Multisite implementation of trained volunteer doula support for disadvantaged childbearing women: a mixed-methods evaluation

Helen Spiby,[1]* Josephine M Green,[2] Zoe Darwin,[2] Helen Willmot,[2] David Knox,[3] Jenny McLeish[4] and Murray Smith[5]

[1]School of Health Sciences, University of Nottingham, Nottingham, UK
[2]Department of Health Sciences, University of York, York, UK
[3]National Child and Maternal Health Intelligence Network, Public Health England, York, UK
[4]Freelance researcher and advocate
[5]Division of Social Research in Medicines and Health, School of Pharmacy, University of Nottingham, Nottingham, UK

*Corresponding author

Declared competing interests of authors: none

Published March 2015
DOI: 10.3310/hsdr03080

Scientific summary

Doula support for disadvantaged childbearing women

Health Services and Delivery Research 2015; Vol. 3: No. 8
DOI: 10.3310/hsdr03080

NIHR Journals Library www.journalslibrary.nihr.ac.uk

Scientific summary

Background

The maternal mortality rate for 'disadvantaged' women (including social deprivation, low income, social isolation, lone parenting, teenage parenting, drug or alcohol use, asylum seekers and refugees, mental illness, domestic abuse and safeguarding concerns) is higher than for the general population. Similarly, for babies born to disadvantaged women, the chances of dying around birth or within the first month of life are higher than for babies of women who are not in adverse circumstances. Disadvantaged women have higher rates of smoking and formula feeding than other population subgroups and are less likely to access routine services for themselves and their babies. Barriers include a lack of access to appropriate services (e.g. for very young women and their partners), lack of staff training in culturally appropriate care and a lack of knowledge among health professionals about relevant interventions and services that they could refer to. Recently published guidance for service provision for pregnant women with complex social factors recommends that such barriers be addressed; multiagency working should be supported and the care provided by different agencies integrated. Support and care in pregnancy, labour and postpartum have a positive impact on women's well-being and outcomes including reduced operative birth and increased breastfeeding rates.

The research examined an innovative volunteer doula service, established in one city and rolled out to four other sites. The term 'doula' denotes a woman who supports other women during pregnancy, birth and breastfeeding, through emotional and physical support and by facilitating communications between the woman, her partner and health-care professionals and services. The role is not one of a clinical professional but of a trained lay supporter and does not include the support provided by female members of the woman's own family. The volunteer doula services offer support to disadvantaged women with the aim of enhancing well-being and improving the uptake of health services.

Objectives

Objective 1: implications for the NHS

1. To determine clinical and public health impacts for women and their babies, including type of delivery, low birthweight and admission to neonatal unit; to determine method of infant feeding planned during pregnancy, infant feeding initiated at birth and baby's feeding method at 6 weeks of age; to determine impact on mothers' smoking behaviour; and to compare these for women who have received the volunteer doula service with data for the general Hull Primary Care Trust (PCT) population, designated statistical neighbours and England averages.
2. To identify the impacts on and experiences of NHS maternity care services and providers (midwives and heads of midwifery).
3. To identify impacts on other NHS services including referral to and uptake of smoking cessation services.
4. To determine the actual and potential impacts on NHS maternity resource use of roll-out of doula support at scale.
5. To determine potential savings to the NHS through clinical events averted by the service.

Objective 2: health and psychosocial impacts on women

6. To identify underlying beliefs and theories about how the service works and the contexts in which it has more or less impact.
7. Based on this, to identify key outcomes which will allow the theories to be tested.
8. To identify the views, experiences and psychosocial impacts on women who have been recipients of the service.
9. To examine the characteristics and reasons of women who disengage from the service.

Objective 3: impact on volunteer doulas

10. To identify the views and experiences of the volunteer doulas and the impacts on their life course.

Objective 4: implementing and sustaining the service

11. To provide an independent assessment of the costs of providing a volunteer doula service, including training.
12. To identify the challenges, facilitators and barriers experienced by the manager and staff (locality development workers) of the original initiative in establishing and maintaining the service.
13. To identify the process of agreeing funding for service costs and the main factors responsible for the positive decision.
14. To examine facilitators and barriers to implementation in the roll-out sites and the extent to which these differ between sites and from the original service.
15. To investigate the experiences of the replication package at the roll-out sites.

Methods

Conceptual framework: for the women's, doulas' and doula services' components, this study was informed by a realistic evaluation perspective, in recognition of the complex intervention being investigated in a real-life setting. The costs of providing the doula service were obtained from information supplied by the services.

Setting: five doula services in England; five NHS trusts providing maternity services.

Sponsorship, ethics committee approval and NHS trust research and development department permissions were obtained in five NHS trusts. Consent was obtained prior to interviews and focus groups. All clinical, public health outcome and reference data were anonymised. Two user panels (doulas and women who had received doula support) identified topics to be explored in data collection, the development of data collection tools and approaches acceptable to potential participants.

Participants and data sources

Women who had been offered doula support were invited to complete postal questionnaires and to take part in focus groups. Doulas who had been trained by the doula services were invited to complete postal questionnaires and a small number took part in telephone interviews. Staff, commissioners and local champions of doula services provided information through interviews and focus groups. Midwives and heads of midwifery took part in focus groups and telephone interviews respectively. Clinical and public health outcomes for women and their babies were obtained from the doula service database in the original site and compared with outcomes available in various reference data sets including routinely collected PCT and Hospital Episode Statistics data, NHS trust maternity databases and Picker Institute outputs.

Outcomes

Clinical and public health outcomes for women and their babies included epidural use, rates of caesarean section, low birthweight, admission to neonatal unit, smoking and breastfeeding. The costs of running a doula service included the recruitment and training of volunteers and costs of running the services. Cost implications for the NHS were calculated. The impacts for women and doulas of being offered and providing doula support and perceptions of doula support among midwives and heads of midwifery working in NHS maternity services nearest to the five doula sites were obtained.

Analysis

The Contexts, Mechanisms and Outcomes for women, doulas and doula services identified in the preliminary phases informed subsequent analysis. Interviews and focus groups were taped and fully transcribed. Qualitative data were analysed using content analysis. Women's and doulas' questionnaire data were entered into Statistical Product and Service Solutions (version 20, IBM Corporation, Armonk, NY, USA), descriptive statistics and chi-squared tests were used to test differences in proportions for categorical variables and *t*-tests or analysis of variance were used for differences in means. Cost implications for the NHS were determined using NHS reference costs and published sources.

Research findings

Our comparisons were limited by the absence of certain variables in reference data sets, including parity and ethnicity, with implications for the interpretation of findings related to epidural, caesarean section and possibly breastfeeding. Clinical and public health outcomes include that women supported by doulas generally used fewer epidurals and required fewer caesarean sections than women in the local population and similar population groups; however, these differences did not achieve statistical significance. More babies were admitted to neonatal intensive care (4.92% vs. 3.51%) but the incidence of low birthweight was lower among babies born to doula-supported women (3.1%) than those born to women in the local population (6.3%). However, numbers were small and differences not statistically significant. Comparisons for smoking at birth presented a mixed pattern, as reductions in rates were not consistently significant when compared with local comparators and other PCTs. More doula-supported women initiated and continued breastfeeding at 6 weeks. Initiation rates were significantly higher for most years than in the local population and other reference groups, and significantly higher for continued breastfeeding for all years.

Improvements in outcomes are associated with savings to the NHS. Depending on the comparison used (NHS England or NHS Hull) differences in caesarean section rates are generally associated with savings per birth between £53 and £168 (comparison with NHS England) and between an additional cost of £41 and a cost saving of £89 (NHS Hull). Savings per birth from improvements in breastfeeding are £6.66 (NHS England) and £9.59 (NHS Hull). Savings per birth due to smoking cessation are between £63.33 and £69.70 per birth. However, when NHS funding support to the original doula service was calculated, an increase in net per birth NHS costs was estimated at £1862.

Fewer women and doulas contributed to data collection than had been hoped. One hundred and sixty-seven women completed questionnaires (response rate 23.6%) and 13 participated in focus group discussions. The majority of women valued doula support highly and there was evidence of benefits to their emotional well-being. Important features appeared to be the continuity of doula support and doulas' availability and flexibility, being listened to by someone who was non-judgemental and having fears allayed, together with building confidence and self-esteem. Women appreciated volunteer doulas for the information provided, knowledgeable companionship, emotional support and relief of isolation, breastfeeding support and help navigating the NHS if they were unfamiliar with it.

Eighty-nine doulas completed questionnaires (response rate 34.5%), 11 participated in focus groups and six participated in telephone interviews. Doulas enjoyed the role and felt well prepared by their training, and the majority felt well supported by doula service staff. They reported positive impacts on their own health and social well-being and for their family. Doulas needed to have prompt experience in the role following completion of training and to feel supported by a professionally run service.

Within the NHS trusts where doula-supported women received maternity care, four heads of midwifery were interviewed and 31 midwives took part in focus groups. They appreciated volunteer doulas for their commitment and support to women, and they identified benefits to the maternity team. Collaborative working was achieved through midwifery input into training and a shared understanding of roles and boundaries.

Doula services experienced challenges in implementing and sustaining their services, including funding and relationships with other organisations. Continuing challenges were responding to changes in local service priorities, maintaining the profile of the doula service and ensuring an appropriate flow both of referrals and of doulas trained and retained.

Costs of running doula services were, to a large extent, site-specific. They included costs for the recruitment and training of volunteers and their equipment, salaries for staff of the doula services, premises, interpreting services and travel. Several services received 'goodwill' support from their staff and host agencies.

Conclusions

This is the largest independent evaluation of volunteer doula support in the UK.

Our findings of positive psychosocial impacts of doula support for disadvantaged childbearing women in five sites in the UK reflect those reported from other countries and health-care systems, where women may not have access to professional midwifery support, and also reflect improvements in breastfeeding initiation and continuation identified elsewhere. Reductions in rates of caesarean section were not statistically significant.

Volunteer doula support appears highly valued by disadvantaged childbearing women, who reported positive experiences of the support received from their doulas and positive impacts on their psychosocial well-being. In many settings where high proportions of women discontinue breastfeeding before their baby is 6 weeks old, this research identifies positive impacts in a priority area for improving public health. The potential NHS savings that may accrue from these improved outcomes must be offset against any NHS funding into doula services. Midwives and heads of midwifery acknowledged the contribution of doulas to supporting disadvantaged women and saw positive impacts for the maternity services.

Doulas appear to have enabled disadvantaged women to access a number of statutory services in line with existing evidence from non-UK settings. Doulas report positive experiences of their role in terms of their confidence, personal health and social well-being, reflecting positive impacts from volunteering in other sectors. Doula services need to be perceived as professional in their approach. They experience challenges in securing funding in an environment where they are competing with both statutory and third-sector organisations. As a service, they need to balance both referrals and the volunteer workforce.

Research recommendations

Little is known about the experiences of disadvantaged women who are not referred to the doula service or who disengage from it following referral. We recommend further research that addresses this. We also recommend further evaluation of impacts on clinical and public health outcomes in 2 or 3 years' time when more data are available from women and babies that should include the roll-out sites. To support this, we recommend that doula services ensure that appropriate processes and systems are in place to support data collection. Further research would enable re-exploration of issues related to sustaining a volunteer doula service when new commissioning systems are better established and, if services cannot be continued, the opportunity to identify the factors related to discontinuation. Further research should explore the design and feasibility of a randomised controlled trial of volunteer doula support, with a concurrent cost-effectiveness analysis.

Funding

The National Institute for Health Research Health Services and Delivery Research programme.

Health Services and Delivery Research

ISSN 2050-4349 (Print)

ISSN 2050-4357 (Online)

This journal is a member of and subscribes to the principles of the Committee on Publication Ethics (COPE) (www.publicationethics.org/).

Editorial contact: nihredit@southampton.ac.uk

The full HS&DR archive is freely available to view online at www.journalslibrary.nihr.ac.uk/hsdr. Print-on-demand copies can be purchased from the report pages of the NIHR Journals Library website: www.journalslibrary.nihr.ac.uk

Criteria for inclusion in the *Health Services and Delivery Research* journal

Reports are published in *Health Services and Delivery Research* (HS&DR) if (1) they have resulted from work for the HS&DR programme or programmes which preceded the HS&DR programme, and (2) they are of a sufficiently high scientific quality as assessed by the reviewers and editors.

HS&DR programme

The Health Services and Delivery Research (HS&DR) programme, part of the National Institute for Health Research (NIHR), was established to fund a broad range of research. It combines the strengths and contributions of two previous NIHR research programmes: the Health Services Research (HSR) programme and the Service Delivery and Organisation (SDO) programme, which were merged in January 2012.

The HS&DR programme aims to produce rigorous and relevant evidence on the quality, access and organisation of health services including costs and outcomes, as well as research on implementation. The programme will enhance the strategic focus on research that matters to the NHS and is keen to support ambitious evaluative research to improve health services.

For more information about the HS&DR programme please visit the website: http://www.nets.nihr.ac.uk/programmes/hsdr

This report

The research reported in this issue of the journal was funded by the HS&DR programme or one of its preceding programmes as project number 10/1009/24. The contractual start date was in October 2011. The final report began editorial review in August 2013 and was accepted for publication in June 2014. The authors have been wholly responsible for all data collection, analysis and interpretation, and for writing up their work. The HS&DR editors and production house have tried to ensure the accuracy of the authors' report and would like to thank the reviewers for their constructive comments on the final report document. However, they do not accept liability for damages or losses arising from material published in this report.

Published by the NIHR Journals Library (www.journalslibrary.nihr.ac.uk), produced by Prepress Projects Ltd, Perth, Scotland (www.prepress-projects.co.uk).