

## Following-up midwives after adverse incidents: How front-line management practices help second victims

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### ABSTRACT

**Objective:** To describe how front-line managers of maternity wards provide support to midwives as second victims in the aftermath of an adverse incident.

**Design:** A qualitative study using critical incident technique and a content analytic approach of semi-structured in-depth interviews.

**Setting:** Maternity wards in 10 Norwegian hospitals with more than 200 registered births annually were included in the study.

**Participants:** A purposeful sample of 33 midwives with more than two years' working experience described 57 adverse incidents.

**Findings:** Maternity ward managers utilised four types of practices to support midwives after critical incidents: management, transformational leadership, distributed leadership and laissez-faire leadership.

**Key conclusions and implications for practice:** The study shows that proactive managers who planned for how to handle critical incidents provided midwives with needed individual support and learning. Proactive transformational leadership and delegating roles for individual support should be promoted when assisting second victims after critical incidents. Managers can limit the potential harm to second victims by preparing for the eventuality of a crisis and institute follow-up practices.

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### Introduction

Normal, healthy pregnancies are not entirely without risks of complications and death. Errors, unforeseen and adverse clinical incidents might occur, even with women designated as low risk. The priority after an adverse incident is the first victims—the woman and her family. However, the attending midwife may experience significant personal and professional distress after an adverse outcome; in that sense, he or she is a second victim, a term conceived by Wu in 2000.

A specific definition was posed by Scott et al., 2009 (p. 326) describing a second victim as “healthcare providers who are involved in an unanticipated adverse patient event, in a medical error and/or a patient related injury and become victimised in the sense that the provider is traumatised by the event. Frequently,

these individuals feel personally responsible for the patient outcome. Many feel as though they have failed the patient, second guessing their clinical skills and knowledge base.”

The traumatising effect on midwives after adverse clinical incidents ranges from common, uncomplicated stress-related reactions to the more complex post-traumatic stress disorder, and these are well documented (Beck et al., 2015; Creedy and Gamble, 2015; Halperin et al., 2011; Rice and Warland, 2013; Schröder et al., 2016a,b; Sheen et al., 2016; Wahlberg et al., 2017, Wahlberg et al., 2020). With potential devastating effects, midwives need, but can experience lack of support after incidents with adverse outcomes (Beck et al., 2015; Calvert and Benn, 2015; Halperin et al., 2011; Sheen et al., 2015).

Supporting second victims after adverse incidents have become an important issue for healthcare organisations worldwide, and a multitude of studies have suggested different methods (Austin et al., 2014; Hauk, 2018; Schwappach and Bolurate, 2009; Schröder et al., 2016a; Seys et al., 2012, 2013; Ulleström et al., 2014, Wilkinson, 2015). In the last decades, labour care has seen

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increasing presence of obstetricians and physicians on the labour wards and an overlap between the roles and responsibilities of midwives and obstetricians (Wahlberg et al., 2020). Still, midwives have a strong position in maternity care in Norway, and they are responsible for providing care during labour for healthy women with normal pregnancies. Physicians have a less dominant role but are medically responsible when pregnancy or labour deviates from the normal process.

In that respect, midwives may experience a change of leadership during births if the midwife in charge asks for assistance. As a result, the management practice for post incident follow-up may differ according to profession and management priorities. A Danish study (Schröder et al., 2016b) found that midwives generally experienced a low level of social support and feedback, and only 49% talked to their immediate superior (front-line management) about an adverse incident, suggesting that a large group abstained from talking to their immediate superior. This is somewhat explained by lack of supervisor support or encouragement (Ulleström et al., 2014; Edrees and Wu, 2017). Even if support services are in place, several barriers are reported amongst health care providers; lack of awareness or understanding of the available options, the time it takes away from work, concerns about confidentiality or judgement from co-workers, the stigma associated with such services, thoughts that the services might be ineffective, and the fear of being blamed (Edrees and Wu, 2017; Hauk, 2018; Schröder et al., 2016b; White et al., 2015). Further, the culture of the organisation may not provide a platform to recognise and support second victims (Hauk, 2018). Schröder et al. (2016b) found that midwives reported significantly higher scores on psychosocial health problems and less ability to continue clinical practices after a critical incident than obstetricians. Gender, level of competence, length of education, and the relationship with the patients may explain these differences.

The research to date acknowledges that front-line management play a significant role in following up midwives after adverse events. What is left unknown is how these managers can provide the necessary support. We contribute to this by describing how midwives perceived follow-up practices in the aftermath of an incident with an adverse outcome. Based on this, we identify what constitutes as “best practice” in following up midwives as second victims.

## Methods

The research design underpinning this study is the Critical Incident Technique (Flanagan, 1954) and a content analytic approach (Polit and Beck, 2004). The technique captures revelatory or significant behaviours and incidents (Keatinge, 2002) that affect subsequent behaviour and actions. It provides a vehicle for obtaining contextual data relevant for practice as well as a basis for inductive theory development. The chief value for management studies is its potential to help researchers understand behaviour critical to complex situations and proceedings in and amongst various groupings (Flanagan, 1954).

### Study focus

The aim of this study is to develop a classification scheme of follow-up practices amongst front-line managers after adverse incidents. The unit of analysis is the perceived follow-up practice after an adverse incident, and the informants are midwives.

The authors defined a front-line manager as a local leader with primary responsibilities for staffing, budgeting, and day-to-day operations of the unit. He or she has many names: labour- or maternity ward manager, labour ward coordinator, head- or chief midwife, or the midwife in charge of the labour ward. We used the

term ‘maternity ward manager’ (MWM) in this study. They were all midwives.

Critical Incident Technique defines the scope of a study from the number of observed critical incidents. A ‘critical incident’ can refer to the overall story itself or to discrete behaviours contained within the story (Keaveney, 1995). When we talk about discrete behaviour, we often refer to incidents. The criteria for what constitute a critical incident in this study are:

- The birth starts out as a midwife-led normal birth in a maternity ward except for the induction of labour.
- The birth has an unexpected, adverse patient outcome, for example death or injury of mother and/or baby, third-degree tear, shoulder dystocia, or infant resuscitation/asphyxia.
- The midwife experiences a need for emotional and/or clinical follow-up after the incident.

### Sample characteristics

38 Norwegian hospitals with more than 200 registered births annually received an e-mail in January 2014 with an invitation to participate in this study followed by a phone call the following week. Ten hospitals from different parts of Norway participated, and 33 midwives fell within the purposive sampling strategy: all informants were fully educated permanent employed midwives with more than two years’ experience working in a maternity unit. They were all women of Nordic origin. They each provided at least one serious clinical adverse incident.

### Data collection procedures

Through qualitative interviews lasting from 90 min to over three hours, 33 midwives recalled 57 specific incidents and told their stories from first-hand experience in their own words. All interviews were conducted in a non-disruptive environment (e.g. hospital meeting room or hotel room). The two female authors, a professor [LC] with extensive experience with the technique, and midwife [JT] with ample clinical experience conducted all interviews together. Interviews were audio-recorded and transcribed verbatim. The interviewers did not know any of the informants.

An analytical thread guided the interviews as the stories unfold through a semi-structured interview guide. Using an analytical model of cause, course, result, and implications as suggested by Edvardsson and Roos (2001) during the interviews, the midwives revealed the incidents that led to the adverse outcome, the actions that made the incident critical, the incident outcome, and the future implications of the incident. Multiple participants were asked the same question, and data were preliminary analysed after each interview enabling the researchers to recognise when saturation was achieved.

### Data characteristics

The phrase *adverse incidents* encompass *errors* such as mistakes, close calls, near misses, active errors, and latent errors (Reason, 1990), as well as *patient harm* such as medical injury and iatrogenic injury (Thomas and Petersen, 2003). The patient outcomes that are included in this study fall into the following classifications of degree of harm (World Health Organization, 2010) (Table 1):

A leadership change occurred in 33 of 57 critical incidents.

### Data analysis

CIT does not define the scope of a study from the number of informants—but from the number of observed critical incidents. A

**Table 1**  
Classification of degree of harm.

Perinatal death, mild to severe harm to mother	1/57
Moderate to severe harm to mother, no harm to child	3/57
Moderate to severe harm to child, no harm to mother	13/57
Moderate to severe harm to mother and child	1/57
Perinatal death, no harm to mother	24/57
Maternal death, no harm to child	2/57
Mild harm to mother and child	13/57

Patient outcomes included in this study ( $N = 57$ ).

'critical incident' can refer to the overall story itself or to discrete behaviours contained within the story (Keaveney, 1995). Discrete behaviours preserve the specificity of the data in this research best, defining the unit of analysis as the perceived follow-up practice after a critical incident.

This study employed a content analytic approach. The analysis involved inductive analysis (Polit and Beck, 2004) with two levels of reading research transcripts: a vertical reading to identify recurring themes and subthemes, and a horizontal reading to group segments of text (within the case analysis).

The *first level of analysis* began with reading the complete transcripts from each critical incident. Two initial themes were noted; a reactive and proactive approach to following-up midwives after critical incidents. Further reading enabled identification of meaning units describing a content or context within those two themes. The meaning units were condensed (shortened) and then attributed with a code. Each code reflects one meaning unit. Table 2 shows an example of this process.

The *second level of analysis* involves reading the transcripts horizontally to facilitate comparison of findings across interviews. The codes from the first level of analysis were recoded and clustered for the development of subcategories and categories. Finally, two themes were identified; individual support after critical incidents and case investigation after critical incidents corresponding with the overarching theme *maternity ward management follow-up practice after an adverse incident*.

### Ethical considerations

Approval for the study was granted by the Norwegian Centre for Research Data (Reference: NSD 2013/36479). The study was conducted in accordance with the [World Medical Association Declaration of Helsinki Principles for Medical Research in Human Subjects \(2018\)](#). Informed consent was obtained from all participants. Prior to data collection, the midwives received written information about the researchers, the research aim and the strict ethical guidelines governing the research process, an information sheet clarifying voluntary participation that could be discontinued at any time without giving reasons, and confidentiality insurance. They were offered time during the interview to talk freely about traumatic situations, and they were given the possibility to contact the Norwegian midwife and Nurses Association after the interview should they need further debriefing. We followed the 32-item checklist for reporting qualitative research (COREQ) (Tong et al., 2007).

### Findings

Two subthemes emerged from the analysis of the critical incidents: individual support and case investigation. Table 3 provides an overview of the main themes, categories, and subcategories.

### Individual support after critical incidents

According to our study, the MWM practices either a proactive or a reactive strategy. The proactive MWM is visible after adverse incidents, and she facilitates support through team meetings, formalised peer support, professional counselling, or individual conversations. Because she works closely with the shift charge midwife, she identifies the need for individual support after an incident.

Midwives described peer support as a form of emotional first aid, a haven to discuss incidents in a non-judgemental and confidential environment. Several mentioned the need for access to additional mental health specialist resources such as psychiatric nurses, psychologists or psychiatrists, or trained clinicians. To be successful, a peer support program must be proactive in nature. Not all midwives will actively seek support as there continues to be a stigma associated with speaking up and accessing offered support.

The proactive MWM grounds peer support on interpersonal trust. There is an openness to making oneself vulnerable by putting one's welfare in the hands of another midwife by trusting that midwife to give support and understanding. Team meetings where the MWM points out and celebrates how a colleague's support, care, or compassion enabled a truly unique contribution for another midwife, can create such trust and a low threshold for supporting other midwives. One midwife described how trust enables criticism:

Our post incident meetings are very constructive. The MWM is very good at tying up the loose ends and keeping the conversation going. She has respect for everyone in the group, and the way she handles these meetings is absolutely amazing... Everything we talk about is confidential, and there is room for everyone to say what they think, and there is even room for criticism. (Interview 3).

Midwives may feel personally responsible for an adverse outcome. Many feel they have failed as midwives and second-guess their clinical skills. The proactive ward manager is committed to caring for the midwife so that she, in turn, feels empowered to continue practicing midwifery:

An incident investigation that reviews both the incident and addresses involved midwives' emotions, empowers us to continue working as midwives. We trust that our MWM ensures that we are able to continue working even if we are to blame for the incident. (Interview 5).

The reactive MWM is absent after adverse incidents, and she takes no action to support involved midwives. When the ward manager's behaviour is unpredictable, and support is given on an occasional and ad-hoc basis, midwives learn to expect little individual follow-up and support from their local leader. They know she does not respond unless they request it, or the incident is of a serious nature and she feels compelled to do so.

It is a heavy burden on a midwife being responsible for serious clinical incidents. The reactive MWM faces her need for individual support with silence, and the midwife experiences reputation loss instead of follow-up practices.

I feel that the number of critical incidents you encounter define your role as a midwife in our organisation. It is difficult to stay in the profession when you have experienced adverse events... You feel abandoned, and you have no one to lean on. (Interview 33).

Midwives use coping strategies to compensate for lack of individual support. Many use colleagues for immediate ventilation after critical incidents, and they use an informal support network of

**Table 2**  
Example of moving from meaning units to codes, subcategories and category.

Meaning units	Codes	Subcategory	Category
"I remember hoping that someone would come and rescue me from the situation. In retrospect, I feel the manager should have been there to support me. She never contacted me." (Interview 1)	Expect, but receive no individual support from MWM after CI	Experiencing limited individual support after critical incidents	Reactive follow-up practices of involved personnel
"I spent a lot of time with the baby after delivery, and I attended the funeral. It was just the parents, the priest and me. I spent the evening after the funeral with the parents. I think it was as much my needs as for theirs ... A good dialogue with the couple in retrospect helps to process the incident. It is difficult when you can't communicate with the parent." (Interview 22)	Use parents to process CI	Individual coping strategies to compensate for lack of individual support	
"The MWM is absent. Support after a critical incident depends on which colleagues you work with that day" (Interview 1)	Use colleagues for immediate ventilation		
"I really dreaded going to work after the incident. I wondered how I would react. And of course, the tears came when I talked to those who had the evening shift and those who came on the night shift that night." (Interview 24)	Dread going to work	Perceived negative consequences of not receiving individual support after critical incidents	
"I have thought many times that we do not have good follow-up routines after critical incidents. You feel abandoned, and you have no one to lean on." (Interview 24) "I used to feel fearless, but that feeling is gone. The belief in myself is gone and my faith in the doctors is gone. It's tough standing alone." (Interview 7)	A feeling of being abandoned by colleagues and MWM		

**Table 3**  
Categories, subcategories, subthemes and overarching theme.

OVERREACHING THEME: Maternity ward management follow-up practice after a critical incident		
CATEGORIES	SUBCATEGORIES	SUBTHEMES
Reactive follow-up practices of involved personnel	Experiencing limited individual support after critical incidents Using individual coping strategies to compensate for lack of individual support Perceived negative consequences of not receiving individual support after critical incidents	Individual support after critical incidents
Proactive follow-up practices of involved personnel	Experiencing individual support after critical incidents Perceived benefits of receiving individual support after critical incidents	
Reactive follow-up practices of critical incidents	Experiencing limited (focus on) learning from critical incidents Individual strategies to compensate for lack of post incident learning initiatives Perceived negative consequences from limited (focus on) learning from critical incidents	Case investigation after critical incidents
A proactive follow-up practice of the incident	Experiencing (focus on) learning from critical incidents Perceived benefits of post incident learning initiatives	

colleagues, friends and family for long term support. We found that when midwives received little individual support after critical incidents, a good dialogue with the parents is of utmost importance:

I spent a lot of time with the baby after delivery, and I attended the funeral. It was just the parents, the priest and me. I spent the evening after the funeral with the parents. I think it was as much my needs as for theirs ... A good dialogue with the couple in retrospect helps to process the incident. It is difficult when you can't communicate with the parents. (Interview 22).

When there is a question of guilt, a relationship with the parents can be difficult and sometimes impossible. Midwives often find themselves in continuous emotional distress going through incidents repeatedly and agonising over questions of guilt, shame and anxiety over own mistakes. For some midwives, this resulted in an inability to act in similar situations. Better individual follow-up and simulation training was mentioned as tools that would better enable them to handle adverse incidents. Others told us they are in a constant crisis mode at work, not trusting what they hear and see anymore. Many practice continuous foetal monitoring as a coping strategy. Others told us they kept a distance to patients to protect themselves. Several midwives did nothing to access support after critical incidents. The most severe consequences were leaving the profession or change of job to the post-natal ward, but it is not uncommon dreading going to work or going on sick leave. We also found that many felt abandoned and lost their professional illusions and the pleasure of work after critical incidents.

### *Case investigation after critical incidents*

Individual support of involved personnel is important; however, equally as important is a case investigation after a critical incident. Even though interprofessional debriefing is common practice after incidents in Norwegian hospitals, we found that it was not common to routinely include midwives during case investigations. We did not find the same with regards to simulation training, even though only two of the ten hospitals in this study practiced ongoing multidisciplinary simulation training.

Midwives working with a proactive MWM express a sense of a 'local maternity care team', and trust towards other professions such as obstetricians, anaesthetists, paediatricians, and support staff.

Proactive ward managers are committed to treating midwives based on the quality of care, and they also seek to develop midwives through delegation of responsibility, guidance, and skills training. Midwives working in maternity wards with ongoing multidisciplinary simulation training enjoy more benefits than midwives working in maternity wards with ad-hoc-based simulation training: a clearer understanding of being a midwife, increased respect between professions, a better understanding of what is expected during and after critical incidents, and empowerment to take charge in critical situations if necessary:

If the midwife rises the alarm and asks for assistance during birth but the doctor acts hesitantly, I know I have the manager's support to take charge and tell the doctor what to do. I am not afraid to step out of my boundaries if I think it is necessary. (Interview 16).



A proactive approach also seems to take a more transparent and holistic approach to managing adverse incidents compared to maternity wards with a more reactive approach. In addition to debriefs, the MWM puts emphasis on defusing the situation as an initial intervention method in the close aftermath of an incident. Defusing works as a multidisciplinary team-based ventilation to air out reactions and impressions. Defusing usually happens prior to a formal incident debrief and is not as fact based as debriefs. We found that proactive ward managers encouraged midwives to document the incident and prepare a formal report as a fact-sorting exercise prior to a formal incident debrief:

*Documentation of an incident are attended to immediately as a routine. If she is informed, the section leader calls for an immediate meeting to coordinate notes... We are encouraged to use a checklist for positive, interdisciplinary review of daily events. All midwives have a 'green card' in their pocket which shows what to check and what to do when something differs from the procedures. (Interview 19).*

A reactive strategy towards case investigation after critical incidents is characterised by lack of clear routines about when, where, and who should attend interdisciplinary debriefs. Midwives tend to attend interdisciplinary debriefs only if summoned, and they are seldom involved in initiatives to assess and learn from incidents. As a result, many midwives perceive the purpose of interdisciplinary case investigations as exercises in apportioning blame or naming scapegoats. Several midwives told us they have limited access to information about cases and must ask other personnel if they know anything, or try to remain in contact with parents to get information:

*The most difficult part of being a midwife is the empty feeling of not knowing how mother and baby are doing after an incident ... I personally must ask the nurses or doctors if they know anything about the patients. (Interview 32).*

*I did not get any information about the baby from my leader or the doctors in the neonatal intensive care. I had to go through the parents. However, after a while they stopped answering my calls. I am not able to put the incident behind me as long as I don't know how the family is doing. (Interview 16).*

A maternity ward needs to be action oriented; hierarchically organised; and infused with clear policies, guidelines, and procedures. However, midwives perceive MWMs stressing correct actions to improve overall performance as a threat to their autonomy. The midwives in this study experienced that these leadership behaviours could lead to the midwife getting the blame, irrespective of what part procedures, training, and supervision—or the lack of them—played in the adverse incident. Corridor talk and reputation loss were known consequences.

In sum, the reactive MWM uses performance assessment interviews to discuss any departure from the policies, guidelines, or procedures. She may use previous incidents that have left their mark in form of a sick leave or reluctance to enter similar situations against the midwives. Some were simply a little afraid of their ward manager:

*'You cannot think outside the box and trust your instincts. I am constantly on alert and check the procedures just in case. I have become a code-red thinker. Being a midwife is dealing with critical incidents waiting to happen, and I know I am in trouble if I choose to deviate from procedures. (Interview 17).*

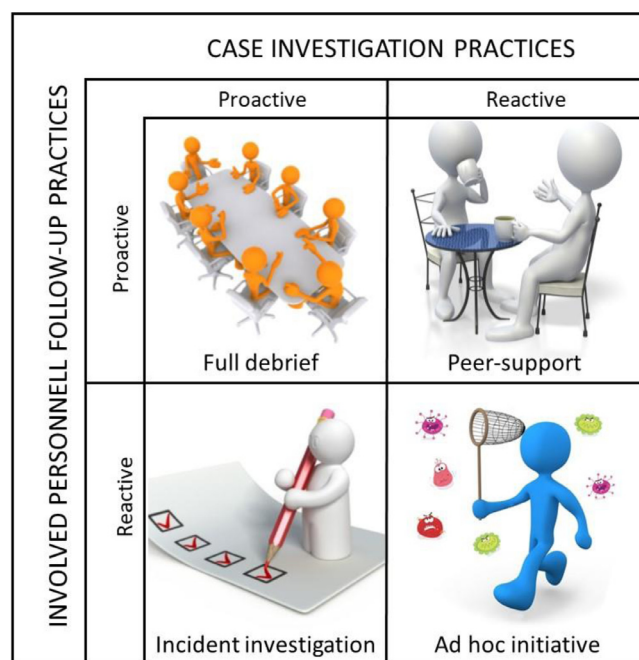


Fig. 1. Behaviours after adverse incidents.

## Discussion

The findings show that front-line managers of Norwegian maternity wards fall into four types of follow-up practices after adverse incidents as shown in Fig. 1.

Corresponding with these four practices, we find that ward managers demonstrate four ideal-types of management and leadership behaviours when handling critical incidents. As shown in Table 4.

Reactive behaviours in our data include 'Laissez-faire leadership' where managers are most noteworthy for their absence, as well as Management behaviours enforcing rules and regulations without making individual considerations. These practices fail to make the individual considerations of proactive transformational leadership (Avolio et al., 1999; Bass, 1985).

Proactive personnel follow-up on the other hand, includes managers or the collegium making individual considerations after incidents. These managers institute a peer-support system with distributed leadership, and/or plan for and act on incidents through a debriefing-system. These approaches enable managers to perform and facilitate transformational leadership in the aftermath of an incident.

### Ad-hoc initiative

Reactive leadership behaviours included an avoidant or passive form of laissez-faire leadership (Avolio et al., 1999; Bass, 1985). Such leadership lends itself to providing informal support, which may buffer the association between errors or adverse clinical incidents and negative outcomes for midwives as second victims (Winning et al., 2017). However, midwifery cultures are hierarchical, and informal support in such a setting may exclude those of a lesser ranking (Begley, 2002). Informal networks can thus be detrimental to midwives in need of support after an adverse incident (Wu and Steckelberg, 2012). Furthermore, colleagues without formal training and experience could unintentionally lead to errors that can be negative for the effected midwife's ability to cope after an incident.

**Table 4**  
Manager-types based on behaviours.

Full debrief Incident investigation	Transformational leadership Management	Peer support Ad-hoc initiative	Distributed leadership Laissez-faire leadership
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An absent leader may cause corridor talk by delaying their response to inquiries or questions, and resists expressing views if discussions arise (Judge and Piccolo, 2004). Midwives recall over-hearing unfounded speculations about adverse incidents. Absence of leadership leave room for speculations. Consequently, an absent MWM might be perceived as lacking empathic traits and as unable to take the involved personnel's perspective (Skinner and Spurgeon, 2005). Such behaviours may reflect incompetence, lack of motivation, or strategic intent to harm (Aasland et al., 2010). Independently of the causes, the findings suggest that a lack of systematic follow-up practices might lead to an absence of necessary leadership after adverse incidents.

#### Incident investigation

Reactive personnel follow-up practices and case investigation emphasises policies, guidelines, and procedures. As incident investigators, they are more concerned with following existing procedures than with making changes when practice fails to meet procedures. This is consistent with traditional management behaviour concerned with administering the work through planning, coordinating, and control (Alvesson et al., 2016). They work to prevent faults and deviations by being proactive and implementing procedures but fail to connect this to proactive personnel follow-up behaviours. The purpose of their clinical debrief is to reveal what happened, why it happened, who was involved, if the healthcare professionals followed procedures, and if the incident could have been avoided. Midwives experience it as a thorough examination, and they worry the MWM will blame them for the incident.

These behaviours rarely intend to identify or help those who need emotional follow-up in the aftermath of an incident. Instead, the MWM makes sure correct procedures are available, preferably in digital form. She informs the midwives about their responsibility to implement the latest procedures; but is unlikely to discuss the procedures' applicability. They focus on learning the lessons and acting to reduce or prevent incidents in the future. Managing by exception and maintaining the status quo, they only intervenes with corrective action to improve performance when failures or problems occur (Hackman and Johnson, 2004).

As for consequences, ad-hoc initiatives and incident investigation lack considerations for individual support. This is problematic as incidents trigger thought of leaving the profession (Beck et al., 2015; Calvert and Benn, 2015; Schröder et al., 2016a; Sheen et al., 2016). Emphasising case and not person might aid this: midwives working under investigating maternity unit managers expressed a greater intent to quit the profession.

#### Peer support

Managers offering peer support and incident debrief behaviours prioritise individual support. These pro-active personnel follow-up practices resemble transformational leadership showing individual considerations for employees (Bass and Riggio, 2006). These maternity ward managers consider midwives' needs, interests, and areas of personal development when following-up after adverse incidents. A comprehensive review of leadership research in nursing found these types of behaviours to associate with improved outcomes (Cummings et al., 2018), which suggests that our findings

are applicable to other countries, and types of nursing. Our findings describe that ward managers who combined proactive systems for support with individualised relational leadership, helped midwives cope with critical incidents.

Formalised peer support concerns a special type of distributed individual support. Here, managers lean on trained midwives with personal adverse experiences to perform leadership tasks (Sahlin and Eriksson-Zetterquist, 2016). It provides an early intervention strategy by normalising the process of seeking help after adverse incidents. Such support takes many forms: phone calls, group meetings, or even going for walks together, and could help keep midwives in their job (Ball et al., 2006; Leversidge, 2016).

#### Incident debriefs

Debriefs after adverse incidents occur routinely in maternity wards with proactive follow-up practices. Combining management and transformational leadership behaviours, they consider the emotional status of involved personnel while also investigating the incident. Such support has a positive effect on stress and reduces the likelihood of future errors (Smith and Forster, 2000; Wu, 2000, 2003). Our study shows that well-organised simulation training, briefs, and incident defusing and debriefs are both educational and stress relieving for midwives involved in critical incidents with adverse outcomes.

By doing structured debriefs, managers benefit by learning from the incident, identifying the needed change, and creating a plan to implement changes together with members of the maternity care team. Hence, managers display leadership through individual considerations and inspirational motivation by making an incident meaningful as a learning-opportunity (Avolio et al., 1999; Bass, 1985).

Briefs are implemented before an incident, debriefs afterwards. The purpose of an investigation is to control if midwives have followed procedures afterwards. A brief in this setting is a set of procedures or evidence-based guidelines, often developed through multidisciplinary team-based skills and simulation training. Such training improves team performance in areas including communication, teamwork, and leadership (Murphy et al., 2016). In our findings, it aids role assignment, mutual respect across professions, and improved professional climate between support staff, physicians, and midwives compared to the three other leadership styles.

#### Trustworthiness and methodological considerations

One argument for the *credibility* of our results, is that the critical incident technique is an established research method. The analytical thread of cause, course, result, and implications guiding the interviews have been successfully utilised in previous comparative research projects (Cheek et al., 1997; Conway, 1998; Cox et al., 1993; Ivarsson et al., 2011; Ng and Lovell, 2012; Redfern and Norman, 1999). Critical Incident Technique reflects the normal way informants think as they develop the context from their own perspectives using their own words.

The success of the critical incident analysis relies on the informant's memory. The method could be limited by informants failing to remember events correctly, be imprecise, forget crucial facts in the story line, and the method has a built-in bias towards incidents that happened recently, since these are easier to recall. We

aimed to hinder this by using a timeline and intensive probing. The trustworthiness of our results, in terms of our ability to capture the realities of the critical incidents, was increased by the fact that one of the interviewers (JT) works as a midwife with cultural competence in the field of labour care prior to data collection dialogues. The informants could speak freely in terms of work-related terminology, and prior to the interviews several of them had reread notes from time of the critical incident. To strengthen the credibility further, site triangulation by the participation of informants within 10 different maternity wards reduced the effect on the study of local factors peculiar to one institution.

Informants may remember more detail from the incident after the interviews, and hence we felt it important to give them the chance to supply such information. All informants received detailed transcripts from the interview prior to data analysis. A few asked for small changes regarding order of events during the incidents, which we incorporated in the transcripts and used as data material in the analysis. A written report with interpretation and our theory of the four different management practices was sent to all informants who was asked to read and comment on the findings. No comments were made.

The research design and content analytic approach is thoroughly described in this article, strengthening the *transferability* of the research. The results do, however, refer to the specific context of the Norwegian health care system. Efforts have therefore been made to provide thick descriptions of the presentation of the results.

In terms of *dependability*, two researchers (LC and JT) who are trained coders, developed independently mutually exclusive and exhaustive categories from 57 critical incidents (after the preliminary analysis after each interview). The researchers examined intrajudge reliability (Weber, 1990) by examining if they classified the same phenomena into the same categories over time, and interjudge reliability by examining if they classified the same phenomena into the same categories. The coding process continued until both researchers agreed on a common classification system, the categories and subcategories developed fully represented the critical behaviours, and no new categories emerged during rereading the transcripts. The third researcher (CR) read the transcripts and the developed categories, and his comments resulted in a few revisions.

To strengthen the *confirmability* of the research, we provide a data analysis audit trail of the coding (Table 2). Although the content analysis procedure is inductive, the approach is also positivistic in nature because the analysis uses an objective classification scheme (even if Flanagan (1954) regards perfect objectivity as impossible). Furthermore, a cause-and-effect analytical model guides the data collection, and a frame of reference guides the data analysis.

#### Study limitations

Limitations of the study includes that the Norwegian context might influence frames of references and expectations of participants. A culture described as expecting decentralised power, informal managers and employees being consulted could have influenced their answers (Hofstede, 2001). The consequences of cultural differences are minimised by presenting thick descriptions of the data and referring the findings to theories on management and leadership. Other limitations include that while we know about midwives' experiences of management practices, we do not know about the intentions of the managers. Nor do we know the effect of these practices beyond the experiences of the midwives. Lacking these perspectives, accounting for the experiences of followers, is relevant as it complements a leader-centric approach to management and leadership studies (Uhl-Bien et al., 2014).

## Conclusion

Adding to studies on leadership in midwifery, the findings complement previous findings concerning the value of relational leadership in nursing (Cummings et al., 2018). By describing how managers prepare for and deliver supportive leadership, the findings conceptualise how they might use their position to improve staff outcomes after adverse incidents.

The severe psychological burdens affecting the second victims are well documented in research, and the need for support programs are evident. Yet, this study finds lack of attention to second victims' needs in both practice, education and policy. Easily accessed support programs tailored to the specific midwives' needs, show a great potential to improving the overall quality of the service given.

Based on the findings, we suggest adopting a proactive approach to critical incidents in education and practice. Easily accessed support programs tailored to the specific midwives' needs would help MWMs support their employees. Managing these incidents with only reactive behaviours makes it harder to provide the necessary support.

We also suggest implementing proactive routines for briefs and debriefs. These routines put MWMs in a position to perform transformational leadership and help employees—showing that creating good systems may help managers provide second victims with needed supportive leadership after an adverse incident.

## Ethical approval

Approval for the study was granted by the Norwegian Centre for Research Data (Reference: NSD 2013/36,479). The study was conducted in accordance with the World Medical Association Declaration of Helsinki Principles for Medical Research in Human Subjects (2018). Written informed consent to participate in the study was obtained from all study participants.

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## Declaration of Competing Interest

None declared.

## CRedit authorship contribution statement

**Line Christoffersen:** Conceptualization, Methodology, Validation, Formal analysis, Investigation, Data curation, Writing - original draft, Writing - review & editing, Visualization. **Janne Teigen:** Conceptualization, Validation, Formal analysis, Investigation, Data curation, Writing - original draft, Writing - review & editing, Visualization, Project administration, Funding acquisition. **Chris Rønningstad:** Formal analysis, Writing - original draft, Writing - review & editing.

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