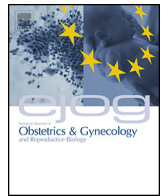




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Full length article

## Shared agenda making for quality improvement; towards more synergy in maternity care



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### ABSTRACT

**Objectives:** Professionals in maternity care have started working in a network approach. To further enhance the efficacy of this multidisciplinary maternity network, the identification of priorities for improvement is warranted. The aim of this study was to create key recommendations for the improvement agenda, in co-production with patients and professionals.

**Study design:** We conducted a Delphi study to inventory (round 1), prioritize (round 2) and eventually approve (round 3) the improvement agenda for the maternity network. Both patients and professionals joined this study.

Initial input for the study consisted of experiences from 397 patients, collected using the ReproQ questionnaire. In round 1, the expert panel, gave improvement recommendations, based on the ReproQ results. This resulted in 11 recommendations. In the second round, the expert panel prioritised these recommendations. In the consensus meeting then finally the concrete improvement agenda was composed.

**Results:** Priority scores differed considerably between patients and professionals in seven items, while four items received similar priority scores from both groups. The four most important improvement activities were: Realise more single bedrooms in hospitals; Create more opportunities for the continued presence of the community midwife during labour; Initiate a digital patient record view system for the network with a view function for patients; and Introduce a case manager for pregnant woman.

**Conclusion:** Based on patient experience and the active involvement of patients and professionals, we were able to compose the shared agenda for quality improvement in maternity care.

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### Introduction

Patient centered care implies the involvement of patients in the improvement agenda of health care. Patient involvement has shown benefits for shared decision making, research partnership, changes to service delivery and patient outcomes [1–5]. However, patient involvement in quality improvement is still limited [6], mainly due to uncertainties about the why and how [7]. Despite these uncertainties, Ocloo and Matthews shared principles that help to underpin practice in a collaborative framework with

patients [1]. They recommend involving a diversity of patients, a clearly articulated purpose and a process that is co-designed or co-produced with patients.

In order to realise patient centered care, maternity care professionals in the Netherlands started working in a network [8]. It is our strong belief that a central position for the patient, rather than the organisation, leads to better maternity care. In doing so, it is the patient who connects the professionals from different organisations. We believe that for providing direction in a new maternity network, a patient included improvement agenda is most valuable. Based on the aforementioned principles we therefore designed a study in which patients were actively engaged in creating and prioritising the improvement activities for the maternity network. We developed a Delphi study involving both patients and professionals as experts. The goal of this study was to achieve an improvement agenda for the multidisciplinary maternity network in co-production with patients.

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## Methods

### Setting

The study was performed in one multidisciplinary maternity network in the area of Nijmegen, region in the Netherlands with an average of 3.800 births a year and over 330 health professionals involved in maternity care. The different professionals working in maternity care were: community based midwives active in eleven independent practices, hospital based midwives, obstetricians (in training), and paediatricians working in two different hospitals (one providing secondary care and one providing secondary and tertiary care). The maternity care assistants gathered in one organisation and youth health doctors and nurses were positioned in 14 offices, which were coordinated by one organisation. Most pregnant women had received care from both the community based midwives, maternity care assistants, and youth health doctors and nurses. Besides, 59% of all pregnant women also received care from professionals working in a hospital [9].

### Design

We used the Delphi method in our study. In the Delphi method an expert panel participates to gain consensus about a topic [10]. The expert panel participates anonymously. The Delphi study consists of rounds of questionnaires that are sent to the experts to gather and synthesise information. Our expert panel consisted of both patients and professionals. The patients were women who gave birth in the month before plotting the questionnaires, so they had experience with maternal care. The professionals formed a representative diversity of the professions active in the different organizations from the multidisciplinary network, to enhance the acceptance of the key recommendations in the whole multidisciplinary network.

### Creating the improvement agenda

Fig. 1 shows the step by step Delphi method to develop key recommendations for the improvement agenda: (1) data analysis of the Repro Questionnaires of patient experience with maternity care, (2) first round Delphi questionnaire, (3) data analysis of the first round, (4) second round Delphi questionnaire, (5) data analysis of the second round, and (6) setting up the improvement agenda in a consensus group. These six steps includes the three Delphi rounds.

#### Step 1: data analysis of the questionnaires of patient experiences

Experiences from patients with the maternity care provided by the multidisciplinary network were measured by the Repro Questionnaire [11]. This validated questionnaire was developed to evaluate prenatal, natal and postnatal care, regardless of where the care is given [11–13]. Development of this self-report questionnaire was based on the 8-domain WHO Responsiveness model, including the following domains: dignity, autonomy, confidentiality, communication, prompt attention, social consideration, basic amenities, choice and continuity [14]. This questionnaire consisted of 32 questions, divided between the 8 domains. Examples of concrete questions were: treating with respect and giving personal attention, involving patient in decision-making, secured provision of medical information, information while treated and continuity of care provision when change of professional. For further detailed information about the questionnaire see 'Measuring client experiences in maternity care under change: development of a questionnaire based on the WHO Responsiveness model' [11].

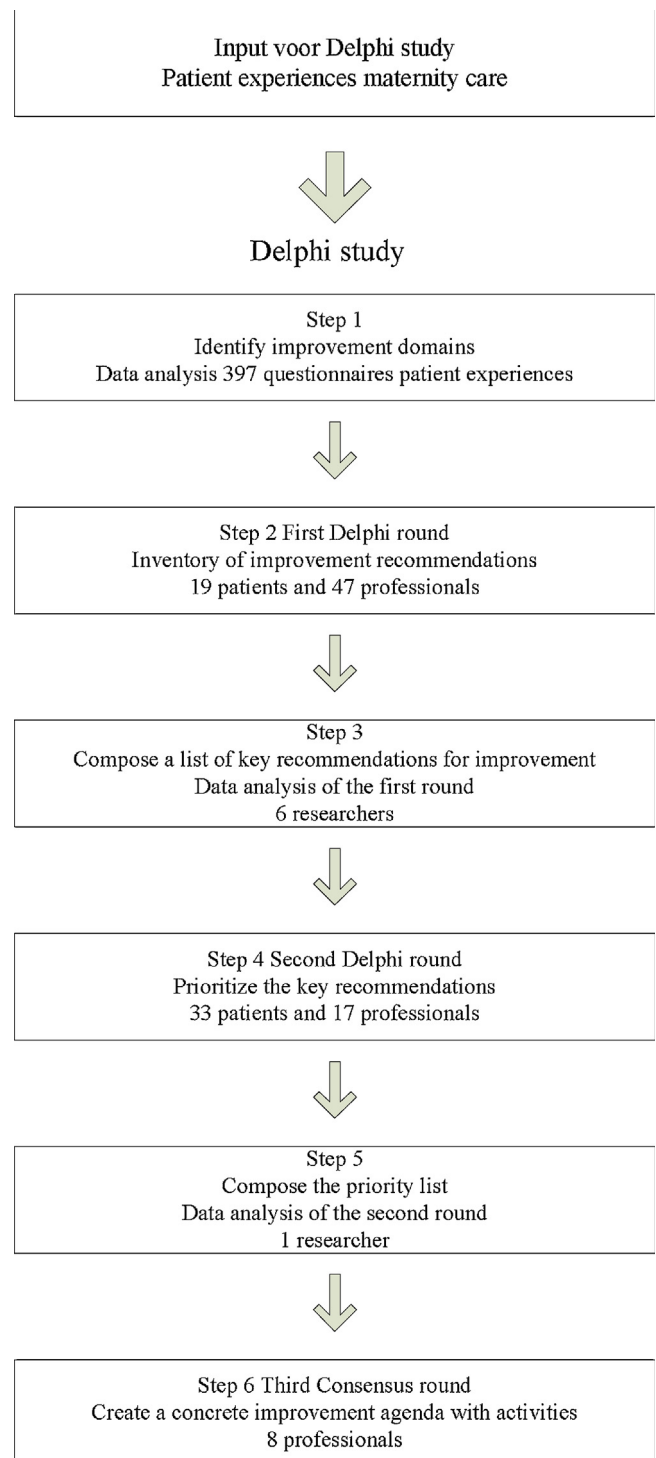


Fig. 1. The step wise Delphi method to develop key recommendations for the improvement agenda.

On a 4-point scale, women could evaluate their experience with maternity care, with '1' being the lowest score and '4' being the highest. The Repro Questionnaire was sent anonymously six weeks after childbirth to 812 women who gave birth in April and May 2013. The response rate was 49% and 397 Repro Questionnaires were analysed, serving as the input for the Delphi study and our starting point to create the improvement agenda. Due to the fact that all domains received mostly high scores, we decided to

**Table 1**  
Results Delphi study.

	First round <i>Improvement ideas</i>	Second round		Third round
		Score (%) <sup>a</sup>		<i>Improvement agenda</i>
		33 <i>patients</i>	17 <i>professionals</i>	
Patients priority	A single bedroom for every woman if hospitalisation is needed.	73 (22,1)	5 (2,9)	1. Discuss with the hospital managers the wish and added value of single bedrooms for women in hospitals and try to realise this.
	Continuing of care during labour. If a transfer to secondary care is needed the community midwife is present for support.	50 (15,2)	6 (3,5)	2. Create more opportunities to continue presence of the community midwife during hospital labour.
	Enable digital patient information transfer between professionals .	48 (14,6)	23 (13,5)	3. Start of a digital patient record view system between organisations with view function for patients, so all required information is multidisciplinary available.
	Every pregnant woman has one case manager.	42 (12,7)	10 (5,9)	4. Introduction of a case manager for every pregnant woman.
Professionals priority	Online insight in patient records for patients and involved professionals from other organisations.	23 (7,0)	36 (21,2)	Included in 3.
	Uniform information from all professionals for pregnant women by using one website and similar information leaflets and meetings.	5 (1,5)	33 (19,4)	5. Create a multidisciplinary team of professionals to realise similar information provision for patients.
	Mandatory multidisciplinary training and (casuistry) meetings for more coordinated patient centered care.	15 (4,5)	16 (9,4)	6. Organisation of more communication trainings for professionals to realise patient centered care. Therefore using i.e. role models, more (patient) feedback, discussing in meetings. Including training the professionals to use the protocols more personalised rather than rigid.
Shared scores	Shared decision making is part of standard care.	33 (10,0)	14 (8,3)	Included in 6.
	A birth plan for every woman with wishes, decisions and a personal care path.	19 (5,8)	9 (5,3)	7. Implementation of a uniform birth plan for all pregnant women in the whole maternity network, with wishes, decisions and a personal care path. This birth plan must be known by all involved professionals.
	More attention or training by professionals for listening to pregnant women.	10 (3,0)	10 (5,9)	Included in 6.
	One telephone number for questions or needed help.	12 (3,6)	8 (4,7)	<i>Not used for the improvement agenda, considered not feasible.</i>

<sup>a</sup>Percentage of maximal amount of points.

measure the negative scores for each domain, i.e. how often women scored '1' or '2'.

#### Step 2: first round Delphi questionnaire

The goal of the first round was to inventory concrete possibilities to improve the maternity care on the WHO Responsiveness domains in the ReproQ. The four WHO domains with the highest negative scores of patient' experience were presented to the expert panel in a Delphi questionnaire. We explained the Repro Questionnaire and displayed the results and the accompanying ReproQ questions to the expert panel. Subsequently, the experts were asked to answer questions how to improve care in each of the four domains, i.e. choice and continuity, autonomy, dignity, and communication in the Nijmegen area. The Delphi questionnaires were sent to 50 professionals and given to 50 women at a postnatal check up appointment.

#### Step 3: data analysis of the first round

The responses were collected in an Excel file. The six researchers from the study group analysed the answers and categorised them by grouping corresponding ideas. This resulted in a list of 11 ideas to improve maternity care.

#### Step 4: second round Delphi questionnaire

The goal of the second round was to prioritise the improvement ideas. The list of 11 ideas was for that purpose sent to the expert panel with the request to assign 10 points in total to the ideas. Responders had the choice to select one idea and award it 10 points or to split the points between several ideas. Questionnaires were sent to 30 professionals and given to 50 women at a postnatal check up appointment.

#### Step 5: data analysis of the second round

The results of the second round in step 4 were analysed by the study group, thus composing a topic list for the consensus group meeting. In this topic list the for patients and professionals were shown separately.

#### Step 6: setting up the improvement agenda in the third consensus round

The goal of the third and last Delphi round was to make a concrete improvement agenda, that was applicable and achievable so that implementation of the activities would be feasible. The face-to-face consensus group was composed of one chairman, eight health professionals and one researcher to take notes. The results of the second round of the Delphi study were shared and the professionals were asked to formulate concrete improvement activities, of which regional implementation should be feasible within six months. The group members had to gain consensus of opinion on each improvement activity.

#### Data analysis

We used SPSS (version 20.0 for Windows: SPSS Inc., Chicago, IL, USA) to analyse ReproQ data. The study group jointly analysed the results of rounds 1 and 2 by coding and discussing the codes.

#### Results

Table 1 shows the results of step 2, step 4 and step 6, respectively Delphi round 1, 2 and 3.

### *Step 1: data analysis of the questionnaires of patient experiences with maternity care*

Results of 'negative scores' revealed four WHO Responsiveness domains with a score above 5%, which were selected for the Delphi study: choice and continuity (16%), autonomy (7%), dignity (7%) and communication (6%).

### *Step 2: first round Delphi questionnaire*

We received 66 responses (19 patients = 38% response rate and 47 professionals = 94% response rate) with 65 different improvement ideas.

### *Step 3: data analysis of the first round*

From these 65 different improvement ideas, several were comparable or complementary. For example, one suggestion was 'one website with the same information', another was 'similar information leaflets for pregnancy from the different organisations' and a third was 'multidisciplinary information meetings for pregnant women'. We combined these into one idea: 'uniform and unambiguous information from all professionals for pregnant women by using one website and similar information leaflets and meetings.' Some ideas were named differently, but the purport was similar. For example, professionals used the term case manager ('every pregnant woman will get one case manager'), whereas patients described the functions of a case manager ('one professional who is the sole contact person', 'one professional who guides me through my pregnancy').

Thus, we composed a list of 11 key recommendations.

### *Step 4: second Delphi questionnaire round*

All 50 responders (33 patients = 66% response and 17 professionals = 57% response) filled in the list as requested. The method of scoring differed considerably between the responders: from 10 points for one idea to ten times 1 point for 10 ideas.

### *Step 5: data analysis of the second round*

Seven recommendations were prioritised differently between patients and health professionals. Patients scored the highest on the ideas 'a single room for every woman' (22.1%), 'continuing of care during labour' (15.2%) and 'a case manager for every woman' (12.7%), while professionals scored respectively 2.9, 3.5 and 5.9%. Three patients awarded 10 points to one particular idea: 'shared decision making is part of the care', 'enable digital patient information transfer between professionals' and 'a single bedroom for every woman in case hospitalisation is needed'.

Professionals scored the highest on 'insight in patient records' (21.2%), 'same information' (19.4%), 'multidisciplinary training' (9.4) and 'training in listening' (5.9%), while patients scored respectively 7.0, 1.5, 4.5 and 3.0%.

Four of the recommendations received comparable priority scores from patients and professionals. From these recommendations, 'shared decision making is part of the care' scored 10.0% among patients and 8.3% among professionals. The other three recommendations revealed the lowest overall priority scores.

### *Step 6: setting up the improvement agenda in a consensus group*

The results of the priority list were shared in the face-to-face consensus group. Due to the multidisciplinary character of the consensus group, members learned from each other. Sometimes, a proposed concrete idea was already implemented by one of the

organisations. Therefore, the first group objective was to learn from each other or to implement something multidisciplinary instead of only in one organisation. The group concluded that 10 ideas out of the 11 required concrete implementation activities, because they could improve maternity care. The idea 'one telephone number for the whole maternity network' was considered unfeasible in the region, and because it was prioritised the least (4%), it was decided not to include this idea in the improvement agenda.

Some of the initial ideas in Delphi round 1 were already concrete (for example 'a single room for every woman' and 'the introduction of a birth plan'), but most were more thematic (for example 'shared decision making' and 'continuing of care at birth'). The latter received the most attention in the consensus group, because of the need to formulate concrete improvement activities. For example, 'shared decision making' was translated into the more concrete 'train the professionals in using the protocols in a more personalised manner instead of rigid'. The group concluded the session with seven concrete improvement activities on which they reached agreement.

## **Discussion**

In the present study, a total of 449 patients and 47 professionals contributed to the creation of the shared improvement agenda for the multidisciplinary maternity network. Therefore, this improvement agenda is a well developed co-production between health professionals and patients, in conformity with the principles of Ocloo and Matthews [1]. In this, the patients formed the link between the professionals of the various organisations. We consider this to be essential in creating a patient centered network and a shared agenda for quality improvement. Utilizing the Delphi study method, we had the possibility to (anonymously) involve a large number of patients and professionals in the decision making process. The prioritising scores given by patients and professionals showed substantial differences and without the inclusion of patients our improvement agenda would obviously have been very different. Previous studies also show differences between patients' experiences and the perception of health professionals' of their patients' experiences [15,16]. A discrepancy between the perspectives of experts and patients was even the most frequently reported barrier in patient and public involvement programs to develop and implement clinical practice guidelines [17]. These findings give more importance to involving patients in the improvement of health care and to realise patient centered care.

To our knowledge, this is the first maternity improvement agenda based on both patient and professional experiences. Also, this time different professionals from different organisations worked together to create this agenda and were connected through the patient in order to improve patient centered care. This combined approach is novel now that the most common way is still to develop improvement activities solely on a health organisation level. We expect this original and broad approach of the shared agenda will lead to more patient satisfaction regarding maternity care, even if we believe this care to already be of high quality, such as in the Nijmegen area. With the current improvement agenda, professionals and managers of the multidisciplinary network have a concrete guide to further improve their care. This agenda has already been offered to the network professionals and the implementation of different activities has already started.

The main strength of this study is the inclusion of the large number of patients from a broad perspective of society. Furthermore, all multidisciplinary professions were involved in the study and the Delphi study resulted in a concrete useful shared agenda for quality improvement. This study does have some shortcomings, however. In the third round we invited only professionals and no

patients into the consensus group. We also opted for two different groups of patient expert members in round 1 and 2, because we distributed the questionnaires anonymously at postnatal check-ups. As such, we did not apply the exact Delphi study design. Because a multidisciplinary network approach in maternity care is one of the main goals for the Dutch Government [18], and because the networks are looking how to offer more patient centered care, this study is of great value to Dutch maternity care. We believe that the Delphi design with patients included is a helpful instrument in the development of a concrete and useful improvement agenda and this will lead towards more synergy in maternity care. This study could be implemented as a network activity in any care network, and can be repeated periodically. It can therefore be used as a Plan-Do-Check-Act cycle. In doing so, networks continuously work on improvement and on patient centered care.

### Ethical approval

The medical ethical committee of the Radboud University Medical Centre has awarded full ethical approval for this project (CMO No. 2011/381). The study is registered at the Dutch Trial Register (NTR, TC=4063).

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