The role of primary care midwives in the Netherlands. Evaluation of midwifery care in the Dutch maternity care system: a descriptive study
Verburg, M.P.

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CHAPTER 1

General introduction
Introduction

Midwifery has officially been legislated as a medical speciality in the Netherlands by the Dutch Practice of Medicine Act of 1 June 1865. It outlined the midwife’s competencies as well as the physician’s and the pharmacist’s. Other medical professions, such as the dentistry, were not recognised under this act. Since that first official description of the midwife’s competencies, the midwife’s field of work has been the subject of many debates. The scope of the midwife’s duties has since been defined as related to ‘normal pregnancy and childbirth’. However, the midwife’s exact competencies and tasks have been redefined many times over the course of time, which in turn has brought about considerable changes to the student midwife’s curriculum (refer to Table A in Appendix 1).

The midwife’s world has changed, as well. Our knowledge of medical science in general and of obstetrics in particular has increased significantly and countless technological advances have changed diagnostic methods and medication for ever. In addition, society has made many advances in hygiene, demographics, public health and prevention, all of which has resulted in a drastically reduced perinatal mortality rate (Figure 1.1).

Recent European comparisons (PERISTAT) have shown that perinatal mortality has been reduced to a lesser degree in the Netherlands than in other European countries. The PERISTAT data (relating to the years 1999 and 2004) were published in 2003 and 2008, respectively, and

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**Figure 1.1** - Perinatal mortality (stillbirth and first week mortality, after 24 weeks GA and 28 weeks GA, respectively) per 1000 live- and stillborns, 1950-2009.

Based on data presented by Statistics Netherlands
However, recent European comparisons (PERISTAT) have shown that perinatal mortality has been reduced to a lesser degree in the Netherlands than in other European countries.\textsuperscript{9,10} The PERISTAT data (relating to the years 1999 and 2004) were published in 2003 and 2008, respectively, and profoundly shocked the Dutch medical world, even though there had been earlier signs suggesting that Dutch perinatal care was lagging behind. As Kloosterman wrote back in 1966, ‘Judging from perinatal and maternal mortality rates, we have lost our edge in maternity care and have had to concede defeat to other countries.’\textsuperscript{11} Hoogendoorn demonstrated in 1986 that the reduction of perinatal mortality in the Netherlands was not up to the reduction rates achieved by other European countries.\textsuperscript{12} Hoogendoorn’s study caused quite a stir, not so much because of the reported rates themselves, but because Hoogendoorn suggested there may be a correlation between the Dutch predilection for home birth and the perinatal mortality rate.\textsuperscript{13} Publications presenting the results of the 2003 EuroNatal study also showed Dutch perinatal mortality rates to be among the highest in Europe.\textsuperscript{14,15}

Much discussion ensued about the reliability and comparability of the data presented in the PERISTAT reports.\textsuperscript{16} The relatively high Dutch mortality rates were attributed to risk factors which are more common in the Netherlands than elsewhere and to policies with regard to ethical choice in matters of prenatal screening and end-of-life decisions in prematurity.\textsuperscript{17-19} However, since these factors did not entirely explain the mortality rates, further explanations were sought in matters which make the Netherlands unique. In maternity care, the most obvious differences from common European practice is the high prevalence of home birth, the division of responsibilities between primary-care midwives and secondary-care obstetricians, and the ‘risk screening’ which forms the basis of the division of responsibilities. These aspects of Dutch perinatal care became the main focus of attention in the debate about perinatal mortality sparked by the PERISTAT study. The debate was carried out both in the Netherlands and abroad, by medical professionals from the birth care field – often publicly and in the media. The role played in the system by midwives, as well as these midwives’ performance, were a main focus of the debate.
Evaluations of Dutch midwifery care in the (inter)national literature

The discussion about perinatal mortality may be old, but so is the debate about the Dutch midwife. Over the last few centuries, historians and sociologists have written many books about the midwife’s position, education and performance.¹² As an example, on the one hand, Geijl passed a harsh judgement on seventeenth- and eighteenth-century Dutch midwives, whom he called ‘intellectually inferior and morally possibly even more inferior, and so rough and crass as to be almost irresponsible’.² On the other hand, seventeenth-century midwife Catharina Schrader received an honourable mention in the 2009 Great Book of Dutch History, in recognition of her knowledge of and competence in delivering babies, as well as the way in which she gave account of her efforts in her so-called ‘Memorijboeck van de Vrouwens’.²¹²²

In order to gain an insight into the discussion on the role of the midwife in the Dutch maternity-care system since World War II, we identified all studies investigating the performance of Dutch midwives published in peer-reviewed medical journals in the fifty years preceding 2005. Since our study was limited to peer-reviewed journals, we did not include so-called ‘grey literature’, such as articles published in Tijdschrift voor Verloskundigen and its predecessors, nor doctoral theses and reports issued by government agencies and regulatory authorities.²³⁻²⁵

Firstly, we searched the entire PubMed database, entering the following (truncated) keywords in the title and/or abstract fields: midwi*, maternity care, maternity services, perinat*, home (child) birth, home delivery, Netherlands, Dutch, with the following limits: English, German, Dutch, ‘Undetermined’ and ‘from 1956 up to and including 2005’. In addition, the keyword midwi* was used again, now searching ‘all fields’ (with the same limits), after which both databases were aggregated.

Next, we searched the ‘research’ category of the database of Nederlands Tijdschrift voor Geneeskunde, entering the following (truncated) keywords in the text and/or title fields: verlosk*, vroedvrouw*, beval*, perinat*, with the limits ‘from 1956 up to and including 2005’. We then hand-searched the reference lists of the papers selected in the previous steps for more useful articles.

We only selected articles which presented original data. Follow-up articles on previously obtained data were only included if the articles in question had a different scope than the original article and only if that scope was relevant to the study at hand. Articles first published abroad and subsequently in a Dutch-language journal were only counted once.
Studies investigating the Dutch ‘maternity-care system’ were included if the midwives’ performance was either the direct or indirect subject of the study, or if data on the midwives’ performance could be gleaned from the study. Studies investigating (the quality of) maternity care in the Netherlands in general, without mention of the role played in the care system by midwives, were excluded from our study. Among the studies excluded were studies investigating the reliability of Dutch perinatal mortality rates\(^{26,27}\) and international comparative studies\(^{9}\). Opinion pieces and reviews of articles which mentioned figures without providing sources or methods of investigation were also excluded. This explains why Kloosterman’s articles, which caused quite a stir at the time of publication and helped change policies, were not included in our selection.\(^{11,28}\) Some of the older articles we found were difficult to classify as it was hard to determine whether they were evaluations or opinion pieces.\(^{29}\) If we could not determine an ‘outcome measure’, such articles were categorised as opinion pieces and were thus excluded from our study.

Our international search resulted in 457 hits, while the Dutch search yielded 277 hits, several of which turned out to be identical to articles previously found in the international search. One reviewer (MPAV) was then appointed to read the abstracts of all the hits so as to select the relevant publications. The studies were then classified into two subcategories: studies investigating the evaluation of the quality of Dutch primary midwifery care and studies investigating the scope of the Dutch primary-care midwife’s duties.

**Studies assessing the quality of Dutch midwifery care**

A total of 36 relevant papers were divided into the first subcategory, i.e. the evaluation of the quality of Dutch midwifery care. The 36 studies in question were quite diverse in terms of research hypothesis, design, method and study population. Some of the studies we analysed were not described in sufficient detail to judge whether they were scientifically valid. This was especially true for the less recent studies. The key data and conclusions of the selected studies can be found summarised in Table B in Appendix 2. The studies (which we have put in chronological order for the sake of convenience) provide good insight into the midwifery-related debates conducted between 1956 and 2005 and into the trends they either set or followed.

Table 1.1 provides a summary of these data. To determine the extent to which various kinds of obstetric professionals were involved in the selected studies, we counted the number of midwives represented in each research team (the so-called
General introduction

The MR-factor (denoting the extent to which midwives were represented in the research team) as well as the number of obstetricians represented in each research team (the OR-factor) *

We found that the less recent studies referred to in Table 1.1 tended to focus on the place of delivery. As a result, they shed relatively little light on the performance of primary-care midwives, since until the nineteen eighties a substantial part of all maternity care was delivered by general practitioners. This being the case, these older studies in the ‘home births’ category reflect the GPs’ performance as well as the midwives’.

The first attempt to describe midwives’ performance was not made until 1982. The outcome of deliveries conducted by midwives was measured by pH, pCO₂ and base deficit in arterial cord blood (early morbidity) and by neurological examination with Prechtl’s method (late morbidity). It bears mention that the results of this attempt (less favourable than the results of deliveries conducted by obstetricians) were criticised on methodological grounds (selection bias and non-optimal standardisation of blood sampling and storage). An attempt by a different research team to repeat this study using sounder methodology saw the results of the original study negated totally.

Particularly explicit and thorough descriptions of the quality of midwives’ efforts were provided in the Wormerveer and Gelderland studies. Thanks to the growing number of data available in the Landelijke Verloskunde Registratie (The Perinatal Registry), since the nineties more studies could be conducted which specifically outlined midwives’ involvement in deliveries, thus allowing for investigations of the ‘maternity-care system’ rather than the ‘place of delivery’.

* We assumed that the first-listed author for each study was the principal researcher. He/she was awarded four author points. The second- and the last-listed author each received two points, while all other authors listed were each awarded one author point.

The midwives’ involvement in the research team, the MR-factor (denoting the extent to which midwives were represented in the research team) was calculated as the quotient of the number of author points for midwives, in relation to the available number of author points * 100.

In the same way the obstetricians’ involvement in the research team (the OR-factor) was calculated (denoting the extent to which obstetricians were represented in the research team).

As an example: The paper ‘The hour of birth: comparisons of circadian pattern between women cared for by midwives and obstetricians’ (2000) had 5 authors. The third author was a midwife (=1 author points for midwives); the first, second and fourth author were obstetricians (4+2+1=7 author points for obstetricians) and the last author was neither midwife nor obstetrician (2 author points). Thus, the total number of author points available was 10. The MR-factor resulted in 1 : 10 * 100 = 10; the OR-factor resulted in 7 : 10 * 100 = 70.
Table 1.1 - Studies investigating the quality of midwifery care, published in peer-reviewed journals in the 1956-2005 period. (Refer to Table B in Appendix 2 for a descriptive summary of the selected studies.)

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<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>Total number of papers selected</td>
<td>0</td>
<td>1</td>
<td>11</td>
<td>12</td>
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<tr>
<td>Number of papers published internationally</td>
<td>-</td>
<td>-</td>
<td>3</td>
<td>7</td>
<td>10</td>
</tr>
<tr>
<td>Number of papers published in Dutch</td>
<td>-</td>
<td>1</td>
<td>8</td>
<td>5</td>
<td>2</td>
</tr>
<tr>
<td>MR-factor (Midwives’ involvement in the research team)*</td>
<td>-</td>
<td>Mean = 0</td>
<td>Mean = 0</td>
<td>Mean = 2 Range 0 - 25</td>
<td>Mean = 13 Range 0 - 50</td>
</tr>
<tr>
<td>OR-factor (Obstetricians’ involvement in the research team)*</td>
<td>-</td>
<td>Mean = 33</td>
<td>Mean = 70 Range 0 - 100</td>
<td>Mean = 62 Range 0 - 100</td>
<td>Mean = 46 Range 0 - 100</td>
</tr>
<tr>
<td>Subject of the study</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>midwifery care</td>
<td>-</td>
<td>-</td>
<td>1</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>place of delivery</td>
<td>-</td>
<td>-</td>
<td>8</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td>primary vs secondary care</td>
<td>-</td>
<td>-</td>
<td>1</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>maternity care system</td>
<td>-</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>6</td>
</tr>
<tr>
<td>Outcome measures #</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>perinatal mortality</td>
<td>-</td>
<td>1 38</td>
<td>8 39-46</td>
<td>7 12;36;47-51</td>
<td>6 37,52-55</td>
</tr>
<tr>
<td>neonatal morbidity</td>
<td>-</td>
<td>-</td>
<td>5 31;43;46;56;57</td>
<td>4 34;35;48;58</td>
<td>3 37,55,59</td>
</tr>
<tr>
<td>maternal mortality</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>1 60</td>
</tr>
<tr>
<td>maternal morbidity</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>1 37</td>
</tr>
<tr>
<td>referral</td>
<td>-</td>
<td>-</td>
<td>3 43;45;46</td>
<td>1 61</td>
<td>-</td>
</tr>
<tr>
<td>interventions</td>
<td>-</td>
<td>-</td>
<td>2 41;46</td>
<td>2 48;58</td>
<td>2 30 62</td>
</tr>
<tr>
<td>women’s experiences</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>1 63</td>
<td>2 62;64</td>
</tr>
<tr>
<td>substandard care factors</td>
<td>-</td>
<td>-</td>
<td>2 42;44</td>
<td>1 36</td>
<td>5 52;53,65,66</td>
</tr>
</tbody>
</table>

* See page 15 for explanation of MR-factor and OR-factor
# The sum of numbers exceeds the number of papers since more than one outcome measure could be used

The majority (57%) of the studies we included in our study used perinatal mortality as an outcome measure. This is somewhat understandable, since perinatal mortality is a concrete outcome which is regarded as an indicator for the quality of the care delivered. On the other hand, this outcome measure is far too imprecise to be used as a measure of quality care, since perinatal mortality is relatively rare, especially in the low-risk population treated by primary-care midwives. Moreover, we have learned from experience that the interpretation of perinatal mortality rates tends to
generate much discussion (mainly with regard to the methodology used) and thus tends to confuse matters rather than clarify them.

As mentioned above, several attempts to use neonatal morbidity as an outcome measure were found to be methodologically or practically unsatisfactory.\textsuperscript{31,32,57,68,69} Here, too, it is true that neonatal morbidity does not occur sufficiently frequently to be employed as a measure of the quality of a care system in general.

What is remarkable is that the evident importance of maternal outcomes, in the primary-care setting as elsewhere, is not reflected in the number of studies devoted to them. We found only one paper in which maternal outcomes in primary care were discussed to some extent\textsuperscript{37}, plus one other paper which explicitly focused on maternal mortality.\textsuperscript{60} It appears that the maternal experience and maternal satisfaction were not recognised as outcome measures for primary-care midwifery until 1995.\textsuperscript{63}

The number of midwives contributing to studies investigating midwives’ performance is remarkably limited. Over the 1956-2005 period, obstetricians obtained mean scores of 33, 70, 62 and 46 for their involvement in midwifery-related studies (average score per decade), whereas midwives averaged a mere 0, 0, 2 and 13.

**Studies concerning the scope and content of primary-care midwives’ duties**

A total of 35 articles met the selection criteria for inclusion in the second subcategory of papers, which was devoted to the scope and content of primary-care midwives’ duties. Refer to Table 1.2 for a list of subjects discussed in the selected articles.

Remarkably, the number of studies dealing with the scope of Dutch midwives’ duties has increased significantly since the mid-1990s (70 per cent of all studies conducted over the fifty-year period covered in our study were conducted in the 1995-2005 period). The 1995-2005 period is also notable for the relatively high number of articles devoted to women’s wishes and expectations\textsuperscript{70-74} and for the realisation that both the person receiving the care and the person delivering the care contribute to the outcome of that care.\textsuperscript{75-83}

As with the studies outlined in Table 1.1, the majority of studies investigating the scope of primary-care midwives’ duties were not conducted by midwives themselves (Table 1.2, third row).
### Table 1.2 - Studies investigating the scope of primary-care midwives’ duties

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</thead>
<tbody>
<tr>
<td><strong>Number of papers</strong></td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>8</td>
<td>25</td>
</tr>
<tr>
<td><strong>Mean MR-factor</strong></td>
<td>-</td>
<td>-</td>
<td>50</td>
<td>3</td>
<td>18</td>
</tr>
<tr>
<td><strong>Pregnancy</strong></td>
<td></td>
<td></td>
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<tr>
<td>counselling and advice (nutrition, smoking cessation, prenatal screening)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>1</td>
<td>84</td>
</tr>
<tr>
<td>use of medication</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>1</td>
<td>88</td>
</tr>
<tr>
<td>diagnostics, tests and interventions</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>2</td>
</tr>
<tr>
<td>social make-up of clientele (socioeconomic status, elderly women, immigrants)</td>
<td>-</td>
<td>-</td>
<td>1</td>
<td>75</td>
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<tr>
<td><strong>Delivery</strong></td>
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<tr>
<td>management of labour and interventions</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>neonatal condition after home birth</td>
<td>-</td>
<td>-</td>
<td>1</td>
<td>97</td>
<td></td>
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<tr>
<td><strong>Women’s attitudes, expectations and evaluations</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>decision-making process in making choices</td>
<td>-</td>
<td>-</td>
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<td>1</td>
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<tr>
<td>expectations and preferences for certain types of care</td>
<td>-</td>
<td>-</td>
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<td>3</td>
<td></td>
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<tr>
<td><strong>Preferences and attitudes of midwives</strong></td>
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<tr>
<td>midwifery-related factors influencing expectant mothers’ choices</td>
<td>-</td>
<td>-</td>
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<td>3</td>
<td></td>
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<tr>
<td>influence of birth location on midwife’s performance</td>
<td>-</td>
<td>-</td>
<td>-</td>
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<td></td>
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<tr>
<td>adherence to guidelines (miscarriage, anaemia, vitamin K policy)</td>
<td>-</td>
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<tr>
<td><strong>Care management</strong></td>
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<tr>
<td>primary-care midwives’ workload</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>1</td>
<td></td>
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<tr>
<td>costs of birth</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td></td>
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<tr>
<td>co-operation between primary- and secondary-care professionals</td>
<td>-</td>
<td>-</td>
<td>1</td>
<td>100</td>
<td></td>
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<tr>
<td>transport of obstetric patients</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>1</td>
<td></td>
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<tr>
<td><strong>Care assessment</strong></td>
<td></td>
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<td></td>
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<tr>
<td>small peer-group evaluation</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>feasibility and effects of (perinatal) audit</td>
<td>-</td>
<td>-</td>
<td>-</td>
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<td></td>
</tr>
</tbody>
</table>

*See page 15 for explanation of the MR-factor*
One may conclude from the literature produced prior to 2006, that until quite recently, midwives’ performance was assessed primarily by people who were not midwives themselves, especially by obstetricians. Analyses of the scope of midwives’ duties have nearly always been linked to the place where their clients gave birth. They were focused primarily on the midwives’ intrapartum duties and hardly any mention was made of the antepartum and postpartum care the midwives delivered. Midwives’ performance was generally defined in terms of mortality or morbidity, focusing on the condition of the neonate rather than the mother. An early development towards an evidence base for the content of the midwife’s work can be seen from 1996 onwards.

The results of the studies conducted over the last fifty years provided sufficient grounds for maintaining the current maternity-care system, in which primary and secondary maternity care are two distinct fields, and in which the primary-care midwife plays an important role. However, it would appear that the results of these studies did not by no means close the discussion about the system and the midwife’s role in it once and for all.

**Evaluation, an essential part of care**

All health-care providers are morally and legally obliged to assess their own performance. Under the Individual Health-Care Providers Act (Wet op de Beroepen in de Individuele Gezondheidszorg), registered care providers must ensure that they can perform their professional duties in a way ‘which results, or can reasonably be expected to result, in the delivery of proper medical care’. Among other methods, this is achieved by ‘systematic monitoring, control and improvement of the quality of care’ (Art. 40: 1,2).

The profession of midwives, being one of the eight professions listed in Article 3 of the said Act, is subject to this mandatory systematic monitoring, control and improvement. The importance of assessment is underscored by the regulation pertaining to the Act (Besluit opleidingseisen en deskundigheidsgebied verloskundige), which identifies the midwife’s educational requirements and competencies. Official registration as a midwife is contingent upon a candidate meeting all the educational requirements stipulated in the regulation (refer to Table A in Appendix 1). It is interesting to note that there are at least 13 mentions of care assessment in this regulation. For instance, a midwife must be able to reflect on her own personal and professional performance (Art. 4:6b) as well as others’ (Art. 4:4h), must
actively request feedback (Art. 4:4i) and must provide feedback to colleagues (Art. 4:6d). She must also be able to systematically collate and analyse complaints related to the performance of her duties (Art. 4:12i), identify and record aspects of her work which can be improved (Art. 4:6c), and initiate and stimulate work-related improvements (Art. 4:12b). In addition, she must be able to give account of her personal, social and scientific abilities and limitations (Art. 4:6f), and, where necessary, be able to look beyond the limitations of her own profession, team and practice (Art. 4:10d).

All of the above concerns the evaluation of the individual midwife’s performance. Under the Quality Assurance at Medical Facilities Act (Kwaliteitswet Zorginstellingen, ‘Quality Act’), the midwifery practice, too, is subject to mandatory ‘systematic monitoring, control and improvement of the quality of care’. Since a ‘medical facility’ is defined in this law as ‘any organisation in which multiple persons work together to provide care’, any midwifery practice which employs more than one midwife is subject to this law. The Quality Act provides a slightly more abstract definition of evaluation of care than the regulation pertaining to the Individual Health-Care Providers Act, describing it as the systematic collation and registration of data relating to the quality of the care delivered at the facility (Art. 4:2a), systematic assessment of the quality of the care delivered at the facility on the basis of the aforementioned data (Art. 4:2b), and, where necessary, a reorganisation of the facility’s care system, depending on the results of the aforementioned assessment (Art. 4:2c).

As the above demonstrates, Dutch health care legislation has made registration and analysis of the medical care delivered, as well as the provision and acceptance of feedback, prerequisites for the delivery of proper medical care. There have been no randomised trials investigating the degree to which audit and feedback contribute to a reduction of perinatal and maternal mortality and morbidity. However, it has been demonstrated that audit and feedback can be effective in improving professional practice, although the most effective mechanisms for this are still unknown. Such feedback may be more effective when it is provided by relevant health professionals actively involved in care provision, when it is delivered more intensively, and when it is not an occasional occurrence, but rather an ongoing process.


Research questions

Both legislation and literature (refer to Tables 1.1 and 2.1) have shown that it is high time midwives took it upon themselves to assess their own performance. They themselves need to establish the outcome measures for their tasks, showing exactly what midwifery care is, how their services rate, and which aspects of their performance leave room for improvement. It is high time that they were open about the quality of their performance, both to themselves and to others, and that they published the results of their evaluations.

This thesis presents several methods for the assessment of midwifery care, ranging from general types of evaluation to specific evaluation aimed at individual care providers. The thesis seeks to answer the following questions:

1. Dutch midwives’ core business is the care of women who are expected to have a normal pregnancy and delivery. But what is considered ‘normal’, how stable is the concept of ‘normality’, and which changes in midwifery practice can be attributed to changes in our understanding of ‘normality’?

2. The primary-care midwife examines pregnant women for risk factors. If complications occur or threaten to occur, she will refer the patient to an obstetrician in secondary care.
   a. Which trends can be identified in referrals from primary care to secondary care?
   b. What are the causes contributing to such trends in referrals?
   c. What is the nature of intrapartum referrals?
   d. What are the outcomes of intrapartum referrals?

3. A professional midwife must be transparent about the quality of the care she can be expected to deliver and has to be prepared to give account of it. Which raises the following questions:
   a. Is it possible to identify a set of indicators for monitoring the quality of maternity care for low-risk women?
   b. In the event of an adverse outcome, the quality of the care delivered will be subject of evaluation by outsiders. Do care providers object to external evaluators giving feedback on such cases?
   c. Which sorts of critical incidents with adverse outcomes are reported to the Dutch Health Care Inspectorate, and what factors contributing to the delivery of substandard care have been found to play a role in these incidents?
Guide to this thesis

Chapter 2 outlines the development of evidence-based midwifery in the Netherlands, as well as the introduction of a quality management policy involving standards to be met in midwifery and the practical contribution midwives can make to research into maternity care.

Chapter 3 addresses Research Question No. 1 by analysing the division of responsibilities between midwives and obstetricians, which is closely related to the question of what is considered ‘normal’. The purpose of this chapter is to define the scope of midwives’ work.

Chapters 4 and 5 address Research Question No. 2. Chapter 4 outlines trends in referrals from midwifery care to obstetric care spotted over the course of a seventeen-year period, as well as the factors contributing to these trends. The purpose of this analysis is to provide a means of internal evaluation, as well as to provide insight into the quality of primary midwifery care at the national level.

Chapter 5 analyses intrapartum referrals to secondary care. The purpose of this analysis is to provide a means of internal evaluation, as well as an insight into the quality of primary midwifery care at the national level.

Chapters 6 to 8 deal with Research Question No. 3. Chapter 6 outlines the search for indicators of midwives’ performance. Such indicators are designed to provide a means of internal evaluation, i.e. an insight into the quality of maternity care at the level of the individual practice, in order to enable midwifery practices to be accountable to external parties.

Chapter 7 discusses the evaluation of perinatal mortality through perinatal audit. It also analyses the degree to which the care providers involved in the incidents accept feedback from external parties. The purpose of perinatal audit is to provide a multi-disciplinary evaluation and to gain insight into the individual practitioners’ performance.

Chapter 8 presents an assessment of critical incidents in maternity care reported to the Dutch Health Care Inspectorate over the 2006-2008 period as well as of the factors contributing to the delivery of substandard care which may have played a role in these incidents. The purpose of critical incident reporting is to provide a means of
both *internal* and *external* evaluation, so as to enable *medical facilities* or *individual health-care providers* to make structural improvements to their care systems.

Chapter 9 ties all the above subjects together, discusses current developments in maternity care and presents some final conclusions and recommendations.

Chapter 10 provides a summary in both English and Dutch.
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