

Title: Family Witnessed Resuscitation: focus group inquiry into UK student nurse experiences of simulated resuscitation scenarios.

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ABSTRACT

Aims:

To describe the impact of family member presence on student nurse performance in a witnessed resuscitation scenario.

To explore student nurses' attitudes to simulated family witnessed resuscitation and their views about its place in clinical practice.

Background: Family witnessed resuscitation remains controversial worldwide. Hospital implementation remains inconsistent despite professional organisation support. Systematic reviews of international literature indicate family members wish to be involved and consulted; healthcare professionals express concerns about being observed while resuscitating. Student nurse perspectives have not been addressed.

Design: qualitative, focus groups

Methods: Participants: UK university second-year student nurses (n=48) who participated in simulated resuscitation scenarios (either family member absent, or present but quiet, or present but distressed). Data generation 2014: Focus group interview schedule - five open-ended questions and probing techniques. Audio recordings transcribed; analysed thematically. Research ethics approval via University Research Ethics committee.

Findings: Overarching theme = students' sense making – making sense of situation (practically/professionally), of themselves (their skills/values), and of others (patients/family members). Students identify as important – team leader allocating tasks, continuity of carer, and number of nurses needed. Three orientations to practice identified and explored -includes rule following, guidance from personal/proto-professional values, and paternalistic protectionism.

Discussion: We explore issues of students' fluency of response and skills repertoire to support family witnessed resuscitation; explanatory potential to account for the inconsistent uptake of family witnessed resuscitation. Possible future lines of inquiry include family members' gaze as a motivational trigger, and management of guilt.

What this paper adds

What is already known on this subject?

- * Family witnessed resuscitation (FWR) remains controversial worldwide and hospital implementation remains inconsistent despite professional organisation support.
- * Systematic reviews of international literature indicate family members wish to be involved and consulted, while healthcare professionals express concerns about being observed while resuscitating.
- * Student nurse perspectives have not been addressed but they are often first responders in hospitals.

What this study adds:

- * Students' views about FWR vary despite exposure to relevant theoretical knowledge and experiential learning in practice.

- * Few students had direct experience of FWR, and exposure to FWR does not seem to influence their wish to retain overall and final control over FWR.
- * Simulated FWR allows students to develop cognitive and functional competency in a safe environment.

BACKGROUND

There is over 30 years of evidence supporting family witnessed resuscitation (FWR), yet it continues to be controversial around the world (1-4). Family members' (FMs) presence during resuscitation is supported by professional organisations such as the US Emergency Nurses Association (5) and joint European nursing organisations (6), yet FWR is not global normative practice (7). Evidence challenges speculations about effects on families. A recent multi-centre randomised control study examines whether FWR reduces the likelihood of post-traumatic distress symptoms (8) and considers implications for medical efforts during resuscitation, effects on teams, and any legal claims. Eight out of fifteen French pre-hospital emergency medical units (EMUs) were randomly assigned to an intervention group, the remainder were controls. FMs were asked if they wished to be present during resuscitation (n=266), families in control EMUs were not offered this option (n=304). Intervention group FMs observed resuscitation in their home. Control group families did not observe resuscitation. Telephone interviews took place 90 days post-event using an Impact Event Scale and Hospital Anxiety Scale, emergency medical team stress measures, observed FM response and behaviour during resuscitation, and complaints/medico-legal claims. Post-traumatic distress symptom frequency was significantly higher in the control (adjusted odds ratio 1.7; 95% confidence interval [CI], 1.2 to 2.5; P=0.004) and for FM absent during resuscitation (adjusted odds ratio 1.6; 95% CI, 1.1 to 2.5; P=0.02). Families did not interfere with medical efforts during FWR, raise resuscitation team emotional stress or make more legal claims.

Other work indicates that patients and FMs want FWR available (9-13). Parents of children being resuscitated indicate they want to choose whether or not to be present. They do not want healthcare staff making the decision alone (14). Where FMs attend FWR, 94% indicate they want to be present again (12, 14).

In contrast, messages about FWR from healthcare providers are inconsistent. Between 7%-96% of healthcare staff favour FWR (12, 13), and attitudinal surveys indicate it is perceived to be a good thing (4). There is geographic variation; studies from Belgium, Germany, Singapore and Turkey indicate greater concerns about FWR compared with UK, Irish, Australian, and USA studies (15-22). The reason is unclear and may be contextual e.g. individual predisposition to FWR, cultural differences, educational preparation, rural vs urban location, healthcare delivery structure (23). Healthcare practitioners with FWR experience are more positive than those without (4, 14, 24), but regardless of FWR exposure, practitioners want to retain overall final control (12, 13).

Salmond *et al.*'s (25) systematic review identified perceived advantages/disadvantages of FWR for patients, families, and providers. FWR is perceived to help families understand the situation's seriousness, maintain their patient connection, and demonstrate that staff have done everything possible (11). Witnessing resuscitation is distressing, but considered to be a good thing because it may help FMs come to terms with death and reduce pathological grief (8, 13, 26).

However, concerns remain about FM presence adding to practitioner performance anxiety, limiting coping strategies and interfering with care delivery (12, 27-29). These continue despite evidence that families do not usually interfere with resuscitation, and experienced practitioners' performance is usually unaffected (12, 14). This last issue is of relevance to nurse educators. Firstly, that student nurses respond appropriately when resuscitation is indicated; secondly, that students deliver appropriate care to the level of their ability; and finally, they are prepared for situations they will meet once they are registered nurses.

Student nurses are partially socialised into the practice world and are not expected to fully conform to norm values. They have potential to produce distinctive insights into the impact of FM presence during FWR. Student nurses are often first responders at UK hospital cardiac arrests, and our interest in FWR stems from our desire to explore the ways students make sense of clinical situations and develop skills for dealing with real-world problems. In particular, how educators may use high-fidelity simulated environments to access difficult clinical situations to explore/develop student competence (cognitive, functional, ethical and personal competence (30) in FWR and overcome real-world ethical constraints. Using simulated environments allows us to explore student nurses' views about FWR and identify ways to support their transition to RNs.

This paper reports on the qualitative arm of a mixed-methods study which included a randomised controlled trial (31). The overall design is reported elsewhere (32). The trial took place in a high-fidelity CPR scenario in a UK university nursing department skills-lab. Seventy nine second-year adult nursing students were recruited via email, and randomly allocated to one of three scenarios – family member (FM) absent; FM present but quiet; FM present but distressed. Students worked in teams of 3-4 and responded to a standardised pre-programmed mannequin simulating events requiring CPR. Actors portraying family members of both genders were provided with a script and each mannequin had an actor voice-over.

METHODS

Audio-recorded qualitative data were captured through four post-scenario focus groups facilitated by GK & JA, experienced researchers trained in focus group techniques. A five open-ended question interview schedule elicited experiences about the simulated cardiac arrest scenarios, focusing on how they felt they managed/responded. Probing techniques confirmed understanding.

Contemporaneous notes were taken around specific points (33). Of the 79 students who took part in the CPR scenario, 48 students elected to take part in the focus groups. These were classroom-based and lasted approximately 60 minutes each. GK, JA & DP transcribed and analysed audio recordings. Transcript samples were assessed for veracity.

Data analysis

Thematic analysis of focus group transcripts was carried out independently by GK, JWA & DP using qualitative data analysis software (QDA Miner Lite). The final version of findings was developed from post-analysis reviews using a constant comparative thematic technique once saturation was achieved (31). Final findings were agreed by group consensus to ensure rigour. Transcripts were not returned to participants.

Ethics

The Code of Ethics of the World Medical Association (Declaration of Helsinki) was followed. Research ethics opinion was secured from the University ethics committee; written and verbal consent was obtained from focus group participants beforehand. All students were made aware of their rights of anonymity and confidentiality, withdrawal at any time, and that anonymised data would be published.

FINDINGS

The overarching theme was sense making, with three sub-themes making sense of the situation (practically and professionally), making sense of themselves (skills and values), and making sense of others (patients and FMs).

Sense making: situation – practically

Students compared their FWR scenario experience with their skills-laboratory clinical simulation experience and previous clinical experience. Their simulated FWR scenario experience was real and

powerful. They related it to their clinical practice CPR experience, and their knowledge/understanding of how hospital clinical environments operate.

F: The difference is you have got somebody there leading... T: ...and you obviously know the patient and the environment where you are, so you know the machinery, you know where it all is. You are more confident... L: ...and with a dummy like that as well, it's confusing when you can actually do things to it or not. When you are with a person, you just do it. (Focus Group 1)

Participants perceived clinical simulation to be useful for their learning. Activities carried out in simulated learning environments gave them confidence to act. They synthesised simulated clinical experience with real clinical experience, emphasising the importance of team leaders allocating roles/tasks necessary for successful CPR.

M: No, I think because you took the handover and then they said, 'Right, let's split this up. Right! Airway, breathing'. So, somebody took control. K: Yeah, I thought it was very controlled. Interviewer: ...and was that your experience that it was controlled? K: A lot of what we did was controlled. (Focus Group 2)

Where FMs were present, students spoke of the need for continuity of care to build trusting relationships at difficult times. Reflecting on their CPR experience (simulated/real), they identified three nurses as the minimum necessary to care for FMs without compromising patient safety (four nurses reduces resuscitation team strain) and prioritised associated actions/tasks.

S: We were quite lucky because with ours, we had four people in our group. So if we had less, it would have affected CPR. B: We could spare somebody to go out. If you have got two of you, one doing chest and one doing the air bagging, where is the spare person to go out and inform the relative? V: Yeah, because at one stage we had two; we had Rachel outside the room and we were still able to do it. (Focus Group 3)

Sense making: situation – professionally

We identified three main currents in students' drive to make sense of the situation from a professional perspective. These currents do not necessarily match the specific scenario students encountered, and seem to reflect an emerging professional nursing orientation. The first current is characterised by adopting a rule-following orientation - doing whatever guidelines advise regardless of its relevance, disengaging from personal and professional autonomy, and subsuming oneself to the will of an omniscient other.

A:...this is what I mean. I wouldn't want to make the decision unless there was like a national guideline, or nurses have the right, or nurses do not have the right, or the decision is given to the patient or the relative. I would follow whatever that guideline was obviously... B: ...But who would make the guideline? A: Well exactly, who makes the rest of them? (Focus Group 2)

The second current is characterised by using personal and proto-professional values for guidance. These include people's rights to choose and express choice; people's autonomy over their bodies; health professionals seeking consent from people when giving care, and acknowledging possible tensions between relatives' rights and individual patient rights.

T: ...we offered him [relative] a chance to come in. I think at first, when we were doing observations and all that, we kind of went there and checked. When the situation changed I went out and informed, give him a chance to see if he wanted to come into the room and see the whole thing but he was all right. He just said, 'I don't want to get in your way', and I just went back and said, 'You are not getting in my way or anybody's way if you really want to you can just come in'. So I think the opportunity was there. He was offered the opportunity if he wanted to come into the room, but it was his choice again, yeah... (Focus Group 1)

The third driver was a desire to assert paternalistic protectionist rights as a professional in order to command and control events, processes and care environments.

M: From my point of view, I would be respecting the professionals. That's their profession. That's what they do. That's what they are trained to do and it's at that point they say, 'I don't think it's right', or 'It's not, you know, it's not right for whatever reason', then I would respect their... You know, it's like in the courts, they make good decisions and bad decisions but at the end of the day you just have to accept that they are the professionals and they make the decision if someone is guilty or not guilty and you just have to respect that. I mean it's the same in the healthcare profession, where we are trained to do what we do and if we don't think something is right, then we should say that it's not right. (Focus Group 2)

Sense making: self – skills

Working under FMs gaze was unsettling for some students. This uneasy feeling appeared to be linked to two related aspects – firstly, they anticipated FMs criticism of their work and caring style during CPR; secondly, they feared being found out as fake unskilled professionals. They were anxious that FMs would blame them for resuscitation failure, for patient death, of the realities of accountability, and being called to account in a law court. This anxiety was linked to feeling self-conscious. They made assumptions about FMs' feelings, assumed these assumptions were real, and

used them to inform their actions/plans. Their actions/plans over-focused on technical physical patient care, ignored FMs without attempting to meet FM needs.

V: But I think if she was there, oh God! I would have felt like an idiot because we really didn't know what was going on. We were like, oh and if she was there, I would have felt embarrassed. (Focus Group 1)

E: ...to be able to cope with that or are they going to turn around and sue us as they always do, you see what I mean? (Focus Group 3)

Other students experienced events differently and found working under FMs' gaze challenging but stimulating. They viewed it positively, felt more aware of the situation wanting to raise their standards, and for FMs to see that everything was done. Simulation led some students to experience guilt when they realised their omissions. They gained insight into possible future actions and used the experience to anticipate different action strategies.

F:...makes you up your game a bit because there is somebody there asking questions, 'What are you doing?' So you think, 'Well, I have got to actually do it'. (Focus Group 1)

E: I feel guilty now that I didn't actually talk to the relatives now, and knowing that, it shows how easy they can be forgotten when they are not in the room. (Focus Group 1)

Many students spoke of the simulation scenario positively, but for some the simulation scenario structure hindered their performance, they were unsure what to do, and felt powerless. They noted how scenarios were different from real life, and their actions/plans didn't fit the scenario.

V: Yeah, because we were working as a team - like you were doing the compressions, and you were doing the compressions, me and Liz were swapping over doing the um... T: ...do you think that resus is already set up it stalled you because we were a bit like that weren't we? Because we were like, 'Blood pressure', 'No! His blood pressure is already on! 'So it kind of like stopped us from going. Whereas maybe if it was from scratch, we might have all been on the ball. (Focus Group 1)

Despite this, FM presence/absence in the scenario was noticeable when they discussed their experiences. Where a FM was present, students were concerned about being asked questions they couldn't answer and they anticipated unpredictable FM behaviour. Students feared FMs behaviour that would be difficult for them to manage i.e. no eye contact/talking.

Sh: ...we asked her if she wanted to leave, that lady; but I tried a bit, but she refused didn't she? She said she wanted to stay... E:...you took the role of looking after the relative but she kept speaking to me. Sh: Yeah... it was like she didn't

really comply with the situation very well, which was true; which reflects probably what would happen in real life...(Focus Group 3)

Where a FM was absent, students talked about the experience in a calm controlled way. They described how leaders directed their actions, divided up tasks easily, focusing on technical/technological care components. Where there was a calm FM present during resuscitation, students noted the calmness of their CPR.

B: I don't think so, no... T: ...because he was quite calm and quiet, we stayed calm and quiet. So I don't know whether that would affect if we had the relative that was hysterical. Y: I think at one point I was quite aware that I was standing quite close to her. So I didn't actually, when he stopped breathing, I didn't realise I had my back to her because she was so quiet. And I turned round and said, 'Sorry, are you all right?' (Focus Group 3)

DISCUSSION

Using simulated healthcare environments for educating student nurses means life-like scenarios can be created in which students practice, learn and make mistakes safely without harming patients (30). For many participants, simulated FWR scenarios are realistic and powerful, unlike other skills development sessions. Simulation echoed their real-world CPR experience, and resonated with their knowledge/understanding of how hospital clinical environments operate. This helps us listen to them with some confidence that their actions mirror their behaviour in real-world settings. We can hear them emphasise the importance of team leaders allocating roles/tasks necessary for successful CPR. Where FMs were present, we can hear the need for continuity of carers for FMs and implications for the numbers of nurses needed for effective resuscitation, which has implications for clinical practice. However, not all students spoke positively about simulation because the scenarios were obviously different from real life, and their actions/intended actions didn't fit.

We identified three emerging currents in professional orientation regarding students' willingness to engage in FWR - rule following, guidance from personal and proto-professional values, and paternalistic protectionism. It can be argued that to care for patients in a safe, efficient, effective and equitable way RNs must be able to exhibit all three currents of behaviour at different times depending on the situation faced (34). Nurses should deploy different behaviours rather than apply the same behaviour regardless of the situation (35-37). From our perspective as educators, there is a challenge to help students develop response fluency and build relevant skills repertoires (37) to care for patients safely.

Student behaviour may be linked to FM gaze and the anxiety and uncertainty evoked. Anticipating criticism, and fear of being found out as unskilled connects with feelings of self-consciousness, reinforces the assumption of their validity and leads to a focus on technical/physical patient care to the exclusion of FMs and their needs. This may have implications for family grieving and raise the incidence of pathological grief reactions. Increased simulation use may help future RNs cope with an increased public demand for transparent healthcare delivery played out as 'gaze'. This may be worth exploring with RNs to gauge its explanatory worth when examining the inconsistent uptake of FWR (25).

Other students experienced FM gaze as challenging but stimulating. The gaze was used as a motivational trigger to raise standards and transparency so FMs could see that everything was done to save the patient. This may support healthy grieving and protect families from pathological grief experiences. Simulation's potential to generate new learning can be seen in students who experienced guilt on realising the gaps in their previous real-world resuscitation events. This exercise helped them achieve insight into different future action strategies. While simulation is safer for patients, educators must be watchful for these responses so that insights may be channelled for positive outcomes.

Students' views about FWR vary despite their exposure to relevant theoretical knowledge and experiential learning in practice which reflects Paplanus *et al.*'s, and Rittenmeyer & Huffman's work (12, 13). Some students perceive FWR to be a good thing echoing Chapman *et al.* (4), but this is countered by others who consider it a barrier to providing safe patient care. Few students had directly experienced FWR, and exposure does not seem to influence their wish to retain overall final control (4, 12-14). Further work is needed to examine how students synthesise theoretical knowledge and clinical experience when formulating attitudes to FWR. There is also scope to explore emotional resonance between students/RNs and patients/FMs in time-sensitive care situations i.e. how is it experienced by nurses, patients and their families? What impact does emotional resonance have on care delivery? What are the implications for delivering safe care?

Student concerns about FM presence refer to performance anxiety, effects on coping strategies and possible interference with care delivery, echoing Åsgård & Maindal (28) and Rittenmeyer & Huffman (13). These fears (also identified in studies with professionals (29)) appear to continue despite students' experience of simulated FWR regardless of FMs presence/absence. Further work is required to examine how students use lived experience to confirm/disconfirm their FWR views, and how students learn to reflect/deflect emotion in clinical encounters. Carefully designed educational encounters can help prepare nurses and healthcare professionals manage complicated situations.

Post-simulation debriefings may also provide an opportunity to examine evidence and explore perspectives from various stake-holders.

CONCLUSION

Systematic reviews of international literature indicate that family members wish to be involved and consulted in FWR. Healthcare professionals however express concerns about being observed while resuscitating. Until this study, student nurse perspectives have not been addressed but they are often first responders in hospitals and this has implications for the quality and safety of care delivered to patients and their families. This study suggests that students' views about FWR vary despite exposure to relevant theoretical knowledge and experiential learning in practice. Few of the students in this study had direct experience of FWR, and exposure to FWR does not seem to influence their wish to retain overall and final control over FWR. Using simulated FWR appears to help students develop cognitive and functional competency in a safe environment.

Findings from this small piece of exploratory work based in one University nursing department must be treated with caution. However, there is scope for a larger project to explore different educational strategies in addressing anxiety when working under the gaze, developing response fluency, and harnessing the potential of motivational triggers.

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