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## **Chapter 5**

### **AN EVALUATION OF THE HISTORICAL CONTEXT OF INTERPROFESSIONAL COLLABORATION IN DUTCH OBSTETRICAL CARE**

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## **Abstract**

*Introduction* Collaboration between different groups of health care professionals is often rooted in a long and often difficult history. This history can exert a strong influence on how professionals collaborate and historical tensions can contribute to problems in contemporary practice. However, literature about interprofessional collaboration often ignores the historical underpinnings of collaboration.

*Methods* In this study, the historical development of interprofessional collaboration between obstetricians and midwives within the setting of Dutch obstetrical care is explored using a review of Dutch and English literature for documents explicitly or implicitly describing the historical development of this collaboration.

*Results* This literature delineates the establishment of professional boundaries and the formalization of the collaboration between the two professions. It also details the history of physician domination over the midwives both in midwifery practice and education and the relatively recent reversal of this situation. Moreover, the shift in collaborative partner from general practitioner to obstetrician and its effect on collaboration is examined.

*Discussion* Insight into the historical foundations of Dutch maternity care collaboration may allow us to understand the origins, and thus formulate possible solutions, for contemporary problems within this collaboration.

## Introduction

Interprofessional problems are not uncommon in healthcare and can greatly influence the provision of patient care. A study in 2008 showed a relatively high perinatal morbidity rate in the Netherlands, compared to the rates in other European countries (Europeristat project, 2008). Subsequent research found this high rate could be attributed in part to sub-optimal collaboration between community midwives and obstetricians (Adviesgroep Zwangerschap en geboorte, 2009).

In literature, poor collaboration between professionals and adverse events are often linked (Manser, 2009). Teamwork issues (in conjunction with communication issues) were found to be contributory factors in 22-32% of the adverse events and incidents (White et al., 2005; Pronovost et al., 2006; Suresh et al., 2004). However, the aspects of teamwork that led to the incidents are often not specified, let alone explored, in such studies and thus there is no insight into how to improve teamwork and prevent future incidents (Manser, 2009).

Collaboration between healthcare professionals is well studied. Within the field of teamwork and interprofessional collaboration, research is aimed at understanding and unraveling the complex phenomenon of collaboration, successful or not (San Martin-Rodriguez et al., 2005; D'Amour et al., 2005; King et al., 2008; Salas et al., 2005). It also seeks to gain insight into the attitudes of collaborating professionals towards the collaboration itself or towards the professional with whom they are supposed to collaborate (Watson et al., 2012; Baker et al., 2006).

Analysis of interprofessional collaboration and its problems usually focuses on the current situation. Yet historical tensions between groups of health care professionals can strongly influence how professionals collaborate today. Insight into the historical underpinnings of a given collaboration may help elucidate the origins of contemporary problems and to inform a search for appropriate solutions.

In this study we aim to gain insight in and provide an overview of the historical development of the collaboration between Dutch midwives and obstetricians by reviewing the available Dutch and English literature and reporting our findings chronologically.

## **Methods**

PubMed and Google Scholar were searched for available Dutch and English literature on the history of the collaboration between Dutch midwives and obstetricians using the keywords: history, Netherlands, collaboration, midwives, obstetricians and their Dutch translations. To provide a comprehensive overview, we also searched for relevant documents in the private libraries of the professional societies of the midwives (Royal Dutch Organization of Midwives) and the obstetricians (Dutch Society of Obstetrics and Gynecology) using the same keywords.

We also searched for documents describing the historical development of the profession of midwifery or obstetrics as these documents could potentially contain important information about collaboration between these professions. For example, any document in which information about one or the other profession was mentioned and from which information about the relationship between both professions could be inferred was included. This could be information as diverse as a midwifery document describing their practice to a gynecological perspective on the role of midwives in obstetric management.

Documents were scanned for any explicit and or implicit information about the interaction between the professions. Next, the information was categorized by the event or the collaborative issue described, such as the introduction of a law or a meeting of a legislative authority. From this, the explicit or implicit consequences for the collaboration were extracted and included in our results.

We did not aim to comprehensively describe the historical development of Dutch obstetrical care, but instead described key historical elements in the collaboration between midwives and obstetricians within obstetrical care.

## Results

The documents we found focused predominantly on the early development of the collaboration and were often written from a physician perspective. Most documents focused on inter-organizational aspects such as the development of regulations, scope of practice and professional boundaries. The interpersonal relationship between the members of the professions and the efforts made to establish effective collaboration were rarely addressed, although the negative aspects of the relationship such as disputes about professional boundaries were broadly reviewed.

### *The beginning*

Midwifery was a well-established autonomous profession, long before the profession of obstetrician came into being. Until the end of the seventeenth century, midwives would only consult another caregiver, a so-called barber surgeon, if the child had died during delivery, and surgical help was required to try to save the woman's life (Schoon, 1995; Assen, 1987). In the beginning of the 14<sup>th</sup> century, the status of midwifery began to change with the founding of the universities and their medical schools. The universities gave rise to a new profession, the '*medicinae doctores*', whose education focused on academic development and on the concurrent knowledge of the human body. The midwives were interested in this academic development, but as they were predominantly female, they were denied access due to the universities' strict male-only admissions policy (Schoon, 1995; Drenth, 1998).

Originally, the practice of the *medicinae doctores* did not include the practical and obstetrical aspects of medicine, except for those practicing in the countryside, since those activities already were the prerogative of the barber surgeons and the midwives respectively. However, the *medicinae doctores* did play an important role in the formal restriction of midwifery practice. In 1668, they introduced an exam that set the standard for the obstetrical care provided by the midwives. From then on the midwives were obliged to pass a midwifery exam with a chief barber surgeon before they could practice, even though the chief barber surgeons had little knowledge of the physiology of labor and even less experience with the 'living' woman in labor. Once certified, the midwife's field of practice was limited to managing a physiological labor. When she suspected pathology during labor, the midwife would first have to consult and get the permission of a *medicinae doctores* before she was allowed to ask a barber surgeon for help (Houtzager, 1993; Donnison, 1977).

### *Academic obstetrics*

During the 18<sup>th</sup> century, the medical field changed drastically. Knowledge of the female body and medical and obstetrical practice were acknowledged by the universities to be an important aspect of the expertise and practice of the *medicinae doctores*. Consequently, medical obstetrical knowledge rapidly increased, for example knowledge about the anatomy of the fetus, placenta and uterus, as well as the physiology and pathology of the pelvis. Moreover, this knowledge led to the introduction of many technical solutions to obstetrical problems such as forceps and the caesarean section.

With this newly acknowledged expertise, the practice of *medicinae doctores* and barber surgeons begin to overlap and over time, two types of doctors developed. The *doctor obstetrici* was educated to be an expert in the female body and obstetrics while the

obstetrical surgeon (also known as 'vroedmeester') was a barber surgeon academically trained in obstetrics. Although their titles might indicate differently, the knowledge and expertise of the *doctor obstetrici* and obstetric surgeons in practical obstetrics remained modest and many of them had rarely attended a 'normal' birth (Houtzager, 1993).

As a result of the academic developments in the field of obstetrics, the academic interference concerning the education and practice of midwifery grew. The education of the midwives was formalized and became more theoretical, with the introduction of clinical training and anatomy lectures, in addition to the traditional vocational apprenticeship training. Both the position and education of the midwives were governed by academic and medical authorities, without any input from the midwives (Kroes-Suverein, 1998).

In short, with the rise of the doctors and the obstetrical surgeons, these professions gradually took control over the midwifery profession, severely restricting their responsibilities and activities. Consequently, the role of the midwife changed from being an autonomous health care provider to being subservient to the obstetrical doctor (Donnison, 1977). Moreover, the clientele and hence the income as well as the status of the midwives significantly decreased (Schoon, 1995; RoSa, 2006).

#### *Formal division of responsibilities*

In 1865, the 'law of medical practice' was introduced, which further restricted the midwife's authority to 'providing obstetrical assistance or advice' in the uncomplicated and natural course of labor and without the use of obstetrical instruments or medication (Drenth, 1998). In contrast a doctor was certified to practice all aspects of medicine, including surgery and obstetrics.

With this, the law formally introduced the division of responsibilities between doctors and midwives for pathological and physiological labor, respectively (Amelink-Verburg & Buitendijk, 2010; Drenth, 1998). Although the law strengthened and consolidated the position of the midwives, it simultaneously significantly limited their authority.

At the same time, an effort was made to unite the different doctors and surgeons into a single basic doctor with a uniform academic training, which could be augmented with further specialized training. During the 20<sup>th</sup> century, a clear division in the medical practice of obstetrics developed. One group of doctors specialized in the pathology of pregnancy and labor (obstetricians) whereas another group limited their obstetrical scope of practice to physiological pregnancy and labor (general practitioners). As a result of this division of work, these two professions developed a different relationship with midwives. The general practitioner was essentially in competition with them for the same patient population, while the obstetrician held sole control over pathology (Klinkert, 1980).

#### *Expansion of the midwife's field of practice*

The competition over physiological obstetrical practice between midwives and general practitioners (GPs) was exacerbated by efforts of midwifery to expand their scope of practice beyond labor and birth. Circa 1900, preventive counseling and care for the woman from her 30<sup>th</sup> week of pregnancy onwards (prenatal care) as well as postnatal care was granted to midwifery. From 1920 onwards, the care for the newborn until 10 days of

age was added to the midwife's practice, although official legislation enshrining this was not adopted until 1932 (Klomp, 1996).

With the 1951's update of the 1865 law of medical practice, the midwives' scope of practice truly expanded (Klomp, 1996). This law legally enabled the midwife to suture perineal lacerations and to perform (but not suture) an episiotomy. Moreover, the law allowed the midwife to provide prenatal care from the beginning of pregnancy, including drawing blood and urine, taking blood pressure and other examinations pertinent to early pregnancy, however the use of medication and instruments during delivery was still forbidden.

Although the laws of 1932 and 1951 expanded the scope of midwifery practice, these laws also introduced more medical governance such as the obligation to report every delivery in a so called 'delivery diary' (1932) at the GP's office (1951) (Klomp, 1996).

#### *A shift in collaborative partner*

Until 1955, the midwife and the GP were the main professions involved in the majority of obstetrical care and both professions struggled to make a living from obstetrical practice and openly competed for posts and clients (Marland, 1995). The third profession involved in obstetrical care, the obstetrician, had a monopoly over specialized care and clinical operative or medical intervention. Patients were not often referred to the obstetrician for these indications as GP's often performed the necessary instrumental and medical action during home delivery. Nevertheless, the obstetrician was sometimes summoned to the house of the woman in labor for instrumental intervention. Given a lack of overlap of scope of practice, obstetricians did not feel threatened by midwifery practice and, in fact, played a significant role in enhancing the quality of midwifery training and often were allied with midwives in their competition with the GPs (Marland, 1995).

With the introduction of the 'primaat voor verloskundigen' (ordinance for midwives) in 1941, the midwife's position in obstetrical care was strengthened on a national level. This ordinance, which remained in force until 2001, was introduced by Dutch insurers and provided obstetrical care by midwives at no cost to the parturient. In contrast, GP-provided obstetrical care had to be paid completely by the woman herself, contributing to the progressive diminishing of the role of the GP in obstetrical care. Simultaneously, the role of the obstetrician in the provision of obstetrical care increased due to the increased number of hospital deliveries from 1950 onwards (Klinkert, 1980) leading to the gradual replacement of the GP by the obstetrician the midwife's 'partner' in obstetrical care.

#### *Further formalization*

The division of responsibilities and scope of practice between the professions in obstetrical care was officially established with the introduction of Kloosterman's obstetrical indications list in 1958. Originally developed by insurance companies to prevent expenditures for needless hospital admissions, this list described 39 maternal indications necessitating a transfer of care from the midwife to the obstetrician. In the later editions of 1966 and 1973, the indications for hospital admittance were augmented by a list of indications for when to consult an obstetrician for advice. In the 1987 edition, the obstetrical indications list was augmented by a list of indications requiring no referral to an obstetrician (Amelink-Verburg & Buitendijk, 2010).



The 1987 edition also designated the midwife to be the care provider to determine risk and this further strengthened their position. This did not sit well with obstetricians, and as a result, the Society of Obstetrics and Gynecology did not acknowledge the new version of the indication list. This led to a cooling of the relationship between the societies of the midwives and the obstetricians. . However by 1992, the obstetrical indications list, based on research and on consensus between obstetricians and midwives (Amelink-Verburg & Buitendijk, 2010), was embedded in the Obstetrical manual of the Dutch Gynecological Society, which also described agreements for collaboration between obstetricians and midwives which had been approved by both professional societies. The aim of the manual was, and still is, to optimize collaboration and quality of obstetrical care.

### *Contemporary practice*

In contemporary Dutch obstetrical practice, midwives and obstetricians have their own areas of expertise and different streams for the provision of care can be distinguished. At the primary care level, the midwives provide the prenatal, obstetrical and postnatal care within the community based on a non-nursing model. They play a crucial role in risk assessment and gate keeping for the secondary level of care. Patients will visit the midwife for risk assessment. In acute obstetrical situations or if pathology during pregnancy is suspected, the Obstetric Indications List advises the midwife on the appropriate care policy e.g. in which situations to transfer the care of a patient to the obstetrician in the hospital (second level of care). At the secondary level of obstetrical care, almost all obstetricians are concerned with the pathology of obstetrics and the majority of them also practice gynecological care. At this level, also a group of hospital midwives is involved. These midwives, most of whom have several years of experience as a community midwife, work in the hospital under supervision of the obstetrician and provide obstetrical care with more extensive authorizations than a community midwife. For example, they are authorized to use fetal monitoring and ultrasound equipment normally used by obstetricians (De Vries, 2004).

In contemporary obstetrical care, midwives and obstetricians collaborate on several levels with a communal aim of providing good quality obstetrical care. For example, they jointly design care protocols and monitor quality of care, midwives consult obstetricians about patients and they collaborate on the labor ward if a patient's care during labor is transferred from the midwife at home to the obstetrician in the hospital (Posthumus et al., 2012). Both the obstetricians and midwives have separate professional societies, the Dutch Gynecological Society (NVOG) which was founded in 1887 (NVOG, 2013) and the Dutch Organization of Midwives (KNOV) founded in 1898 (KNOV, 2009). Both societies have their own visions, protocols and political lobbies.

## Discussion

In this article we have provided an historical overview on the development of the collaboration between midwives and obstetricians in the Netherlands that chronicles the establishment of professional boundaries, and the rise and fall of physician domination of the collaborative relationship between the two professions. These historical tensions, unless addressed, have the potential to undermine the emergence of effective teamwork between both professions.

Despite historical attempts by physicians to dominate midwives, Dutch midwifery did not perish but plays a central role in modern obstetrical care in the Netherlands.

In the 19<sup>th</sup> century, autonomous midwifery practice was heavily curtailed in several western countries, but the discussion in the Netherlands had a different focus (Marland, 1995). Here, the discussion was not about the continued existence of the midwife since the role of the midwife in 'normal' deliveries was firmly entrenched due to the early introduction of legislation governing the obstetrical professions, the institutionalization of midwifery training and the low rate of hospital births (Lieburg, 1989). Instead, the discussion centered on the role of the midwife in complicated childbirth. As a result, in contrast to several other European countries, the Dutch midwives have a comprehensive role and scope of practice (Miller, 1997; Larsson et al., 2009; Lavender & Chapple, 2004) and autonomously perform physiological deliveries, both at home and in the hospital.

What can be learned from history in regard to the current collaborative problems in Dutch obstetrical care that may contribute to a higher perinatal morbidity?

From the literature, we know several components are pivotal to achieve effective collaboration. The model of D'Amour describes two domains, four elements and ten factors important for interprofessional collaboration. Within the inter-organizational domain, the elements 'governance' (with the factors: centrality, leadership, support for innovation and connectivity) and 'formalization' (using formalization tools and structured information exchange) are important, whereas within the inter-relational domain the elements 'shared goals and vision' (characterized by the factors: 'goals' and 'client-centered orientation versus other allegiances') and 'internalization' (characterized by 'mutual acquaintanceship' and 'trust') are key (D'Amour et al., 2008).

When reflecting on the historical development of the collaboration using D'Amour's model, it becomes clear that the development of the governance facilitating collaboration within the inter-organizational domain has not been well supported. Obstetricians and midwives are still organized in two different professional societies with their own visions, protocols and political lobbies (Drenth, 1998; Assen, 1987) hindering interprofessional governance.

The same is true for the interprofessional formalization of collaborative frameworks, despite significant legislation introduced to regulate obstetrical care. On close inspection, this legislation appears to only be aimed at the preservation of autonomy and establishing professional boundaries, and not at developing effective collaboration. Only recently, shared formalization efforts have been made to establish real collaboration. For example, the contemporary version of the Obstetrics Indication List is aimed at optimizing the collaboration and quality of obstetrical care and has been endorsed by both midwives and obstetricians. Also, over the last two decades, so called 'Verloskundig Samenwerkingsverbanden' (local obstetrical partnerships) have been founded. These partnerships are usually formed by obstetricians of a single hospital and all midwifery

practices surrounding it and aimed at developing and optimizing shared care (Posthumus et al., 2012).

Historical events also have not supported the development of the inter-relational domain of D'Amour's model. Instead of developing shared goals and vision and building a relationship of trust, the domination by doctors, as well as disputes over professional boundaries and scope of practice, seem to have encouraged the exact opposite. As lack of shared concepts of care and trust have been shown to negatively influence collaboration (Mathieu et al., 2000), these issues probably contribute to the occurrence of contemporary collaborative problems.

The historical overview also reveals that collaboration between midwives and obstetricians is not an 'interprofessional' collaboration, as an interprofessional team is defined as 'a structured entity with a common goal and a common decision-making process based on an integration of knowledge and expertise of each professional to solve complex problems' (D'Amour et al., 2005). Instead, the description of multiprofessional collaboration would be more appropriate as this refers to situations in which 'several professional work on the same project independently or in parallel but in a coordinated fashion' (D'Amour et al., 2005).

It might seem logical for both professions to provide patient-centered care by sharing goals and visions and documentation, while practicing in the same professional community and striving for true interprofessional collaboration. However, the aforementioned historical collaborative issues may have become so culturally embedded in the professional foundations of both the midwives and obstetricians (Schuitmaker, 2012) and led to a deeply rooted mistrust in one another that is difficult to address.

This mistrust is likely to undermine efforts to achieve effective collaboration and even hinder the progression of the collaboration from multiprofessional collaboration towards interprofessional collaboration. It would seem clear that solving the high perinatal mortality rate attributable to sub-optimal collaboration between midwives and obstetricians, it will be necessary to deconstruct and reshape the underlying cultures.

We consider it a strength of this study that our historical overview covers most of the important and relevant documents pertaining to the development of the collaboration between midwives and obstetricians. Yet, in composing a historically accurate overview, we were strongly limited by the focus and opinion of the authors of the included documents. As mentioned at the beginning of the results section, most documents were written from an physician's point of view. This is not surprising given the hierarchical nature of the relationship between the two professions. The midwives' perspective on such turning points as the introduction of legislation and its effect on midwifery practice might therefore be under represented or not entirely accurately described.

Future research should focus on determining what aspects of contemporary collaboration actually contribute to the high perinatal morbidity, keeping the historically rooted issues in mind. An exploration of both the midwives' and obstetricians' perspectives could reveal what is needed to truly achieve effective collaboration and optimize patient care. Moreover, this may provide clues as to what interventions are necessary to shift from multiprofessional to interprofessional collaboration.

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