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# Openness to new perspectives created by patient participation at the morbidity and mortality meeting

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ABSTRACT

*Objectives:* Morbidity and mortality meetings (M&MMs) at surgical departments may improve when patients participate, leading to different learning points. A gynecological oncology department invited patients to join their M&MMs. The practical constraints and experiences important from the perspective of patients and their healthcare professionals were evaluated.
*Methods:* Semi-structured interviews were conducted with patients and professionals who attended M&MMs at a gynecological oncology department between 2016 and 2018. The interviews were transcribed and coded and thematic content analysis was performed.
*Results:* Eight patients and 17 healthcare professionals participated. Eleven themes related to interpersonal dynamics. The five shared themes are: patient–doctor relationship, language, openness of communication, learning and personal impact. All participants suggested maintaining the new practical design of the M&MMs.
*Conclusions:* Patients and healthcare professionals valued patient participation in the M&MMs. Patient participation is possible when professionals are open to discussing and learning from adverse events (AEs). In this setting, patients feel that they are taken seriously and gain a better understanding of the course of an AE.
*Practice Implications:* Involving patients in M&MMs led to new insights, better understanding, and improved processing of AEs. Collaborating with patients and using their feedback seems to be effective when developing innovations in healthcare.


## 1. Introduction

Patient participation and engagement better meets patients' needs, preferences and values and thus improves the quality of care. However, involving patients in daily practice challenges today's healthcare and notions of quality. [1–7] Research showed that difficulties in achieving patient participation may be related to factors experienced by professionals, such as lack of time, personal beliefs or lack of perspective taking. For patients it may be related to the acceptance of the new patient role that may influence their willingness to participate [8,9]. It is known that patient participation can add new perspectives, such as in the field of error prevention where patients add new and different perspectives to the analysis of adverse events (AE) [8,10–13]. Nevertheless, it is not common practice to involve patients at morbidity and mortality meetings (M&MM) where AEs are discussed amongst healthcare professionals. Involving patients in this new healthcare context may challenge the current system and require a different approach of participation. [14]

Around 10 % of an approximate 421 million hospitalisations lead to AEs in medicine worldwide every year, especially in surgical care where AEs account for 16 % annually. [15] AEs result in unintended patient harm from either healthcare management, intervention or omission. [16] To improve patient safety in surgical care, M&MMs were implemented and aimed at learning from choices and actions that lead to AEs. This is part of the ongoing professional practice evaluation that ultimately leads to improved

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healthcare and patient outcomes. [17–19] Studies show the need for M&MM quality improvement, because it is difficult to share learning points throughout the organization and achieve practice change. [20–22] As patient participation positively influences patient safety and quality of care, engaging patients in M&MMs might enhance workplace-based learning and practice change. In addition, healthcare professionals may provide more person-centred care as a result. Literature about patient participation at M&MMs is scarce despite the valuable studies about patient participation in other contexts, such as multidisciplinary team meetings [23–25]. Therefore, it is necessary to study (and develop) a new design of the M&MM that includes patients and to encourage learning of adverse events.

Nevertheless, suggesting patient participation at the level of joining the discussion of an M&MM is challenging because it can trigger unsafe feelings and impede an open discussion. AEs can have grave consequences for the patient's physical and emotional recovery, and for the consultant's personal trauma as the "second victim" or due to a fear of litigation. [15,26–30] However, patients seem to want to be informed, and competent patient-doctor communication seems to be needed after an AE [31,32]. A joint M&MM with the patient and their healthcare professionals may positively help facilitate mutual understanding and lead to a better patient–doctor relationship and greater patient satisfaction. By changing the practice of M&MM it is possible to study how patient participation in this new healthcare setting can be realized.

The aim of this study was to explore how patient participation at an M&MM can be practiced and whether and how professionals and patients can learn from AEs to achieve practice change. Therefore, we examined practical constraints and experiences from the perspective of patients and their healthcare professionals. This feasibility project was a first step in our design based research approach to study patient participation at the M&MM.

## 2. Methods

### 2.1. Study design

We used qualitative research methods, including semi-structured interview guides to understand the topics that were important from the perspectives of patients and healthcare professionals. We used several in-depth interviewing techniques: words appropriate for the participants, open-ended questions, probes and verification information during the interview when necessary. [33] These methods provided tools to explore experiences in a new context of patient participation.

This is the first study of a larger project to optimize patient participation at the M&MM. We used research methodology of design-based research and its principles to test the intervention of patient participation at the M&MM and further develop the design. This study evaluates the first design of the M&MM with patient involvement. (Box 1) [34,35]

### 2.2. Research setting

The research was carried out at the department of gynecologic oncology of a tertiary university hospital. This teaching hospital was one of the eight expertise centers in gynecologic oncology in the Netherlands, which admitted 300 new patients annually. The registered AEs classified as severe with the valid and reproducible Clavien-Dindo grading system (I–V), were discussed at the M&MMs. [36,37] The standard M&MM was held once a month before 2016, and only members of the gynecological team such as consultants, registrars, and residents were invited.

The M&MM was held once every two months after 2016: the new design included the patient and their partner or family member, and all involved healthcare professionals from the gynecological team and other departments. Between 2016 and 2018 eleven M&MMs were organized of which eight with patients and three M&MMs without patient participation (one of a deceased patient and two patients refused). Table 1 presents the characteristics of the eight M&MMs, patient characteristics and the belonging AEs which led to either prolonged hospital stay or readmission. Patients' age ranged between 44 and 80 years. All healthcare professionals from the gynecological oncology staff attended at least three meetings. Four consultants from other departments attended one meeting.

The study (case 2018–4713) was approved by the Ethical Review Board of the hospital (CMO Light). Written informed consent was given before the interviews began. None of the research team members had conflicting interests.

### 2.3. Study population and recruitment

Eight patients and 20 consultants, nurses, and registrars who participated in the M&MMs held between 2016 and 2018 were recruited in July and August of 2018 for the interviews. Each patient interview was scheduled in the privacy of the patient's own home. The healthcare professionals were interviewed in a private room in the hospital, or by phone.

### 2.4. Data collection interviews

We used two separately developed semi-structured interview guides to interview both patients and healthcare professionals. The research team evaluated the interview guides for relevance and comprehensiveness. The interviews with patients started with open questions about their treatment, the AE, and their expectations of the M&MM. Then other topics were discussed, such as their needs and emotional processing during the meeting, information, and the effect of the relationship with their healthcare professional (Table 2).

The interviews with professionals started with open questions about their experience with M&MMs, how they perceived the goal of the meeting, and their expectations. Then specific possible challenges, such as open discussions, fear of losing the patient's trust, or trust in their professional reputation, were discussed. Possible opportunities, such as the benefits of patient participation were also discussed. Both patient and professional interviews ended with a question about how they thought the meeting could be improved. A medical anthropologist, who had no previous relationship with the participants, but who had attended two M&MMs, conducted the interviews. The participants were informed about her background, degree of involvement, and the

**Box 1.** Design and delivery of the M&MM with patient participation.

Box 1

**Table 1**
Characteristics of eight M&MM with patient participation.

| | Type of gynecological cancer | Procedure | AE | Intervention | Time between AE and M&MM | Brought partner or family member | Attendees | Technical lessons and learning points |
|---|---|---|---|---|---|---|---|---|
| 1 | Vulvar cancer | Wide local excision with bilateral inguinal lymph node dissection | Urosepsis / wound infection | Readmission to ICU and long-term antibiotics | 6 weeks | Alone | 6 gynecological oncologists<br>2 registrars 1 fellow<br>1 nurse<br>1 senior nurse 1 case manager 1 quality department<br>1 coordinator | *Improvement of the antibiotic policy and wound care.<br>*Better transfer to home care. *Provide patient with tailored alarm signals. |
| 2 | Recurrent granulosa cell tumor | Cytoreductive debulking surgery | Blood loss (7500 mL) | Multiple blood transfusion and fresh frozen plasma, 1 night admission to MCU | 4 weeks | Partner | 6 gynecological oncologists<br>1 registrar<br>1 nurse specialist<br>1 case manager<br>1 anesthesiologist<br>1 coordinator | *More focus on medication verification (listen to the patient).<br>*Daily visits on weekends.<br>* Patient thought the paralytic ileus was more impressive than the hemorrhage. |
| 3 | Ovarian cancer | Cytoreductive debulking surgery | Paralytic ileus | Long-term admission: gastric draining | 4 weeks | Partner | 5 gynecological oncologists<br>3 registrars<br>1 nurse specialist<br>1 case manager<br>1 quality department<br>1 coordinator | *Create a roadmap when epidural fails postoperatively.*Better explain treatment of an ileus (such as the use of gum, coca cola and the importance of movement). |
| 4 | Cervical cancer | Radical hysterectomy with pelvic lymph node dissection | Infection/ wound abscess and urethral injury | Re-implantation urethra and antibiotics | 12 weeks | Alone | 5 gynecological oncologists<br>3 registrars<br>1 nurse specialist<br>1 case manager<br>1 urologist<br>1 coordinator | *Provide clear explanation of abcess.<br>*Patient was shocked by the wound abscess. *Patient was content with all the sincerity during her care. |
| 5 | Ovarian cancer | Cytoreductive debulking surgery | Bowel injury | Relaparotomy, partial bowel resection (ileum) with colostomy | 5 to 6 weeks | Partner | 5 gynecological oncologists<br>2 registrars<br>1 nurse<br>1 nurse specialist<br>1 case manager<br>1 urologist | *Different approach during surgery.<br>*Better understanding of the perception of the patient. |
| 6 | Ovarian cancer | Staging procedure | Abdominal abscess | Drainage | 22 weeks | Partner | 4 gynecological oncologists<br>1 registrar<br>1 fellow<br>1 senior nurse<br>1 case manager<br>1 surgeon<br>1 coordinator | *Improved definition of the indication of insertion of a MESH.<br>*Easily request for CT.<br>*Better understanding of the domestic context. |
| 7 | Endometrial cancer | Abdominal hysterectomy, bilateral salpingo-oophorectomy, pelvic lymph node sampling | Platzbauch | Relaparotomy | 8 weeks | Partner | 3 gynecological oncologists<br>1 registrar<br>1 resident<br>1 nurse<br>1 case manager<br>1 nurse specialist<br>1 coordinator<br>1 medical anthropologist | *Preferences of suture techniques amongst colleagues.<br>*Be mindful of the role of the partner and inform him/her on a regular basis. |
| 8 | Endometrial cancer | Total laparoscopic hysterectomy, bilateral salpingo-oophorectomy | Hematoma of the vaginal vault | Vaginal drainage and antibiotics | 11 weeks (due to death in the family) | Family member | 4 gynecological oncologists<br>3 registrars<br>1 case manager<br>1 coordinator<br>1 medical anthropologist | *Visual aids can support patients to understand what happened.<br>*Better inform patients of all emergency phone numbers. |

AE: adverse event; ICU: Intensive Care Unit; M&MM: morbidity and mortality meeting; MCU: Medium Care Unit.

**Table 2**
Interview guide.

| | |
|---|---|
| General | The two interview guides were semi-structured based on (a) relevant themes from the literature on patient participation at multidisciplinary team meetings and the disclosure process of AEs and (b) practical elements of the meeting: time and timing, duration, clarity, frequency, location, and different roles of the stakeholders. |
| Patients | Start interview: introductory open questions to understand the experiences surrounding the treatment process and the AE. Main topics: (a) expectations and needs of the M&MM, impact and emotional processing of the AE, information, relationship with the healthcare professional, experience of the partner or family member who joined the meeting, and (b) practical elements. End interview: points of improvement for the M&MM with patient participation |
| Healthcare professionals | Start interview: introductory open questions about their attendance at the M&MMs and the perceived goal of the meeting. Main topics: (a) expectations of the meeting, satisfactory elements, barriers (e.g. open discussions, fear of lawsuits, losing trust and professional reputation), facilitators (e.g. benefits of patient participation) and (b) practical elements. End interview: points of improvement for the M&MM with patient participation |

AE: adverse event; M&MM: morbidity and mortality meeting.

research goals before the interview. The interviews were audio recorded and transcribed. Additional field notes were added to the transcript.

### 2.5. Analysis

We used the Atlas.ti tool version 8 for Windows for thematic content analysis, generating codes by conventional content analysis. [38,39] Two researchers used open coding to analyze the first two interviews, one from a patient and one from a healthcare professional. Open coding was used to allow new insights to emerge from the data with codes that were strongly connected to the transcripts. Afterwards, the codes were clustered into items, themes, and domains; partly on the basis of important topics from the literature, but derived from the data without predefined structures. The two researchers then coded all other interviews and adjusted the code list accordingly with the research team. This led to a coding tree. Before finalizing the coding tree, two other members of the research team, as a stakeholder of the meeting and a methodologist, selectively coded five transcripts to detect missing topics or themes. The credibility of the data was strengthened by independent coding. A multidisciplinary research team interpreted the credibility during data analysis to select the most relevant results.

## 3. Results

Eight patients and 17 healthcare professionals participated in the study. An additional three professionals did not participate because they did not respond or believed they did not gained enough experience with attending M&MMs with patient participation. The interviews with patients lasted an average of 49.5 min (range 38–62 min). The interviews with healthcare professionals lasted an average of 30 min (range 20–44 min).

The analysis resulted in different practical constraints (see 3.1) and a coding tree with eleven core themes in the interpersonal domain: three for patients, three for healthcare professionals and five shared themes relevant for both groups (Table 4).

### 3.1. Practical constraints

The patients and healthcare professionals were enthusiastic about the practical design of the meeting, such as the duration (1 h), the time reserved for the patient to share experiences, the presence of a strong moderator and the casemanager who tends to the patient prior, during and after the meeting.(Table 3) Patients especially appreciated the personal time and attention by the casemanager.

> "Afterwards, when all was discussed, everybody shook hands with me. The nurse practitioner stayed for a chat and helped me to answer a survey. I really like that." (patient 4)

Healthcare professionals mentioned practical constraints that became apparent after experiencing several M&MMs. First, the M&MM should be organized in the morning instead of the afternoon when professionals might have outpatient clinic and are delayed. Second, the M&MM with patient participation required more preparation time that needs to be taken into account when planning an M&MM. Third, all involved healthcare professionals, especially the external consultants, may be invited a few weeks prior to the meeting to clear their schedule. Fourth, the majority of the staff preferred the consultant, fellow, or senior registrar to present the AE. They were seen as more knowledgeable of the AE and/or could effortlessly use comprehensive language.

**Table 3**
Success factors of the M&MM with patient participation described by patients and healthcare professionals.

| Success factors |
|---|
| Personal attention for the patient provided by a healthcare professional (usually case manager) before, during, and after the meeting |
| Strong moderator: manages time, formulates the goal of the meeting, clarifies when necessary |
| Reserved time (within 1 h) for patient and partner/ family member to explain their experience and join the discussion |
| Creation of a safe environment for healthcare professional and patient – discuss in a respectful way with equality (without professional hierarchy) |
| Meeting planned within 3 months after the AE or medical error |
| A well-structured format or guideline in order to translate learning points (from the meeting) to practice change |
| Professionals familiar to the patient (and the patient's case) should attend the meeting |
| Patient is well informed about the goal of the meeting: organized for medical professionals to learn from preceding events, where the patient can share their story and join the discussion |
| A presenter who focuses on comprehensive language and is aware of the "painful" aspects |
| The meeting is in a room with U-shaped seating: the patient is seated close to the presenter and next to the case manager or the consultant |

AE: adverse event; M&MM: morbidity and mortality meeting.

**Table 4**
Code tree and quotes from patients and healthcare professionals.

| Study population | Themes | Quote |
|---|---|---|
| PATIENTS | Trust and safety | "That they create an overview and yes that is very nice. That is such a feeling of trust that everything will be all right. And then you have 100, no 200 percent of trust in them." (patient 4) |
| | Information | "Some things were explained briefly [after the AE], it was explained very well again the next day . . . and during the meeting. When that happens, you have nothing to complain about." (patient 7) |
| | Active involvement | "If I can contribute something that will provide someone else with better treatment, or something similar, I would like to be involved in that." (patient 3) |
| HEALTHCARE PROFESSIONAL | Notions of quality | "I think the goal of the M&MM needs to be the priority, what you want to achieve. And, what could the patient add to that." (consultant 5) |
| | Patient-centered attitude | "I can remember a meeting . . . where the discussion was quite strong and then I thought these things would have been discussed if the patient wasn't there as well. . . . So I looked at the patient and her partner every now and then, to see whether they handled the information well, and they did." (nurse specialist 1) |
| | Balance for the patient | "We should be careful the meeting will not be a performance or summary for the patient, but that it keeps covering the content: . . . what happened, how we solved it, whether it was good or whether it could have been better. And the medical focus remains." (registrar 2) |
| SHARED THEMES | Doctor–patient relationship | "So I think it is really important you have a relationship based on trust, as a healthcare professional, with the patient that joins the M&MM, that she [the patient] feels at ease. (external consultant, urologist 13) |
| | Open communication | " . . . but make sure that you check regularly whether the patient understands you. . . . and don't be afraid to show how it is written in literature, protocols or what we know from other research.""(resident 3) |
| | Language | "All the medical jargon is explained of course. And yes, it was all very clear. It was also clearly indicated that if you don't understand what is being said, you can ask for clarification. Then everything will be all right." (patient 8) |
| | Learning | "Seeing the AE through the eyes of the patient provides more and different learning points" (fellow 12) |
| | Personal Impact | "If you as the consultant personally advise a certain treatment [and an AE occurs]. Then you do feel very vulnerable as a consultant." (consultant 5) |

AE: adverse event; M&MM: morbidity and mortality meeting.

### 3.2. Interpersonal dynamics

The thematic content analysis resulted in a coding tree with eleven core themes related to interpersonal dynamics (Table 4).

#### 3.2.1. Patients

*3.2.1.1. Trust and safety.* Patients experienced a bond of trust with their consultant and the casemanager, and explained that in effect they also trusted other healthcare professionals; *"I felt complete trust in all those doctors"* (patient, 4). This trust resulted in feeling safe to share experiences, ask questions, and feel comfortable during the meeting.

*3.2.1.2. Information.* Every patient was curious and expressed a need to have all the information about the passing events surrounding the AE. This was important for some patients who forgot aspects of the treatment process, due to the anaesthetics, pain, or stress from their personal situation.

> "We wanted to see what happened, because we experienced a lot of stress and therefore we have missed some information and what exactly happened." (patient 8)

### 3.3. Active involvement

Upon invitation patients agreed to join the M&MM without hesitation, no matter the age or type of AE. The most important reason was to actively contribute to improving healthcare for future patients by sharing their own experience. Patients also wanted to understand how healthcare professionals deal with AE and what they learn from them. This way, patients explained, they could understand better why something did not go as planned and found acceptance in what happened.

#### 3.3.1. Healthcare professionals

*3.3.1.1. Notions of quality.* Healthcare professionals described different notions of quality of the meeting but everybody mentioned maintaining "the quality" of the meeting as important. These notions were related to ideas about the content of the learning points, the type of discussion, and the role of the patient.

Describing learning points that are relevant for clinical practice seemed to be a way to achieve quality of the meeting. In order to achieve that, an open discussion was considered a measure of quality of the meeting that has to give room to "*bring everything to the table"* and "*be frank*".

"*I think that the greatest danger or defect is that in that situation the discussion would not be held at its sharpest, which might eventually lead to a point where you would not discuss certain points of improvement."*(registrar, 3) Professionals experienced some limitations to openness in the discussion, mostly during the first three to four M&MMs, as a way to reach what they perceived as quality. After experiencing several meetings with patient involvement, healthcare professionals felt more free to express themselves more openly and comfortably: "*In the beginning you carefully try what works well in the conversation with patients, . . . but you do notice that it is easier after a while*."(consultant 5).

Professionals expressed that the content of the meeting was improved. Due to (1) input from the patient and their partner or family member, (2) input from other disciplines, (3) the experience of the professionals in communicating about difficult situations and (4) a well prepared presentation.

*3.3.1.2. Patient-centred attitude.* During the M&MM healthcare professionals described they acted attentive to the experience of the patient, such as by observing the patient and to see how they reacted. The consultants and the moderator often verified with the patient whether they had any other questions. The moderator also summarized parts of the discussion. In addition, the professionals expressed they were interested in the patient's perspective and experience of the AE.

*3.3.1.3. Balance for the patient.* Professionals explained they felt like they had to balance between hosting a medically oriented M&MM, or a patient focused M&MM. This was related to the

balance between the use of medical jargon and lay language and the time reserved for the patient. During the first meetings some professionals were concerned that the patient would not understand the meeting and the information might harm them, which led to simplistic language and too much focus on the patient instead of the learning aspects. However, after feed-back of patients and family a better balance in medical but understandable language was used and a better focus on learning points improved. These aspects remain challenging but, especially with more experience, these challenges do not seem to negatively influence the focus or goal of the meeting.

### 3.3.2. Shared themes

*3.3.2.1. Patient–doctor relationship.* Both professionals and patients said that a patient–doctor relationship with open communication was the foundation for a meeting where both stakeholders feel comfortable in sharing their experiences and actions. Healthcare professionals mentioned feeling less vulnerable when this relationship was stable. In this relationship it was important for patients to be acknowledged in how they experienced the AE, which gave them a feeling of being treated as an equal. This also reflected in patients feeling heard and taken serious during the M&MM. All patients appreciated the time healthcare professionals took during the meeting to listen to their experiences.

> "I just really appreciated how you [the department] do it now. Be transparent, clear, and honest. That gives you a feeling of . . . being important. . . . That things are discussed in this manner and that you are taken seriously, in your whole story." (patient, 8)

*3.3.2.2. Communication openness.* The most valued part of a stable relationship for both patients and professionals was transparency of information. Seven of the eight patients did not hear new information related to their AE during the M&MM, which aligned with their sense of trust and expectations that healthcare professionals had been open and honest during the process of consultation and treatment. Healthcare professionals mentioned open communication between colleagues and the patient, as a condition in order to host M&MMs with patients. External consultants, for whom this was the only opportunity to discuss the AE, experienced this as more difficult. The staff of the department of gynecological oncology was described by them as capable of being open about the AE, however, they were most impressed by the openness of the patient.

*"At first I thought how can I speak freely during the meeting but it makes a difference that they [the patient] were very accessible and open."* (external consultant, 17)

Transparent communication was experienced by patients and professionals as a reason why patients did not feel a need to receive an apology or file a law suit, and healthcare professionals were not afraid of a law suit as a result of the M&MM. However, some professionals assumed that in cases of severe AE, or patients with strong negative emotions, it would be more challenging to communicate openly.

*3.3.2.3. Language.* Healthcare professionals wanted to provide patients with an opportunity to be involved in the discussion. However, they were concerned whether the patient would understand everything and if the (technical) medical topics in the discussion would get enough attention. "*. . . That is what we consultants do. Speak in diminutives when we want to make it simpler and not too heavy. . . . we should be careful that that does not happen, so it remains an adult and worthwhile meeting.*" (consultant, 5) However, the experience of healthcare professionals changed over time because they felt more comfortable to discuss medical topics with the presence of the patient. Patients were eager to join the M&MM, were positive about the amount of information and clarification during the M&MM, and did not experience the (technical) medical language as negatively affecting their experience of the M&MM. In addition, patients accepted the fact that some parts would be difficult to understand and focused on other elements that were important to them.

*3.3.2.4. Personal impact.* Patients felt supported in their emotional and mental processing of the AE. Even though the meeting was experienced as exhausting on a mental and emotional level, it helped several patients find closure after a difficult period. Even so, healthcare professionals feared, or assumed, that medical and open language about severe events may influence patients' well-being. In some M&MMs healthcare professionals explained they felt more vulnerable, especially if they felt personally responsible for the AE.

> "If you as the consultant personally advise a certain treatment [and an AE occurs]. Then you do feel very vulnerable as a consultant." (consultant 5)

*3.3.2.5. Learning.* At the start of the M&MM the moderator mentioned the meeting was installed to learn from passing events and ultimately to improve healthcare. At the end of each M&MM a report was written with the learning- and action points relevant for clinical practice. However, it was not always clear for the professionals whether the learning points that resulted from the meeting were acted upon in (clinical) practice.

Healthcare professionals described they gained new perspectives at the end of the meeting from the fact that the discussion was held with a multidisciplinary team of professionals and the presence of the patient (Table 1). Hearing about the patients' experience created a better understanding of the effect of the AE on the patient. Professionals explained the level of (technical) learning as depending on the type of AE and whether the patient felt comfortable to share their experience. One example that multiple healthcare professionals gave during the interviews were the learning points from meeting 3 (see Table 1). A nurse gave the patient chewing gum and Coca Cola to drink, which supports the recovery of an ileus. The patient did not take these items because the nurse did not explain the rationale of using these and the patient did not like them. Therefore, the main learning point came from the experience of the patient: certain information may need to be explained further and as medical professionals we must reflect on how we communicate to the patient.

In return, patients gained a better understanding of how professionals work together between teams, which, as they explained, changed their perspective on the future care they will receive from that same hospital. The partner of a patient explained he acknowledged the fact that healthcare professionals have to learn as well. "*And everybody can make a mistake . . . . If a mistake is made, then you can learn from it. That is also true.*" (partner of patient, 6)

## 4. Discussion and conclusion

Discussion this is the first study about patients participating in their own M&MM. This research resulted in different themes and elements for the practice of M&MM that are important for patients and healthcare professionals. The most important conditions for organizing such an M&MM where both patients and professionals feel safe to share is a supportive patient–doctor relationship whose principle feature is openness. This condition led to a setting where

the patient felt safe sharing their story and asking questions, and where healthcare professionals could discuss more freely after attending several M&MMs. However, a balanced use of lay and medical language and reaching an open discussion were challenging. Most of the practical elements of this first design should be maintained. These elements include the support from a case manager or nurse before, during, and after the meeting, a strong moderator, and repeated invitations to all involved healthcare professionals.

This research adds to the literature about patient participation in medical meetings due to its unique context. [23,25,40–42] Partnership is seen as an important process that supports participation and as part of realising patient-centered care [43,44]. Studies also describe equality as an important component of patient participation [45]. Within this study patients felt taken serious and heard, which provides testimonial justice for patients even though varying relations of power still exist. [46] When patients feel taken serious, a sense of equality is experienced and a partnership can be realised. However, that sense of equality seems to have certain conditions, such as the patients' emotional state and openness of communication from both sides [9]. Other research encountered concerns from healthcare professionals for the involvement of patients, such as the patient's ability to cope with the information discussed and whether the dynamics in the meeting would change [40,41]. The fact that patients in our study embraced their new role during the M&MM is an important factor in achieving participation. [8]. Another study showed comparable results where healthcare professionals were challenged when adjusting the medical jargon and discussing openly with the patient present [23]. Our results show that healthcare professionals felt more comfortable, after attending several meetings, to discuss all aspects of the AE with the patient. Therefore, participation in this context seems to be a process that creates opportunities for a new culture of openness when professionals discuss and learn from AE.

One of the main goals of M&MMs is to learn from the meeting. In order to learn effectively, the learning environment needs to be safe and supportive; open communication should be possible. This is partly related to the constant interaction between attendees and the impact people can have on each other during critical discussions. [47] This study showed that aspects of healthcare communication can be part of the discussion during an M&MM with multidisciplinary healthcare professionals and patients as attendees. [48–51]. A positive experience of the M&MMs gave professionals the incentive to be more open during discussions and open to learn in each meeting. Patient participation can therefore be viewed as a learning intervention. Some studies found that most learning points of M&MMs focused on "individual and technical performance", and neglected other areas of improvement that involve collaboration with other disciplines, or at a systems level. [52,53] Although learning points from the meeting are important for improving current clinical practice, the report itself was hardly read and professionals were unaware whether the learning points lead to practice change. However, the fact that professionals explained that they learned from the perspective of the patient, may indicate that professionals learned more, perhaps unconsciously, than solely the learning points that were written down in the report.

The strengths of our study are the multi-disciplinary research team providing complementary input. In addition, all the patients that joined an M&MM and the majority of the healthcare professionals were willing to participate in the interviews. A limitation of the study is the fact that eight patients and the majority of the 17 healthcare professionals participated in different meetings. They might have had a different exposure as to how the meeting was executed.

Although this study shows a design that leads to positive patient experiences in the M&MMs, the challenge to implement the learning points from the meeting to change clinical practice remains, and more research is needed in this field. [20,53] In addition, further research is needed whether patient involvement negatively impacts the learning process and openness of the discussion in specific situations/ cases. An important focus for future development of the meeting needs to concentrate on providing a safe space for all attendees to have in-depth, honest discussions and the time to inform and prepare the attendees. Furthermore, research is needed in other surgical departments with different types of patients and AEs to understand the contextual factors related to its execution and further the development of its design [54].

### *4.1. Conclusion*

Participation of patients in their own M&MM while experiencing trust and safety is possible when there is a stable patient–doctor relationship, a balanced use of medical and lay language and a support system provided by the involved healthcare professionals. Patients and the involved healthcare professionals valued the practical aspects of this M&MM design. Patient participation is possible when professionals are open to discuss and to learn from the AE with patients present. In this setting patients feel taken seriously and gain a better understanding of the course of the AE.

### *4.2. Practice implications*

Both patients and healthcare professionals are positively surprised about a joint M&MM where AEs are discussed. Involving patients at the M&MM leads to new insights, better understanding, and improved processing of the AE. However, it is challenging how to balance a medically oriented discussion that leads to learning points, while communicating in comprehensive language. Developing a healthcare innovation with patients' feedback seems to be effective in the current setting. Our blueprint of the practical organization of the meeting may be used in other (surgical) departments.

## Ethics approval

The study (case 2018–4713) was approved by the Ethical Review Board of the hospital (CMO Light).

I confirm all patient/personal identifiers have been removed or disguised so the patient/person(s) described are not identifiable and cannot be identified through the details of the story.

## Data availability statement

Data are available on reasonable request.

## CRediT authorship contribution statement

**B.J. Myren:** Conceptualization, Formal analysis, Investigation, Methodology, Software, Visualization, Writing - original draft, Writing - review & editing. **R.P.M.G. Hermens:** Conceptualization, Formal analysis, Methodology, Supervision, Writing - review & editing. **J.J. Koksma:** Formal analysis, Investigation, Methodology, Supervision, Validation, Writing - review & editing. **S. Bastiaans:** Data curation, Formal analysis, Investigation, Methodology, Software, Visualization. **J.A. de Hullu:** Conceptualization, Investigation, Methodology, Resources, Supervision, Validation. **P.L.M. Zusterzeel:** Conceptualization, Data curation, Formal analysis, Investigation, Methodology, Project administration, Resources, Supervision, Validation, Writing - review & editing.

## Declaration of Competing Interest

None.

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## Appendix A. Supplementary data

Supplementary material related to this article can be found, in the online version, at doi:https://doi.org/10.1016/j.pec.2020.08.008.

## References

[1] A. Institute of medicine committee on quality of health care, Crossing the Quality Chasm: A New Health System for the 21st Century, National Academies Press (US), Washington (DC), 2001 Copyright 2001 by the National Academy of Sciences. All rights reserved..
[2] N. Armstrong, G. Herbert, E.L. Aveling, M. Dixon-Woods, G. Martin, Optimizing patient involvement in quality improvement, Health Expect. 16 (2013) e36–e47.
[3] N. Mead, P. Bower, Patient-centredness: a conceptual framework and review of the empirical literature, Soc. Sci. Med. 51 (2000) 1087–1110.
[4] C. Doktorchik, K. Manalili, R. Jolley, E. Gibbons, M. Lu, H. Quan, M.J. Santana, Identifying Canadian patient-centred care measurement practices and quality indicators: a survey, CMAJ Open 6 (2018) E643–e50.
[5] A. Renedo, C. Marston, Developing patient-centred care: an ethnographic study of patient perceptions and influence on quality improvement, BMC Health Serv. Res. 15 (122) (2015).
[6] J.J. Koksma, J.A.M. Kremer, Beyond the quality illusion: the learning era, Acad. Med. 94 (2019) 166–169.
[7] J.E. van der Aa, A.J.M. Aabakke, B. Ristorp Andersen, A. Settnes, P. Hornnes, P.W. Teunissen, A.J. Goverde, F. Scheele, From prescription to guidance: a European framework for generic competencies, Adv. Health Sci. Educ. Theory Pract. (2019).
[8] Y. Longtin, H. Sax, L.L. Leape, S.E. Sheridan, L. Donaldson, D. Pittet, Patient participation: current knowledge and applicability to patient safety, Mayo Clin. Proc. 85 (2010) 53–62.
[9] S. Angel, K.N. Frederiksen, Challenges in achieving patient participation: a review of how patient participation is addressed in empirical studies, Int. J. Nurs. Stud. 52 (2015) 1525–1538.
[10] T.H. Gallagher, A.D. Waterman, A.G. Ebers, V.J. Fraser, W. Levinson, Patients' and physicians' attitudes regarding the disclosure of medical errors, J. Gen. Intern. Med. 18 (2003) 283.
[11] A. Eaves-Leanos, E.J. Dunn, Open disclosure of adverse events: transparency and safety in health care, Surg. Clin. North Am. 92 (2012) 163–177.
[12] J.M. Etchegaray, M.J. Ottosen, A. Aigbe, E. Sedlock, W.M. Sage, S.K. Bell, T.H. Gallagher, E.J. Thomas, Patients as partners in learning from unexpected events, Health Serv. Res. 51 (2016) 2600–2614.
[13] J.M. Etchegaray, M.J. Ottosen, L. Burress, W.M. Sage, S.K. Bell, T.H. Gallagher, E.J. Thomas, Structuring patient and family involvement in medical error event disclosure and analysis, Health Aff. 33 (2014) 46–52.
[14] K.I. Hower, V. Vennedey, H.A. Hillen, L. Kuntz, S. Stock, H. Pfaff, L. Ansmann, Implementation of patient-centred care: which organisational determinants matter from decision maker's perspective? Results from a qualitative interview study across various health and social care organisations, Brit Med J Open. 9 (2019)e027591.
[15] World Health Organisation, 10 facts on patient safety. https://www.who.int/features/factfiles/patient_safety/en/ (accessed 6-11-2018)
[16] J. Fraser, The morbidity and mortality meeting: time for a different approach? Arch. Dis. Child. 101 (2016) 4–8.
[17] E.L. Mitchell, D.Y. Lee, S. Arora, P. Kenney-Moore, T.K. Liem, G.J. Landry, G.L. Moneta, N. Sevdalis, Improving the quality of the surgical morbidity and mortality conference: a prospective intervention study, Acad. Med. 88 (2013) 824–830.
[18] P.S. Mok, E.Y. Tan, M.O. Baerlocher, S. Athreya, The role of morbidity and mortality meetings in interventional radiology, Eur. J. Radiol. 81 (2012) 3344–3347.
[19] M.-V.D.M.P. Hollander, Kievit J.K. EJF, Van complicaties naar kwaliteitsverbetering, Med. Contact (Bussum) (2005). March. Available: (Accessed 23 Apr 2019) https://www.medischcontact.nl/nieuws/laatste-nieuws/artikel/van-complicaties-naar-kwaliteitsverbetering.htm.
[20] M.S. de Vos, P.J. Marang-van de Mheen, A.D. Smith, D. Mou, E.E. Whang, J.F. Hamming, Toward best practices for surgical morbidity and mortality conferences: a mixed methods study, J. Surg. Educ. 75 (2018) 33–42.
[21] T.D. Vreugdenburg, D. Forel, N. Marlow, G.J. Maddern, J. Quinn, R. Lander, S. Tobin, Morbidity and mortality meetings: gold, silver or bronze? ANZ J. Surg. 88 (2018) 966–974.
[22] J. George, Medical morbidity and mortality conferences: past, present and future, Postgrad. Med. J. 93 (2017) 148–152.
[23] E.T. Choy, A. Chiu, P. Butow, J. Young, A. Spillane, A pilot study to evaluate the impact of involving breast cancer patients in the multidisciplinary discussion of their disease and treatment plan, Breast. 16 (2007) 178–189.
[24] H. Morement, R. Harrison, S.D. Taylor-Robinson, The multidisciplinary team meeting in the UK from the patients' perspective: comments and observations from cholangiocarcinoma patients and their families, Int. J. Gen. Med. 10 (2017) 305–310.
[25] L. Ansmann, C. Kowalski, H. Pfaff, R. Wuerstlein, M.A. Wirtz, N. Ernstmann, Patient participation in multidisciplinary tumor conferences, Breast 23 (2014) 865–869.
[26] A.K. Jha, I. Larizgoitia, C. Audera-Lopez, N. Prasopa-Plaizier, H. Waters, D.W. Bates, The global burden of unsafe medical care: analytic modelling of observational studies, Brit Med J Qual Saf. 22 (2013) 809–815.
[27] L. Nilsson, M.B. Risberg, A. Montgomery, R. Sjodahl, K. Schildmeijer, H. Rutberg, Preventable adverse events in surgical care in Sweden: a nationwide review of patient notes, Medicine (Baltimore) 95 (2016) e3047.
[28] J.D. Bohnen, K.D. Lillemoe, E.A. Mort, H.M.A. Kaafarani, When Things Go Wrong: The Surgeon as Second Victim, Ann. Surg. 269 (2019) 808–809.
[29] B. Coughlan, D. Powell, M.F. Higgins, The second victim: a review, Eur. J. Obstet. Gynecol. Reprod. Biol. 213 (2017) 11–16.
[30] A. O'Dowd, Doctors increasingly practise "defensive" medicine for fear of litigation, says regulator, Brit Med J. 350 (2015) h87.
[31] J.M. Etchegaray, M.J. Ottosen, L. Burress, W.M. Sage, S.K. Bell, T.H. Gallagher, E.J. Thomas, Structuring patient and family involvement in medical error event disclosure and analysis, Health Aff (Millwood). 33 (2014) 46–52.
[32] T.H. Gallagher, A.D. Waterman, A.G. Ebers, V.J. Fraser, W. Levinson, Patients' and physicians' attitudes regarding the disclosure of medical errors, J Amer Med Assoc. 289 (2003) 1001–1007.
[33] C. Boyce, P. Neale, Conducting In-depth Interviews: a Guide for Designing and Conducting In-depth Interviews for Evaluation Input. Pathfinder International Tool Series: Monitoring and Evaluation – 2, Pathfinder International, Watertown, MA USA, 2006.
[34] T. Anderson, J. Shattuck, Design-based research: a decade of progress in education research? Educ. Res. 41 (2012) 16–25.
[35] T.C. Reeves, J. Herrington, R. Oliver, Design Research: A Socially Responsible Approach to Instructional Technology Research in Higher Education, J. Comput. High. Educ. 16 (2005) 97–116.
[36] D. Dindo, N. Demartines, P.A. Clavien, Classification of surgical complications: a new proposal with evaluation in a cohort of 6336 patients and results of a survey, Ann. Surg. 240 (2004) 205–213.
[37] P.A. Clavien, J. Barkun, M.L. de Oliveira, J.N. Vauthey, D. Dindo, R.D. Schulick, E. de Santibanes, J. Pekolj, K. Slankamenac, C. Bassi, R. Graf, R. Vonlanthen, R. Padbury, J.L. Cameron, M. Makuuchi, The Clavien-Dindo classification of surgical complications: five-year experience, Ann. Surg. 250 (2009) 187–196.
[38] N. King, Doing template analysis, in: G. Symon, C. Cassell (Eds.), Qualitative Organizational Research: Core Methods and Current Challenges, Sage, London, 2012.
[39] H.F. Hsieh, S.E. Shannon, Three approaches to qualitative content analysis, Qual. Health Res. 15 (2005) 1277–1288.
[40] P. Butow, J.D. Harrison, E.T. Choy, J.M. Young, A. Spillane, A. Evans, Health professional and consumer views on involving breast cancer patients in the multidisciplinary discussion of their disease and treatment plan, Cancer. 110 (2007) 1937–1944.
[41] B. Devitt, J. Philip, S.A. McLachlan, Team dynamics, decision making, and attitudes toward multidisciplinary cancer meetings: health professionals' perspectives, J. Oncol. Pract. 6 (2010) e17–20.
[42] R.P. Sullivan, C.R. Waldemayer, R.F. Bunting Jr., Building confidence into communication of bad news: the role of the patient advocate, J. Healthc. Risk Manag. 29 (2010) 33–37.
[43] E.M. Tutton, Patient participation on a ward for frail older people, J. Adv. Nurs. 50 (2005) 143–152.
[44] S.M. Greene, L. Tuzzio, D. Cherkin, A framework for making patient-centered care front and center, Perm. J. 16 (2012) 49–53.
[45] S. Vahdat, L. Hamzehgardeshi, S. Hessam, Z. Hamzehgardeshi, Patient involvement in health care decision making: a review, Iran. Red Crescent Med. J. 16 (2014) e12454.
[46] H. Carel, I.J. Kidd, Epistemic injustice in healthcare: a philosophial analysis, Med. Health Care Philos. 17 (2014) 529–540.
[47] J.P. Wheeler, N.E. Thompson, Supportive learning environment, in: P.M. Erickson, W.S. Fox, D. Steward (Eds.), National Standards for Teachers of Family and Consumer Sciences: Research, Implementation, and Resources. Published Electronically by the National Association of Teacher Educators for Family and Consumer Sciences, Published electronically by the National Association of Teacher Educators for Family and Consumer Sciences, 2010, pp. 235–246. Avilable: (Accessed 14 May 2019) http://www.natefacs.org/Pages/Standards_eBook/Standards_eBook.pdf.
[48] P.M. McNeill, M. Walton, Medical harm and the consequences of error for doctors, Med. J. Aust. 176 (2002) 222–225.
[49] T.J. Krizek, Surgical error: ethical issues of adverse events, Arch Surg. 135 (2000) 1359–1366.

[50] S. Kooienga, V.T. Stewart, Putting a face on medical errors: a patient perspective, J. Healthc. Qual. 33 (2011) 37–41.
[51] C. Skalen, L. Nordgren, E.M. Annerback, Patient complaints about health care in a Swedish County: characteristics and satisfaction after handling, Nurs. Open 3 (2016) 203–211.
[52] M.S. de Vos, J.F. Hamming, P.J. Marang-van de Mheen, Learning from morbidity and mortality conferences: focus and sustainability of lessons for patient care, J. Patient Saf. (2017).
[53] T.D. Vreugdenburg, D. Forel, N. Marlow, G.J. Maddern, J. Quinn, R. Lander, S. Tobin, Morbidity and mortality meetings: gold, silver or bronze? ANZ J. Surg. (2018).
[54] E. Coles, M. Wells, M. Maxwell, F.M. Harris, J. Anderson, N.M. Gray, G. Milner, S. MacGillivray, The influence of contextual factors on healthcare quality improvement initiatives: what works, for whom and in what setting? Protocol for a realist review, Syst. Rev. 6 (2017).