

Case study

Preventing injury when moving patients in an emergency

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Abstract

Background: Emergency events occur in all health and aged care facilities. While staff are often skilled in dealing with the clinical interventions necessary for the circumstances, the movement of the patient in such an event is often poorly managed. **Aim:** To address the issue of providing emergency care without compromising safety, three case studies that resulted in injury will be explored. **Method:** This study involved review of published material addressing patient handling in emergencies and analysis of three case studies, each resulting in injuries to staff and patients. The case studies are sourced from matters that led to litigation in which the author was involved, and each is now resolved. Each case study will provide background to the circumstances, specifically the scene, staffing, what occurred, how the patient was moved, the patient outcome and the injuries that resulted from the handling situation. The analysis will then identify the key system failures relevant to the specific case. **Results:** As well as highlighting specific problems in handling the patient in each of the case studies, the study was able to show a pattern of system failures that led to each injury. Fundamental to each of the cases was poor communication and poor leadership. Also evident was ineffective work practices, inadequate training and failure to use equipment readily available in the facility. **Conclusions:** As emergencies do and will occur in healthcare facilities, injuries to staff and patients will continue unless there are clear protocols developed to address how the patient should be moved. These protocols must be developed against a backdrop of leadership, communication, clinical considerations and best practice patient handling with appropriate equipment.

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Background

Emergency events can occur in all health facilities. While staff are often skilled in dealing with the clinical interventions necessary for the circumstances, the movement of the patient in such an event is often poorly managed and can result in injury to both staff and patient.

Training in safe patient handling is usually limited to routine care situations, and is almost always limited to those involved in 'bedside' care, usually nurses and ward orderlies. Training rarely extends to dealing with emergency events, or includes medical personnel who oversee the treatment and management of a patient in an emergency.

There is an abundance of literature providing evidence that repositioning patients, and in particular, lifting patients from the floor, is a high risk manual handling activity [1]. In recent years, there has also been much published on techniques for handling patients in many different routine care situations [2]. The problem is that in an emergency, decisions often have to be made quickly, by people who may only come together for that one event. The Australian Macquarie Dictionary [3] defines *emergency* as a sudden and urgent occasion for action. In healthcare, it is an 'umbrella' term for situations or events, that compromise:

- the *health* of a patient, such as a cardiopulmonary arrest, sudden loss of consciousness, severe haemorrhage or anaphylaxis, and
- the *safety* of a patient or staff, such as an evacuation for fire or other threat.

This paper seeks to explore, by way of case studies, three events which were each considered by staff to be an 'emergency'. The resulting injuries were sufficient to lead to litigation in all cases. Each event highlighted system failure, yet each had practical and available alternatives that would not have compromised or conflicted with medical management.

Method

This study involved review of published material addressing patient handling in emergencies and analysis of three legal cases in which injury resulted during patient movement.

Results

The following three cases studies all involved injuries to hospital staff and/or the patient. These injuries all resulted from moving the patient and all subsequently resulted in litigation, which has now been resolved.

Case study 1

Scene	Large city hospital, medical ward, Saturday afternoon 15.00 hrs.
Patient	Elderly male, 75 kg, repeat admission to the ward that afternoon with known diagnosis of carcinoma of upper airway.
Staffing	No hospital nursing personnel on ward – all agency registered nurses (RNs).
What happened	Patient in ensuite bathroom, collapsed on toilet and suffered cardiac arrest (cessation of normal blood circulation due to failure of the heart to pump). Patient

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discovered slumped on toilet and nursing staff lowered to the ground. Doctor attending to another patient on ward responded, commenced cardiopulmonary resuscitation (CPR) with nurse and spontaneous breathing / cardiac output returned, however patient was not conscious. Hospital's Arrest Team (team of doctors rostered to attend patient emergency events) arrived and took over management. No clinical notes on ward. Patient's specialist could not be contacted. Arrest Team Leader decided on active resuscitation, patient intubated and transferred to Intensive Care Unit (ICU). Nursing supervisor attended as adjunct to Arrest Team.

Handling procedures	Patient lifted manually by team of six and carried from ensuite and then lifted to the bed, which was left raised.
Patient outcome	Patient transferred to ICU. Patient had an <i>End of Life Plan</i> – Not for Active Resuscitation, extubated. Patient died overnight.
Injuries	Doctor and RN both sustained lumbar spine injuries.

Key system failures in case study 1 were:

- **Communication** – The patient had a current *End of Life Plan*, in which the patient indicated he did not wish to be actively resuscitated. The End of Life Plan was included in the patient's notes, however the notes were not available to the Arrest Team. The patient's specialist doctor did not respond to calls from the Arrest Team, despite being 'on call' that weekend.
- **Work practices** - There was no distinction between the 'emergency' and the 'recovery' care. The 'emergency' phase involved lowering the patient to the floor to commence CPR – no injuries were sustained in this manoeuvre. The injuries occurred in the 'recovery' phase due to poor handling from the floor to the bed – after the patient had been successfully resuscitated. The hospital had no protocols for handling a patient from the floor post arrest.
- **Leadership** – All the nursing personnel working on the ward that shift were from a nurse agency and did not regularly work on the ward. The nursing supervisor, a senior hospital employee, should have anticipated that a hoist would be needed and could have arranged it while the patient was being resuscitated. A suitable hoist was available on the ward, however the appropriate sling attachment, which could maintain the patient flat during the transfer from the floor, was kept on an adjacent floor. Neither the hoist, nor the sling were obtained.
- **Equipment** – Patient should have been moved by mechanical means.
- **Training** – None of the staff involved in this transfer had received training in safe handling of patients from the floor at the hospital.

Case study 2

Scene	Large city hospital, surgical ward, weekday morning 05.30 hrs.
Patient	Middle aged male, 92 kg, with developmental disorder requiring round the clock nursing supervision following cholecystectomy.
Staffing	One agency nurse assigned to the care of this patient only (nurse special) and three hospital nurses attending to other patients on the ward.

What happened	Patient agitated during the night and wanted to sit out of bed. This was attended and patient settled quickly. The agency nurse had not had a break all night, so arranged with ward staff for relief while taking a 30 minute break. Relieving nurse stayed with patient for a while then went to get notes from the nurses station and was diverted by another patient calling out. After attending to that patient, the relieving nurse went back to the nurses station. Agency nurse returned from the break to find the patient had up-turned the chair. The tray table compressed the patient's chest and he was cyanosed (not breathing). The tray table could not be removed, obstructed by the patient's weight. Nursing assistance obtained.
Handling procedures	Four nurses attended and rotated the chair, bringing the patient back upright. Tray table was removed and the patient was then lifted manually by the team back to bed.
Patient outcome	Arrest team called but patient breathing spontaneously with oxygen therapy and recovered without any ill effects.
Injuries	Agency RN sustained lumbar spine injury.

Key system failures in case study 2 were:

- **Communication** – Poor. The relieving ward nurse had not been briefed on the patient's condition other than that there was a nurse specifically assigned to the patient's care overnight. The ward nurse did not appreciate the patient's need for constant supervision.
- **Work practices** – Relieving nurse did not follow instruction regarding supervision.
- **Leadership** – All RNs on the ward but no-one 'in-charge'. Relieving nurse did not follow / take direction from the agency nurse. Breaks to relieve the agency nurse should have been arranged throughout the night.
- **Training** – Nurses had not received training in extrication or safe handling of a patient from the floor. Hospital nurses had reportedly received training in chair-to-bed transfers but did not use these techniques to move this patient.

Case study 3

Scene	Day procedure unit, weekday 12.30 hrs.
Patient	Middle aged female, 65 kg, underwent colonoscopy.
Staffing	Two nurses working in recovery area.
What happened	Patient transferred from procedural trolley to lounge chair following colonoscopy. Lounge chairs were all located against a wall. Patient experienced sudden hypotensive episode and loss of consciousness. Recovery nurse lifted / pulled patient to the floor and she regained consciousness. Patient felt better and two nurses assisted the patient back onto the chair. After a few minutes, the patient fainted again and was again lowered to the floor and placed in the recovery position. Consciousness returned quickly. Doctor called and decided that the patient needed re-scoping as she had had a bleed during the first procedure. Patient assisted up from the floor and fainted again, with four people lifting the patient to a trolley.
Handling procedures	Patient lifted manually by nurses on four occasions using <i>hook through arm manoeuvre</i> (patient pulled to standing by her arms). Top and tail manoeuvre (patient's full body weight lifted by her arms and legs) used by a team of four to move the patient from the floor to the trolley.

Patient outcome	Patient fine after second procedure – discharged home with no further problem.
Injuries	Doctor and patient both sustained shoulder injuries.

Key system failures in case study 3 were:

- **Communication** – The patient had had a small bleed during first procedure. This was not communicated to the recovery nurses, hence patient moved from trolley to chair too soon.
- **Work practices** – There was no distinction between the ‘emergency’ and the ‘recovery’ care. The injury to the patient may have occurred during movement to the ground. However, the injury to the doctor occurred because of the poor handling from the floor to the trolley in the recovery phase – after the patient had successfully regained consciousness.
- **Leadership** – No protocols, other than call an ambulance in an emergency, which was not helpful in these circumstances.
- **Equipment** – No equipment for safe handling from the floor, but had a height adjustable trolley, which was not used.
- **Training** – Poor handling skills, no training for any staff. Lack of planning in handling.

Discussion

In Australia, each accredited [4] healthcare facility is required to have a range of policies that address work environment issues, including those for the safe handling of patients and emergency management. NSW Health, one of the two largest government employers in the health sector in Australia, has a manual handling policy [5] which states that total body lifting should be avoided *except in emergency situations*. Guidelines in the United Kingdom [6] provide strategies, albeit limited, for safe patient handling in emergency events that occur *within* healthcare facilities. In contrast, Australian guidelines [7] only provide very limited handling advice for situations that occur *outside* healthcare facilities. As such, there is no satisfactory guidance or protocol for Australian hospital staff to apply in these circumstances.

When dealing with an emergency, it is important to acknowledge that it consists of two phases, namely:

- the *discovery* phase, where the patient is found to be in a condition warranting immediate and urgent intervention to sustain life, the area is made safe and the patient positioned for treatment, followed by
- the *resuscitation* phase, where the treatment to sustain life is implemented.

There are only two potential outcomes – the patient either survives the emergency or dies. When death is the outcome, the medical team leave the scene and nurses manage the care of the deceased. However, when the patient survives, the medical team usually remain with the patient, and the patient is usually stabilised before moving. Hence this becomes the *recovery* phase. The problem, highlighted in these three case

studies, is that staff do not seem to know where an *emergency* ceases and *recovery* care commences.

In case study 1, the patient was breathing spontaneously and had cardiac output while he was still on the floor – he was in effect, ‘recovered’. Therefore, it was not necessary to move him manually when a hoist that could have done this was close at hand. Moving the patient manually did not improve the patient outcome and indeed placed all of the handlers at risk. Similarly, in case study 3, the patient was conscious on the ground. A height adjustable trolley was available, but not used. With guidance and proper placement, the patient may well have been able to get herself onto a lowered trolley with minimal assistance from the staff.

In all three cases the patient was moved to facilitate the commencement of resuscitation. However, it was only in case study 2, where the patient was asphyxiating, that the staff lifted the *total body weight* of the patient *prior* to resuscitation commencing. While it was necessary to relieve pressure on the patient’s chest immediately, it did not require lifting the patient *and the chair* to achieve this – pushing the chair over would have relieved the pressure on the patient and enabled the staff to remove the tray table, which was pressing against the patient’s diaphragm and preventing air intake. Even after this monumental lifting situation, the staff manually lifted the patient again to the bed after he was already breathing spontaneously.

Apart from poor technique and planning in the handling of the patients, these case studies highlight a pattern of system failures. Fundamental to each of these cases is poor communication, including lack of continuity of care information and inadequate handover. Had communication been effective in each of these cases, then the injuries to the staff and/or the patient would not have occurred.

Another key system failure was poor leadership. Doctors are trained to make clinical decisions about care, however, they are rarely trained in the options available for safe patient handling. Therefore, it is neither safe nor responsible to leave the decision making for how a patient is to be moved to doctors. Protocols should be in place for handling patients in a range of emergency and recovery situations which doctors and nurses should have input into developing. When an emergency presents, these protocols should enable the attending doctors and other care leaders to match to the circumstances. A key example of lack of leadership was in case study 1 where the nursing supervisor for the hospital, who was the only ‘hospital’ nurse at the arrest and supernumerary to the resuscitation process, did not anticipate that a hoist may be required. Nor did the supervisor provide any direction to the agency staff, who were all very junior graduates, inexperienced in emergency events and most likely unaware of the specific handling equipment available at that hospital.

All health care workers are required to attend regular training mandated to maintain their skills in CPR. This would be an ideal opportunity to confirm procedures for dealing with the recovery phase of emergency events, including requirements for the use of equipment in total body lifting. However, procedures for the safe handling of patients, including

movement from the floor, should be part of *routine training* for nursing personnel and information regarding revised procedures, such as for emergency events, emphasised at *in-service training*. Importantly, training alone would not have prevented the injuries reported in these case studies.

Conclusion

Emergencies occur in healthcare facilities. Such events can be infrequent, bringing together health professionals who may never have worked with each other, often in very tense circumstances. Injuries to staff and patients will undoubtedly continue unless there are clear protocols developed to address patient movement in emergency and recovery situations. These protocols must be developed against a backdrop of leadership, communication, environmental considerations, clinical considerations and *best practice* patient handling. Each of the case studies highlighted system failure, yet each had practical and available alternatives that would not have compromised or conflicted with medical management.

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