National Institute for Health and Care Excellence

Final

Postnatal care

[D] Timing of first postnatal contact by health visitor

NICE guideline NG194

Evidence review underpinning recommendations 1.1.15 to 1.1.16

April 2021

Final

These evidence reviews were developed by the National Guideline Alliance, part of the Royal College of Obstetricians and Gynaecologists

Disclaimer

The recommendations in this guideline represent the view of NICE, arrived at after careful consideration of the evidence available. When exercising their judgement, professionals are expected to take this guideline fully into account, alongside the individual needs, preferences and values of their patients or service users. The recommendations in this guideline are not mandatory and the guideline does not override the responsibility of healthcare professionals to make decisions appropriate to the circumstances of the individual patient, in consultation with the patient and/or their carer or guardian.

Local commissioners and/or providers have a responsibility to enable the guideline to be applied when individual health professionals and their patients or service users wish to use it. They should do so in the context of local and national priorities for funding and developing services, and in light of their duties to have due regard to the need to eliminate unlawful discrimination, to advance equality of opportunity and to reduce health inequalities. Nothing in this guideline should be interpreted in a way that would be inconsistent with compliance with those duties.

NICE guidelines cover health and care in England. Decisions on how they apply in other UK countries are made by ministers in the Welsh Government, Scottish Government, and Northern Ireland Executive. All NICE guidance is subject to regular review and may be updated or withdrawn.

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Timing of first postnatal contact by health visitor

Review question

When should the first postnatal contact by health visitors be made?

Introduction

The timing of engagement of different healthcare professionals in the postnatal period could have both positive and negative impact on the family during this delicate time period. In current practice, the Healthy Child Programme mandates two postnatal visits within the first 8 weeks from the health visitor team. The aim of this review is to explore what is the appropriate timing for the first postnatal contact by health visitors.

Summary of the protocol

See Table 1 for a summary of the Population, Intervention, Comparison and Outcome (PICO) characteristics of this review.

Table 1: Summary of the protocol (PICO table)

Population	Women who gave birth to 1, 2 or 3 healthy infants at term.
Intervention	Early first postnatal home visit by health visitor or family nurse practitioner. An early visit is defined as taking place at an earlier time than the comparator.
Comparison	Late first postnatal home visit by health visitor or family nurse practitioner. A late visit is defined as taking place later than the intervention.
Outcome	**Critical** • Identification of safeguarding concerns • Proportion of women breastfeeding (exclusively or partially) at 6 weeks, 12 weeks and 6 months after the birth • Infant mortality within 1 year after the birth **Important** • Emotional attachment between parent and baby when the baby is 12 to 18 months of age • Proportion of women assessed by a healthcare professional as experiencing moderate to severe depression or anxiety at 6 to 8 weeks, 3 months and 6 months after the birth • Proportion of parents satisfied with their postnatal care • Proportion of unplanned attendance for woman or baby to health services or admission to hospital for problems within 8 weeks after the birth

For further details, see the review protocol in appendix A.

Methods and process

This evidence review was developed using the methods and process described in Developing NICE guidelines: the manual 2014. Methods specific to this review question are described in the review protocol in appendix A.

Declarations of interest were recorded according to NICE's 2014 conflicts of interest policy until March 2018. From April 2018 until June 2019, declarations of interest were recorded according to NICE's 2018 conflicts of interest policy. From July 2019 onwards, the declarations of interest were recorded according to NICE's 2019 conflicts of interest policy. Those interests declared before July 2019 were reclassified according to NICE's 2019 conflicts of interest policy (see Register of Interests).

Clinical evidence

Included studies

A systematic review of the literature was conducted but no studies were identified which were applicable to this review question.

See the literature search strategy in appendix B and study selection flow chart in appendix C.

Excluded studies

No studies were identified which were applicable to this review question.

Summary of studies included in the evidence review

No studies were identified which were applicable to this review question (and so there are no evidence tables in appendix D). No meta-analysis was undertaken for this review (and so there are no forest plots in appendix E).

Quality assessment of studies included in the evidence review

No studies were identified which were applicable to this review question and so there are no evidence profiles in appendix F.

Economic evidence

Included studies

A single economic search was undertaken for all topics included in the scope of this guideline but no economic studies were identified which were applicable to this review question. See the literature search strategy in appendix B and economic study selection flow chart in appendix G.

Excluded studies

No economic studies were reviewed at full text and excluded from this review.

Economic model

No economic modelling was undertaken for this review because the committee agreed that other topics were higher priorities for economic evaluation.

Evidence statements

Clinical evidence statements

No evidence was identified which was applicable to this review question.

Economic evidence statements

No economic evidence was identified which was applicable to this review question.

The committee's discussion of the evidence

Interpreting the evidence

The outcomes that matter most

The committee were most interested in whether the timing of the first postnatal contact from a health visitor would improve the identification of safeguarding concerns so this outcome was rated critical. This outcome was important to the committee as they felt that current practice often leads to women having long stretches of time where they do not see a healthcare professional and other times where they see multiple healthcare professionals within a short space of time. With the uneven dispersion of healthcare professional contact, safeguarding concerns may be identified too late. The committee were also interested in the proportion of women breastfeeding exclusively or partially at 6 weeks, 12 weeks and 6 months after birth and this was rated a critical outcome. This outcome was important to the committee as it is common for women to give up breastfeeding in the early postnatal period if problems are encountered. The committee wanted to know whether the timing of the contact with a health visitor would maintain breastfeeding. Finally, the committee were interested in baby mortality within 1 year after birth, which was also a critical outcome.

The committee were also interested in the following important outcomes: emotional attachment between parent and baby when the baby is 12 to 18 months of age, the proportion of women assessed by a healthcare professional as experiencing moderate to severe depression or anxiety at 6 to 8 weeks, 3 months and 6 months after the birth, the proportion of parents satisfied with their postnatal care and the proportion of unplanned attendance for woman or baby to health services or admission to hospital for problems within 8 weeks after the birth.

From the studies identified from the searches, none were selected as relevant from reviewing their title and abstracts. Studies were typically excluded as they were comparing additional postnatal contact compared to standard care, as opposed to comparing the scheduling of the same number of visits. As no evidence was identified, the committee had no data on any of these outcomes to use as a basis for discussions or making recommendations.

The quality of the evidence

No studies were identified which were applicable to this review question.

Benefits and harms

Owing to the lack of evidence, the committee made recommendations based on their knowledge, experience and through informal consensus.

The Department of Health and Social Care's Healthy Child Programme currently mandates 1 health visitor visit in the antenatal period and 2 health visitor visits in the early postnatal

period. The committee agreed that the timing of the postnatal visits could have an impact on various issues, including health outcomes as well as the families' experience with the postnatal care.

First of all, the committee discussed that the first postnatal contact with the health visitor should be a home visit. This was important as the committee felt that many of the assessments that a health visitor would need to conduct would need to be in person as outlined in the recommendations on assessment and care of the woman and assessment and care of the baby, made on the basis of evidence review F about the essential content of postnatal contacts.

Through discussion about the timing of the first postnatal health visitor contact, the committee agreed it is not uncommon for the time between the final midwife contact and the first postnatal health visitor contact to be within a few days or in some cases a few hours of each other, which can be overwhelming for the family. Having these early postnatal contacts so close together is not beneficial to the woman or baby when both the woman and baby are experiencing rapid changes. Furthermore, it can create a long gap between the first and second postnatal health visitor visit. The committee agreed that having visits more spread out would allow parents to ask questions and have the baby's progress checked as the changes occur throughout the postnatal period. For these reasons, the committee agreed that the recommendation about the timing of the first postnatal health visitor contact should also address the interlude between midwife and health visitor contacts.

Considering these issues, the committee recommend that the first postnatal contact by a health visitor could usually take place between 7 to 14 days after discharge from midwifery care, which would usually mean 17 and 28 days after birth because the discharge from midwifery care usually happens between 10 to 14 days after birth. Therefore, 17 days would be at least one week after the final midwife contact (if the contact was at 10 days). The committee did not want to recommend 21 days (which would also be 7 days after the last midwife contact if this contact was at 14 days) as they felt the time interval of 17 to 21 days was too restrictive. The committee acknowledged that many health visitors work part-time and not at weekends so a larger window for this first postnatal contact would be most realistic. Therefore, the timing of 7 to 14 days after discharge from midwifery care was agreed.

The committee felt that the benefit of this recommendation included giving hope to families that the health visitor, able to offer help, advice and support would be coming into their home within in a maximum of 2 weeks after the final midwife contact. A further benefit would be avoiding the current situation where women commonly have their last midwife contact and first contact with the health visitor all before 14 days. The next scheduled contact with a healthcare professional would be at 6-8 weeks following the birth. The committee felt this time interval was too long, leaving the families without contact from the healthcare professionals for weeks and sometimes resulting in families contacting the GP or going to the A&E unnecessarily. They agreed that having the postnatal contacts more evenly spread, and not concentrated on the first 2 weeks would be more beneficial to the woman and her baby so that there would not be long gaps and that concerns relating to the baby's and mother's health and wellbeing can be assessed and identified throughout the first 8 weeks after birth.

The committee discussed the potential risks or harms associated with the recommendation, if the time between the last midwife contact and the first postnatal health visitor contact would be too long for some families. The committee thought that provided that the woman had a comprehensive routine antenatal home visit by a health visitor (as mandated by the Healthy Child Programme) and that the family had been informed who to contact (and how) with problems or queries, then this interval would not be too long, for a low risk, 'universal', family. If, however, there were concerns about the woman or the baby, this would have either

already been identified from the antenatal visit or would be passed on from the midwifery team to the health visitor team and it is current practice that an early health visitor contact would be scheduled. For this reason, the committee added a caveat, making a second recommendation on the basis of informal consensus, that in the circumstance that a routine antenatal health visitor home visit has not taken place, an additional early health visitor postnatal home visit could be arranged.

Finally, the committee did consider that a visit around day 28 might decrease the health visitor's contact with partners as many will have returned to work but on balance they considered the benefits of these recommendations to outweigh the potential harms.

Given the lack of evidence identified for this review, the committee also made a research recommendation that studies should be carried out that would answer this review question on when the first postnatal contact with a health visitor should be made.

Cost-effectiveness and resource use

No economic evidence on the cost-effectiveness of the timing of the first postnatal contact by health visitors was identified. When making the recommendations, the committee agreed that the timing of the first health visitor contact should not affect the total number of health visitor contacts with women and their babies, and therefore the recommendations should have no impact on the total cost of health visitor contacts postnatally. The committee expressed the view that if routine health visitor contacts in the antenatal or postnatal period do not take place, then it is possible that problems developing during the antenatal or postnatal period may not be assessed and addressed, leading to more costly healthcare visits and interventions later in the care pathway, hence they made a recommendation that an additional early health visitor postnatal home visit could be arranged in the exceptional circumstance that a routine antenatal health visitor home visit has not taken place to replace this missed visit.

Other factors the committee took into account

In addition to the timing of the visits, the committee acknowledged that communication between midwifery and health visitor teams may be problematic or lacking in current practice. Recommendations about communication between different health care professionals and services were made based on evidence review B.

The committee also considered the current keep performance indicators (KPIs) for health visiting teams. They recognised that the current KPI target for the first postnatal contact (that is before 14 days) effectively overlaps with the time period when the woman is still under midwifery care, which does not represent the best use of resources. Therefore, the committee aimed to make recommendations that would improve the scheduling of contact for families in the early postnatal period, achieving best value and optimising health outcomes.

The committee noted during protocol development that certain subgroups of women and health care professionals may require special consideration:

- young women (19 years or under)
- women with physical and cognitive disabilities
- women with severe mental health illness
- women who had difficulty accessing postnatal care services.

A stratified analysis was therefore predefined in the protocol based on these subgroups. However, considering the lack of evidence, the committee agreed not to make separate recommendations and that the recommendations they did make should apply universally.

References

No evidence was identified which was applicable to this review question.

Appendices

Appendix A – Review protocol

Review protocol for review question: When should the first postnatal contact by health visitors be made?

Table 2: Review protocol

Field (based on PRISMA-P)	Content
Review question	When should the first postnatal contact by health visitors be made?
Type of review question	Intervention
Objective of the review	The aim of this review is to determine when the first postnatal contact by health visitors should be made.
Eligibility criteria – population	Women who gave birth to one, two or three healthy infants at term.
Eligibility criteria – intervention	Early first postnatal home visit by health visitor or family nurse practitioner. An early visit is defined as taking place at an earlier time than the comparator.
Eligibility criteria – comparator	Late first postnatal home visit by health visitor or family nurse practitioner. A late visit is defined as taking place later than the intervention.
Outcomes and prioritisation	Critical outcomes • Identification of safeguarding concerns (default MIDs) • Proportion of women breastfeeding (exclusively or partially) at 6 weeks, 12 weeks and 6 months after the birth (MID: any statistically significant change). • Infant mortality within 1 year after the birth (MID: any statistically significant change) Important outcomes • Emotional attachment between parent and baby when the baby is 12 to 18 months of age (default MIDs) • Proportion of women assessed by a healthcare professional as experiencing moderate to severe depression or anxiety at 6 to 8 weeks, 3 months and 6 months after the birth (default MIDs). • Proportion of parents satisfied with their postnatal care (default MIDs). • Proportion of unplanned attendance for woman or baby to health services or admission to hospital for problems within 8 weeks after the birth (default MIDs).

Field (based on PRISMA-P)	Content
Eligibility criteria – study design	• Published full text papers only • Systematic reviews of RCTs • RCTs • Only if RCTs unavailable to inform decision-making: prospective or retrospective comparative cohort studies if at least 100 mother-infant pairs in each arm • Prospective study designs will be prioritised over retrospective study designs • Conference abstracts will not be considered
Other inclusion exclusion criteria	Studies from low- and middle-income countries, as defined by the World Bank, will be excluded, as the configuration of antenatal and postnatal services in these countries might not be representative of that in the UK. Date: prioritise papers published from 2000, and only go back to 1980 if evidence not found
Proposed sensitivity/sub-group analysis, or meta-regression	Groups that will be reviewed and analysed separately: • young women (19 years or under) • women with physical and cognitive disabilities • women with severe mental health illness • women who have difficulty accessing postnatal care services In the presence of heterogeneity, the following subgroups will be considered for sensitivity analysis: • singletons, twins and triplets • primiparous versus multiparous women • women with pre-existing conditions, complications in pregnancy, or complications experienced in the intrapartum period, including complications associated with caesarean section or instrumental delivery. • number of subsequent visits following first visit • different content of visit • for breastfeeding outcome only: women who chose to not breastfeed before first postnatal contact with health visitor versus women who chose to breastfeed Statistical heterogeneity will be assessed by visually examining the forest plots and by calculating the I^2 inconsistency statistic (with an I^2 value of more than 50% indicating considerable heterogeneity)

Field (based on PRISMA-P)	Content
	Potential confounders: • age • BMI • characteristics defining subgroups above.
Selection process – duplicate screening/selection/analysis	Review questions selected as high priorities for health economic analysis (and those selected as medium priorities and where health economic analysis could influence recommendations) will be subject to dual weeding and study selection; any discrepancies above 10% of the dual weeded resources will be resolved through discussion between the first and second reviewers or by reference to a third person. This review question was not prioritised for health economic analysis therefore no formal dual weeding, study selection (inclusion/exclusion) or data extraction into evidence tables will be undertaken. (However, internal (NGA) quality assurance processes will include consideration of the outcomes of weeding, study selection and data extraction and the committee will review the results of study selection and data extraction).
Data management (software)	Pairwise meta-analyses will be performed using Cochrane Review Manager (RevMan5). 'GRADEpro' will be used to assess the quality of evidence for each outcome.
Information sources – databases and dates	The following databases will be searched: • CCRCT • CDSR • CINAHL • DARE • Embase • EMCare • HTA Database • MEDLINE and MEDLINE IN-PROCESS Searches will be restricted by: • Date limitations: 1980 to 17th December 2019 • English language Other searches: • Inclusion lists of systematic reviews

Field (based on PRISMA-P)	Content
Identify if an update	This guideline will update the NICE guideline on postnatal care up to 8 weeks after birth (CG37). All reviews are being conducted afresh. The CG37 (2006) did not include recommendations on this topic.
Author contacts	National Guideline Alliance https://www.nice.org.uk/guidance/indevelopment/gid-ng10070
Highlight if amendment to previous protocol	For details please see section 4.5 of Developing NICE guidelines: the manual
Search strategy – for one database	For details please see appendix B of the guideline
Data collection process – forms/duplicate	A standardised evidence table format will be used, and published as appendix D (clinical evidence tables) or H (economic evidence tables) of the guideline.
Data items – define all variables to be collected	For details please see evidence tables in appendix D (clinical evidence tables) or H (economic evidence tables) of the guideline.
Methods for assessing bias at outcome/study level	Standard study checklists were used to critically appraise individual studies. For details please see section 6.2 of Developing NICE guidelines: the manual The risk of bias across all available evidence was evaluated for each outcome using an adaptation of the 'Grading of Recommendations Assessment, Development and Evaluation (GRADE) toolbox' developed by the international GRADE working group http://www.gradeworkinggroup.org/
Criteria for quantitative synthesis	For details please see section 6.4 of Developing NICE guidelines: the manual
Methods for quantitative analysis – combining studies and exploring (in)consistency	For details please see Supplement 1.
Meta-bias assessment – publication bias, selective reporting bias	For details please see section 6.2 of Developing NICE guidelines: the manual.
Confidence in cumulative evidence	For details please see sections 6.4 and 9.1 of Developing NICE guidelines: the manual
Rationale/context – what is known	For details please see the introduction to the evidence review in the guideline.
Describe contributions of authors and guarantor	A multidisciplinary committee developed the guideline. The committee was convened by the National Guideline Alliance and chaired by Dr David Jewell in line with section 3 of Developing NICE guidelines: the manual. Staff from the National Guideline Alliance undertook systematic literature searches, appraised the evidence, conducted meta-analysis and cost-effectiveness analysis where appropriate, and drafted the guideline in collaboration with the committee. For details please see the methods chapter of the guideline.

Field (based on PRISMA-P)	Content
Sources of funding/support	The National Guideline Alliance is funded by NICE and hosted by the Royal College of Obstetricians and Gynaecologists
Name of sponsor	The National Guideline Alliance is funded by NICE and hosted by the Royal College of Obstetricians and Gynaecologists
Roles of sponsor	NICE funds the National Guideline Alliance to develop guidelines for those working in the NHS, public health, and social care in England
PROSPERO registration number	Not registered

CDSR: Cochrane Database of Systematic Reviews; CENTRAL: Cochrane Central Register of Controlled Trials; DARE: Database of Abstracts of Reviews of Effects; GRADE: Grading of Recommendations Assessment, Development and Evaluation; HTA: Health Technology Assessment; MID: minimally important difference; NGA: National Guideline Alliance; NICE: National Institute for Health and Care Excellence; RCT: randomised controlled trial; RoB: risk of bias; SD: standard deviation

Appendix B – Literature search strategies

Literature search strategies for review question: When should the first postnatal contact by health visitors be made?

Clinical search

The search for this topic was last run on 17th December 2019.

Database: Emcare, Embase, Medline, Medline Ahead of Print and In-Process & Other Non-Indexed Citations – OVID [Multifile]

#	Search
1	perinatal period/ or exp postnatal care/
2	1 use emczd, emcr
3	postpartum period/ or peripartum period/ or postnatal care/
4	3 use ppez
5	(((first time or new) adj mother*) or nullipara* or peri natal* or perinatal* or postbirth or post birth or postdelivery or post delivery or postnatal* or post natal* or postpartum* or post partum* or primipara* or puerpera* or puerperium*).ti,ab.
6	((after or follow*) adj2 birth).ti,ab.
7	or/2,4-6
8	health visitor/ use emczd, emcr or nurses, community health/ use ppez or (((blanket or community or family or home or public) adj nurs*) or ((blanket or community or family or home or public or public) adj2 health adj2 (nurs* or practitioner*)) or health visitor* or phn or phns or scphn*).ti,ab.
9	7 and 8
10	9
11	limit 10 to english language
12	limit 11 to yr="1980 -current"

Database: CINAHL [ProQUEST]

#	Search
s9	s4 and s7 publication year: 1980-2019
s8	s4 and s7
s7	s5 or s6
s6	tx (((blanket or community or family or home or public) n1 nurs*) or ((blanket or community or family or home or public or public) n2 health n2 (nurs* or practitioner*)) or health visitor* or phn or phns or scphn*)
s5	(mh "community health nursing+")
s4	s1 or s2 or s3
s3	tx (((“first time” or new) adj mother*) or nullipara* or “peri natal*” or perinatal* or postbirth or “post birth” or postdelivery or “post delivery” or postnatal* or “post natal*” or postpartum* or “post partum*” or primipara* or puerpera* or puerperium* or ((after or follow*) n2 birth*))
s2	(mh "postpartum care (saba ccc)")
s1	(mh "postnatal period+")

Database: CDSR, CCRCT [Wiley]

#	Search
#1	mesh descriptor: [postpartum period] explode all trees

#	Search
#2	mesh descriptor: [peripartum period] this term only
#3	mesh descriptor: [postnatal care] this term only
#4	((((“first time” or new) adj mother*) or nullipara* or "peri natal*" or perinatal* or postbirth or "post birth" or postdelivery or "post delivery" or postnatal* or "post natal*" or postpartum* or "post partum*" or primipara* or puerpera* or puerperium* or ((after or follow*) near/2 birth))):ti,ab,kw
#5	#1 or #2 or #3 or #4
#6	mesh descriptor: [nurses, community health] this term only
#7	((((blanket or community or family or home or public) near/1 nurs*) or ((blanket or community or family or home or public or public) near/2 health near/2 (nurs* or practitioner*)) or "health visitor*" or phn or phns or scphn*)):ti,ab,kw
#8	#6 or #7
#9	#5 and #8 with cochrane library publication date between jan 1980 and aug 2019

Database: DARE, HTA (global) [CRD Web]

#	Search
1	mesh descriptor postpartum period in dare,hta
2	mesh descriptor peripartum period in dare,hta
3	mesh descriptor postnatal care in dare,hta
4	(nullipara* or peri natal* or perinatal* or postbirth or post birth or postdelivery or post delivery or postnatal* or post natal* or postpartum* or post partum* or primipara* or puerpera* or puerperium* or ((after or follow*) near2 birth*)) in dare, hta
5	#1 or #2 or #3 or #4

Health economic search

The search for this topic was last run on 5th December 2019.

Database: Embase, Emcare, Medline, Medline Ahead of Print and In-Process & Other Non-Indexed Citations (global) – OVID [Multifile]

#	Search
1	puerperium/ or perinatal period/ or postnatal care/
2	1 use emczd, emcr
3	postpartum period/ or peripartum period/ or postnatal care/
4	3 use ppez
5	(nullipara* or peri natal* or perinatal* or postbirth or post birth or postdelivery or post delivery or postnatal* or post natal* or postpartum* or post partum* or primipara* or puerpera* or puerperium* or ((after or follow*) adj2 birth*)).ti,ab.
6	or/2,4-5
7	breast feeding/ or breast feeding education/ or lactation/
8	7 use emczd, emcr
9	exp breast feeding/ or lactation/
10	9 use ppez
11	(breastfeed* or breast feed* or breastfed* or breastfeed* or breast fed or breastmilk or breast milk or expressed milk* or lactat* or (nursing adj (baby or infant* or mother* or neonate* or newborn*))).ti,ab.
12	or/8,10-11
13	artificial food/ or bottle feeding/ or infant feeding/
14	13 use emczd, emcr
15	bottle feeding/ or infant formula/
16	15 use ppez

#	Search
17	(((bottle or formula or synthetic) adj2 (artificial or fed or feed* or infant* or milk*)) or (artificial adj (formula or milk)) or bottlefed or bottlefeed or cup feeding or (milk adj2 (substitut* or supplement*)) or ((infant or milk or water or glucose or dextrose or formula) adj supplement) or formula supplement* or supplement feed or milk feed or ((baby or babies or infant* or neonate* or newborn*) adj (formula* or milk)) or formulafeed or formulated or (milk adj2 powder*) or hydrolyzed formula* or (((feeding or baby or infant) adj bottle*) or infant feeding or bottle nipple* or milk pump*)).ti,ab.
18	or/14,16-17
19	or/6,12,18
20	budget/ or exp economic evaluation/ or exp fee/ or funding/ or exp health care cost/ or health economics/
21	20 use emczd, emcr
22	exp budgets/ or exp "costs and cost analysis"/ or economics/ or exp economics, hospital/ or exp economics, medical/ or economics, nursing/ or economics, pharmaceutical/ or exp "fees and charges"/ or value of life/
23	22 use ppez
24	budget*.ti,ab. or cost*.ti. or (economic* or pharmaco?economic*).ti. or (price* or pricing*).ti,ab. or (cost* adj2 (effective* or utilit* or benefit* or minimi* or unit* or estimat* or variable*)).ab. or (financ* or fee or fees).ti,ab. or (value adj2 (money or monetary)).ti,ab.
25	or/21,23-24
26	economic model/ or quality adjusted life year/ or "quality of life index"/
27	(cost-benefit analysis.sh. and (cost-effectiveness ratio* and (perspective* or life expectanc*)).tw.)
28	((quality of life or qol).tw. and cost benefit analysis.sh.)
29	or/26-28 use emczd, emcr
30	models, economic/ or quality-adjusted life years/
31	(cost-benefit analysis.sh. and (cost-effectiveness ratio* and (perspective* or life expectanc*)).tw.)
32	((quality of life or qol).tw. and cost-benefit analysis.sh.)
33	or/30-32 use ppez
34	(eq-5d* or eq5d* or eq-5* or eq5* or euroqual* or euro qual* or euroqual 5d* or euro qual 5d* or euro qol* or euroqol*or euro quol* or euroquol* or euro quol5d* or euroquol5d* or eur qol* or eurqol* or eur qol5d* or eurqol5d* or eur?qul* or eur?qul5d* or euro* quality of life or european qol).tw.
35	(euro* adj3 (5 d* or 5d* or 5 dimension* or 5dimension* or 5 domain* or 5domain*)).tw.
36	(hui or hui2 or hui3).tw.
37	(illness state* or health state*).tw.
38	(multiattibute* or multi attribute*).tw.
39	(qaly* or qal or qald* or qale* or qtime* or qwb* or daly).tw.
40	(quality adjusted or quality adjusted life year*).tw.
41	(sf36 or sf 36 or sf thirty six or sf thirtysix).tw.
42	sickness impact profile.sh.
43	(time trade off*1 or time tradeoff*1 or tto or timetradeoff*1).tw.
44	(utilit* adj3 (score*1 or valu* or health* or cost* or measur* or disease* or mean or gain or gains or index*)).tw.
45	utilities.tw.

#	Search
46	((qol or hrqol or quality of life).tw. or *quality of life/) and ((qol or hrqol* or quality of life) adj2 (change*1 or declin* or decreas* or deteriorat* or effect or effects or high* or impact*1 or impacted or improve* or increas* or low* or reduc* or score or scores or worse)).ab.
47	quality of life.sh. and ((health-related quality of life or (health adj3 status) or ((quality of life or qol) adj3 (chang* or improv*)) or ((quality of life or qol) adj (measure*1 or score*1))).tw. or (quality of life or qol).ti. or ec.fs.)
48	or/29,33-47
49	or/25,48
50	19 and 50
51	limit 50 to english language
52	(animals/ not humans/) or exp animals, laboratory/ or exp animal experimentation/ or exp models, animal/ or exp rodentia/
53	52 use ppez
54	(animal/ not human/) or nonhuman/ or exp animal experiment/ or exp experimental animal/ or animal model/ or exp rodent/
55	54 use emczd, emcr
56	(rat or rats or mouse or mice).ti.
57	or/53,55-56
58	51 not 57

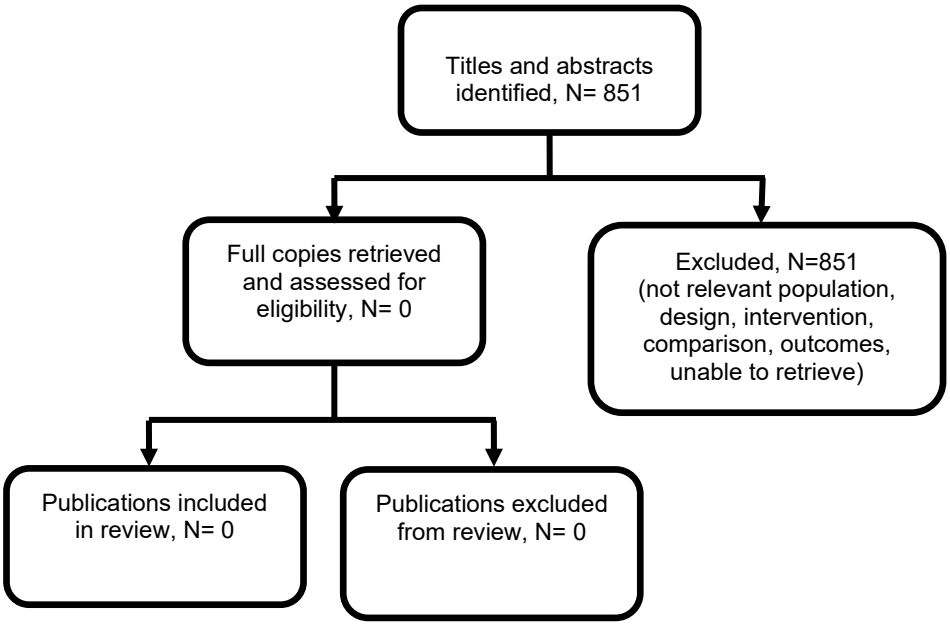
Database: HTA, NHS EED (global) [CRD Web]

#	Search
1	mesh descriptor postpartum period in hta, nhs eed
2	mesh descriptor peripartum period in hta, nhs eed
3	mesh descriptor postnatal care hta, nhs eed
4	(nullipara* or peri natal* or perinatal* or postbirth or post birth or postdelivery or post delivery or postnatal* or post natal* or postpartum* or post partum* or primipara* or puerpera* or puerperium* or ((after or follow*) near2 birth*)) hta, nhs eed
5	#1 or #2 or #3 or #4
6	mesh descriptor breast feeding explode all trees hta, nhs eed
7	mesh descriptor lactation hta, nhs eed
8	(breastfeed* or breast feed* or breastfed* or breastfeed* or breast fed or breastmilk or breast milk or expressed milk* or lactat* or (nursing next (baby or infant* or mother* or neonate* or newborn*))) hta, nhs eed
9	#6 or #7 or #8
10	mesh descriptor bottle feeding hta, nhs eed
11	mesh descriptor infant formula hta, nhs eed
12	(((bottle or formula or synthetic) near2 (artificial or fed or feed* or infant* or milk*)) or (artificial next (formula or milk)) or bottlefed or bottlefeed or cup feeding or (milk near2 (substitut* or supplement*)) or ((infant or milk or water or glucose or dextrose or formula) next supplement) or formula supplement* or supplement feed or milk feed or ((baby or babies or infant* or neonate* or newborn*) next (formula* or milk)) or formulafeed or formulated or (milk near2 powder*) or hydrolyzed formula* or (((feeding or baby or infant) next bottle*) or infant feeding or bottle nipple* or milk pump*)) hta, nhs eed
13	#10 or #11 or #12
14	#5 or #9 or #13

Appendix C – Clinical evidence study selection

Study selection for: When should the first postnatal contact by health visitors be made?

Figure 1: Study selection flow chart



Appendix D – Clinical evidence tables

Evidence tables for review question: When should the first postnatal contact by health visitors be made?

No evidence was identified which was applicable to this review question.

Appendix E – Forest plots

Forest plots for review question: When should the first postnatal contact by health visitors be made?

No meta-analysis was conducted for this review question and so there are no forest plots.

Appendix F – GRADE tables

GRADE tables for review question: When should the first postnatal contact by health visitors be made?

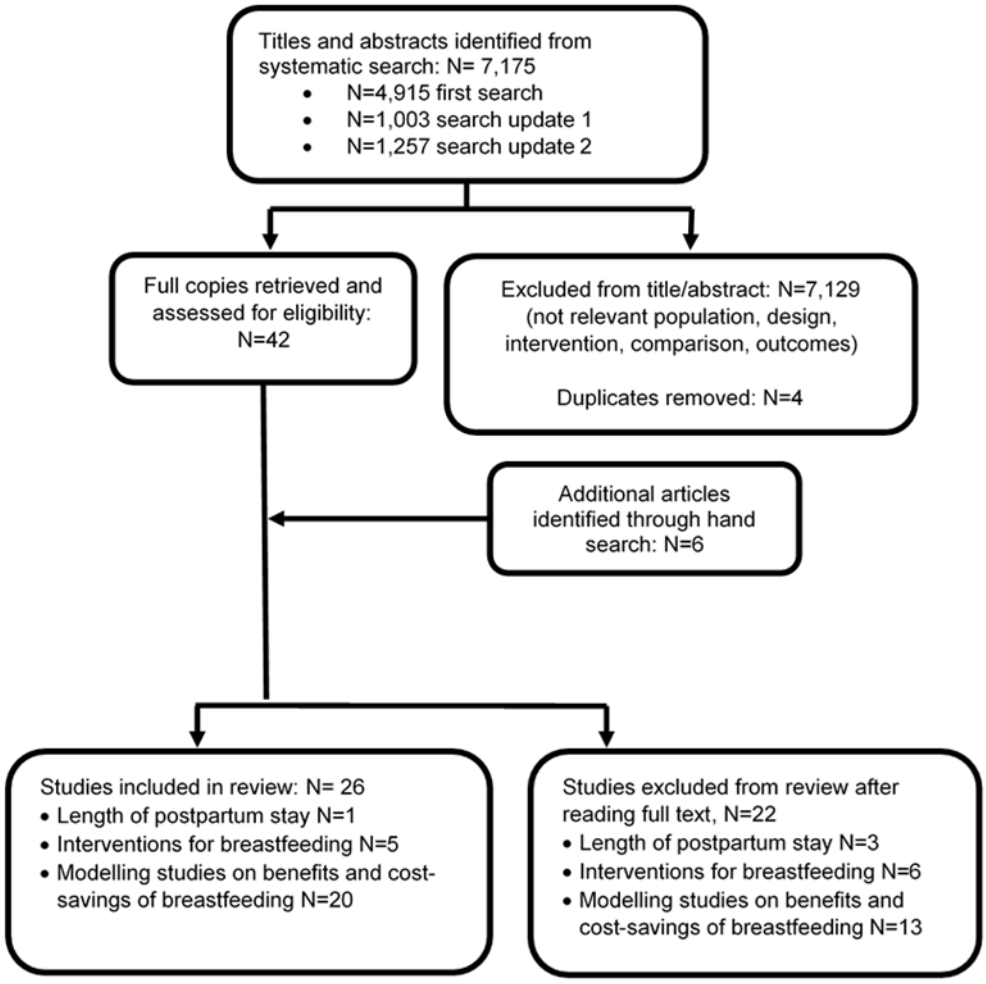
No evidence was identified which was applicable to this review question.

Appendix G – Economic evidence study selection

Economic evidence study selection for review question: When should the first postnatal contact by health visitors be made?

A global health economics search was undertaken for all areas covered in the guideline. Figure 2 shows the flow diagram of the selection process for economic evaluations of postnatal care interventions, including modelling studies on the benefits and cost-savings of breastfeeding.

Figure 2. Flow diagram of selection process for economic evaluations of postnatal care interventions and modelling studies on the benefits and cost-savings of breastfeeding



Appendix H – Economic evidence tables

Economic evidence tables for review question: When should the first postnatal contact by health visitors be made?

No economic evidence was identified which was applicable to this review question.

Appendix I – Economic evidence profiles

Economic evidence profiles for review question: When should the first postnatal contact by health visitors be made?

No economic evidence was identified which was applicable to this review question.

Appendix J – Economic analysis

Economic analysis for review question: When should the first postnatal contact by health visitors be made?

No economic analysis was conducted for this review question.

Appendix K – Excluded studies

Excluded studies for review question: When should the first postnatal contact by health visitors be made?

Clinical studies

All studies identified in the search were excluded at the title and abstract stage. Therefore, no clinical evidence was identified for these review questions.

Economic studies

No economic evidence was identified for this review.

Appendix L – Research recommendations

Research recommendations for review question: When should the first postnatal contact by health visitors be made?

Research question

What is the most effective timing of the first postnatal contact by health visitors?

Why this is important

A timely visit by the health visitor can possibly have an effect upon a number of measurable outcomes; mental health and well-being, sleep deficit coping mechanisms, continuation of breastfeeding, accident and emergency attendance rates and reported parental satisfaction with transition to parenthood.

The right information at the right time, delivered on a bespoke basis through a trusted relationship, can transform a family's ability to transition to parenthood.

There is at present no research to inform as to when is the most efficacious time for the health visitor profession to make the first postnatal contact. At present health visitors are commissioned to visit once antenatally then a second time up to 14 days' post birth. This timing often results in both the midwife and the health visitor seeing the family on day 14, which many parents report as unhelpful. The health visitor will not routinely visit again until 6 weeks later.

Table 3: Research recommendation rationale

Research question	What is the most effective timing of the first postnatal contact by health visitors ?
Why is this needed	
Importance to 'patients' or the population	Appropriate support given at the right time which improves health outcomes for both parents and baby
Relevance to NICE guidance	Health visitors are commissioned by the local council in England, Scotland and Wales to visit parents at home within 14 days of a baby's birth and then again at 6-8 weeks of age (more frequent visiting in Wales and Scotland) There is no evidence to support the timings of these visits.
Relevance to the NHS	Improving transition to parenthood with a decline in postnatal depression, increase in breastfeeding rates at 3 months, decrease in accident and emergency attendances and increased parental satisfaction in the postnatal period would have a profound impact on the NHS budget.
National priorities	As part of the Public Health England Strategy 20-25, the fifth priority is termed 'The best start in life' which aims to improve the health of babies' children and their families, resulting in good foundations for a healthy life. This starts pre-conception.
Current evidence base	None regarding timing of the first health visitor visit postnatally.
Equality	None known
Feasibility	Yes, given the number of births per year and the health visitor infrastructure already in place
Other comments	-

Table 4: Research recommendation modified PICO table

Criterion	Explanation
Population	Parents of newborn babies
Intervention	First postnatal health visitor visit before day 14
Comparator	First postnatal health visitor visit between 14 and 21 days
Outcomes	• Breastfeeding rates • Parental scores on mental health tools such as the depression identification questions (D.I.Q), the general anxiety disorder questionnaire (GAD) or the Edinburgh Postnatal Depression Scale (EPDS) • Parental satisfaction regarding Transition to Parenthood • Unplanned attendance to health services • Weight measurements at 3 months, 6 months, 9 months, 1 year and 2 years of age • Costs and cost-effectiveness
Study design	Randomised controlled trial or cluster-randomised controlled trial
Timeframe	2 years
Additional information	-