Midwives' Experiences With a Handover Checklist: A Grounded Theory Study

Marte Østenfor Myre

Western Norway University of Applied Sciences Faculty of Health and Social Sciences: Hogskulen pa Vestlandet Avdeling for helse- og sosialfag

Eline Skimisdottir Vik

Western Norway University of Applied Sciences Faculty of Health and Social Sciences: Hogskulen pa Vestlandet Avdeling for helse- og sosialfag

Anne Britt Vika Nilsen

Western Norway University of Applied Sciences Faculty of Health and Social Sciences: Hogskulen pa Vestlandet Avdeling for helse- og sosialfag

Katrine Aasekjær (✉ kaaa@hvl.no)

Western Norway University of Applied Sciences Faculty of Health and Social Sciences: Hogskulen pa Vestlandet Avdeling for helse- og sosialfag <https://orcid.org/0000-0002-2892-1122>

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Abstract

Background

Quality of care and patient safety is highly recognised and a priority within health services globally. Healthcare services in Norway are among the best in the world. Nevertheless, there is still a need for quality improvement and evaluation of the services. In healthcare, checklists have proven to reduce unwanted variation by standardising processes, which in turn contribute to increased quality in care. However, a poorly handled handover situation may be a potential threat to patient safety. To improve the quality of care, a checklist was implemented at a large maternity clinic in Norway. In the present study we explored midwives' experiences with the use of a checklist implemented to improve the quality of the handover of mother and baby between wards and hospital shifts from birth until mother and baby are discharged from the hospital.

Method

We conducted a grounded theory (GT) study, performing one focus group interview and 13 individual interviews, including altogether 16 midwives. Years of experience as a midwife ranged from 1 to 30 years. The interviews were recorded, transcribed and analysed using open, selective and theoretical coding.

Results

The main concern faced by the midwives was distilled down to *no common understanding of the purpose of the checklist nor consensus on how to use the checklist*. The generated grounded theory, *individual interpretation of the checklist*, involved the following three strategies that all seemed to explain how the midwives solved their main concern: *following the system, evaluating the system and distancing themselves from the system*. The only condition that seemed to influence a change in the use of the checklist was if a midwife experienced an adverse outcome in mother or baby, which could be related to the use of the checklist.

Conclusion

The findings in this study indicate that a general lack of common understanding and consensus on the rationale for implementing a checklist resulted in an individual use of the checklist and was therefore a potential hazard to patient safety. This individual use of the checklist might have resulted in an attitude towards the checklist more as an individual tool and less as a quality improvement initiative. Findings also emphasise the importance of a clear implementation strategy supervised by the management. Further research should explore the understanding of organisational and cultural context when implementing a checklist to clinical practice.

Background

Quality of care and patient safety is highly recognised and a priority within health services globally (WHO, 2017, p. 1). In high-income countries, the quality within maternal and neonatal healthcare has increased substantially over the past 10 years; however, parts of practice may still lead to inadequate, unnecessary or harmful care (Koblinsky et al., 2016; Miller et al., 2016; Renfrew et al., 2014). Childbirth and the immediate postnatal period are critical for maternal and neonatal survival, and globally this period is associated with severe complications for both mother and baby (Albolino et al., 2017).

Nearly half of all adverse events within healthcare have been associated with poor communication, and failure in handover between healthcare professionals' may result in adverse events, such as lack of correct care, misuse or poor utilisation of resources (Birmingham, Buffum, Blegen, & Lyndon, 2015; Manias, Geddes, Watson, Jones, & Della, 2016; O'Connell, Macdonald, & Kelly, 2008; Street et al., 2011; World Health Organization, 2007). Thus, a poorly handled handover situation may be a potential threat to patient safety (Saastad, 2017; Saastad, Kirschner, & Flesland, 2014; World Health Organization, 2007).

Improving quality of care requires a systematic and continuous focus on and evaluation of healthcare services (Albolino et al., 2017; Lavender, 2016; World Health Organization, 2016). One recognised tool to support an evidence-based practice is the implementation and use of checklists (Albolino et al., 2017; Haynes et al., 2009). Checklists have been shown to be an inexpensive, flexible and effective tool in planning safety in some healthcare settings (Thomassen, Brattebø, Heltne, Søfteland, & Espeland, 2010; World Health Organization, 2008). However, potential barriers to checklist utilisation may be related to cultural resistance, lack of personnel or motivation among healthcare professionals, or a fear of losing autonomy or limiting clinical judgement (Brun-Pedersen & André, 2017; Geerligs, Rankin, Shepherd, & Butow, 2018).

To improve the quality of care, a checklist was implemented at a large maternity clinic in Norway. The purpose of the checklist was to secure a quality handover of mother and baby from the delivery room to a separate postnatal ward. After the handover, the checklist would follow mother and baby until discharge from the hospital. There is an increase in the use of checklists within healthcare, but few studies explore healthcare workers and their challenges when implementing and using a checklist (Brun-Pedersen & André, 2017; Thomassen et al., 2010). We therefore conducted a grounded theory study to explore midwives' experiences with the use of a checklist in the handover from the delivery room to postnatal care.

Methods

A grounded theory study (GT) was conducted using a constant comparative method for collecting and analysing data (Glaser Barney & Strauss Anselm, 1967). GT is an inductive method focusing on social processes and interaction intending to develop a theoretical explanation of a social phenomenon grounded in data (Giske, 2014 s.94; Glaser, 1978, 1992; Gynnild, 2014 s.14). Grounded theory was used to explain the actions used among midwives implementing and using the checklist related to maternity care and the handover from one ward to another (Glaser, 1978, 1992).

Participants, setting and data collection

Data were collected from October 2017 to January 2018, using both individual and focus group interviews, and a total of 13 individual interviews and one focus group interview were conducted. Midwives from a large Norwegian maternity clinic using the checklist were invited to participate in the study. The midwives were recruited through a purposeful sampling, and a total of 16 midwives were included. The maternity clinic is situated in a university hospital with approximately 5,000 deliveries per year. Participants eligible for the study were midwives using the checklist who worked in a ward at the university hospital where the checklist had been implemented. The participants recruited were either working in high- or low-risk delivery wards, in postnatal wards or in a ward with both delivery and postnatal care. All participants received written and oral information about the study, and written informed consent was obtained prior to participation. The interviews were conducted before, during or after a shift at the participants' own workplace. A suitable meeting room was used to avoid interference, and all the interviews were recorded on audio tapes. The individual interview lasted between 20 and 45 minutes, and the focus group interview lasted for 60 minutes. Each participant was interviewed once, and the interviewer made all the arrangements regarding time and place in agreement with the participants.

A semi-structured interview guide using open-ended questions was used to conduct the interviews. All the interviews opened with the question: "Can you please tell me about the use of the checklist?" Due to the emerging grounded theory, the interview guide was adjusted once by adding explicit questions about how the checklist was filled out. This was necessary in order to expand and confirm hypotheses with a deductive approach in the additional interviews and for the evolving of the theory (Glaser, 1978). All the interviews were recorded and transcribed verbatim by the first author, and each transcript was analysed before the next interview. In line with Glaser (1978), the sampling was controlled by the emerging theory as in theoretical sampling.

Ethical Considerations

The Norwegian Data Protection Official for Research approved the study (reference number: 54239/3/BGH). In accordance with Norwegian law, approval by the Regional Medical and Health Research Ethics Committee was not required. Ethical principles were ensured in the following way: All participants received written and oral information about the study, confidentiality issues, and the possibility and means of withdrawal. Written informed consent was obtained prior to participation. All data were stored on a stationary computer in a locked office accessible only to the first author.

Data Analysis

The interviews were analysed in accordance with grounded theory methodology by using open, selective and theoretical coding progressively. Each interview was analysed and compared with the previous interview combined with memos, written textual notes from the data collection in a continuous process (Glaser Barney & Strauss Anselm, 1967; Glaser, 1978, 1992; Hjälmhult, Giske, & Satinovic, 2014). The process started with open coding manually line-by-line while constantly focusing on the incidents. Constant comparison was then used to explore differences and similarities (Glaser Barney & Strauss Anselm, 1967; Glaser, 1978, 1992; Hjälmhult et al., 2014). When the midwives' main concern was identified, the study advanced to identify patterns of behaviour by which the midwives resolved their concern. During the whole process of analysis, memos, theoretical ideas about codes, categories and their relationships were written and used in the analysis. This enriched the analysis process and facilitated the generation of hypotheses from data about what happened in the studied area. Subsequently, codes were coded selectively in relation to the core category, and grouped into broader, universal

categories. To see if the findings were supported or not, the core category “individual interpretation of the checklist” was identified and compared with the literature in the field (Glaser Barney & Strauss Anselm, 1967; Glaser, 1978, 1992). Data collection stopped when saturation was achieved (Glaser Barney & Strauss Anselm, 1967; Glaser, 1978, 1992). The first author has done all coding under guidance of the other authors, and the text was reviewed several times to assess the coding units. According to Glaser (1978), it is important not be too influenced by others in the analysis process. Consequently, none of the participants were invited to provide feedback on the findings until the theory was fully developed. To support the findings, relevant quotations were identified and translated from Norwegian to English.

Results

The midwives’ main concern was identified as “no common understanding of the purpose of the checklist nor consensus on how to use the checklist”.

The midwife’s primary goal in the handover situation was patient safety. However, there was uncertainty whether the checklist could be used as a quality improvement initiative or more as a list of reminders of what to do. This uncertainty resulted in the grounded theory “individual interpretation of the checklist”. The midwives interpreted the checklist according to how they understood the checklist, how the working conditions were and to their personal attitudes towards the checklist. Individual interpretation of the checklist consisted of three strategies: *following the system*, *evaluating the system* and *distancing themselves from the system*. Each strategy had corresponding conditions and consequences influencing how the checklist was used. The three strategies did not represent a dynamic or linear process, but a constant manner, meaning that the time of introduction to the checklist was decisive as to the strategy to which the midwife was adjusted. Whether a midwife was a novice, competent or an expert at the time of their first introduction to the checklist affected which strategy was chosen, irrespective of the midwives’ years of practice. However, our results indicate that the midwives did not alter the strategy first adapted. The only condition that seemed to influence a change in the use of the checklist was if the midwife experienced an adverse outcome in the mother or baby that could be related to the use of the checklist.

A common experience, regardless of ward or seniority as midwife, was that they all experienced variation in the use of the checklist. The unwarranted variation in the use of the checklist may be explained by its poor design, such as more than 30 items on the list, or the fact that the checklist followed the woman and baby for days. None of the midwives in the study experienced a common understanding on how to use checklist, and this uncertainty was experienced within and amongst the wards at the clinic. The consequences were that the checklist was considered an individual instrument to facilitate each midwife, and not as a part of a common patient safety strategy.

Following the system

The dominant condition of this strategy was mainly characterised by the midwives’ sense of duty towards their management or head of staff. The midwives felt obligated to use the checklist and by following the system and using the checklist, the midwives worked in agreement with the guidelines given by the management. These midwives experienced the checklist as an efficient tool, and they trusted the checklist when it was correctly filled out. Still, they expressed that there was uncertainty related to the use of the checklist, but this uncertainty was solved by adjusting the use to their own preferences. The checklist controlled and guided their work by systematically checking out tasks that were completed. When the midwives came across checklists that were incomplete or incorrectly filled out, the midwives compensated for this by filling out the missing parts. By following the system, the midwives signed off on several sections of the checklist that they had not performed or observed. Hence, they did what they were told to do, but the midwives using this strategy did not report uncertainties about the checklist to those responsible for development of the checklist. However, they had many thoughts about the potential for improvement of the checklist.

“If things are busy, you can end up just thinking awww ... but with the checklist it’s simply checking things off one after another... and you do all the rest a lot quicker because you remember more easily what the next step is, rather than spending a long time thinking - what was I supposed to do now?”

Evaluating the system

The condition of this strategy was more pragmatic where the midwives prioritised the use of the checklist in concurrence with the number of tasks on the actual shift. When the midwives had several competing tasks and duties, they deprioritised the checklist, but when the shift was quiet and foreseeable, they used the checklist according to how they meant the checklist should be filled out. The midwives adjusted the use of the checklist to what was most suitable and practical to themselves. Midwives that used the strategy evaluating the system had a more personal approach to the checklist where they merely made their own version of how to fill out the checklist. This personal version

was influenced by the midwife's earlier experiences with adverse outcomes related to the checklist, and the midwives only trusted their own way of filling out the checklist. Not trusting their colleague's work in the handover situation resulted in double checking, reviewing and filling out what they meant were missing parts, and the consequence was a higher workload leading to frustration and hampered workflow.

Midwives using the strategy evaluating the system looked at the checklist as a tool to discover irregularities in practice, and the discovery of irregularities contributed to patient safety by correcting the practice. By adjusting the use of the checklist, the midwives camouflaged unwarranted situations and the inaccuracy of the checklist.

"As when things have been checked off the list, and it turns out the tasks haven't been done. Or when nothing is checked off, even though everything already has been done. In my experience it's a good checklist for work I'm doing myself, but I cannot trust the checklist when it has been filled out by someone else."

Distancing oneself from the system

The dominant strategy of this strategy was distancing themselves from the checklist by not using it. The midwives continued to perform their clinical practice as if the checklist had not been implemented. This silent protest was influenced by two aspects: the implementation process of the checklist and a concern about losing clinical skills. The midwives were critical to how the checklist had been implemented, focusing on lack of information and lack of a proper plan demonstrating how and why the checklist was implemented. Some midwives described the implementation process as a top-down process with little interest in the perspective of the midwives using the checklist, or arguments supported in research-based evidence. These midwives argued that the checklist was redundant because it only contained sections that are considered basic clinical midwifery skills. The midwives were concerned that the checklist could lead to a reduced ability to critically observe, reflect, interpret and act if a standardisation of their practice was defined by a checklist. Furthermore, they suspected that using the checklist could be a potential threat to patient safety as the checklist could give an impression of false security because midwives might forget to observe what is not on the checklist, and by that lose part of their clinical competences.

"That checklist is provoking... I believe it can be a threat to patient safety because midwives forget what to do and how things are to be done, and you also forget why you should do things".

Discussion

In the handover from the delivery room to postnatal care, the midwives' main concern was identified as "no common understanding of the purpose of the checklist nor consensus on how to use the checklist". A general lack of consensus on the rationale for implementing the checklist influenced its use, opening up individual interpretations. The emergent grounded theory of "individual interpretation of the checklist" explained how the midwives resolved their main concern. The different strategies used by the midwives were found irrespective of ward or the individual midwife's years of practice. We identified the following three main strategies related to the use of the checklist: following the system, evaluating the system, and distancing oneself from the system. Conditions that influenced which strategy the midwives used regarding the checklist were related to how they understood the checklist, working conditions and their personal attitudes towards the list.

Since the checklist was used differently based on the midwives' personal beliefs and attitudes, it was difficult to ensure a common understanding and equal use of the checklist. This resulted in uncertainty among the midwives and potentially failing to ensure the safety of mother and infant after handover from the delivery room to postnatal care. Checklists are cheap and easy to implement (Thomassen et al., 2010), and are often used when healthcare workers face a variation of challenges related to quality and safety (Clay-Williams & Colligan, 2015; Thomassen, Storesund, Søfteland, & Brattebø, 2014). A systematic review on the effects of using a safety checklist in medicine concluded that safety checklists seem to be effective tools for improving care in various settings (Thomassen et al., 2014). Notably, none of the included studies reported negative effects related to the use of such a checklist (Thomassen et al., 2014). While checklists are commonly used, also outside healthcare settings, there is no consensus on how to implement a new checklist.

The World Health Organization (WHO) has published an implementation manual for surgical safety checklists (World Health Organization, 2008). When assessing their recommendations, we find several possible explanations for the challenges observed related to the implementation of the checklist investigated in the current study. Firstly, the WHO recommends that a single person participating in caring for the patient is made responsible for ticking the boxes on the list (World Health Organization, 2008). In the current study, the checklist followed the mother and infant, not the midwife. When a woman and her baby were discharged from the hospital, this could possibly result in an ethical dilemma for a midwife who is expected to sign a checklist based on tasks potentially performed by several colleagues. Secondly, for the checklist to be effective, the care providers should aim to accomplish the different steps of the list effectively and

undisturbed (World Health Organization, 2008), introducing the aspects of time and external noise. In this study, the checklist was expected to be effective across midwives and their various tasks, wards and hospital shifts, i.e. ranging from hours to days, depending on the individual mother's or infant's needs. The findings in this study indicate that the consequences of implementing a checklist without assessing current recommendations on how to best implement a checklist may pose a threat to patient safety, rather than enhance patient safety.

Some midwives were particularly eager to follow the ward's routines and ticking the boxes on the checklist appeared more important than checking if the tasks were completed or not. Midwives in Britain have been found to feel overwhelmed at work, caused by a heavy workload and poor staffing (Cull, Hunter, Henley, Fenwick, & Sidebotham, 2020). Similar findings are reported in a Norwegian study, adding that midwives often experience insufficient support from their midwifery leaders and powerlessness in a constantly changing work environment ruled by a medical model of care (Lukasse & Henriksen, 2019). A culture of fear or distance to management seems to exist within maternity care (Curtis, Ball, & Kirkham, 2006). Thus, regardless of whether the midwife aims to be an ideal employee or is silently protesting the use of the checklist, the combination of the different midwives' strategies in solving their shared main concern may represent a challenge to patient safety.

The amount of individual adjustments and lack of common understanding affected the midwives differently. It is a paradox when some midwives chose not to prioritise the checklist during busy shifts, while others find the checklist particularly useful in such situations. One might argue that the use of a checklist challenges best practice in midwifery if a midwife or the system are more concerned about routines and ticking boxes, and less concerned about offering individualised care. While the checklist in the current study was somewhat different from a surgical checklist assessed by the WHO (World Health Organization, 2008), there is still a question whether a checklist is suitable for the tasks the checklist is made to cover. Caring for someone over days is different from caring for someone over a limited time period in a high-risk situation, such as a surgery. Woman-centred care is recognised as a quality marker of maternity services (De Labrusse, Ramelet, Humphrey, & MacLennan, 2016). Therefore, when care is standardised and based on a checklist, this may challenge addressing the different needs of different mothers and infants. Previous research has shown that a checklist may be effective when assessing patient safety (Thomassen et al., 2014). However, the results in the current study suggests that a checklist needs to be limited to few and specific tasks and proper implementation strategies are warranted.

Strength and limitations

The checklist used and implemented in this study was associated with a large maternity clinic in Norway, and implementation within a clinic implies a change for the people involved. A strength of this study is that the participants' views of using the checklist are grounded in empirical data given by the participants from the hospital using the checklist. Grounded theory method focuses on human actions and interactions and is therefore well suited when exploring experiences with a given phenomenon (Glaser Barney & Strauss Anselm, 1967; Glaser, 1978, 1992). The participants were all midwives representing all the different wards at the maternity clinic, securing diversity and different experiences using the checklist. However, all the participants came from the same hospital and experiences related to the use of the checklist will reflect the context an organisational culture experienced within this hospital. Furthermore, our grounded theory seems relevant to the strategies used by the midwives, and the theory could be adjusted to new data when it emerges.

Conclusion

The findings in this study indicate that a general lack of common understanding and consensus on the rationale for implementing a checklist resulted in individual use of the checklist and was therefore a potential threat to patient safety. This individual use of the checklist might have resulted in an attitude towards the checklist as more of an individual tool and less as a quality improvement initiative. Findings also emphasise the importance of a clear implementation strategy supervised by the management. Further research should explore the understanding of organisational and cultural context when implementing a checklist in clinical practice.

Abbreviations

Not applicable

Declarations

Ethics approval and consent to participate

The study was approved by The Norwegian Data Protection Official for Research (approval number: 54239/3/BGH). All participants were given a written consent.

Consent for publication

Not applicable

Availability of data and materials

Data that support the findings for this study are available from the Western Norway University of applied science research server. All data can also be made available on request from the corresponding author

Competing interests

The authors declare that they have no competing interests

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Authors contribution

MØM and KAA drafted the study and contributed to the data collection. MØM, KAA, ESV and ABVN drafted the manuscript and contributed to data analysis and interpretation of data. The final manuscript was read and approved by all authors.

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Authors information

This manuscript is based on the first author's Master thesis and her collection of data as a student in Master in Midwifery. During the recruitment and collection of data the first author was a nurse and midwifery student. The last author was her main supervisor, who moderated the interviews and facilitated the master student during the data collection process. Both, second, third and last author have experience in performing qualitative research.

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