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Original Research – Quantitative

Determinants of prenatal health care utilisation by low-risk women: A prospective cohort study

Esther I. Feijen-de Jong [a,*], Danielle E.M.C. Jansen [b,c,g], Frank Baarveld [d,h], Agatha W. Boerleider [e,i], Evelien Spelten [a,j], François Schellevis [e,f,i], Sijmen A. Reijneveld [b,g]

[a] Department of Midwifery Science, AVAG, and the EMGO Institute for Health and Care Research, VU University Medical Center, Amsterdam, The Netherlands
[b] Department of Health Sciences, University Medical Center Groningen, University of Groningen, The Netherlands
[c] Department of Sociology and Interuniversity Center for Social Science Theory and Methodology (ICS), University of Groningen, The Netherlands
[d] National Association for Specialty Training for General Practice and GP Trainers, Utrecht, The Netherlands
[e] Netherlands Institute for Health Services Research (NIVEL), Utrecht, The Netherlands
[f] Department of General Practice and Elderly Care Medicine/EMGO Institute for Health and Care Research, VU University Medical Center, Amsterdam, The Netherlands

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ABSTRACT

Background: Prenatal health care is pivotal in providing adequate prevention and care to pregnant women.
Aim: We examined the determinants of inadequate prenatal health care utilisation by low-risk women in primary midwifery-led care in the Netherlands.
Methods: We used longitudinal data from the population-based DELIVER study with 20 midwifery practices across the Netherlands in 2009 and 2010 as the experimental setting. The participants were 3070 pregnant women starting pregnancy care in primary midwifery care.
Findings: We collected patient-reported data on potential determinants of prenatal care utilisation derived from the Andersen model. Prenatal health care utilisation was measured by a revised version of the Kotelchuck Index, which measures a combination of care entry and number of visits. Low-risk pregnant women (not referred during pregnancy) were more likely to use prenatal care inadequately if they intended to deliver at a hospital, if they did not use folic acid adequately periconceptionally, or if they were exposed to cigarette smoke during pregnancy. Among those who were referred to secondary care, women reporting a chronic illnesses or disabilities, and women who did not use folic acid periconceptionally were more likely to make inadequate use of prenatal care.
Conclusion: Inadequate prenatal health care use in primary midwifery care is more likely in specific groups, and the risk groups differ when women are referred to secondary care. The findings suggest routes that can target interventions to women who are at risk of not adequately using prenatal prevention and care services.

1. Introduction

Adequate use of prenatal health care is essential for mother and baby in reducing morbidity and mortality rates.[1–3] A timely start (during the first trimester) and an adequate number (according to professional guidelines) of prenatal care visits are important determinants of maternal and foetal health.[2,4,5] Availability of prenatal care may strongly influence adequate use. However, even in the case of optimal availability, some women do not make adequate use of prenatal care.[6]

Several determinants of inadequate prenatal health care utilisation have been identified. Smoking, low maternal age, low

* Corresponding author at: Dirk Huizingastraat 3-5, 9713 GL Groningen, The Netherlands. Tel.: +31 050 3618886.
E-mail addresses: esther.feijen@inholland.nl (E.I. Feijen-de Jong), d.e.m.c.jansen@umcg.nl (Danielle E.M.C. Jansen), f.baarveld@huisartsopleiding.nl (F. Baarveld), agathawb75@yahoo.com (A.W. Boerleider), evelienspelten@yahoo.com (E. Spelten), f.schellevis@nivel.nl (F. Schellevis), s.a.reijneveld@umcg.nl (S.A. Reijneveld).
[g] Address: P.O. Box 196, 9700 AD Groningen, The Netherlands.
[h] Address: P.O. Box 20072, 3502 LB Utrecht, The Netherlands.
[i] Address: P.O. Box 1568, 3500 BN Utrecht, The Netherlands.
[j] Address: Dirk Huizingastraat 3-5, 9713 GL Groningen, The Netherlands.

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educational level, non-marital status, ethnic minority status, planned pattern of prenatal care, hospital type, planned place of delivery, uninsured status, high parity, prior premature birth, obstetric risk factors, late recognition of pregnancy, and living in deprived neighbourhoods are all associated with inadequate health care utilisation.[6] However, most studies identifying determinants of prenatal health care utilisation include heterogeneous populations of both low- and high-risk pregnant women.[6] Specific evidence on determinants of prenatal health care utilisation by low-risk women (women who are not known to have any medical or obstetric risk factors before the onset of labour,[7]) is lacking. This is remarkable as the majority of pregnancies (80–90%) are considered to be low-risk.[8,9]

The organisation of maternity care in the Netherlands enables the study of low-risk pregnant women and also the assessment of determinants of inadequate health care utilisation in women who may be at low-risk at the beginning of pregnancy, but become high risk later. Dutch maternity care is organised into primary, secondary and tertiary care. Low-risk women mainly attend midwives and, to a small degree, general practitioners (2–6%).[10] Women are defined as low-risk and are referred to secondary care according to an Obstetrics and Midwifery Manual. This Manual aligns provider competencies with the health status of pregnant women. It is developed and revised over decades with input of midwives and gynaecologists.[11] High-risk women attend obstetricians and specialised midwives in general hospitals (secondary care), while tertiary care occurs in university hospitals. There is close mutual cooperation between these different strata.[10]

The aim of this research is to examine determinants of inadequate prenatal health care use by low-risk women in primary midwifery-led care in the Netherlands, and to determine whether these differ from those who are referred to prenatal secondary care. Information and knowledge about these determinants can optimise professional guidelines in prenatal care and can support the development of tailored interventions for the groups that make inadequate use of prenatal care.

We used Andersen's behavioural model of health care utilisation as a guiding framework to categorise the determinants of health care utilisation.[12] This model suggests that the utilisation of health care services depends on predisposing, enabling, need and health behaviour factors.[12]

2. Subjects and methods

Data for this analysis were obtained from the DELIVER study (Dutch acronym for 'data primary care delivery') conducted by the Department of Midwifery Science of VU University Medical Center, Amsterdam.[13] DELIVER was a descriptive study that aimed to provide information about the organisation of midwifery care, the accessibility of midwifery care, and the quality of primary midwifery care in the Netherlands.

DELIVER used a two-stage sampling procedure. Firstly, midwifery practices were recruited by using purposive sampling. Subsequently, all clients receiving care in the participating primary midwifery practices at any time in a 12-month study period in 2009–2010 were eligible to participate if they were able to understand Dutch, English, Turkish or Arabic. The participating practices (20 of the 519 midwifery practices in the Netherlands) comprised 110 midwives and a caseload of 8200 clients per year, representing all regions of the Netherlands. The women included in our study: (a) started their prenatal care in a primary care midwifery practice at the beginning of their pregnancy, (b) filled in the first questionnaire in the DELIVER study, and (c) the data from their questionnaire could be linked to the electronic client data and the Netherlands Perinatal Registry data (Fig. 1).

Clients participating in the DELIVER study completed up to three questionnaires, depending on the date of their first appointment in midwifery practice during the study period. The first questionnaire was administered before 34 weeks of gestation, the second between 34 weeks of gestation and birth, and the third six weeks postpartum. In addition, data was collected about the care provided by midwives by extracting data from electronic client records of participating clients and from the Netherlands

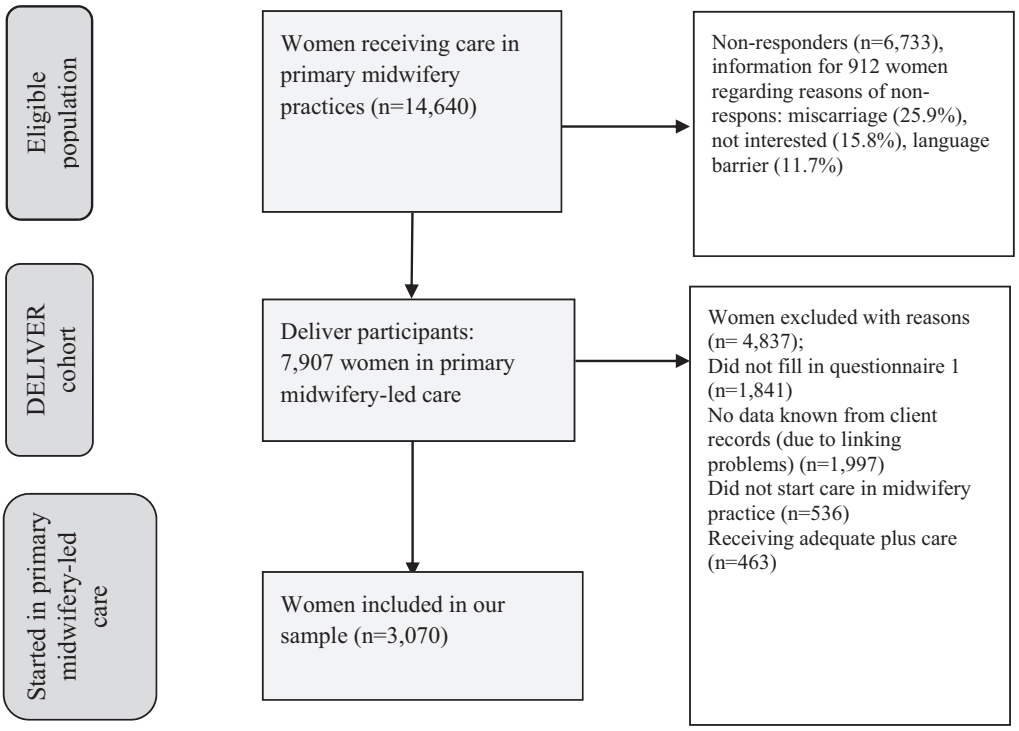

Fig. 1. Eligible population, DELIVER cohort and research population. DELIVER, Data EersteLIjns VERloskunde (Dutch acronym for 'data primary care delivery').