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Information exchange, responsibilities and expectation management in interhospital transfers: a qualitative study of hospital medicine physicians and advanced practice providers

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ABSTRACT

Introduction The transfer of patients between hospitals, known as interhospital transfer (IHT), is associated with higher rates of mortality, longer lengths of stay and greater resource utilisation compared with admissions from the emergency department. To characterise the IHT process and identify key barriers and facilitators to IHT care, we examined the experiences of physician and advanced practice provider (APP) hospital medicine clinicians who care for IHT patients transferred to their facility.

Methods Qualitative descriptive study using semistructured interviews with adult medicine hospitalists from an academic acute care hospital that accepts approximately 4000 IHT patients annually. A combined inductive and deductive coding approach guided thematic analysis.

Results We interviewed 30 hospitalists with a mean of 5.7 years of experience. Two-thirds of interviewees were physicians and one-third were APPs.

They described IHTs as challenging when (1) exchanged information was incomplete, inaccurate, extraneous, and/or untimely, (2) uncertainty impacted care responsibilities and (3) healthcare team members and patients had differing care expectations. As a result, participants described patient safety issues such as delays in care and inappropriate triage of patients due to incomplete communication of clinical status changes.

Recommended improvement strategies include (1) dedicated individuals performing IHT tasks to improve consistency of information exchanged and relationships with transferring clinicians, (2) standardised scripts and documentation, (3) bidirectional communication, (4) interdisciplinary training and (5) shared understanding of care needs and expectations.

Conclusions Physicians and APP hospital medicine clinicians at an accepting hospital found information exchange, care responsibilities and expectation management challenging in IHT. In turn, hospitalists perceived a negative impact on IHT patient care and safety. Highly reliable and timely information transfer, standardisation of IHT processes and clear interdisciplinary communication may facilitate improved care for IHT patients.

WHAT IS ALREADY KNOWN ON THIS TOPIC

⇒ Interhospital transfers confer higher risk of mortality, longer lengths of stay and greater resource utilisation, with care coordination challenges likely contributing to these outcomes. This study characterises the experience of hospital medicine physicians and advanced practice providers at an accepting hospital to identify potential patient safety and care coordination targets to improve.

WHAT THIS STUDY ADDS

⇒ This study highlights the importance of streamlined information exchange and a cohesive clinical narrative to facilitate interhospital transfer (IHT) care continuity, clear identification of responsible IHT care teams to promote timely patient care and effective expectation management across clinicians and patients to improve IHT care delivery.

HOW THIS STUDY MIGHT AFFECT RESEARCH, PRACTICE OR POLICY

⇒ This study identifies potential approaches for improving IHT care coordination, specifically: use of standardised scripts and documentation, use of dedicated IHT teams, interdisciplinary education about clinician responsibilities and managing clinical care expectations across all IHT parties.

INTRODUCTION

Each year, over one million patients in the United States of America are transferred between acute care hospitals in a process known as interhospital transfer (IHT).[1–3] IHTs are often initiated for subspecialty management and/or procedures. Although patients can potentially benefit from IHT, transferred patients have higher risk of death, longer lengths of stay and increased resource utilisation compared with non-transferred patients.[1–7] These differences are not completely explained by IHT patient

severity of illness or comorbidities, suggesting that additional factors contribute.[1–6]

Similar to other areas of care transitions, poor communication, fragmented information exchange and non-standardised processes likely contribute to poor IHT patient outcomes.[8–13] Prior studies have characterised barriers and facilitators to quality IHT care, but in-depth examination about how care coordination factors affect patient care as perceived by accepting hospital physicians and advanced practice providers (APPs, nurse practitioners or physician assistants), that is, the front-line clinicians that care for IHT patients at time of transfer, is needed.[8 10 12–18]

Our study details physician and APP experiences with IHTs and offers potential care coordination and organisational policy targets to advance quality and patient safety.

METHODS

Design and setting

This is a qualitative descriptive study of inpatient hospital medicine physician and APP experiences with IHTs at a Colorado quaternary care academic medical centre. The hospital receives 4000 IHTs annually from affiliated and non-affiliated facilities across the US Rocky Mountain and Southwest regions. Floor-level adult medicine patients comprise 44% of IHT patients.[18] IHTs are managed by the health system's call centre, which facilitates transfer request calls, clinician conversations and transfer logistics. Logistics include coordinating transport and monitoring bed capacity as these may create delays between transfer acceptance and patient arrival. Reporting follows the Consolidated Criteria for Reporting Qualitative Studies guidelines.[19]

Patient involvement

Given the scope of this study, patients and the public were not involved in the design, conduct, reporting or dissemination of this research.

Participants

A purposive convenience sampling strategy was used to recruit hospital medicine physicians and APPs who cared for IHT patients at the study site for at least 1 year.[20–22] Participants in this study served in three possible roles during the IHT process (figure 1): (1) the accepting physician responsible for determining whether to accept a patient for transfer via a phone conversation with a transferring clinician, (2) the triage clinician, typically an APP or physician nocturnist, responsible for assigning IHT patients to medicine teams based on team capacity and key patient characteristics (eg, age) and (3) the admitting provider, a physician or APP, who cares for IHT patients on arrival. The accepting physician, who is also on a clinical service and changes daily, is expected to document the acceptance conversation in a transfer

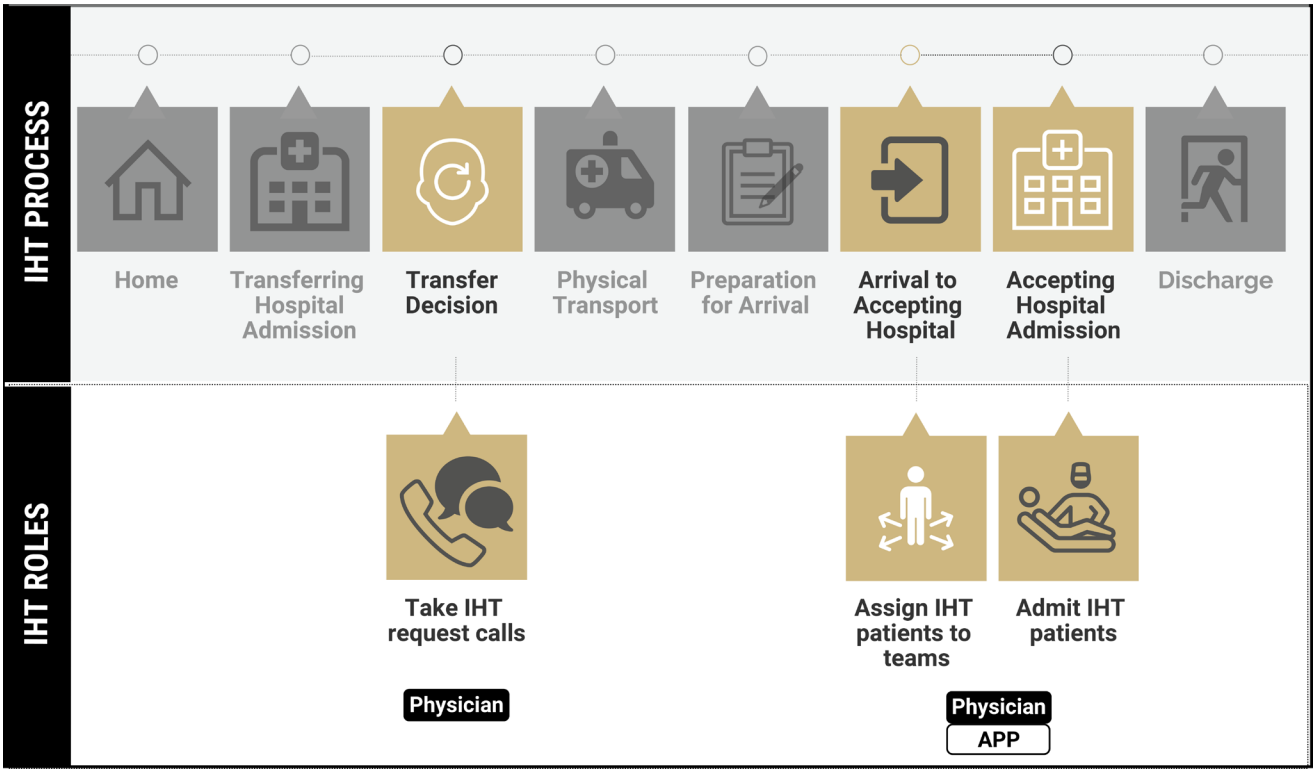

Figure 1 IHT roles fulfilled by hospital medicine physicians and APPs. The IHT process is a multistep process with multiple participants. Our study focuses on the IHT process steps and tasks represented by the gold boxes. Grey boxes indicate process steps outside the scope of this study. Participant types (physician or APP) who perform each task are indicated. Teams are determined based on a system that identifies key patient characteristics (eg, age, COVID-19 status, medical oncology need) and which medicine team is next to admit. APP, advanced practice provider; IHT, interhospital transfer.

acceptance note in the electronic health record. Participants received general guidance on IHT roles at time of new hire onboarding and/or experiential learning on the job. We recruited participants via email and hospital medicine business meetings. We attempted to ensure representation across shifts (day, swing and night) and provider type (physician and APP).

Data collection

Interviews were conducted from September 2021 to December 2021 via secure video conference and lasted 1 hour. One interviewer (LM) with prior qualitative experience and no direct clinical role, facilitated all interviews while at least one team member (AY or CW, both with direct clinical roles) took field notes. All members of the interview team had pre-existing relationships with participants as members of the same division but were not in supervisory roles.

Semistructured interview guides (online supplemental appendices 1a,b) were used to explore physician and APP IHT care experiences as well as challenges and ideal approaches to successful IHT. The Agency for Healthcare Research and Quality (AHRQ) Care Coordination Measurement Framework (CCMF) (online supplemental file 2) and themes extracted from prior research informed interview guide development and data analysis.[18 23] Specifically, the domains of Communication, Assessing Needs and Goals, and Negotiating Responsibility were used to examine care coordination.

Interviews were audio recorded, professionally transcribed and deidentified. Data were collected until theoretical data saturation was reached (ie, when additional data did not lead to new codes or emergent themes).[24–26]

Data analysis

Thematic analysis was used to interpret data obtained from transcribed interviews. Employing an a priori analytical framework as detailed above, three team members (AY, LM and CW) coreviewed a subset of transcripts (10%) and compiled a list of codes (ie, descriptors that capture interview ideas or concepts) into a codebook.[18 23] A combined inductive and deductive approach was used; the inductive approach allowed for the discovery of new emerging themes and the deductive approach allowed for mapping to defined domains noted above.[27 28] Approximately 20% of the transcripts were double-coded to ensure consistency across coders. Each transcript was coded in Atlas.ti (V.22, Berlin, Germany). An iterative process was used as the coders independently coded the remaining transcripts, meeting to establish consensus by identifying and resolving discrepancies in emerging themes through discussion and triangulation (AY, LM and CW). Reflexivity was accomplished by incorporating non-clinical (LM), physician (AY) and APP (CW) perspectives in interpreting themes. The senior author (CDJ) provided guidance as needed. The study team maintained a record of all analytical decisions and discussions. Member checking was conducted.

Table 1 Survey respondent demographics by degree

	MD/DO N=17 (%)	PA/NP N=13 (%)
Gender		
Male	7 (41.2)	3 (23.1)
Female	10 (58.8)	10 (76.9)
Years as a hospitalist		
Mean±SD	5.9±4.5	5.4±3.0
Min, Max	1, 18	2, 12
Roles related to interhospital transfer*		
Accept transfer calls	17 (100.0)	1 (7.7)
Assign IHT patients to teams on arrival	4 (23.5)	13 (100.0)
Admit IHT patients	17 (100.0)	13 (100.0)
Type of clinical shifts worked*		
Day shifts	15 (88.2)	9 (69.2)
Swing shifts†	15 (88.2)	9 (69.2)
Night shifts	5 (29.4)	5 (38.5)

*Participants were able to select more than one option so total may exceed 100%.
†Swing shifts are composed of admissions from 1400 to 1900.
DO, doctor of osteopathic medicine; MD, doctor of medicine; NP, nurse practitioner; PA, physician assistant.

RESULTS

Of 115 hospital medicine clinicians invited to participate, 30 (26%) completed interviews from September to December 2021. Participants reported working day shifts (n=24), swing shifts (n=24) and night shifts (n=10), with the option to select more than one shift type. 20 (67%) of the participants identified as female. Demographic data are displayed in table 1.

Our qualitative analyses identified three key domains of participant IHT experiences: (1) information exchange and communication during IHT, (2) responsibilities during IHT and (3) expectation management during IHT. Themes did not map directly to a single defined AHRQ CCMF domain, often overlapping two or three domains. Findings are summarised in figure 2, organised by study domain with text boxes representing identified challenges and potential improvement strategies within each domain. Additional representative quotes can be found in table 2 and online supplemental appendix 3.

Domain 1: information exchange and communication in IHT

Challenges in information exchange were frequently cited as barriers to providing comprehensive and timely patient care. Communication structure changes were presented as solutions.

Theme 1.1: information fragmentation

Interviewees shared having to piece together information from various sources to construct an organised clinical narrative. Sources of information include prior chart

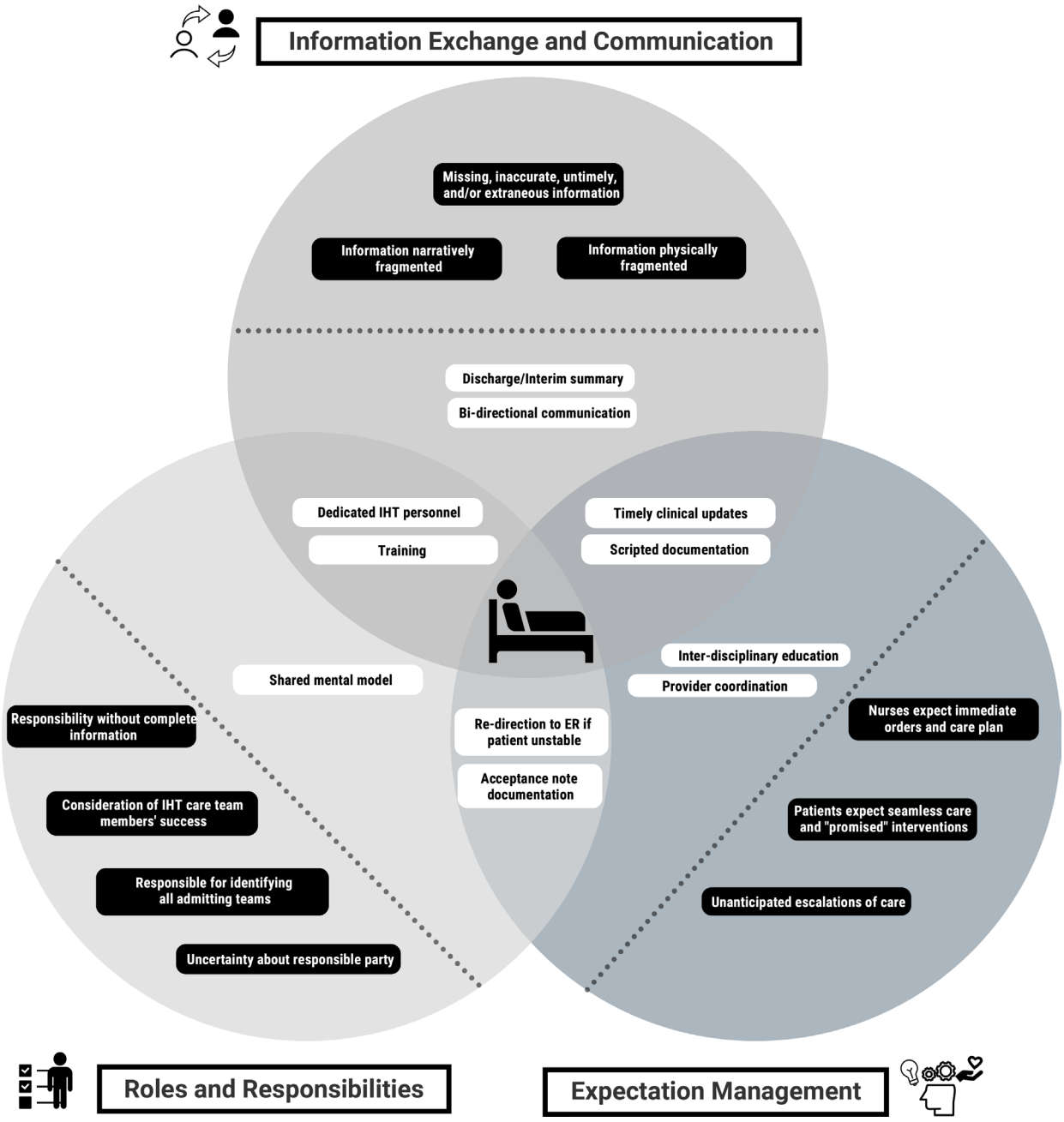

Figure 2 IHT care challenges and potential improvement strategies. Black boxes represent challenges experienced by physicians and APPs during IHT. White boxes represent potential improvement strategies. Findings had significant overlap across AHRQ Care Coordination Measurement Framework domains of Communication, Assessing Needs and Goals, and Negotiating Responsibility, most notable in the proposed strategies. AHRQ, Agency for Healthcare Research and Quality; APP, advanced practice provider; IHT, interhospital transfer.

documentation within the accepting hospital EHR, health information exchange platforms, the transfer acceptance note (documented by the accepting physician) and paper records. Patients and/or care partners also served as additional information sources.

> I'll first look at the [transfer acceptance] note and then see if this patient has been here before. Then I will check CareEverywhere® to see if there's any information there… and then I'll look for a packet of records. Then once I look through all that information, I will go and talk to the patient. Interview 17, Physician

When key study results were not accessible, that is, data were not sent or difficult to find, admitters repeated diagnostic tests, delaying care and generating system waste.

> [With IHTs], you're having to slowly put the pieces together and figure out what's going on, why they were transferred, and how you can best you know get the ball rolling on what it is that they actually need…

Table 2 Additional representative quotes by domain and theme (full table in online supplemental appendix 3)

Domain	Theme	Representative quotes
Information exchange and communication in IHT (Domain 1)	Information exchanged is missing, inaccurate, untimely and/or extraneous (Theme 1.1)	'…when you're not seeing the patient, and you're not able to look in the chart and look through the records, it's hard to even know what you're missing… which is part of what makes doing the [transfer request] calls so difficult.' Interview 18, Physician
		'…another issue is, we're not trained to [take transfer acceptance calls] at all, no one is formally trained to do this. So, you kind of learn on the fly, by trial and error.' Interview 5, Physician
	Information Fragmentation (Theme 1.2)	'… the packets are either just huge and burdensome or disorganized, or both. They're missing things that have been done [and] that just results in repetitive testing and care.' Interview 29, APP
		'…a discharge summary is for me far and away the most valuable… like a good synthesis of their admission…. I think having a clear picture of why they came into the outside hospital, in the beginning - what was their initial complaint, their biggest problem, and then some kind of chronologic description of what treatments they've had already, just a brief timeline of what they've had done procedure-wise, is helpful.' Interview 11, APP
Responsibilities During IHT (Domain 2)	Pressures on clinicians at time of IHT acceptance (Theme 2.1)	'I also think you're accepting some level of liability and more importantly, for me professionally, responsibility for another person. Because moving them from one place to another is not without potential harm, as is the case with any transition of care. And then, … [as the admitting] provider, it's unpleasant and frustrating to have someone or their family who feels like something was promised to them, which they then don't receive. And they went through all of the hassle, including potentially now having to travel way farther to see their loved one.' Interview 15, Physician
	Uncertainty around who is responsible for IHT patients on arrival (Theme 2.2)	[When things go well], the first step is that the floor nursing staff and administrative staff know who to reach out to. That's clear that they can notify us right away. I can pass it on right away. The nurses don't feel sort of scared in a timeframe where they don't have a provider contact or they don't have orders… I mean, I think that's probably one of the most important things is that [the nurses] know who to call and how to do it quickly.' Interview 25, APP
Expectations Management During IHT (Domain 3)	Nursing expectations of hospital medicine clinicians (Theme 3.1)	'When nursing gets these patients, I think they have the assumption that the way that patient is going to show up is the same way a patient presents from the emergency room, which is usually some basic orders and things have already been done for the patient. They expect that stuff right away. And they expect you to know that patient, like you got sign out from an emergency room doctor and not that you just read some note and didn't think that patient was coming for three days. So, I think management of expectation there is really hard.' Interview 21, Physician
	Patient expectations of care at the accepting hospital (Theme 3.2)	'…I empathize with them [patients and families] a lot, because we're also stuck in the middle, right? Because they're on our service, but perhaps they're being transferred for a procedure that I don't actually do. And I would gladly help them, but I also have to be respectful of the team that I'm consulting and be respectful of their reservations, but you're also stuck in the middle and your hands are tied a lot because you can't make consultants do things, but sometimes it feels like a pointless transfer if you're like why were they transferred if nobody's going to do anything?' Interview 27, APP
		'I guess when people get transferred they always think that they're going to come in and get all these studies. It's always hard [when] they think something is going to happen, and it actually doesn't happen. Those are always really hard conversations to have. … it just puts you in a bad place because you also feel horrible.' Interview 30, Physician
	Unrealistic expectations of what can be achieved on a floor-level unit (Theme 3.3)	'Even if all the communication has been perfect, sometimes patient status changes, and it really creates a lot of risk to patients when they are transferred to floor status, and then immediately require escalation of care.' Interview 7, Physician
		'Oftentimes there can be a good amount of time that elapses in between that conversation and actually having the patient show up on your door. And that may not be something that we have any control over, particularly if beds are tight. I think that delays from that initial communication can be a big problem. I think there's probably a missed opportunity for EMS, when they're transporting a patient because they may have been with the patient for hours, they may have a good amount of information about their vitals, their pain medicine requirement, are they clinically worsening? I think that information may be communicated to the nurses, but it's not. There are so many breaks in the information chain that we're potentially missing some clinically relevant changes that were observed by somebody, but we just don't have a way to get that information. And then all of a sudden we just have to respond to what we're seeing in the moment. I think that's another missed opportunity to have providers meet outside hospital transfers at the bedside.' Interview 25, APP

IHT, interhospital transfer.

sometimes I feel like a lot is missing or falls through the cracks, and I end up duplicating workups just because information is lost. There's time that's lost too…I feel like you're playing a lot of catch up unnecessarily. Interview 27, APP

Potential improvement strategies

Several participants identified a discharge or interim summary as one strategy to address information fragmentation and narrative discontinuity. They described several key elements in an ideal discharge summary: transfer reason, summary of the transferring hospital course, list of procedures, a medication list, physical exam and vital signs prior to transfer, consultant notes or recommendations, and key laboratory and/or imaging information.

I like a discharge summary … [with] a good kind of overview of the days leading up to the transfer. And then all relevant imaging, most recent consult note, and … records of medications being administered. Interviewee 24, APP

Theme 1.2: information exchanged is missing, inaccurate, untimely and/or extraneous

Participants across different roles described that the information they received about IHT patients was often incomplete, inaccurate, untimely and/or extraneous.

For accepting physicians, many described having an incomplete picture of the IHT patient. They often had to prompt for information such as vital signs or the patient's clinical course to help them determine acuity level and whether a transfer would be beneficial.

…sometimes it's really just guesswork… trying to figure out and taking the information from another provider and trying to piece that together to figure out what the patient's [going to] look like when they get here… Interview 20, Physician

Many admitting clinicians described that the information at the time of admission was variable in accuracy, content and pertinence. They attributed these discrepancies to missing or inaccurate information exchange during the acceptance call and/or clinical status changes that were not reported to the accepting hospital before the IHT patient's arrival. Additionally, relevant clinical information was often described as buried within extraneous data (eg, nursing assessments) and tedious to extract.

Even when it's not haphazard, even when it happens exactly the way it's supposed to, there are a lot of transfers of responsibility for receipt of information and transfer of information. And each one of those creates the opportunity for information attrition or error. And you have to go no farther than to play the game of telephone to see how that can happen. Interview 7, Physician

Potential improvement strategies

Participants suggested instituting a dedicated individual at the accepting hospital to field transfer acceptance calls to improve consistency and completeness of information exchange. In addition to a templated acceptance note, dedicated scripts and formal training were highlighted as approaches to standardise what information elements are communicated.

Having a dedicated person receiving those calls and [who] has the time to run through things, and maybe even having dedicated scripts for certain clinical conditions would be great, just so that everybody does it the same way. Interview 27, APP

Lastly, bidirectional communication between transferring and accepting clinicians was described as an approach to mitigate information loss.

…if somebody shows up and you're missing information or they're different than clinically anticipated, there should be a method for reaching back out to the provider at the outside hospital. Interview 8, Physician

Domain 2: responsibilities during IHT

When discussing IHT care workflow, participants identified uncertainty driving challenges with IHT care responsibilities.

Theme 2.1: pressures on clinicians at time of IHT acceptance

For accepting physicians, they frequently experienced unease with the transfer decision-making process. They described making a consequential decision for a patient they had not personally evaluated based on potentially incomplete information from a transferring clinician with whom they had no prior working relationship.

In [transfer acceptance] calls, you feel so responsible, but also so vulnerable, because you're so reliant on what this other person is telling you and then you're having to make important clinical decisions. Interview 18, Physician

Potential downstream impacts on admitting colleagues' workflows due to care needs mismatch increased pressure on accepting providers to make appropriate acceptance decisions.

I [felt I] set one of my colleagues up [for] a busy admitting night—you can imagine if you get someone that you have to do an acute transfer to the ICU [intensive care unit] or is not billed as [expected] and comes with tons of records, there are other patients that are missing out on the care they need. It's not the greatest professional experience. Interview 21, Physician

Potential improvement strategies

Similar to domain 1, theme 1, a dedicated team to field transfer calls was suggested to establish relationships with transferring clinicians and increase confidence in information exchange.

Theme 2.2: uncertainty around who is responsible for IHT patients on arrival

For triage clinicians, who assign IHT patients to teams after their arrival, they often were responsible for identifying the admitting service even for patients who were not accepted to a medicine service.

> I've had a number of times where I get called by nurses… saying 'this person is here, who's going to be admitting them?' And after a lot of digging, they're not even a hospital medicine patient. [Other] services, even though they've accepted the patient for transfer, have not documented. Sometimes [I go] through … Epic trying to find the encounters and [call center] calls and … have to Google who was the doctor involved in the calls to figure out [their] specialty. Interview 9, APP

Additionally, many participants pointed to the absence of a clear admitting team for IHT patients at the time of arrival as a safety concern and source of professional stress. This uncertainty regarding the responsible admitting team could result in communication breakdowns, delayed clinician evaluation and potential patient safety compromise, which was most apparent when IHT patients clinically deteriorated on arrival. Participants attributed the uncertainty to incomplete documentation of acceptance conversations by other services and lack of a list of anticipated IHTs for front-line clinicians.

> The scary thing is that [something] bad can happen …and the nurses don't know what provider is caring for the patient and then you're contacted…. They're just calling people because they don't know who to call. It's one of the biggest problems: there's potentially a window where no care team is aware that the patient is physically there and that they're responsible for them. Interview 14, Physician

Potential improvement strategies

Suggestions included (1) a dedicated admitting team responsible for IHT patients and (2) organisational policies that require documentation of a standardised acceptance note across all services to aid in timely team identification.

> I think just clear identification of who's the person that's responsible for the patient upon arrival and then a check in process would make things safer. Interview 1, Physician

Domain 3: expectation management during IHT

Interviewees described that the way IHT care is currently delivered creates constraints that make meeting nursing, patient and system expectations challenging.

Theme 3.1: nursing expectations of hospital medicine clinicians

Many triage and admitting team participants shared that nurses expected them to be aware of IHT patients prior to their arrival and prepared to initiate a care plan. However, because the accepting provider who takes the phone call from the transferring hospital is frequently not the triage clinician or the admitting provider, care plans are not pre-established at the time of IHT patient arrival.

> [The nurses] expect me to know about the patient, know what's going on, and who's going to take them. I think that there's like a huge disconnect in the realization that I don't know the patient has hit the floor until they informed me the patient is on the floor. Interview 26, APP

Potential improvement strategies

Education about workflows may aid in more realistic interdisciplinary expectations and reduce tensions between nursing and clinicians.

> I wish they understood our workflow a little bit better; it can be really distracting when a nurse says multiple times 'can I get orders?' and I don't know anything about this patient… I can't put in a Lovenox order without knowing that they're not [having] a GI bleed. Interview 2, Physician

Theme 3.2: patient expectations of care at the accepting hospital

Several interviewees reported that IHT patients expected their care to be seamlessly continued on transfer but were disappointed when their hospital stay following transfer did not unfold as expected.

> I would say there's often a discrepancy between a patient's expectation and what might happen once they're [transferred]. For example, they don't get the procedure that they were promised, so they're understandably frustrated. Interview 9, APP

When subspecialty teams decided not to pursue procedures or studies for which the patient was originally transferred—a decision that may not have been feasible until an in-person evaluation was completed—participants described navigating difficult conversations with patients and their care partners.

> The worst is when a patient is transferred to your service to receive specialty care of a consultant, and then the consultant does not agree that the patient required transfer and does not want to provide the course of treatment that was the reason for the transfer. And now, you're the one who has to talk to the patient about this expectation that [what] they

were transferred five hours, across state lines… for is not something that is actually going to be provided for them. Interview 7, Physician

Potential improvement strategies

Recommendations included improved coordination between transferring clinicians, accepting clinicians and consulting teams to facilitate consistent messaging to patients and their care partners.

I think there could be better coordination between services—between the accepting clinicians, the [consulting] teams, and the transferring facility. Interview 14, Physician

Opportunities to increase sense-making for patients could include explanations directly from the specialty team regarding the rationale for not offering a treatment or procedure after transfer.

Theme 3.3: unrealistic expectations of what can be achieved on a floor-level unit

Triage and admitting clinicians described that when IHT patients arrive clinically unstable, inpatient floor-level units have difficulty managing emergent situations. Unlike the emergency department or the intensive care unit (ICU), floor-level units do not have the level of staffing or resources to address a decompensating IHT patient who has just arrived. Additionally, system structures make obtaining STAT workup challenging on a floor unit.

[A patient] decompensated on the way to the hospital and [was] taken up to the floor. I spent six hours trying to get this patient upgraded to the appropriate level of care. [She] probably should have gone straight to the ED or straight to the ICU, but because she was accepted as floor [status], EMS [emergency medical services] just took her there. She just got dumped on the floor, and then it was hard to get anything done for her in a timely manner because we don't have quite the same resources [as] the ICU or in the emergency department. Interview 11, APP

Potential improvement strategies

Proposed solutions were (1) timely updates of the patient's clinical status and/or medication changes that could alter the level of care required on arrival and (2) increased agency for emergency medical service (EMS) to deviate from the original transfer plan destination if patients deteriorate.

[In an] ideal world, if the patient started crumping in the ambulance, EMS can call [the call center] and say, "This patient can't come to the floor, they need to go to step down or they need to go to the ER. Interview 16, APP

DISCUSSION

Our qualitative study of hospital medicine physicians and APPs at an academic medical centre found challenges in IHT information exchange, care team responsibilities and expectation management. To streamline IHT care, participants proposed designating specific individuals to manage both IHT transfer acceptance calls and IHT patient admissions. This approach would facilitate enhanced communication and build stronger relationships between transferring and accepting clinicians, ultimately optimising care continuity. Moreover, dedicated IHT admission teams would allow nurses to easily identify the responsible primary team. Interviewees also suggested standardised transfer acceptance scripts, transfer summary elements and documentation policies as additional means to improve information exchange. Lastly, the findings from our study suggest that bidirectional communication and interdisciplinary training may enable shared mental models of clinical acuity and expectations of care. By incorporating these strategies, IHT care could move closer to an ideal care delivery model.

While prior studies have revealed concerns about fragmented IHT information and inconsistent handover practices, our research highlights a larger issue: the lack of a cohesive clinical narrative readily available in a central location.[8 10 12 13 29 30] Currently, clinicians must review multiple data sources to understand an IHT patient's medical history, the prior hospital course and anticipated plan of care. Some of these sources may contain missing, inaccurate and/or extraneous information, hindering synthesis of pertinent clinical information. Employing dedicated IHT teams who follow standardised scripts and receive formal training focused on IHT process nuances was identified as an avenue to improve consistency of information quality and completeness and has been shown to be effective in at least one healthcare system.[31] Additionally, participants suggested the use of discharge summaries with specified elements to further facilitate organisation of relevant clinical information into one source.

This study expands our understanding of the impact of uncertainty on IHT care responsibilities. Prior work has highlighted the frustration and stress transferring clinicians experience due to the uncertainties in finding an accepting hospital for IHT patients.[8] Our participants provided an alternative viewpoint, revealing the pressure and stress associated with decision-making when accepting IHT patients. They described the pressure and stress stemming from (1) making important clinical decisions with potentially incomplete clinical information and (2) the possible consequences for patients and admitting clinicians downstream if they made an inappropriate decision. Developing relationships with transferring clinicians could address some of these stressors. Additionally, our work further validates the importance of clear identification of which clinicians are responsible for IHT patients at time of arrival to accepting hospitals.[18 29] As described in research examining safety threats

related to IHT of patients with non-traumatic intracranial haemorrhage, ambiguity in roles and responsibilities can lead to diffusion of accountability and increase the risk of medical errors.[29] Establishing organisational policies to facilitate timely admitting team identification could mitigate communication breakdowns and potential delays in patient care.

Our work offers new insights into the dynamics between nurses and admitting clinicians as well as the relationships between patients and admitting clinicians. In prior work, nurses described feeling powerless to deliver timely and appropriate care for IHT patients while awaiting the admitting teams' assessment and orders.[18] Clinicians in this study also described feeling ineffective when IHT patients arrived for procedures that subspecialists did not ultimately pursue, leaving them caught in the middle. Additionally, clinicians described the tension to provide a timely and safe care plan while synthesising a clinical narrative for a patient that they had no awareness of prior to arrival. Mueller *et al* previously described a lack of shared understanding of the goals for transfer between various individuals involved in the IHT process; our work highlights the stress that clinicians sustain and the frustration that patients experience due to the discordance between the ideal and the current reality of IHT care.[13] Our findings confirm that patients often assume that clinical information is seamlessly communicated between clinicians and expand on the consequences of disappointment and dissatisfaction when this expectation is not met.

Lastly, our research adds to existing literature regarding inappropriate IHT triage in the context of changing clinical acuity. The assumption that IHT patients remain clinically static from acceptance to arrival can lead to unexpected and potentially dangerous clinical decompensations enroute or on arrival at the accepting hospital. Participants described unanticipated IHT patient decompensations as particularly stressful because floor-level clinicians, nurses and units are not properly resourced to manage emergent situations for unfamiliar patients. This underscores the need for more flexible systems that can account for the possibility of unforeseen clinical changes and ensure proper resource allocation to prevent chaotic and unsafe situations.

Our study findings must be interpreted within the design limitations. This study was conducted at a single site, which limits generalisability given that IHT processes vary between hospitals and systems.[2 10] However, given the consistency of our findings with prior work that have used both quantitative and qualitative methods, we believe that the broad themes in this study are likely similar at other large academic centres. Additionally, we sampled a large quaternary hospital that manages a high volume of IHTs.[1] Second, our study may have been subject to selection bias with clinicians self-selecting to participate in order to discuss negative experiences, especially since they were familiar with the research team. We attempted to mitigate this by asking about both ideal and challenging IHT experiences. Lastly, we also acknowledge that there are other key informants involved in the IHT process that were excluded in our study, such as transferring clinicians and other clinical services (ie, ICU, surgery, etc) but opted to focus on accepting facility clinicians within general medicine given the scope of this study.

In summary, this study highlights the complexity of the IHT process and characterises challenges physicians and APPs at an accepting hospital experience with information exchange, care responsibilities and expectation management during IHT. Creating standardised transfer acceptance scripts with tailored training, having dedicated IHT personnel for acceptance calls and admissions and managing interdisciplinary expectations may alleviate some of the challenges in IHTs. Findings from this study offer several potential policy and care coordination targets to make IHT care safer and more streamlined for both patients and clinicians alike.

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