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Left behind: Exploring the concerns of emergency department staff when personnel are utilised for inter-hospital transfer

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ABSTRACT

Background: Inter-Hospital Transfer (IHT) may require an escort from the referring hospital, either a Registered Nurse (RN), physician or both, leading to a sudden drop in staffing levels within the referring department potentially increasing risk to patients and staff.
Aims: To explore the perspectives of RNs and physicians of differing experience levels when left behind due to an escorted IHT, and the decision-making protocols for IHT.
Method: A qualitative exploratory approach of 5 RNs and 4 physicians selected using purposeful sampling. Data were collected through semi-structured interviews and thematically analysed.
Findings: Five themes were identified: the impact of being left behind; the burden of transfer; missed care; a triangulation of competing needs upon the decision-making process; and the effect of inter-hospital transfers on staff with different experience levels.
Conclusion: IHT is described differently by less experienced RNs compared to their more experienced counterparts especially concerning safety and risk. Physicians described the department as vulnerable with ad-hoc decision-making protocols surrounding IHT the norm.

1. Background

Inter-hospital transfer (IHT) is when a referring hospital does not have the ability to provide the level or specialisation of care to meet patient's needs, and where transfer is required to provide an increased level of care and improve the prognosis of patients [1]. Research surrounding IHT has explored the risks to the patient during transfer [1,2,3], however, there is a dearth of research considering the impact on staff who are 'left behind' in the Emergency Department (ED), working with lower staffing ratios and the potential for increased Adverse Events (AE) during this period.

The phenomenon of IHT has been studied nationally and internationally [3,4,5,6,7], from the perspective of safety during the transport phase, and not from the perspective of those who have been left behind. Approximately 95% of IHT transfers originate from non-tertiary hospitals, approximately a quarter (25%) of these require an escort [8], however research has also shown inaccuracies in documenting IHT, identifying that only 65%-87% of all IHTs are accurately recorded [9], therefore the true prevalence is unknown. Escorts for IHT may be a physician, RN, or combination, depending on the acuity and nature of the transfer. Current guidelines do not provide guidance on the decision-making process on who should attend an IHT [3]. Different countries, and even different states in Australia, have inconsistent approaches to IHT [2,10,11]. Within Australia, the east coast ambulance services have the ability for Mobile Intensive Care Ambulance (MICA) paramedics to attend IHTs [2], whereas in Western Australia (WA) there is only one ambulance service, and it does not currently provide MICA level road paramedics. Research has focused on the risks associated with the in-transport aspect of an IHT and AE during IHT where Mobile Intensive Care Units (MICUs) and/or paramedics have an advanced skill set [2,7,12].

Poor outcomes for both staff and patients in areas with lower staffing levels have previously been studied [13,14,15]. Staff shortages cause stress in healthcare workers while simultaneously decreasing the quality and safety of patient care leading to poorer healthcare outcomes for patients [13,14,16]. However, there is a dearth of evidence surrounding the outcomes of those who are left behind when an escorted IHT takes place. This research explores the concerns of staff who have both been

Abbreviations: IHT, Inter-hospital transfer; AE, Adverse Events.

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left behind during and IHT, and who have escorted patients on IHT.

2. Methods

An exploratory qualitative approach was used [17]. The aim of the study was to answer three research questions; 'How do staff members feel when they are left behind in the ED, when an escorted IHT occurs?', 'What is the perception of staff members with differing experience levels when they are left behind during an escorted IHT?' And 'What are the staff perceptions surrounding the decision-making process for staff member escorts for IHT?'. Interviews were conducted by the PI (CW), with a preparatory interview taking place.

2.1. Setting, sampling and recruitment

This study was conducted in a small metropolitan general hospital where IHT occurs to major tertiary centres in the capital city. The general hospital provides a range of outpatient services and medical, surgical, paediatric, maternity, mental health, intensive care and ED. The ED saw 67, 900 admissions between September 2020 and September 2021.

Purposive sampling was used to recruit physicians (N = 4) and RNs (N = 5) from within the ED who had experience of being 'left behind' when an escorted IHT had taken place. Participants were purposively chosen due to their varying level of ED experience. A total of 9 interviews were conducted (N = 9). Participants were recruited by email, posters and social media posts. Demographic information can be found in Table 1.

2.2. Data collection

Data for this study was recorded via audio recorded, semi-structured interviews by the PI, with notes recorded as an aide memoir and prompts for the PI to assist in ensuring the questions were fully explored. The PI (CW) had been a senior emergency nurse within the department previously, however no longer held a position within the department or the hospital environment. Interviews were conducted one to one in a private area away from the department, with 3 interviews taking place within the hospital environment in a private office, and the rest in private areas away from the hospital environment. One interview was held on the telephone. All interviews were held at a time of convenience for the participant, providing the ability to attend while on and off shift. No other participants of interviewers were present during the interview process. An interview guide was developed by the student researcher alongside their supervisors and a preparatory interview took place prior to the initial participant interview. The duration of the interviews ranged from 19 to 55 min, data saturation was achieved when no new themes or codes were generated [18].

2.3. Ethics

Ethical approval from the University (2019/204) and health service (RGS0000003765) was received. Informed consent to participate using an approved participant information and consent form, was gained prior to interviews taking place with confidentiality maintained by using participant numbers and removal of idioms of speech.

Table 1
Demographic information.

Characteristics		Number of participants
Position title	Registered Nurse	5
	Physician	4
Years of experience	0 – 3 years	2
	3 – 8 years	0
	8 years and over	7
Gender	Male	3
	Female	6

2.4. Data analysis

Interviews were recorded and transcribed verbatim. Transcripts were read multiple times so that the researcher became 'immersed' in the data [19]. NVivo© software [20] was utilised as a secondary approach to data analysis to identify themes which were reviewed by the researcher and research supervisors. Any deviation was discussed until consensus achieved. An experienced qualitative researcher (VC) provided oversight for the entire data analysis process. Codes were created and stored in NVivo© to create an audit trail.

2.5. Rigour

Rigour was checked against four criteria recognised to ensure validity and reliability [21]. Credibility was sought by asking participants to review their stories, alongside member checking of transcribed interview data for verification of truthfulness [22]. A documented audit trail is available.

3. Results

The five themes identified are discussed below (Table 2).

3.1. The impact of being left behind

All participants recognised that they had been 'left behind' when a colleague had taken a patient on IHT, however, nurses and physicians had different feelings about being abandoned. Physicians discussed the increase in workload:

> *Often, we may be slightly understaffed and so when we lose one doctor and one nurse it massively increases our workload - up to ten percent sometimes.* (Participant 5 – Physician).

An RN described communication breakdown as a sign of stress in their physician colleagues as well as unsafe practices adopted in order to cope:

> *I'd already deferred this x-ray multiple times and the […] reg said "This patient needs to go." And I said, "Well I can't go." "Well, you're going to have to go." "Well can you go with them then? Like you're a doctor it'd be easier for you to go so I'm not leaving patients." …But as a nurse you kind of have to…… I come back, there's piles of lists of everything that needs to be done and no one's helping at all.* (Participant 3 – RN).

3.2. The burden of transfer

Both physicians and RNs assert that an IHT is not a quick turnaround. The staff members involved may be engaged in the resuscitation room, situated away from the main department, prior to the transfer taking place. While the ambulance transfer to the tertiary hospital may be relatively quick, the return to the department may take much longer, as staff are required to return by taxi and may be delayed due to this:

> *If you're with an R1 [airway nurse on the resuscitation team] they can be gone your whole eight hours, ten-hour shift.* (Participant 3 - RN).
> *For what could … be … two to four hours. I mean it's two hours with the best will in the world. And that's if you get up, hand your patient over and manage to get a taxi.* (Participant 6 – Physician).

If an IHT occurs, the patient load increases usually without any possibility of finding a replacement. RN participants commented on safety of staffing. They felt they were rushed and unable to provide the required care to patients, with organisational expectation being that one RN would be able to fulfil the role of two:

Table 2
Table of themes with supportive quotes.

Theme	Supportive quotes
The impact of being left behind	*I'd already deferred this x-ray multiple times and the […] reg said "This patient needs to go." And I said, "Well I can't go." "Well, you're going to have to go." "Well can you go with them then? Like you're a doctor it'd be easier for you to go so I'm not leaving patients." …But as a nurse you kind of have to…… I come back, there's piles of lists of everything that needs to be done and no one's helping at all.*
The burden of transfer	*If you're with an R1 [airway nurse on the resuscitation team] they can be gone your whole eight hours, ten-hour shift*
Missed care	*Even encouraging oral fluids while they're unwell with their temperatures, those sorts of things get put on the back burner… we don't know… the next time we're going to be able to come back around and offer a drink… And even toileting and things like …there's more accidents incontinence wise when there's less staff on the floor*
A triangulation of competing needs upon the decision-making process	*A big proportion of our critical care transfers are because we don't have nurses staffing our ICU beds. That's a high proportion of our transfer burden at night …Sometimes because there physically is no space, but not having staffed beds is quite an issue … we transfer intensive care patients and that takes huge amounts of resources … we lose a doctor and a nurse, often because the people require significant level of care*
The effect of inter-hospital transfers on staff with different experience levels	*She left me the whole shift from… 7.15 to 3.30… Someone came on at three o'clock but that's… still … eight hours that you're by yourself. And she said to the SDN's "I think someone should go and help her. She's by herself." They're like "No, no she's fine." All my bunks were full. I had really unwell patients and I just found that as a junior nurse … I had no support* *I imagine they would feel extremely unsupported and probably like their registration's a bit at risk really… They're trying to do things that they're probably not really comfortable with, that normally they would bounce it off their partner nurse. But their partner nurse has gone.*

Normally seven to eight [patients to two nurses, which becomes the responsibility of one nurse during IHT]. If they have people in the corridor it goes to nine. But if it has no one in the corridor it's eight patients. (Participant 3 - RN).

An RN described how, on a double shift, their feelings of being left behind were exacerbated, due to already low staffing in the department:

I was asked to do a double shift … I was going from an afternoon shift starting at 12.30 and going to finish at 7.15 the next day. At 10.30 at night a resus… needed a nurse to go on transfer… and then as the patient had just left …, a resus walked into the department. … It was a cardiac arrest, we had to take turns on doing CPR. And at one point there was two nurses left on the floor … myself and another nurse… we were alone on the floor, two people and the triage nurse from ten o'clock at night until six o'clock in the morning. (Participant 7 - RN).

Physicians also felt that there was an increased burden on nursing staff, which would impact patient care:

I think it's even worse for the nursing staff if one of them ends up going … on transfer. The knock-on effect … for patients … has more of an impact. (Participant 6 - Physician).

3.3. Missed care

Missed care may be missed observations or missed opportunities to provide basic nursing care such as pain relief or continence care. Nurses were stressed that these basic, but very necessary, care needs were not met:

even encouraging oral fluids while they're unwell with their temperatures, those sorts of things get put on the back burner… we don't know… the next time we're going to be able to come back around and offer a drink… And even toileting and things like …there's more accidents incontinence wise when there's less staff on the floor (Participant 7 - RN).

The flow-on impact of missed care was spoken of in the following way:

The knock on for adverse events probably isn't felt till further down the line perhaps, when the nursing staff have not had the ability to … dispense some IV antibiotics (Participant 6 – Physician) This flow-on effect means further reliance on nursing staff to prevent adverse outcomes for patients:
If it's overnight and one Reg has gone to do a transfer and the other Reg is doing the MET call and you've got two residents left behind in ED, you are very dependent on the skills of the nursing staff to help them prevent adverse events. (Participant 6 - Physician).

One RN participant noted to ensure AE did not occur they had to remind the physician to prescribe medications:

We had a septic patient in the department… They definitely could have declined if we weren't on top of it… We had to encourage doctors to write up the next bag of fluids and remind them that things were due, and things needed to be written up while they were busy. (Participant 7 - RN).

3.4. A triangulation of competing needs and the decision-making process

Both physicians and nurses felt that there were many competing needs surrounding the decision-making processes when an IHT was imminent. These included external pressures from decisions made by senior hospital executives and management, but also due to the requirements of external organisations, such as the local ambulance provider and the receiving tertiary hospitals. These competing needs also included decisions on staffing in other departments, where short staffing meant patients who could ordinarily remain in the hospital may also require an IHT that is also escorted by ED staff:

A big proportion of our critical care transfers are because we don't have nurses staffing our ICU beds. That's a high proportion of our transfer burden at night …Sometimes because there physically is no space, but not having staffed beds is quite an issue … we transfer intensive care patients and that takes huge amounts of resources … we lose a doctor and a nurse, often because the people require significant level of care. (Participant 2 - Physician).

Further, an escorted IHT may take place from any ward or department within the hospital:

If the paeds ward is full, we'll [ED] transfer a high flow up to a different hospital just for capacity. And then we have to go to manage the hi flow machine which is crazy because they could get managed at [the hospital]. (Participant 8 – RN).

Both physicians and RN participants noted that RN escorts often only went to provide assistance with equipment, rather than being required for advanced clinical knowledge and skill. Decisions concerning escorts, often remain with the attending paramedic and their level of comfort concerning equipment.

Confusingly the paramedics have varying abilities and varying comfort with things and they sometimes get directions from [the ambulance

service] that they're allowed or not allowed to do different things… it depends if they're willing to take the patient or not. (Participant 2 - Physician).

3.5. The effect of inter-hospital transfers on staff with different levels of experience.

An RN with less than three years of experience spoke about feelings of being overwhelmed and lacking support:

She left me the whole shift from… 7.15 to 3.30… Someone came on at three o'clock but that's… still … eight hours that you're by yourself. And she said to the SDN's "I think someone should go and help her. She's by herself." They're like "No, no she's fine." All my bunks were full. I had really unwell patients and I just found that as a junior nurse … I had no support. (Participant 3 - RN).

An RN with more than eight years' experience felt that they wanted to give support to their junior colleagues, however, were often unable to, as they had other responsibilities. The RN said:

I imagine they would feel extremely unsupported and probably like their registration's a bit at risk really… They're trying to do things that they're probably not really comfortable with, that normally they would bounce it off their partner nurse. But their partner nurse has gone. (Participant 8 – RN).

In contrast, while most of the physicians had many years of experience, one physician who had the least number of years of experience, felt very supported:

I haven't personally been witness to any increased anxiety or stress levels from juniors or from middle grade or seniors really… [I feel] very supported. (Participant 1 – Physician).

4. Discussion

The impact of being left behind was reported by RNs with less than three years' experience in a negative manner. These RNs described an increase in workload, an increase in stress, and a perceived decrease in support by senior staff members. This is in keeping with nursing transition to practice literature where the task orientated focus of newly graduated nurses has been described [23]. MacKusick and Minick [24] described horizontal hostility towards inexperienced nurses by means of indifference and lack of support. This lack of leadership disempowers nurses to provide safe and effective care [25] with poor culture linked to RN attrition rates [26]. RNs with less than three years' experience are between 30 and 50% more likely to leave the workforce, with fatigue and exhaustion contributing factors, juxtaposed with their perception of lack of support from other RNs [24]. This is reflective of the feelings of inexperienced RN's in this study, highlighting that these transitioning nurses require mentoring and support in such a high-paced specialty nursing context [27].

High workload, insufficient staffing levels, inexperience, a lack of leadership and communication failures have all been reported to contribute to poor patient safety outcomes [28,29]. RN participants in this study who had less than three years of experience felt these compounding issues the most, reporting situations of being left alone without leadership support to care for up to nine patients. The lack of experience and situational awareness within a high acuity department is highly relevant to safe, quality care [30].

In contrast, physician participants felt more supported by senior colleagues. This is consistent with research [28], which revealed that although human error and a lack of support and supervision is a contributing factor to errors in health care, physicians overall felt more supported by their colleagues than nursing staff. While RN participants felt stressed about a lack of support, physician participants felt more concerned about the vulnerability of the department and nursing staff that are left behind. This divide between RN and physician participants' feelings of being supported by their peers, could be due to better physician training programs [31].

Nurse- to- patient ratio models have been utilised internationally with little consensus regarding the optimal ratio, specifically in acute care areas [32]. In Western Australia, nurse staffing ratios in ED are mandated by the NHpPP [33], however, this does not take into consideration the sudden loss of staff when an RN is utilised for IHT. There is scant research surrounding international trends for safe staffing ratios and mandates noted [26] yet an increase in emergency physicians is associated with a reduction in ED length of stay in Middle Eastern hospitals [34].The Australasian College For Emergency Medicine [35] guidelines advocate the recommended minimum senior staffing model for EDs but does not account for physicians removed for IHT.

The cost of an IHT and the extended length of time of IHT, were of concern to participants in this study. Participants noted that it was not just the IHT that took time but the loss of staff to the resuscitation room for initial stabilisation of the patient, subsequent IHT and the time taken for the return journey. Nurse participants described ethical dilemmas where they knew essential nursing care was not being met but they had to choose care they perceived to be of priority, which is congruent with a study [36] looking at RNs caring for patients with an extended length of stay in overcrowded ED.

Missed care concerns, such as only having time to undertake 'visual observations', included informal observations of a patient, that is, quickly looking at the patient's colour and whether they appeared to be alert and/or breathing. These checks were not formal observations undertaking and documenting a full set of vital signs, as required by organisational policy. This is ethically alarming, as an RN has a duty of care towards their patients whereby a reasonable standard of care is expected at all times [37]. Nurses are also not meeting the Standards for Professional Practice [38] nor Standard 8 (Recognising and Responding to Acute Deterioration) of the National Safety and Quality Health Services Standards (NSQHS) [39]. Further to this, the RNs using only visual observations and not a formal full set of vital signs could be deemed negligent if harm were to occur to a patient [37]. Participants felt they had no other choice however, but to provide only 'visual' care for their patients whilst being unexpectedly understaffed due to IHT. Participating RNs also expressed concern surrounding inadequate handovers, such as lists of jobs being left on pieces of paper, with no formal handover of care taking place [36,40].

If an escorted IHT were to take place at the same time as a MET call in which staff were expected to attend, it could increase risks to patients in the ED significantly. The challenge of attending MET calls has been described previously [14]. While both this study and previous research [14] noted that AE were rare, this may be due to the excellent care being provided, or the lack of identified AEs may also be due to under reporting [31,41].

In this study, the decision-making process regarding the escort for an IHT was made on a case-by-case, or 'ad-hoc' basis often by the consultant in charge of the department. Decisions would consider the needs of the patient requiring transfer, the needs of the staff member escorting the transfer, and the needs of the department and hospital, thus forming the 'internal' line of the triangulation of competing needs. Physicians felt there was no requirement for a set protocol or policed decision-making framework, although this is contradicted by research [42].

5. Implications for practice

This study outlined the challenges faced by nurses and physicians and RNs who are left behind when an escorted IHT takes place from an ED within a general hospital setting. Four recommendations for practice are:

1. A specialised transfer service with intensive care capabilities and trained staff should be employed for all transfers that require a physician or nursing escort. Ambulances and escort teams should be available 24 h a day, seven days a week and should be based in areas that frequently require IHTs.
2. That the decision surrounding the experience level of staff required for an escort should be left with the referring department, and that a decision-making protocol should be implemented to aide those unfamiliar with the process of allocation to ensure correct staff escort. The protocol may relieve the burden of decision-making from the staff involved and create consistency in who should attend escorted IHT. Further, current guidelines be updated to reflect this.
3. A pool of nursing and physician staff that are 'on call' should be utilised for times of low or short staffing and remunerated adequately. Those that are required to attend the department when on call, should have a minimum rest period instituted, with a second consultant covering, to prevent fatigue and potential AE occurring.
4. Clinical Nurse Specialists should be given the remit to support junior staff during high acuity and high turnover of patients, rather than being utilised for administrative tasks. These nurses are in a unique position to provide leadership, support, and education for junior nursing staff within the ED

6. Limitations

This was a small study in one general hospital, therefore transferability to other similar contexts may not be possible. Further research could occur with a wider survey of nurses and physicians. Physician participants in this study were mostly senior consultants, therefore more junior physicians may have different concerns.

7. Conclusion

The experiences of those who were 'left behind' when an escorted IHT takes place were garnered and the themes identified were: 'the impact of being left behind', 'the burden of transfer', 'missed care', 'a triangulation of competing needs and the decision-making process' and 'the effect of IHT on staff with different levels of experience levels'. The impact of being left behind during an IHT was described differently by RN's with less than three years' experience compared to those with more than eight years' experience. Stress, vulnerability of the department, missed care and only visual checks were described. All participants noted the increased workload to themselves, and other staff members caused by IHT and the increased potential for serious adverse events related to staff movements associated with IHT.

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CRediT authorship contribution statement

Clare Walters: Conceptualization, Methodology, Validation, Investigation, Resources, Data curation, Writing – original draft, Writing – review & editing, Visualization, Project administration. **Vicki Cope:** Methodology, Validation, Writing – review & editing, Supervision. **Martin P.R. Hopkins:** Validation, Writing – review & editing, Supervision.

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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