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RESEARCH

‘You can't have an ego in this game’: A simulation primed qualitative inquiry of team reflection in paediatrics

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Abstract

Introduction: Acute care paediatric teams face ambiguous, dynamic patient care situations that demand adaptability to avoid patient harm. Team huddles and adaptation processes have shown promise in mitigating risk and reducing harm. One team process that may occur in huddles is team reflection (TR), defined as a team's capacity to consciously reflect on the group objectives or strategies to adapt to dynamic circumstances. Prior research on in-action TR *during* patient care episodes demonstrated improved team performance and learning. This study explored how interprofessional teams experience pre-action TR through a simulated huddle before patient arrival. A better understanding of pre-action TR behaviours may reveal an underutilized strategy for improving team function and patient outcomes.

Methods: The authors used simulation-primed qualitative inquiry to examine pre-action TR. Eleven multidisciplinary, interprofessional paediatric critical care teams (four to six members) participated in a simulation in which they were handed off a critically ill patient with imminent arrival time and instructed to plan care, immediately followed by focus groups to explore their experience of pre-action TR. A deductive then inductive approach to thematic analysis was applied using the TuRBO framework: (a) seeking information, (b) evaluating information, and (c) planning.

Results: Teams reported that pre-action TR behaviours fostered psychological safety, reduced barriers for sharing input, supported inclusive leadership, and enhanced shared mental model generation. These behaviours also enabled more effective and efficient planning. Importantly, participants described how pre-action TR behaviours both relied on and reinforced team dynamics such as team familiarity, trust, and psychological safety—highlighting their self-amplifying nature.

Conclusion: Pre-action TR behaviours promote team engagement and coordination, serving as a powerful tool in both training and practice. Integrating TR behaviours into huddles is a feasible strategy to strengthen team training, team dynamics and readiness. Future research should quantify its impact on team performance and patient outcomes.

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Profession	Number of participants	Years in role (mean)	Age (mean)
Nurse	22	6.2	30.3
RT	2	17.5	43
APN	7	5.9	36.8
Resident	2	2	29.5
Hospitalist	1	2	32
Fellow	10	1.9	31.5
Attending	2	3	33.5

Abbreviations: APN, advanced practice nurse; RT, respiratory therapist.

TABLE 1 Demographic information of simulation and focus group participants. Participants are listed by role in the critical care and emergency room settings.

1 | INTRODUCTION

Ambiguous, dynamic patient situations characterize acute care paediatrics, a clinical setting associated with heightened patient safety risk.¹ In critical care environments, children may experience treatment delays or harm without appropriate team adaptation.^{2,3} While many patient safety initiatives rely on retrospective analysis to make proactive or preventative strategies, such reviews often lack granularity of real time events,⁴ suffer from hindsight bias,^{4,5} and frequently overlook complex team dynamics and adaptation.^{4,6}

One proactive team safety initiative is the team huddle—brief, multidisciplinary meetings in healthcare where risk mitigation and planning occur. These huddles have demonstrated positive impacts on patient outcomes, such as reduced mortality associated with the use of pre-surgical checklists.⁷ An underlying process in these huddles is Team Reflection (TR), which may enhance team adaptability during these huddles and serve as a mechanism for improved team performance.

TR is defined as a team's capacity to consciously reflect on their objectives and strategies to adapt to dynamic circumstances.⁸ It has been shown to enhance team performance, functioning and learning.^{9–11} While much of the existing literature focuses on TR during debriefs *after* clinical events, more recent work highlights the benefits of in-action TR—reflection occurring in real-time during care episodes—in simulated settings.^{10,11}

However, according to Schmutz et al., TR can also occur before patient care begins, for example, during team huddles, which remains underexplored.¹² Studies on pre-action periods, including handover tools, preoperative briefings, and surgical safety checklists, suggest value in structured planning.^{7,13,14} Yet these tools target routine care and may not be applicable to the fast, dynamic critical care environment where teams face limited preparation time for acutely ill transfers. TR may be especially valuable in preparing teams for complex, dynamic nonroutine situations involving rapidly evolving illness.

This study explores how interprofessional team members experience pre-action TR behaviours during huddles and perceive their benefits and limitations prior to hands-on care. A deeper understanding of this process may help teams harness the full potential of TR behaviours to optimize patient care.

2 | METHODS

We used a simulation-primed qualitative inquiry approach (SPQI),^{15,16} which employs simulation to sensitize participants to a phenomenon of interest followed by an elicitation of participant responses and reflections on potentially emotionally charged or sensitive experiences. The simulation served not as an educational intervention, but as a means for the authors to explore participants' immediate reflections on team behaviour during post-simulation focus groups (FGs). Study participants are detailed in Table 1.

2.1 | Setting, recruitment, sampling strategy and participants

This study occurred at a tertiary care academic children's hospital in the United States, which includes a 60-bed paediatric intensive care unit and an emergency department that sees over 60 000 patients annually. RM recruited participants via email to professional listservs within clinical divisions, with approximately 30 responses. Additional participants were recruited using snowball sampling from early respondents. All participants reviewed an information sheet that described the nature of the research, risks and benefits of the data collected. We did not sensitize participants to the concepts of TR to avoid influencing their behaviour. Ethics approval was provided by the Institutional Review Board (IRB 2021-4020). From the pool of respondents, purposive sampling was used to construct teams reflecting typical clinical configurations. Availability for scheduled simulations also limited participation for some who initially expressed interest. Each team comprised four to six members, including the following:

- A board-certified physician (attending or fellow)
- At least two nurses
- A “frontline provider”, defined as a team member who is first to call, first to act on patient care needs (resident, advance practice nurse [APN], hospitalist)

Some roles, such as Respiratory Therapists (RTs), were infrequently represented due to clinical constraints but also reflect clinical reality. Team leadership was situational and fluid but was most often assumed by fellows or attendings.

TABLE 2 Simulation scenarios piloted and used for this study. Abbreviations were read out loud to participants as written.**Simulation scenarios**

A 12 year old male with a history of AML, anthracycline associated myocardial dysfunction and HD dependent CKD is coming in via transport to the oncology service for altered mental status for the last 24 h. Parents noticed him being progressively more fatigued and transport team notes the patient is now less responsive with a GCS of 9, based on this they believe he is better suited for the PICU. Current vitals: HR 120, RR 22, BP 90/70, T 39.0, SpO₂ 90%. ETA is 5 min.

2.5 min update: Patient has had two 3–4 s runs of ventricular tachycardia on transport monitor

2 year old with Trisomy 21 and history of AVSD s/p repair 2 weeks ago. He is coming via transport from OSH with fever, erythema and pus draining from his sternotomy wound. He has had progressive fatigue with exertion, not eating or drinking well for the last day. The CICU is currently cannulating a patient onto ECMO so the patient is diverted to the PICU.

On transport arrival he is febrile to 40, HR 150, RR 30, BP 60/30 SpO₂ 88% RA. He has a harsh murmur on exam, soft abdomen, he is difficult to arouse and is agitated when he awakens. Cap refill 3–4 s. There is erythema, swelling and pus coming from an opening in his sternotomy wound. You have instructed to obtain IV access and give 40/kg of fluid.

2.5 min update: After 40/kg of fluid his HR is 165, BP unchanged at 60/30

A 14 year old female is en route to the ED via EMS. She has a known history of T1DM and depression has had 2 days of respiratory symptoms, fever and subsequent lethargy and vomiting.

EMS reports she is lethargic, tachycardia, weak pulses. She is rigged and flushed. She has a POC glucose of 450. Initial vitals: HR 120 RR 28 BP 80/50 T 39.5 SpO₂ 98% in RA.

2.5 min update: Patient had a GTC that persists despite Ativan administration. She is requiring bag mask ventilation for desaturations, she continues to be rigged, febrile and flushed.

A 3 year old female is en route to the ED via EMS. She was found in her home, unconscious in the laundry room. There were spilled cleaning products found next to the patient. She is altered in transport with a reported GCS of 9. She is spontaneously breathing, her abdomen is distended, she has weak peripheral pulses and a cap refill of 3 s. Initial vitals by EMS: HR: 130, RR 30, BP 70/40, T 37.0 SpO₂ 92%

2.5 min update: Patient's breathing is more laboured, with biphasic stridor, she is drooling and grabs her abdomen with knees pulled up, she has one episode of bloody emesis. She is more tachycardic to the 150 s and her blood pressure remains at 70/40.

Abbreviations: AVSD, atrioventricular septal defect; AML, acute myeloid leukaemia; BP, blood pressure; CICU, cardiac intensive care unit; CKD, chronic kidney disease; ECMO, extracorporeal membrane oxygenation; ED, emergency department; EMS, emergency medical services; ETA, estimated time of arrival; GCS, Glasgow coma scale; GTC, generalized tonic clonic seizure; HD, haemodialysis; HR, heart rate; OSH, outside hospital; POC, point of care; PICU, paediatric intensive care unit; RA, room air; RR, respiratory rate; SpO₂, oxygen saturation; s/p, status post; T, temperature; T1DM, type 1 diabetes mellitus.

2.2 | Simulation scenario

The research team collaboratively designed and piloted multiple simulation scenarios featuring critically ill patients with unclear diagnoses arriving imminently (Table 2). Teams participated in one scenario in which they were instructed to plan care as they deemed appropriate. An updated patient status was provided midway through the scenario that prompted reassessment. The simulation concluded after 5 minutes just before patient arrival, followed by a FG to explore TR behaviours elicited by the scenario, consistent with the SPQI approach.^{15,16} Each team went through only one simulation/FG.

2.3 | Data collection and analysis

From February to October 2021, RM facilitated 11 simulations and post-simulation FGs involving 11 teams with a total of 46 participants. Semi-structured FGs were guided by a topic outline (Supplementary Figure), which was iteratively refined based on early feedback from MM and WE to ensure rich data collection in line with the research question. All simulations and FGs were audio and video recorded, professionally transcribed and de-identified. Using an interpretivist paradigm,¹⁷ we employed initially a deductive and then an inductive approach to thematic analysis.^{18,19} We used the Team Reflection

Behavioral Observation System (TuRBO), a tool for analysing in-action TR,¹¹ to supply a priori categories based on the three key domains of TR to inform initial deductive qualitative analysis. This guided initial coding in these domains: (a) seeking information, (b) evaluating information, and (c) planning. Within these domains, we then conducted inductive analysis to identify relevant themes. Deductive coding of transcripts was performed by RM using MAXQDA (VERBI Software, Berlin, Germany) and discussed with WE; inductive thematic analysis was completed by RM, with input from WE and JBS during regular analytic meetings. Shared understanding of themes and subthemes was generated through discussion. Figure 1 demonstrates the data flow for this project.

2.4 | Reflexivity and positionality

The research team included physicians with extensive clinical experience: RM and MM in paediatric critical care and MA and WJE in paediatric emergency medicine. JBS is a work and organizational psychologist with expertise in extreme teams. WJE and JBS, who co-developed TuRBO, have conducted substantial research in TR. WJE, MM, and MA have significant experience in simulation development and WJE, JBS, and MM in qualitative research. RM, a former clinical trainee at the study site, had preexisting relationships with many

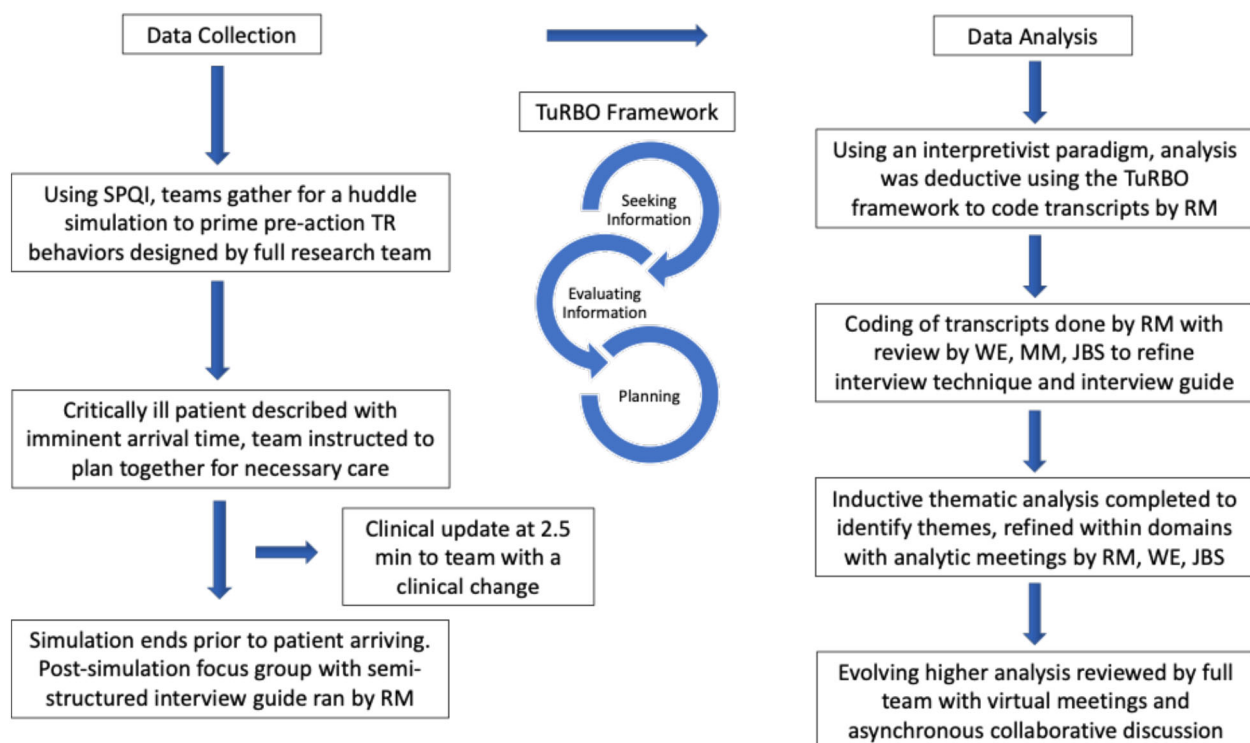


FIGURE 1 Visual representation of data flow from simulation to focus group and subsequent analysis. Abbreviation: TuRBO, Team Reflection Behavioral Observation System.

participants—an insider role that may have enhanced rapport but also required reflexivity to mitigate personal bias. RM clarified his role as a researcher during data collection and debriefed regularly with co-authors. Although the team anticipated benefits of TR behaviours, we remained open to potential limitations and probed discrepant instances within our dataset.

3 | RESULTS

If the clinical workplace and the teams working in it represented a garden, then pre-action TR could be viewed as a seed that requires fertile soil to take root. The essential components included familiarity, trust, and perceived team psychological safety. Once productive pre-action TR behaviours occurred, they further enriched that very workplace environment by reducing hierarchy and opening dialogue. At the highest level, our analysis revealed this cyclical nature: TR behaviours could strengthen the very conditions that enabled them; in their absence, opportunities for reflection diminished. Representative quotes are labelled with anonymous participant codes (i.e. G5APN).

This self-reinforcing dynamic was particularly evident in one of our focus groups, who discussed the impacts of ‘knowing’—or ‘not knowing’ in this case—their teammates. One APN captured the tension ‘I don’t trust you so I’m going to ask you all the questions’ (G8APN) while a nurse noted ‘if it’s a fellow I don’t know ... I don’t

think I’d say everything’ (G8N1). This discomfort was also closely linked to misjudgment by nursing staff: ‘You’re going to look at me and be like ‘No that’s so wrong’ ... that’s the difference with the other (known) person – you know no one’s going to think you’re dumb’ (G8N2).

These rich comments also illustrate that psychological safety was a vital prerequisite for pre-action TR behaviours such as inviting input or expressing uncertainty: ‘If I know they don’t trust me, I may be more or less inclined to target my communication ... rather than just spitball (ideas)’ (G8N1). The tension between humility and performance, ego and openness was well described by team members, as one APN noted ‘I have this policy of checking the ego at the door, but sometimes ... the person in me wants that ego there. I’m still trying to prove to you that I actually know what I’m doing’ (G8APN). In this way, pre-action TR was not just a skill or behaviour—it helped influence and establish an emerging state of team preparation. It depended on trust, role familiarity, and cultural norms—when these were present, TR behaviours strengthened them. Without them, reflection appeared to wither.

Beyond these cross-cutting findings about the self-reinforcing nature of pre-action TR behaviours, we now delve deeper into the broader, interrelated domains of TR: seeking information, evaluating information, and planning. For each domain, we highlight how relative levels of trust, familiarity and perceived psychological safety either amplified or dampened dialogue and team reflective behaviours. This relationship is demonstrated in Figure 2.

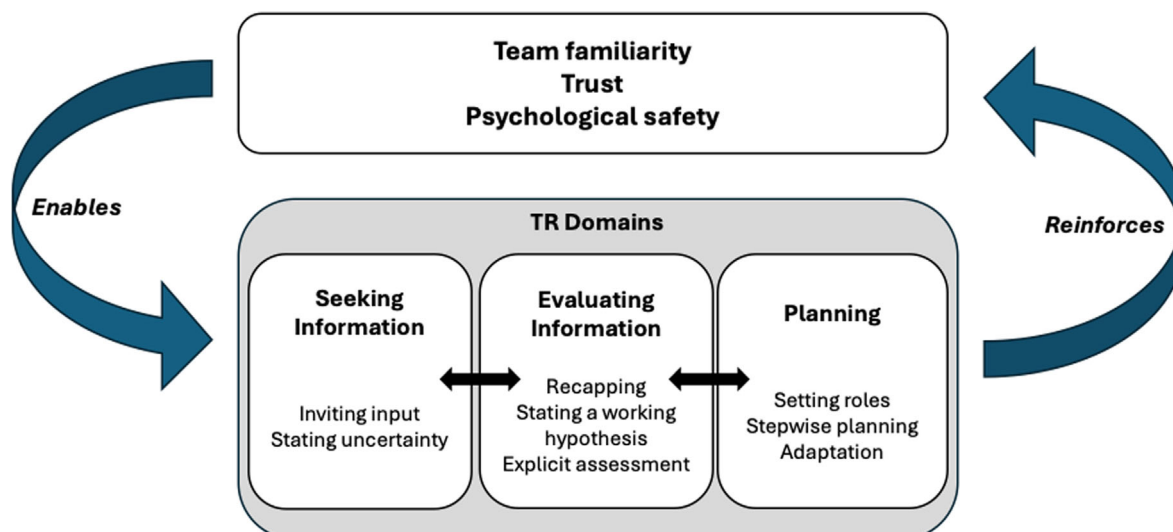


FIGURE 2 Cyclical relationship between cross-cutting team dynamics and pre-action team reflection behaviours.

3.1 | Seeking information

Expressing self-doubt and vulnerability coupled with actively inviting input cultivated inclusivity in these high-stakes decision-making scenarios. However, this behaviour was only effective when participants perceived psychological safety. Team members consistently described hesitation to speak up when uncertain about relevance and accuracy. Sharing input could be ‘intimidating’ (G3N1) and ‘embarrassing if you’re wrong’ (G6N2). This underscored that the perceived safety of the environment—particularly for nurses and junior providers—was a necessary condition for pre-action TR behaviours to be impactful.

Despite these barriers, participants highlighted that *actively inviting input* could help ensure ‘everyone feels comfortable voicing opinions’ (G6A). This practice was perceived as impactful for patient care as participants recognized that ‘no one person is going to know everything’ (G6H). Nursing colleagues described this invitation as a way of ‘creating space’ (G3N2) for sharing and helped them ‘contribut[e] to the plan of care’ (G2N2). Invitations for input were often interpreted as a reciprocation of leadership. One APN reflected:

It makes it feel more like a team ... we’re all in this together ... We’re looking to [fellow] for guidance, but he is also returning that to us, and it makes it more inclusive.

(G3APN)

Participants described these invitational behaviours as shaping the psychological environment for the team, as one APN shared:

Setting that tone ... “This is a space where we’re all trying to hear each other out and I actively want you to participate and contribute. And I will take any of your

thoughts”. I think having that sense is helpful. It allows us to continue. It encourages us, subtly and unconsciously, to continue.

(G8APN)

Team members also encouraged information sharing by verbalizing their own uncertainty. ‘Thinking out loud’ (G10F) through statements such as ‘I don’t know what it is’ (G10F) was perceived as a strategic vulnerability that invited collaboration. Participants viewed this openness ‘from bedside nurse all the way up to attendings ... invites other ideas’ (G7APN) and reduced hierarchy and ego to create conversational entry points for a ‘pause or break to chime in, to share what I’ve been thinking’ (G8N1). One fellow captured this mindset clearly:

You can’t have an ego in this game. I am very comfortable in saying “I don’t know”. I feel that’s the only way I can finally see what I don’t know and hear it, not just tune it out because it wasn’t my idea.

(G11F)

Patterns of seeking input also varied by role. Fellows described it as a safety check, that ‘in stressful situations, you can’t think of everything’ (G5F) and seeking to ensure ‘I wasn’t missing big things’ (G11F). Nurses, in contrast, described inviting input from physicians for improved understanding. By acknowledging they ‘may not be on the same page’ (G6N2), inviting input from physicians fulfilled their desire to close ‘a knowledge gap’ (G2N2). In-person interactions, rather than asynchronous communication, was viewed as critical to fostering nursing input:

Talking in person rather than over text ... we’re prompted to ask more questions.

(G9N1)

3.2 | Evaluating information

Teams emphasized the importance of evaluating information collectively and explicitly, especially in the face of clinical complexity. Recapping emerged as a central pre-action TR behaviour that facilitated shared understanding and team alignment. One fellow acknowledged a missed opportunity: 'I probably gave too many tasks and ... I should have summarized' (G5F). In contrast, effective recapping was described as a tool that 'got us on the same page' (G10A) and helped establish order in the team's thinking.

Beyond coordination, recapping was seen as a strategic pause for processing and recalibration: 'When [fellow] says were going from X to Z and this is why ... and then it's quiet and everyone has a moment to absorb it and sit with it' (G9N1). These instances of brief silence allowed team members to reflect and identify gaps '[It] prompts me to say something when I feel like my mental model is missing' (G5APN). Participants viewed a recap as a focusing point that helped 'clarify tasks and priorities' (G2N1) and align perspectives: '[It] creates that shared mental model' (G9F). Another participant noted how it enabled more democratic decision-making:

In these situations, I could do a monologue ... "Okay this is what we're going to do". I feel like this was more about us talking about it together. We came to a better plan than I would've on my own. (G7F)

These moments of evaluation not only required psychological safety and shared language to occur but also reinforced them. This creates a cycle where clear, collective cognitive sensemaking allowed future reflection to occur more easily and more frequently.

Despite these benefits, participants described a tension between wanting to contribute and fearing they might disrupt clarity. One nurse explained 'I don't just want to be noise' (G9N1) while another hoped to 'further the dialogue rather than just create confusion' (G9N2). This insight highlights that recapping and evaluating were vulnerable acts—participants needed to believe their input would be valued and constructive. When team environments supported this vulnerability, TR behaviours flourished. Without it, evaluative reflection would potentially diminish, reinforcing disengagement.

Two key factors—experience and familiarity—strongly influenced participation in evaluative processes. Prior clinical exposure shaped team members' willingness to speak up: 'what might have gone right or wrong in the past influences your input' (G10A). Experienced nurses were 'very confident in [their] own skills' (G8F) and 'more willing to put your word out' (G8F), as one nurse shared:

Probably just experience. I try not to have too much fear about being wrong ... I have enough trust in [my experience].

(G6N1)

Team familiarity enabled team members to feel more comfortable and confident in contributing to collective situational assessments.

One fellow observed 'the more we are in teams together ... the more input I get' (G8F) and nurses echoed 'I always feel more confident to speak up when I have a personal relationship with somebody' (G2N2) with 'mutual trust and respect' (G3N2). Peer-to-peer support mattered greatly to nurses, 'having another nurse there... someone who's thinking the same way as you' (G2N1). This familiarity fostered mutual trust and sense of cohesion:

You feel a bit of ... unity ... "Okay, we're all here. We can all rely on each other to get this kid where they need to be".

(G9N1)

In this way, pre-action TR behaviours like evaluating information were not isolated acts—they were shaped by interpersonal context and when done effectively, strengthened that context. This appeared to reflect a self-amplifying cycle - deepening familiarity, trust, and more complete shared mental models over time.

3.3 | Planning

A crucial step in transforming collective understanding into coordinated action was clearly articulating plans and priorities. Planning was one of the most frequently discussed domains of TR. Participants described an organic division of labor—with team leaders 'doing a lot of the decision making and thinking about the bigger picture' (G11N2) and nurses focused on execution 'actual things that need to happen to implement [the plans]' (G11N2). This operational focus was described in detail:

I think about what your requests require of our role. You want labs. You want access. You need access that has blood return. How can I make these requests reality? Just trying to figure out how to make the plan reality.

(G5N2)

Effective planning depended on clarity. When team members knew 'explicitly who is going to do what' (G8N1) they could complete tasks in a 'prioritized fashion' (G8N1), reducing ambiguity and increasing confidence. Clear role delineation brought comfort: 'It felt good to have that plan set in motion' (G4RT). These moments not only clarified workflow but reinforced shared mental models - highlighting the interconnected nature of the TR domains.

Participants valued the iterative, back-and-forth communication during planning. Providers would 'toss out an idea' (G4F) with the need 'to get things mobilized' (G4F) while the nurses accomplished resource mobilization: 'we're coordinating that' (G6N2). This reciprocal exchange was foundational to pre-action TR behaviours, reinforcing team interdependence and collaborative action. Structured approaches of 'running head to toe' (G4N2) enabled teams to plan methodically, minimizing oversights and reinforcing a shared cognitive process.

In dynamic clinical environments, teams relied on recapping and input-seeking to adjust priorities in real time. One fellow described new information emerging then ‘allowed us to plan and attend to [new] priorities which was helpful’ (G10F). Collaborative planning helped identify blind spots and gaps in assumptions. During a discussion about vascular access, this benefit of prospective taking was realized:

G3APN: “If he has a port, if it's de-accessed, we still have to get access, and a lot of nurses have never [accessed a port]”

G3F: “That's humbling ... that's not necessarily something I think about too, but that's why planning together seemed useful”

Participants consistently noted that physical proximity and familiarity enhanced planning quality, with being in the same room ‘allows us to get on the same page quicker, allows us to plan ... more efficiently’ (G7F). Similarly, planning for contingencies with active input from team members was common ‘in anticipating what's coming ... “if this happens, then we'll do this. If not, we'll do that”’ (G10N1). These observations reinforce the cyclical nature of pre-action TR behaviours—planning requires coordination and trust but also enriches those very qualities through the act of planning itself.

4 | DISCUSSION

Our study demonstrates that pre-action TR behaviours—such as inviting input, recapping and collaborative planning—not only improve team readiness for complex, ambiguous, dynamic patient care but also reinforce the very conditions that make those behaviours possible. Trust, psychological safety, and putting ego aside: pre-action TR behaviours depend on these elements to take root. However, pre-action TR behaviours also enrich that same environment by flattening hierarchies, encouraging engagement and deepening connection. This dynamic illustrates TR's self-reinforcing potential.

Our findings extend prior work on voice behaviour, which is the voluntary sharing of ideas or concerns to improve how a team or organization functions.^{20,21} As an important prerequisite for voice behaviour, team leaders helped establish psychologically safe environments by inviting input, expressing humility and uncertainty: behaviours that encouraged open dialogue and speaking up. Our work also highlights how creating shared mental models has slightly different impacts on various professional groups. While physicians and APNs tended to focus on big picture planning, nurses and respiratory therapists translated strategy into action, emphasizing immediate task-oriented implications. Thus, our findings build on an existing literature base and amplify the utility of team huddles by clarifying their benefits through a mechanistic lens of team reflection.

Participants in this study described persistent hesitation to share their input in multidisciplinary groups, in line with longstanding calls to improve healthcare teams' psychological safety^{22,23}—a shared belief held by members of a team that the team is safe for interpersonal risk taking.²⁴ This reluctance to engage in productive voice behaviour,

often tied to perceived status differences and hierarchy,^{20,24–27} was especially pronounced across intergroup boundaries.^{28,29} However, participants emphasized that explicit invitations to contribute served as effective signals of inclusivity, supporting previous findings that inclusive leadership encourages team members to speak up.^{20,30} Such invitations enabled team members to share unique perspectives, contributing to a more complete assessment of patient needs. The result is a development of shared mental models which enhances team performance^{31,32}—but only when those models are both accurate and aligned across team members with appropriate coordination of tasks and roles.³³ This alignment is fostered through specific pre-action TR behaviours such as recapping, information sharing and clarifying plans in a stepwise fashion.

Participants highlighted the value of in-person huddles to facilitate rapid alignment and efficient planning. These findings are consistent with previous work showing that face-to-face huddles reduce hierarchical barriers, enhance safety/safety climate and improve staff satisfaction.^{34,35} Many participants voiced a preference for huddles particularly for high-acuity patients, reinforcing the benefits of pre-action TR behaviours on coordinated team performance during high-workload conditions.³³

4.1 | Clinical implications

The need for teams to train together is well established,³⁶ as it improves clinical outcomes.^{37,38} Our study supports the value of simulation-based huddle training to promote familiarity and relational coordination.^{39,40} Participants reported that exposure to team members improved their willingness to speak up, and pre-action TR behaviours provided insight into how others think—fostering perspective taking, social coordination and team member sharing. Training teams in huddle scenarios with explicit pre-action TR behaviour training may enhance this familiarity and subsequent team member sharing.^{41,42}

Our use of SPQI^{15,16} allowed for a candid exploration of how teams experience pre-action TR and discuss potentially sensitive topics such as hierarchy, work environment, and team member trust. Importantly, these simulations surfaced team dynamics that might otherwise remain hidden and offered a valuable format to examine pre-action TR behaviours in real time. Integrating pre-action TR behaviours explicitly into simulation curricula may help prepare physicians-in-training for leadership roles, addressing known gaps in current education models.⁴³ Doing so could better equip critical care teams to function adaptively and collaboratively. While physicians and APNs often serve as team leaders, these behaviours may create conditions for nurses and other bedside staff to contribute their expertise for optimal patient care and prepare critical care teams for real-world practice.⁴⁴

4.2 | Limitations

This single-centre qualitative study offers rich contextual insight in both the paediatric intensive care unit and emergency room settings

but is not intended to be generalizable. However, the academic medical centre studied draws trainees and faculty from diverse institutions across North America, promoting transferability⁴⁵ of our findings and readers should evaluate if our findings apply in their clinical context.

RM had professional relationships with nearly all participants, which may have influenced data collection: these prior relationships may have enhanced rapport and openness during the FG; however, clear role clarification positioning RM as a researcher was also required to promote genuine reflection. While one-on-one interviews might have yielded deeper, more open individual insights, FGs better captured the real-time dynamics of team members reflecting on each other's behaviours and building on these reflections. We consider this a strength as collective reflection is a hallmark of TR.

Our deductive-then-inductive approach, done because of the existing theoretical TR framework, supported structure analysis but may have constrained emergent theme development. Although TuRBO was designed for in-action TR, its conceptual model was relevant for exploring pre-action contexts.¹²

Data were collected in 2021; though core challenges like ambiguity, hierarchy, and psychological safety remain, institutional norms may have evolved. Future work should examine how TR varies across settings, cultures, and team structures. We did not stratify participants by equity-related demographics; future studies could explore how diverse backgrounds influence TR engagement.

5 | CONCLUSION

Team huddles help prepare for the arrival of critically ill patients in acute care settings. Pre-action TR behaviours during this planning phase may promote team engagement and enhance team function by (a) fostering psychological safety and reducing barriers for sharing input, (b) facilitating inclusive leadership, (c) supporting the development of shared mental models, and (d) enabling efficient and explicit care planning. Importantly, pre-action TR behaviours may serve as a vehicle to amplify positive team dynamics but may falter without them. Therefore, incorporating pre-action TR behaviours into huddles can support team-based training environments in simulation-based education or active practice. Pre-action TR behaviour training embedded into curricula may positively influence how we train future health professionals to lead teams inclusively and effectively. Future work should explore the measurable impact of pre-action TR behaviours on team performance and patient outcomes.

AUTHOR CONTRIBUTIONS

RM conceptualized the study, collected, analyzed, and interpreted the data, drafted and revised the manuscript, gave final approval and agreed to be accountable for all aspects of the work. MM, JBS and MA substantially contributed to the study design, critically revised the manuscript, gave final approval and agreed to be accountable for all aspects of the work. WE substantially contributed to study design, analysis and interpretation of data, critically revised the manuscript, gave final approval and agreed to be accountable for all aspects of the work.

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CONFLICT OF INTEREST STATEMENT

The authors have no conflicts of interest to disclose.

DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available on request from the corresponding author. The data are not publicly available due to privacy or ethical restrictions.

ETHICS STATEMENT

This study was approved as exempt by the Ann & Robert H. Lurie Children's Hospital of Chicago IRB, January 2021 (#2021-4020).

OTHER DISCLOSURES

Dr. Eppich serves on faculty at the Harvard Center for Medical Simulation (CMS), PAEDSIM e. V, and The Debriefing Academy for which he receives per diem honoraria. Dr. Schmutz serves on faculty at PAEDSIM e. V and The Debriefing Academy for which he receives per diem honoraria.

PREVIOUS PRESENTATIONS

This study was presented at the Society of Critical Care Medicine 2022 Congress (virtual) and Association of Paediatric Program Directors annual Spring meeting; April 18, 2024; Chicago, IL.

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REFERENCES

1. Plint AC, Newton AS, Stang A, et al. How safe are paediatric emergency departments? A national prospective cohort study. *BMJ Qual Saf.* 2022;31(11):806-817. doi:[10.1136/bmjqs-2021-014608](https://doi.org/10.1136/bmjqs-2021-014608)
2. Manser T. Teamwork and patient safety in dynamic domains of healthcare: a review of the literature. *Acta Anaesthesiol Scand.* 2009; 53(2):143-151. doi:[10.1111/j.1399-6576.2008.01717.x](https://doi.org/10.1111/j.1399-6576.2008.01717.x)
3. Schmutz JB, Meier LL, Manser T. How effective is teamwork really? The relationship between teamwork and performance in healthcare team: a systematic review and meta-analysis. *BMJ Open.* 2019;9(9): e028280. doi:[10.1136/bmjopen-2018-028280](https://doi.org/10.1136/bmjopen-2018-028280)
4. Peerally MF, Carr S, Waring J, Dixon-Woods M. The problem with root cause analysis. *BMJ Qual Saf.* 2017;26(5):417-422. doi:[10.1136/bmjqs-2016-005511](https://doi.org/10.1136/bmjqs-2016-005511)
5. Roese NJ, Vohs KD. Hindsight bias. *Perspect Psychol Sci.* 2012;7(5): 411-426. doi:[10.1177/1745691612454303](https://doi.org/10.1177/1745691612454303)
6. Dixon-Woods M, McNicol S, Martin G. Ten challenges in improving quality in healthcare: lessons from the Health Foundation's programme evaluations and relevant literature. *BMJ Qual Saf.* 2012; 21(10):876-884. doi:[10.1136/bmjqs-2011-000760](https://doi.org/10.1136/bmjqs-2011-000760)
7. Haynes AB, Weiser TG, Berry WR, et al. A surgical safety checklist to reduce morbidity and mortality in a global population. *N Engl J Med.* 2009;360(5):491-499. doi:[10.1056/NEJMs0810119](https://doi.org/10.1056/NEJMs0810119)

8. West MA. Reflexivity, revolution and innovation in work teams. In: *Product development teams*. Jai Press; 2000:1-29.
9. Konradt U, Otte KP, Schippers MC, Steenfatt C. Reflexivity in teams: a review and new perspectives. *J Psychol*. 2016;150(2):53-174. doi:10.1080/00223980.2015.1050977
10. Schmutz JB, Lei Z, Eppich WJ, Manser T. Reflection in the heat of the moment: the role of in-action team reflexivity in health care emergency teams. *J Organ Behav*. 2018;39(6):749-765. doi:10.1002/job.2299
11. Schmutz JB, Lei Z, Eppich WJ. Reflection on the fly: development of the team reflection behavioral observation (TuRBO) system for acute care teams. *Acad Med*. 2021;96(9):1337-1345. doi:10.1097/ACM.00000000000004105
12. Schmutz JB, Eppich WJ. Promoting learning and patient care through shared reflection: a conceptual framework for team reflexivity in health care. *Acad Med*. 2017;92(11):1555-1563. doi:10.1097/ACM.0000000000001688
13. Martin HA, Ciurzynski SM. Situation, background, assessment, and recommendation-guided huddles improve communication and teamwork in the emergency department. *J Emerg Nurs*. 2015;41(6):484-488. doi:10.1016/j.jen.2015.05.017
14. Phadnis J, Templeton-Ward O. Inadequate preoperative team briefings lead to more intraoperative adverse events. *J Patient Saf*. 2018;14(2):82-86. doi:10.1097/PTS.0000000000000181
15. Wong AH, Tiyyagura GK, Dodington JM, Hawkins B, Hersey D, Auerbach MA. Facilitating tough conversations: using an innovative simulation-primed qualitative inquiry in pediatric research. *Acad Pediatr*. 2017;17(8):807-813. doi:10.1016/j.acap.2017.06.007
16. Pack R, Columbus L, Duncliffe TH, et al. "Maybe I'm not that approachable": using simulation to elicit team leaders' perceptions of their role in facilitating speaking up behaviors. *Adv Simul*. 2022;7(1):31. doi:10.1186/s41077-022-00227-y
17. Bunniss S, Kelly DR. Research paradigms in medical education research. *Med Educ*. 2010;44(4):358-366. doi:10.1111/j.1365-2923.2009.03611.x
18. Kiger ME, Varpio L. Thematic analysis of qualitative data: AMEE guide no. 131. *Med Teach*. 2020;42(8):846-854. doi:10.1080/0142159X.2020.1755030
19. Braun V, Clarke V. *Thematic Analysis: A Practical Guide*. SAGE Publications Ltd; 2021.
20. Edmondson AC, Besieux T. Reflections: voice and silence in workplace conversations. *J Change Manag*. 2021;21(3):269-286. doi:10.1080/14697017.2021.1928910
21. Weiss M, Kolbe M, Grote G, Spahn R, Grande B. We can do it! Inclusive leader language promotes voice behavior in multi-professional teams. *Leadersh Q*. 2018;29(3):389-402. doi:10.1016/j.leaqua.2017.09.002
22. Weller J, Boyd M, Cumin D. Teams, tribes and patient safety: overcoming barriers to effective teamwork in healthcare. *Postgrad Med J*. 2014;90(1061):149-154. doi:10.1136/postgradmedj-2012-131168
23. O'Donovan R, McAuliffe E. Exploring psychological safety in healthcare teams to inform the development of interventions: combining observational, survey and interview data. *BMC Health Serv Res*. 2020;20(1):810. doi:10.1186/s12913-020-05646-z
24. Edmondson A. Psychological safety and learning behavior in work teams. *Adm Sci Q*. 1999;44:350-383. doi:10.2307/2666999
25. Mitchell R, Boyle B, Parker V, Giles M, Chiang V, Joyce P. Managing inclusiveness and diversity in teams: how leader inclusiveness affects performance through status and team identity. *Hum Resour Manage*. 2015;54(2):217-239. doi:10.1002/hrm.21658
26. Friedman Z, Hayter MA, Everett TC, Matava CT, Noble LM, Bould MD. Power and conflict: the effect of a superior's interpersonal behaviour on trainees' ability to challenge authority during a simulated airway emergency. *Anaesthesia*. 2015;70(10):1119-1129. doi:10.1111/anae.13191
27. Schwappach DL, Gehring K. Trade-offs between voice and silence: a qualitative exploration of oncology staff's decisions to speak up about safety concerns. *BMC Health Serv Res*. 2014;14(1):303. doi:10.1186/1472-6963-14-303
28. Bochatay N, Bajwa NM, Blondon KS, Junod Perron N, Cullati S, Nendaz MR. Exploring group boundaries and conflicts: a social identity theory perspective. *Med Educ*. 2019;53(8):799-807. doi:10.1111/medu.13881
29. Burford B. Group processes in medical education: learning from social identity theory. *Med Educ*. 2012;46(2):143-152. doi:10.1111/j.1365-2923.2011.04099.x
30. Nemphard IM, Edmondson AC. Making it safe: the effects of leader inclusiveness and professional status on psychological safety and improvement efforts in health care teams. *J Organ Behav*. 2006;27(7):941-966. doi:10.1002/job.413
31. Burtcher MJ, Kolbe M, Wacker J, Manser T. Interactions of team mental models and monitoring behaviors predict team performance in simulated anesthesia inductions. *J Exp Psychol Appl*. 2011;17(3):257-269. doi:10.1037/a0025148
32. Westli HK, Johnsen BH, Eid J, Rasten I, Brattebø G. Teamwork skills, shared mental models, and performance in simulated trauma teams: an independent group design. *Scand J Trauma Resusc Emerg Med*. 2010;18:47. doi:10.1186/1757-7241-18-47
33. Stout RJ, Cannon-Bower JA, Salas E, Milanovich DM. Planning, shared mental models, and coordinated performance: an empiric link is established. *Hum Factors*. 1999;41:61. doi:10.1518/001872099779577273
34. Pimentel CB, Snow AL, Carnes SL, et al. Huddles and their effectiveness at the frontlines of clinical care: a scoping review. *J Gen Intern Med*. 2021;36(9):2772-2783. doi:10.1007/s11606-021-06632-9
35. Glymph DC, Olenick M, Barbera S, Brown EL, Prestianni L, Miller C. Healthcare utilizing deliberate discussion linking events (HUDDLE): a systematic review. *AANA J*. 2015;83(3):183-188.
36. Institute of Medicine (US) Committee on Quality of Health Care in America. In: Kohn LT, Corrigan JM, Donaldson MS, eds. *To Err Is Human: Building a Safer Health System*. National Academies Press (US); 2000.
37. Meriën AER, van de Ven J, Mol BW, Houterman S, Oei SG. Multidisciplinary team training in a simulation setting for acute obstetric emergencies: a systematic review. *Obstet Gynecol*. 2010;115(5):1021-1031. doi:10.1097/AOG.0b013e3181d9f4cd
38. Neily J, Mills PD, Young-Xu Y, et al. Association between implementation of a medical team training program and surgical mortality. *JAMA*. 2010;304(15):1693-1700. doi:10.1001/jama.2010.1506
39. Purdy E, Borchert L, El-Bitar A, Isaacson W, Bills L, Brazil V. Taking simulation out of its "safe container"—exploring the bidirectional impacts of psychological safety and simulation in an emergency department. *Adv Simul (Lond)*. 2022;7(1):5. doi:10.1186/s41077-022-00201-8
40. Bolton R, Logan C, Gittell JH. Revisiting relational coordination: a systematic review. *J Appl Behav Sci*. 2021;57(3):290-322. doi:10.1177/0021886321991597
41. Pettigrew TF, Tropp LR. A meta-analytic test of intergroup contact theory. *J Pers Soc Psychol*. 2006;90(5):751-783. doi:10.1037/0022-3514.90.5.751
42. Galinsky AD, Ku G, Wang CS. Perspective-taking and self-other overlap: fostering social bonds and facilitating social coordination. *Group Process Intergrat Relat*. 2005;8(2):109-124. doi:10.1177/1368430205051060
43. Sadowski B, Cantrell S, Barelski A, O'Malley PG, Hartzell JD. Leadership training in graduate medical education: a systematic review. *J Grad Med Educ*. 2018;10(2):134-148. doi:10.4300/JGME-D-17-00194.1

44. Schmutz JB, Kolbe M, Eppich WJ. Twelve tips for integrating team reflexivity into your simulation-based team training. *Med Teach*. 2018;40(7):721-727. doi:[10.1080/0142159X.2018.1464135](https://doi.org/10.1080/0142159X.2018.1464135)
45. Stalmeijer RE, Brown MEL, O'Brien BC. How to discuss transferability of qualitative research in health professions education. *Clin Teach*. 2024;21(6):e13762. doi:[10.1111/tct.13762](https://doi.org/10.1111/tct.13762)

SUPPORTING INFORMATION

Additional supporting information can be found online in the Supporting Information section at the end of this article.

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