planned home birth
104 (3%) and continuity of carer (80%) targets. Our secondary objectives included evaluating the
105 characteristics of the women whose care achieved the home birth and continuity targets, those
106 whose care did not, those who declined the service, and those who were not eligible.

107

108 **Methods**

109 Phase I involved a case note review of all women entering the Angus scheme.

110 Group 1 included women whose care package achieved both home birth and continuity targets;

111 Group 2 included women who entered the scheme but whose care package achieved either just

112 one of the targets, or neither of them; Group 3 included women who were eligible but declined

113 the care package. For additional comparisons, we randomly selected women who were

114 ineligible (Group 4), and also included women who were ineligible according to the original

115 criteria but who nevertheless joined the scheme (Group 5). Data extraction and analysis of hard

116 copy notes was carried out by AS (academic midwife), and SS (clinical midwife). Formal ethics

117 approval was not required for Phase I as it was deemed a service evaluation. However, approval

118 to access records was obtained from the local NHS Caldicott Guardian – a senior Health Board

119 official responsible for ensuring patient-identifiable information is handled appropriately.

120 Research University data management regulations applied throughout. Data were entered

121 directly into a password-protected Excel database on a laptop and uploaded to the university's

122 secure cloud-based system. No personal identifiers were recorded. All mothers and midwives

123 were given a unique anonymous identifier.

124 We included women who booked from the scheme's inception (April 2016) to October 2017

125 (latest recorded Expected Date of Delivery 31/3/2018) giving an 18-month evaluation period.

126 We conducted an inter-group analysis of basic clinical and socio-demographic data, using

127 Anova and Chi-square (χ^2) as appropriate. Parity was grouped: primigravida; Para 1; and Para
128 2+. We used the Scottish Index of Multiple Deprivation (SIMD)²² estimation of an individual's
129 deprivation score using their postcode (zip code). This is a standard mechanism for evaluating
130 the significance of deprivation in health outcomes.

131 We recorded the relevant gestation of each planned and unplanned antenatal visit. We recorded
132 which midwives attended the woman throughout pregnancy, labour/birth and the postnatal
133 period. We used a standard 'density' approach to calculate continuity of carer²³ by identifying
134 the denominator (the number of planned antenatal / postnatal visits; labour counted as one visit),
135 and the numerator (how many of these involved the primary midwife; and, alternatively the
136 primary midwife and a home birth team colleague).

137 Phase II involved qualitative evaluation of stakeholder perceptions. These findings are
138 described in detail in the accompanying paper (this volume).

139 **Results**

140 *Primary Outcome*

141 During the 18-month evaluation period, 1,466 women booked for antenatal care in Angus, of
142 whom about 440 would have been considered eligible for this study. While we cannot be certain
143 that all 440 were told about the scheme due to documentation issues, 52 accepted. A further 17
144 women, previously ineligible before the criteria were expanded to include nulliparous women
145 and multiparous women with some medical complexity, were also accepted following
146 discussions which included a consultant obstetrician, meaning that a total of 69 joined the
147 scheme. Forty-four had a planned home birth for a rate of almost 3.1% (44/1435), thus meeting
148 the scheme's first target [the denominator was reduced by a calculated 2.1% non-continuing
149 pregnancy rate²⁴ from 1,466 to 1,435]).

150 Twenty-five of the 69 did not have a planned home birth. Reasons included change of mind
151 (n=7); requiring induction (n=9); medical advice [large baby; fetal abnormality; breech] (n=3);
152 intra-uterine death (n=1). Five were transferred during labour (augmentation n=2); preterm
153 (n=2); prolonged rupture of membranes (n=1). Of these 25, 17 had a normal birth at term. There
154 were also four postnatal transfers: perineal suturing (n=2); post-partum haemorrhage (n=1);
155 retained placenta (n=1).

156 Eighteen percent of the women who gave birth at home also achieved the 80% continuity of
157 carer target with their primary midwife throughout (8/44 - last row; Figure 1). Excluding the
158 postnatal period increased the rate to 55% (24/44) (third row; Figure 1). Including the buddy
159 midwife in the 'care throughout' calculation resulted in a continuity rate of 73% (i.e. 32/44).

160 **Figure 1**

161
162 Many women did not enter the scheme at booking (usually around 10-12 weeks) as initially
163 anticipated. Recruitment 'spikes' occurred at 16, 24, 28 and 35 weeks (mean 23 weeks; mode

164 24; range 6-38). Having fewer antenatal visits in the scheme reduces the denominator when
165 calculating continuity of carer.

166

167 **Secondary outcomes**

168 There were no statistically significant differences between the deprivation (SIMD) profiles of
169 those joining and those not joining the scheme ($\chi^2=1.779$; $p=.77$; $df=4$). Women who achieved
170 both home birth and continuity targets were less likely to have high deprivation scores. None
171 was in the most deprived quintile, while those in the scheme who had a hospital birth were more
172 likely to be from the two most deprived quintiles (Figure 2).

173 **Figure 2 SIMD profiles**

174

175 Those not eligible for and not in the scheme (see fifth row, Figure 2) had a similar SIMD profile
176 to the women who were in it and achieved all targets (see first row, Figure 2). A quarter of those
177 giving birth at home were from the two highest deprivation quintiles (SIMD 1 and 2).

178 The SIMD profile of women entering the scheme and the general county population profile
179 appeared broadly similar. However, women from the 'least deprived' quintile (SIMD 5) were
180 much more likely to join the scheme (12.9% Angus scheme vs. 1.6% general population) ($\chi^2 =$
181 45.665 ; $p<.001$; $df=4$).

182 Age was not a significant variable, either between the five groups ($F=1.116$; $p>.05$) (Table 1),
183 or between those in the scheme who achieved a home birth and those who did not (mean 30.7
184 vs. 29.5; $F=.898$; $p>.05$).

185 **Table 1 Age and clinical data**

186

187 For those having a home birth, analysis of parity showed no significance ($r=1.956$; $df=2$; $p>.05$).

188 Of ten women in the Angus scheme who had a previous instrumental birth, seven had a planned
189 home birth. One of these seven, and the three who did not give birth at home, were all designated
190 'not low risk' towards the end of the pregnancy. Of the seven achieving a home birth, five also
191 achieved the 80% continuity target (rates for the other two were 70% and 79%). The one woman
192 in the scheme who had had a previous caesarean birth required a further caesarean. Two of the
193 women entering the scheme – one eligible, one theoretically ineligible - had a preterm birth;
194 both births were in hospital.

195

196 **Discussion**

197 Improving pregnancy outcomes is both a research and a policy priority.^{14,25,26} Evaluating an
198 innovative scheme as safe, effective and popular can be said to address satisfactorily its
199 political, clinical and social requirements. These include ensuring clinical safety and social
200 acceptability, as well as meeting management-specified targets. Cheyne et al¹³ note that
201 continuity is ‘deceptively complex’ and that evaluating all the physical, political, financial,
202 environmental, resource and personnel factors requires a thorough understanding of
203 terminology and context. Our evaluation focused on the Angus scheme’s planned home birth
204 and continuity of carer targets and, through our qualitative evaluation (this volume), its
205 acceptability to stakeholders.

206 The debate about place of birth varies around the world. In some low resource settings, birth in
207 maternity units is encouraged in order to reduce maternal and neonatal mortality and morbidity
208 rates.²⁷ In high resource countries with effective infrastructure and a strong autonomous
209 midwifery profession, the debate more often concerns choice.²⁸ Had the Angus scheme become
210 associated with mortality or significant morbidity it would have been suspended by
211 management. While we noted relevant clinical outcomes, these were not part of our formal
212 evaluation. This evaluation focused on the scheme’s principal targets (percent home birth and
213 continuity of carer), as well as acceptability with stakeholders.

214 Calculating the home birth rate is not difficult. However, evaluating continuity of carer is more
215 complex because of competing understandings about what to count and different recording
216 systems. From our evaluation of the Angus scheme, we offer a discussion of salient issues
217 regarding the process evaluation of home birth and continuity of carer. Our accompanying paper
218 reports our assessment of stakeholder perceptions.

219

220 *Eligibility and awareness*

221 The Angus Home Birth scheme achieved its 3% planned home birth target. However, this
222 included some women originally deemed ineligible but who nevertheless chose home birth.
223 Eligibility was initially restricted to ‘low risk’ parous women using the Birthplace study’s
224 definition - effectively meaning the absence of a medical condition or obstetric complication¹².
225 However, increasing demand and the midwives’ growing confidence led to greater choice and
226 flexibility about informed birthplace discussions. In addition to eight women originally
227 excluded because they were primigravid, nine parous women were accepted following
228 discussion - which included the consultant obstetrician - about risk factors (high parity; previous
229 caesarean; elevated BMI; medical history). The Birth in Angus Facebook page reported a 5%
230 home birth rate in 2019. This greater demand was partly driven by women’s positive stories,
231 some of them on the Angus Home Birth private Facebook page. Referring to the Albany
232 Midwifery Practice, a continuity of carer scheme in a deprived area of London, Reed²⁹ called
233 this “the cultural norm of birth at home”, something we address in our accompanying paper.

234 Such schemes should be advertised and promoted equitably. A long-standing body of literature
235 details the possible influence of social class on childbirth decisions,³⁰⁻³² although before its
236 closure, the Albany Midwifery Practice had demonstrated home birth’s viability even in areas
237 of high social disadvantage.¹⁷ To those who suspect that home birth is a middle class
238 phenomenon, we can offer a qualified rebuttal. Using the standard Scotland-wide calculation
239 of deprivation scores, we found that a quarter of the women achieving planned home birth in
240 Angus were from the two *most* deprived quintiles. However, our analysis also suggests that
241 better-off women were over-represented in the scheme and were also more likely to achieve
242 both planned home birth and continuity of carer targets. Any evaluation of similar schemes
243 must examine the issues of eligibility and uptake.

244

245 *Which targets?*

246 Meeting the continuity of carer target was significantly helped by flexible working patterns
247 whereby midwives could schedule antenatal visits to suit the women's other commitments and
248 their own workloads; such flexible planning also helped to ensure adequate cover for home
249 births (see our accompanying paper for more detail). The original continuity of carer target
250 throughout pregnancy, labour/birth and the postnatal period was 80%. Less than a fifth of those
251 having a planned home birth achieved this continuity with just the primary midwife; our initial
252 conclusion is that this target was unrealistic. Including a 'buddy' midwife (the scheme
253 comprising two, then three midwives) significantly improved the continuity of carer rate. Our
254 qualitative evaluation established that each woman could meet this 'buddy midwife' before
255 labour. However, it becomes harder in larger teams to ensure a meaningful relationship, which
256 is, after all, the purpose of continuity of carer. In pursuing its 75% continuity of carer target,
257 the Scottish Government's *Best Start* implementation group suggests up to one colleague during
258 the antenatal and postnatal periods, and up to two during labour and birth. It is acknowledged
259 that it is difficult for a labouring woman to build up a trusting rapport with someone whom she
260 has just met, but the intention is that there is at least a known caregiver present. In England, the
261 *Better Births* target is a 20% annual increase of births having continuity of carer.¹⁴ To have
262 comparable data, consultation between those monitoring different schemes is essential.

263 A care package may only just reach, or just fail to reach, a target. Thresholds, however defined,
264 produce a binary outcome, although the actual difference in care terms may be marginal. They
265 are also, to an extent, arbitrary: one woman's continuity of carer rate was 79%, which 'failed'
266 to meet the Angus scheme's target while meeting the later Scotland-wide target. Targets can be
267 altered by allowing the inclusion of colleagues. Target-setting should not be arbitrary or done
268 simply to ensure targets are met. Perhaps most importantly, targets produce binary outcomes
269 which may mask a dose-response finding.

270 We raise three notes of caution regarding targets: firstly, a target of *all women* receiving at least
271 75% continuity of carer from two named midwives is quite different from a target of 75% of

272 *women* receiving *all* their planned visits from those midwives. Both options have been
273 suggested in national strategy discussions, but despite appearing similar, these are quite
274 different calculations. Secondly, meeting a target may be satisfying, but this is merely a proxy
275 for achieving good care and better clinical and psychosocial outcomes. Thirdly, it is important
276 to see targets in the wider context of care evaluation; care planners should identify how to
277 respond when targets are missed.

278

279 *Which visits are counted?*

280 Continuity of midwifery carer is an evolving model in the UK.^{9,14} Schemes variously include
281 individual caseloading and team continuity.³³ While Sandall's monitoring and evaluation
282 framework offers helpful definitions and advice,³³ a diversity of schemes and implementation
283 strategies risks inconsistency. Various instruments are available to complement the process
284 evaluation,³⁴ but first it must be established whether the process is being implemented
285 effectively. Targets may reflect local priorities and circumstances. The Angus scheme covers
286 pregnancy, labour/birth and the postnatal period. The 80% primary midwife continuity target
287 was achieved in most cases for the antenatal and intrapartum periods, but not when including
288 the postnatal period. Having only two (then three) part-time midwives was a factor: having two
289 present at the birth made it less likely that one would also be working when postnatal visits
290 were needed. With all three midwives now full-time, this situation has eased.

291 Some schemes omit labour/birth or postnatal figures in their targets; parallel calculations for
292 different combinations of antenatal, labour/birth and postnatal care are feasible. Crucially, the
293 'visits' denominator should only include planned visits, whether they are midwife-only or
294 involve the midwife and a doctor or other specialist. The intrapartum period counts as a single
295 visit, and unplanned visits (e.g. to triage) do not count.

296 Late booking (or, as here, late entry to the scheme) affects the visits denominator. This is a
297 potential risk where the planned number of visits is low, as is common in many low resource
298 countries.³⁵ Missing just one visit may mean that the target is missed. Threshold continuity
299 targets raise the possibility of perverse incentives: arranging extra visits where continuity can
300 be guaranteed increases both numerator and denominator, and therefore the continuity of carer
301 rate. Since health service managers have been accused of manipulating figures so as to achieve
302 targets,³⁶ this is not entirely fanciful. It is our impression that autonomous midwives would
303 resist such manipulation.

304

305 *Which midwives provide the care?*

306 In the Angus scheme the primary midwife provided care, involving a ‘buddy’ or other
307 community midwife when required. The ‘buddy’ should be designated in advance to avoid the
308 criticism that continuity of carer occurs by chance rather than by design. Some schemes plan
309 care around a wider midwifery team.³³ With a small team a woman can feasibly meet each
310 midwife during pregnancy, but covering the birth is more problematic. The first postnatal visit
311 may also be difficult if more than one team midwife attended intrapartum, especially with a
312 prolonged or overnight labour. In the UK, teams of up to six-eight midwives (perhaps
313 comprising six Whole Time Equivalent [WTEs]) have been suggested.³⁷ Over 60% of UK
314 midwives work part-time,³⁸ so in practice, this means at least eight midwives. Whether genuine
315 continuity of carer can be achieved may be questioned if a critical ingredient is a meaningful,
316 trusting relationship. Additional group-based meetings can be arranged, including group care
317 visits and social get-togethers; the content of such meetings will determine whether meaningful
318 relationships can develop. This can be assessed by asking women if they knew the midwife
319 before the onset of labour, and felt safe and supported in her care.¹¹

320 Staff turnover, a recognised feature of contemporary healthcare, should be factored in when
321 setting targets. Both initial midwives left the Angus scheme within 18 months, inevitably
322 impacting continuity rates.

323

324 *Record keeping and monitoring issues*

325 When evaluating this scheme, the switch from hand-written to electronic recording was
326 incomplete. Nevertheless, the same recording issues apply whether the record is digital or
327 paper-based. Additional (i.e. not pre-planned) visits must be clearly flagged to avoid being
328 included in continuity calculations. When and why women meet other members of the team
329 (e.g. through 'joint visits'), and whether this is significant enough to be included in continuity
330 calculations must be recorded carefully. In our analysis, most women were deemed 'low risk',
331 so few additional visits were required; this will not apply in all schemes. The rationale for
332 including 'ineligible' women was also sometimes hard to identify in the documentation, but
333 appears to have resulted from greater demand from women, and greater confidence among
334 midwives, with a corresponding desire to empower women with more choice.

335 We are aware that databases are being created to monitor continuity. Busy midwives may resist
336 recording yet more information. Indeed, we could not always identify when joint visits
337 occurred. If recording practices vary, then establishing an accurate picture or making
338 comparisons becomes difficult. Electronic records should allow for visits to identify more than
339 one practitioner's name. Recording and monitoring requirements must be practicable, and
340 compliant with data storage regulations.³⁹

341

342 *Limitations*

343 The statistical analysis in this small-scale study is for illustrative purposes only. Comprehensive
344 evaluations would require considerably more planning and resources.¹³ Nevertheless, while not

345 claiming generalisability, we believe others in similar situations may benefit from considering
346 some of process issues we identified. Continuity schemes linked to *Better Births*¹⁴ and *The Best*
347 *Start*⁹ are being rolled out across the United Kingdom and are also being implemented in many
348 other countries. In addition, the focus on high quality midwifery care is of broad international
349 interest.⁴⁰

350 Local health records were not fully digitised. There were documentation quality issues, notably
351 around which women were told about the scheme, and regarding when women changed their
352 mind. However, assigning women to the appropriate groups for analysis was feasible. As we
353 conducted a total population sample of women entering the Angus scheme, selection bias in
354 Groups 1-3 was unlikely; it was minimised for Groups 4 and 5 by selecting these case notes at
355 random.

356

357 **Conclusion**

358 Although the Angus scheme had mixed success regarding meeting its targets, and this was a
359 small-scale study, this paper's principal purpose is to describe the lessons which may assist
360 others when considering similar schemes. Firstly, the parameters must be clearly defined
361 (which visits count; which practitioners are included in the calculations). Local data collection
362 tools may reflect local circumstances. However, developing a robust and broad evidence base
363 requires a commonly agreed-upon set of measures.

364 Secondly, targets must be meaningful and feasible. In retrospect, the Angus scheme's 80%
365 primary midwife continuity of carer target was unrealistic. However, simply setting achievable
366 targets should be avoided as these may not represent meaningful improvements in care.
367 Achieving continuity targets does not of itself indicate any benefit; assessments must be
368 broader, and include stakeholder perspectives. Those whose care packages do not meet the
369 targets must also be considered carefully.

370 Lastly, good care models should be broadly available. Choice around planned home birth is
371 sometimes contentious; indeed, in Angus, some technically ineligible women did join the
372 scheme, following negotiation with the midwives. Assessments of clinical and social risk do
373 inform decisions about birthplace. We found that many of those achieving a planned home birth
374 had higher deprivation scores, reinforcing the need to offer such schemes equitably.

375

376 **List of abbreviations**

377 AHB: Angus Home Birth

378 CoCer: Continuity of Carer

379 df: degrees of freedom

380 EDD: Expected Date of Delivery

381 NHS: National Health Service

382 SD: Standard Deviation

383 SIMD: Scottish Index of Multiple Deprivation

384 UK: United Kingdom

385 WTE: Whole Time Equivalent

386

387

388 *Data availability statement*

389 The data that support the findings of this study are available on request from the corresponding
390 author. The data are not publicly available due to privacy or ethical restrictions.

391

392

393 **Table 1** Age and clinical data

		AHB, Home birth and CoCer targets met N=32	AHB, Home birth but not CoCer N=12	AHB, but did not achieve home birth N=25	Eligible for AHB but declined N=33	Not eligible and not in AHB N=26
Age	mean [SD] range	30.4 [4.9] 20-42	31.6 [5.1] 22-38	29.5 [6.1] 19-41	28.2 [6.4] 18-39	28.9 [5.6] 15-40
Parity	0	0	1	7	6	4
	1	18	6	10	19	13
	2	6	3	3	8	9
	3+	8	2	5	0	0
Previous instrumental birth		5	2	3	7	1
Gestation	<37 weeks	0	0	2	4	4
	37-41	30	12	20	27	22
	42+	2	0	3	2	0

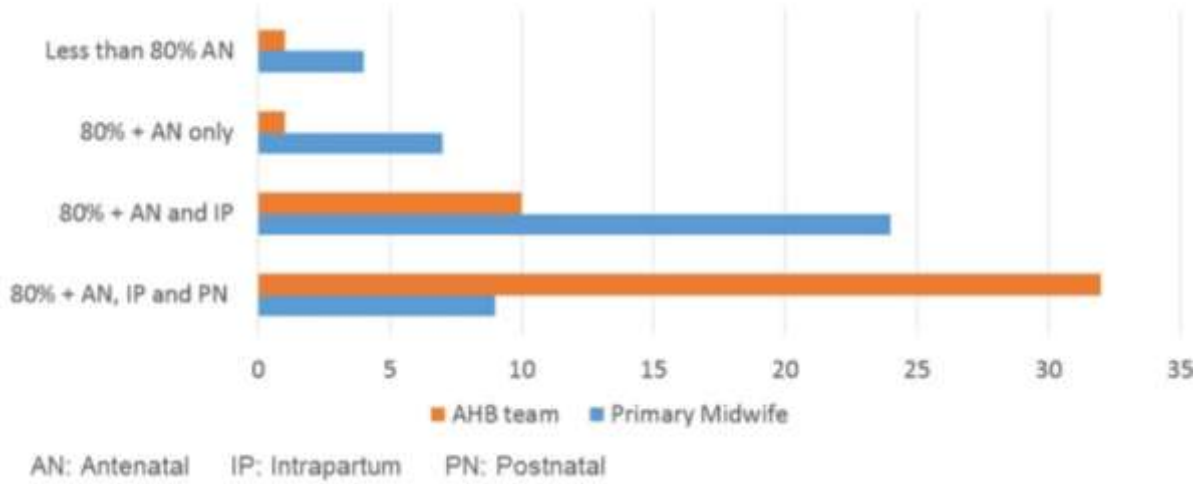
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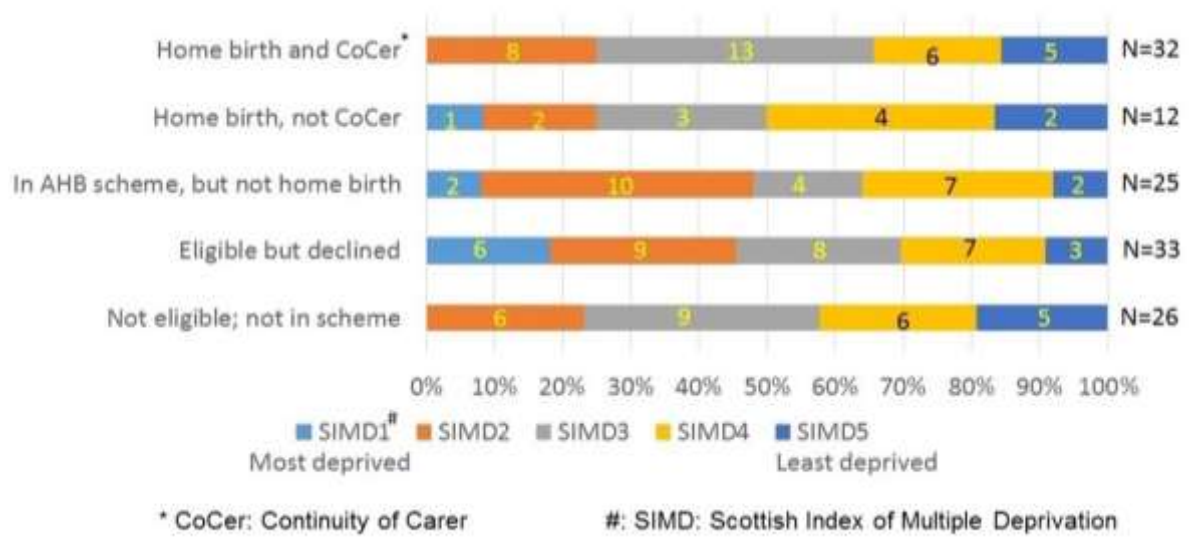
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480 **Figure 1** 80% continuity of carer target for the 44 women who had a planned home
 481 **birth: a) with their primary midwife only;**
 482 **b) with their primary midwife + an AHB team colleague**
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486 **Figure 2** SIMD profiles



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