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ABSTRACT

Aim: To explore clinician perceived barriers to and facilitators for the provision of actionable processes of care important for patients with persistent or chronic critical illness.

Design: Qualitative descriptive interview study.

Methods: Secondary analysis of semi-structured telephone interviews (December 2018 – February 2019) with professionally diverse clinicians working with adults experiencing persistent or chronic critical illness in Canadian intensive care units. We used deductive content analysis informed by the Social-Ecological Model.

Results: We recruited 31 participants from intensive care units across nine Canadian provinces. Reported intrapersonal level barriers to the provision of actionable processes of care included lack of training, negative emotions, and challenges prioritizing these patients. Facilitators included establishment of positive relations and trust with patients and family. Interpersonal barriers included communication difficulties, limited access to physicians, and conflict. Facilitators included communication support, time spent with the patient/family, and conflict management. Institutional barriers comprised inappropriate care processes, inadequate resources, and disruptive environmental conditions. Facilitators were regular team rounds, appropriate staffing, and employment of a primary care (nurse and/or physician) model. Community level barriers included inappropriate care location and insufficient transition support. Facilitators were access to alternate care sites/teams and to formalized transition support. Public policy level barriers

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included inadequacy of formal education programs for the care of these patients; knowledge implementation for patient management was identified as a facilitator.

Conclusion: Our results highlighted multilevel barriers and facilitators to the delivery of actionable processes important for quality care for patient/family experiencing persistent or chronic critical illness.

Impact: Using the Social Ecological Model, the results of this study provide intra and interpersonal, institutional, community, and policy level barriers to address and facilitators to harness to improve the care of patients/family experiencing persistent or chronic critical illness.

Reporting Method: Consolidated criteria for reporting qualitative studies.

Patient or Public Contribution: No patient or public contribution.

Keywords: Barriers, Facilitators, Nursing Care, Persistent critical illness, Chronic critical illness, Qualitative, Social Ecological Model

What does this paper contribute to the wider global clinical community?

- This paper provides professionally diverse critical care clinician identified multi-level barriers and facilitators to the delivery of actionable processes to improve the care of patients and family with persistent or chronic critical illness.

INTRODUCTION

Up to 10% of intensive care unit (ICU) patients experience persistent or chronic critical illness (P/CCI). This comprises ongoing organ dysfunction, prolonged dependence on mechanical ventilation, and the need for tracheostomy (Iwashyna et al., 2016; Kahn et al., 2015). Patients experiencing P/CCI have unique and complex care needs that differ from those of the acutely critically ill. Meeting these care needs requires the identification of care processes that are specific to these physical, emotional, and social needs and experiences. There is a lack of quality improvement tools to inform the care of patients with P/CCI. Existing measures of ICU care quality and tools such as checklists are not sufficiently inclusive of actionable processes of care relevant to patients experiencing P/CCI nor have they been developed with patient and family input (Allum et al., 2022). A better understanding is therefore needed among ICU decision-makers about how to best deliver and organize processes to enable high quality patient and family focused care for P/CCI patients and their family members.

Background

Actionable processes of care include interventions for which ICU nurses and interprofessional team members have control over their delivery, for example, using a protocol to guide weaning from invasive mechanical ventilation (Amaral, 2015). Changing patient care practices in ICU can be challenging. Research that identifies key facilitators/barriers to innovation is recommended to support broad and effective implementation (Parmar et al., 2022). An interprofessional approach is recommended to ensure successful implementation and sustained practice change (Rose, 2011). It is, therefore, important for nurses and all

interprofessional team members to be aware of actionable processes of care relevant to P/CCI patients and drivers for their implementation.

The Study

This study is part of a larger research programme aimed at developing tools and strategies to improve the experiences and outcomes of P/CCI patients and their families (Rose, Allum, et al., 2022; Rose et al., 2019; Rose, Istanbulian, et al., 2022). Our previous systematic review identified 42 distinct actionable processes of care for patients with P/CCI of potential relevance (Rose et al., 2019). Data from qualitative interviews we conducted with 29 patient and family members in Canada and the UK identified nine actionable processes of care of importance to them (Rose, Allum, et al., 2022). We then conducted interviews with ICU clinicians (December 2018– February 2019) that contributed to a total of 47 actionable processes of care. Following these interviews, we conducted a consensus process with 138 ICU clinician, patients, and family member participants to prioritize the top actionable processes of care from the list of 47 for inclusion in a quality improvement checklist (Rose, Istanbulian, et al., 2022). We obtained consensus on 11 core domains: patient and family involvement in decision-making; patient communication; physical comfort and complication prevention; promoting self-care and normalcy; ventilator weaning; physical therapy; swallowing; pharmacotherapy; psychological issues; delirium; and appropriate referrals (Rose, Istanbulian, et al., 2022). We subsequently conducted this secondary analysis of the clinician interviews applying a multi-level ecological framework (i.e., Social-Ecological Model) (McLeroy et al., 1988) to better understand drivers (i.e., barriers and facilitators) to implementation of these care processes.

Aim

Our aim was to explore clinician perceived barriers to and facilitators for the provision of actionable processes of care perceived as important for patients with P/CCI using the Social-Ecological Model.

METHODS

Design

We conducted a qualitative descriptive study. This approach aims to understand care processes through participants' descriptions and use this knowledge to improve those processes (Bradshaw et al., 2017). As a low inference approach, qualitative description can be flexibly paired with an existing theory or framework to enhance study design.

Model

Our analysis was guided by the Social-Ecological Model (McLeroy et al., 1988). Proposed by McLeroy et al., the Social-Ecological Model focusses attention on individual and environmental determinant factors that interact and reinforce specific outcomes including intrapersonal, interpersonal, institutional, community and public policy factors. The model is frequently used to better understand and target challenges in the uptake of health interventions (McLeroy et al., 1988).

Study Setting and Recruitment

We used a multi-modal and purposive recruitment strategy. To achieve variation in profession and years of ICU experience, as well as representation from numerous ICUs across Canada, we used the following strategies: social media (i.e., Twitter), recruitment flyers via relevant charity/organization websites, and snowballing methods. We continued to recruit participants until we perceived our recruitment targets were met in terms of variation in participant characteristics and had achieved sufficient information power for our relatively narrowly focused study aim and the specificity of our study participants (Malterud et al., 2016).

Inclusion/Exclusion Criteria

Our inclusion criteria comprised (1) all direct team care team members and managers currently practicing or employed in an ICU requiring management of P/CCI patients; (2) more than one year of ICU experience; and (3) informed consent. There were no exclusion criteria.

Data Collection

Following informed consent, two authors (LR/LI) conducted telephone interviews using a semi-structured interview guide (See Supplementary File 1) developed iteratively by the research team. LR is a Nursing Professor and LI was a PhD student and practicing Nurse Practitioner at the time of interview conduct. Both interviewers identify as women and have qualitative interview experience. The interview guide was piloted during the first two interviews which confirmed no changes were required. Interviews were between 16 and 50 minutes (average 30

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minutes), digitally recorded, and transcribed by a professional transcription company. No repeat interviews were conducted.

Preliminary discussions prior to interview commencement were used to establish a relationship with each participant. Some participants were previously known to the interviewers. Notes were made on participant reactions to questions, responses, meaningful pauses, and reflections not otherwise captured by the digital recording or transcription. The research team has extensive experience with patients experiencing P/CCI and engaged in reflexive discussions during the data collection period.

Data Analysis

We used a team-based directed content analysis (Assarroudi et al., 2018). During the organisation phase, three researchers (LI, LR, CD) developed a formative categorization matrix informed by the Social-Ecological Model adapted to the ICU environment (See Supplementary File 2) (McLeroy, 1988). We developed a theoretical definition of the main categories and subcategories and determined coding rules. Using independent coding and team discussions to gain consensus, we pre-tested the categorisation matrix, and then together chose anchor samples for each main category. Next, we applied the consensus codes to the dataset, again independently, and met monthly to group codes according to the main categories. Finally, through reflexive group discussion and constant comparison we consolidated the main categories of barriers/facilitators.

Ethical Considerations

Ethics approval for the overall research program was obtained from Michael Garron Hospital (704-1703-Mis-306); Sunnybrook Health Sciences Centre (144-2017), and the University of Toronto (34733). Informed written consent was obtained ahead of interview with assent audio-recorded prior to interview commencement. Participants were referred to by number and profession on data transcripts (e.g., 001, 002, etc.) to preserve anonymity.

Rigor

To enhance the credibility and trustworthiness of the analysis we employed researcher triangulation to confirm or refute categorizations and conclusions. We actively sought out and scrutinized data that do not readily fit the Social-Ecological Model or support evolving data interpretations. In accordance with recommendations for transparent and comprehensive reporting, we used the Consolidated Criteria for Reporting Qualitative Research (COREQ) guidelines to describe our methods and findings (Tong et al., 2007).

FINDINGS

Participant Characteristics

We recruited 31 participants. Of these, 8 (26%) were registered nurses, 18 (58%) were multiprofessional team members (i.e., pharmacist, speech therapist, respiratory therapist, social work, physiotherapist, dietitian), 4 (13%) were physicians, and 1(3%) was a nurse manager.

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Participants were diverse in terms of sex, ICU experience, and geographic location (Table 1). No participant withdrew from the study.

Findings below are organized according to barriers and facilitators within each determinant level of the Social-Ecological Model, substantiated with participant quotes (additional quotes are provided in the Supplementary File 3).

Intrapersonal Level

The Intrapersonal level was defined as individual clinician characteristics such as knowledge, attitudes, behavior, self-concept, skills, etc., impacting care.

Barriers

We identified three categories as perceived barriers to providing quality care at the intrapersonal level: lack of training, negative emotions, and challenges in prioritizing P/CCI patients.

Lack of training in the management of patients with P/CCI was identified across the dataset by a variety of ICU professions:

“I think we're not trained to deal with this type of need of listening and acting on their needs. We are basically trained to take over because they're acutely sick and get them better, and then get them out, and then get new ones in.” (Pharmacist, 015)

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Participants explained how existing training prioritized care and outcomes of acutely critically ill patients. As a result, participants reported multiple negative and disruptive reactions associated with caring for P/CCI patients and family. These included physical and mental exhaustion, frustration with lack of progress, despair, and perceived hopelessness in relation to patient prognosis.

Participants expressed that working with P/CCI patients did not provide them with the same satisfaction they felt working with acutely critically ill patients.

“They’re physically exhausting and mentally exhausting and they're here for months and you want them to do well but you keep seeing them setting back. It doesn't make for a nice work environment for sure. You don't want to go and see that patient. You'd rather just look away.” (Nurse, 013)

Furthermore, participants reported that P/CCI patients were not their patient population of interest, and that they chose the ICU setting to work with more acutely ill patients.

“I think that can be frustrating because a lot of ICU nurses [didn't chose to] work in ICU because they want to take care of that kind of patient.” (Nurse, 005)

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Some participants reported that P/CCI patients were de-prioritized and that their attention was triaged to acutely unstable or deteriorating patients.

“I'm going to spend the vast majority of my shifts focusing on the acute patient making sure that they're stabilized and will get to the other [P/CCI] patient when I can get to them, kind of. So they're like tack-ons.” (Nurse, 004)

Facilitators

Perceived facilitators at the intrapersonal level included a personal philosophy of acknowledging patient values and experiencing positive emotions through the establishment of trust and rapport. This primarily involved taking the time to get to know the patient and family.

“Bringing it back to that person's values, what did they enjoy about life, and so on and so forth ...” (Social Work, 042)

Participants explained how the establishment of a relationship with the P/CCI patient positively influenced their work satisfaction. To do so they proactively focused on what the patient deemed important for their physical and psychosocial wellbeing, anticipated needs, and determined how best to address them. This focus, in turn, fostered a trusting relationship with the patient/family and a greater degree of work satisfaction.

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“Trust matters because trust is-- if I don't trust you, how can I go into the abyss with you?” (Speech Language Pathology, 018)

Interpersonal Level

The interpersonal level was defined as social and professional interactions between critical care key stakeholders (e.g., HCP, patient, family) impacting care.

Barriers

We identified three categories as perceived barriers to providing quality care at the interpersonal level: patient communication difficulty, perceived lack of engagement by physicians, and conflict with family members. Participants reported difficulty communicating with P/CCI patients that negatively impacted their ability to accurately identify needs and to participate in meaningful communication exchange.

“So, communication is still difficult, and they just tend to be very particular and like things a certain way and sometimes it can be frustrating when you're not doing it the way they want you to do it, or you don't understand what they're saying.” (Nurse, 005)

Perceived lack of engagement by ICU physicians was thought to intensify family member uncertainties about patient recovery, which could manifest in strong emotions and confronting

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encounters. Insufficient dialogue also inhibited understanding ways in which the family could participate in care planning.

“And doctors - I know they're very busy - but I think a lot-- people would prefer-- both patients and family members would prefer more frequent check-ins.” (Speech Language Pathology, 019)

Participants described conflict with family members as “... “horrible, challenging, obtrusive, and demanding (Nurse, 011).” Conflict was exacerbated with prolonged admission.

“Almost every single family is quite shocked when we have folks who end up staying longer than the projected three to four days in the ICU. And then that creates a lot of tension because they feel like they weren't prepared for this. And they're just left shell shocked.” (Nurse, 013)

Facilitators

Perceived facilitators included communication success promoting strategies, access to and time spent with physicians, and practicing conflict management. The need for consistency in the strategies provided to patients with P/CCI to facilitate communication was expressed as a facilitator for quality care.

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“I feel like the overall goal [is to] have them on some sort of consistent communication system. And then we also try to do ... one-way speaking valves.” (Speech Language Pathology, 026)

The above participant explained how consistent use of advanced and alternative communication tools for patients with advanced airways, such as speaking valves, enhanced two-way communication and patient engagement in their own care. In addition, participants explained how time spent communicating with the patient and family conferred significant benefits including opportunities to dissipate ill feelings, build rapport, and provide answers to concerns or questions. Both routine and ad hoc communication encounters were deemed therapeutic and meaningful to develop and maintain trust and to pre-emptively manage conflict.

“Time can encompass anything, whether it is standing by the ventilator and playing with the ventilator to appropriately wean them or it's to simply just talk to the family and tell them what's going to happen ... but I believe that the chronic patient that's probably one of the most important things that they need.” (Respiratory Therapy, 001)

Institutional Level

The institutional level was defined as ICU level (e.g., formal processes of care), hospital characteristics, rules, and regulations impacting care.

Barriers

We identified four categories as perceived barriers to providing quality care for patients with P/CCI at the institutional level. These included inappropriate processes of care (defined as routines not tailored to their specific needs and/or preferences), inadequate resources, and disruptive environmental conditions. Inappropriate processes of care included clinical documentation that lacked integration between different ICU professions. Lack of documented integration of care plans for patients with P/CCI was perceived to negatively impact the delivery of quality care.

“So, for example, the respiratory therapist can make their own note. The nurses can make their own note. But then, it doesn't populate into the same column. So sometimes, it populates into different sections of the chart, and it becomes-- to me, it's just a very big jumbled mess.” (Respiratory Therapy, 032)

Inappropriate processes of care for P/CCI patients also include family meetings which were felt by participants to be too infrequent for the needs of the care team, patients, and family.

“And so, patients like that will go weeks and weeks without a family meeting, without an update.” (Nurse, 004)

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Inadequate resources included insufficient staffing. Participants noted that additional personnel allocation in ICU would permit them to carry out processes of care (e.g., supporting communication needs) that they felt were important to patients and family experiencing P/CCI. Participants also reported that staffing models that included higher nurse-to-patient ratios were also not suitable for the provision of quality care to patients and family with P/CCI and further may place them at risk for inadequate fundamental care. ICUs typically have nurse – to -patient ratios of one: one for acute patients. For patients with less acute needs, the ratio can be less, two or three: one, for example. This ratio for less acute patients can be problematic if nurses have a less acute patient and a more acute patient who suddenly deteriorate.

“I've been on the end of it where you're a lot of the time the chronic patients are paired up with another-- a lot of the times, there are a two-patient assignment type thing. So, if your other patient starts crashing then sorry, the care plan ends up going out the window type thing too.” (Nurse, 002)

Inadequate resources also included lack of access to tools such as communication boards for non-vocal patients. These tools could be used to carry out symptom assessments, support participation in care, and decision making.

“I think ICU might have a pain scale and some basic pictures for patients to point to. But I think we could probably have something more official that might be more appropriate.” (Speech Language Pathology, 025)

Finally, participants reported that environmental conditions such as excessive noise and light at night, when more acute patients are receiving urgent care prevented sleep and therefore negatively impacts P/CCI patients.

“The main ICU is built ... lots of the patients will be next to each other without walls. So, there's lots of noise. Lights are being put on at night.” (Pharmacist, 034)

Facilitators

Facilitator categories relating to the institutional and/or unit level comprised supportive processes of care, adequate resourcing, and policies that support quality care for patients and family experiencing P/CCI. Supportive processes of care included proactive multi-professional care coordination activities and those processes aimed at improving care continuity. These were thought to be especially important for P/CCI patients who often have multiple care plans and priorities that need to be coordinated. Rounding as a team was reported to facilitate care coordination.

“So once a week we have what we call transition care rounds, and those rounds are focused on our longer-stay patients because our daily rounds, which involved the patients and families, have more bullet rounds, and they're goal focused.” (Manager, 037)

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Family inclusion at rounds and in day-to-day activities as a standard process of care for patients experiencing P/CCI was also a reported facilitator, as this was viewed to promote goal concordance between the team, patient, and family.

“...we round with families, and we sort of let the families know-- we summarize at the end of the case. "This is what we discussed, this is what we agreed upon, this is what we hope to achieve the next 24 hours."” (Physician, 036)

Processes of care aimed at de-medicalization and de-prescribing were reported as facilitators for the provision of quality care for patients with P/CCI. This included removal of invasive lines, discontinuing daily bloodwork, reducing frequency of vital sign surveillance, and optimization of medications to a regimen more suited to P/CCI as opposed to an acute ICU patient.

“So, for me, de-prescribing is a really big key. And ... optimizing therapies for patients, making sure that they are on what they should be on or they're not on what they shouldn't be on.” (Pharmacist, 024)

A protocolized approach to weaning was also viewed as a facilitative care process for ventilation of P/CCI patients. One participant described a weaning approach used with patients with P/CCI.

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“When they become more on the chronic side, we go a little bit slower, even to the point of doing one hour a day to two hours a day to three hours a day and keep increasing that until they could meet that 24 hours.” (Respiratory Therapist, 001)

Participants described how care processes that promoted the establishment of normalcy, and a routine were facilitators of quality care for patients with P/CCI.

“I think just a big thing is establishing a good routine. They like to get their sleep meds at this time so that they can fall asleep at this time, and wake up at this time and then when they wake up they like to get up in the chair right away or they like to wait until the afternoon to get up in the chair ...” (Nurse, 005)

The establishment of a primary nurse and/or primary physician model was a considered as a facilitator for provision of actionable processes of care important for patients with P/CCI. Participants reported that this would allow the staff to get to know and develop a rapport with patients and family members and be able to provide more humanistic care.

“And in a lot of cases they almost benefit from a sort of constant primary nurse, one who knows them well and all their little idiosyncrasies and the things that they like, because most of our long-term patients that have been there, they just like things a certain way, I guess, to keep them sane.” (Nurse, 011)

Finally, having open and flexible visiting policies for family was reported as a facilitator.

“But with some [persistent or chronic] critically ill patients, we would be a little bit more flexible and let the family stay and just close the door or something.” (Nurse, 005)

Community Level

The community level was defined as relationships among organizations, institutions, and informal networks within defined boundaries impacting care.

Barriers

Barrier categories at the community level included inappropriate care location and insufficient transition support. Participants representing multiple professions considered the ICU to be the “wrong place” ((Respiratory Therapist, 001) for patients with P/CCI. One participant described the difficulty for staff in ICU to concurrently care for patients experiencing P/CCI.

“I honestly think it should be a different team of people. I think part of the problem is that it's unrealistic to expect a group of health care providers who are finely attuned to dealing with life and death emergencies in a continuous fashion to then scale back, and

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scale down, and switch gears to take on these patients who have, generally speaking, none of these things.” (Physician, 036)

In addition to a lack of alternate care locations or specialized teams, participants perceived insufficient transition support that resulted in the patient/family to be ill-prepared to assume complex care requirements at home, including but not limited to tracheostomy care and management of home mechanical ventilation.

“Because when they go home and you're not there, that's a big shock to them also, because they've become accustomed to having 24-hour care. So now you go home and it's just them. And they say to themselves ... "Oh, crap, what am I going to do if something happens? I don't have the help. I'm going to panic." And that's a very rational fear.”
(Respiratory Therapist, 001)

Facilitators

Community level facilitators conversely included the presence of alternate care locations/models of care and appropriate transition support. One participant described the need for a dedicated team who are interested in caring for patients with P/CCI.

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“The question is can we train a core group of people, health care providers who are interested in people who have these problems, interested in caring for them ...”

(Physician, 036)

Participants reported the need for additional discharge locations such as regional weaning and long-term ventilation centres to transfer patients. Others reported that access to information about these centres and rehabilitation facilities can improve the transition experience.

“We could do a lot better with linking with people's websites and develop their own virtual-tour-type thing. I mean, we're very good at that with real estate now.” (Social

Worker, 042)

Public Policy Level

The public policy level was defined as local, state, national, and global laws and policies governing care.

Barrier

Only one subcategory – inadequacy of formal education programs for patients with P/CCI - was identified as a barrier at the public policy level. The lack of emphasis on P/CCI in

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clinical educational curricula and/or standards for critical care was thought to contribute to the knowledge gaps identified at the intrapersonal level, interpersonal, and institutional levels.

“But then I don't think we spend enough time I guess in our training overall on those that become more chronic.” (Pharmacist, 015)

In expanding on this point, participants explained how the lack of emphasis on P/CCI in educational curricula and standards delegitimized the importance of these patients and opportunities to enhance their quality of care.

Facilitator

Only one subcategory – knowledge implementation for management of care needs for patients with P/CCI - was identified as a facilitator at the public policy level. Participants reported that funding for implementation, quality improvement, and more research to manage P/CCI is an important facilitator for the provision of actionable processes of care.

“We can do [better] to prevent a lot of these things from happening. So, all the issues around infections. All the issues around delirium. So, weaning. I think these are all things that we need to think of trying to find ways that we can prevent these issues from happening because we're really not that good at treating them ... so, we need to find strategies and try to plan ways of preventing these problems.” (Pharmacist, 034)

DISCUSSION

At each level of the Social-Ecological Model, we identified barriers and facilitators reported by professionally diverse clinicians for the provision of quality care for patients and family with P/CCI. Reported barriers included lack of training specific to the management of these patients, negative emotions, challenges prioritizing their care needs, patient communication difficulties, limited access to physicians, and conflict inappropriate care processes, inadequate resources, disruptive environmental conditions (e.g., bright lights), inappropriate care location, inadequate transition support, and inadequacy of formal education curricula. Facilitators included establishment of positive relations and trust, communication support, spending time with patient/family, conflict management, regular team rounds, using a primary model of care, availability of alternative care locations, formalized transition support, and funding for implementation, quality improvement, and more research to manage P/CCI.

Intrapersonal Level

Participants in this study reported that they themselves had no training relating to the unique needs of P/CCI patients and family. Critical care training instead was perceived to be exclusively geared towards the needs of patients with higher acuity and shorter admissions. Patients with P/CCI were considered ‘tack-ons’ and because of their long admission with slow to

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no improvement participants described them as emotionally laborious. At the intrapersonal level, feeling ill prepared to manage the needs or expectation of patients and family with P/CCI may contribute to moral distress (Mealer & Moss, 2016) and burn out (Costa & Moss, 2018) among ICU clinicians. When confronted with these stressful situations, clinicians may feel powerless, unable to provide care according to their own belief system, and therefore prone to develop moral distress (Mealer & Moss, 2016). Burnout is typified by three symptoms—emotional exhaustion, depersonalization, and reduced personal accomplishment and presents when there are divergences between one's own expectations of oneself and one's role and employer/organizational expectations of one's role (Costa & Moss, 2018). As indicated in this study and others, downstream negative impacts of moral distress and burnout can translate beyond the staff involved and impact patient care (Costa & Moss, 2018; Mealer & Moss, 2016).

Interpersonal Level

At the interpersonal level, participants reported challenges communicating with patients and family with P/CCI. Participants also reported that there was often conflict with families, attributing this to tensions associated with the shock of a longer than expected admissions. Conditions in the ICU including ambient noise and light, lack of privacy, sedation, illness, and isolation can exacerbate anxiety and fears which can manifest physically as agitation, and socially as mistrust of care teams (Schroeder et al., 2021). As recognised by our participants, therapeutic communication (Dinoso & Baudoin, 2023) and allocating appropriate time improves relations between patients family and care teams and can prevent conflict (Schroeder et al., 2021).

Institutional Level

A lack of collaboration in setting goals and plans of care was described by participants of this study as a barrier to the provision of quality care. Examples cited included a need for collaborative documentation methods and shared goal setting meetings to ensure care plans designed by all team members were aligned. Furthermore, participants endorsed the need for P/CCI patients and families to be consulted when goals and care planning. In an ethnographic study of information sharing in an adult ICU, Boltey et al. (2022) explain that supporting patient and family engagement can allow for trust building. These authors suggest care process strategies such as including patients and families in rounds, and assessing information needs of family members (Boltey et al., 2022). Given their prolonged ICU admission and slower trajectory of recovery, P/CCI patients would benefit from a ‘team’ approach where team composition is reviewed and goals are set mutually (Costa 2019). This might be more difficult to achieve, and arguably a lower priority, with acutely ill ICU patients who have frequent changes in status. Bedside nurses are well positioned to lead change initiatives to correct problems that arise in the clinical setting and identify inefficiencies related to organisational structures, workflows, and policies (Casey et al., 2011; Iraizoz-Iraizoz et al., 2023), and strengthening nursing leadership in ICU can positively impact interdisciplinary collaboration (Yamamoto, 2022).

Community Level

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At the community level, participants in this study explicitly expressed their belief that ICU was the wrong place for P/CCI patients. Internationally, alternate care environments exist for prolonged ventilation and persistent critical illness and long term ventilation (e.g., weaning programs in Canada, UK, etc., respiratory care units in Italy, and other step down or sub-acute respiratory care unit programs in the US and Taiwan, etc.) (Aboussouan et al., 2005; Ceriana et al., 2003; Hannan et al., 2013; Rose & Fraser, 2012; Sahetya et al., 2016). However, whatever the model there are insufficient resources in these alternate locations to meet the demand from ICUs. Although the ideal model of care for PCCI patients is unknown, our data suggest the ICU environment and care practices are misaligned to the needs of these patients. Care locations where dedicated multiprofessional teams manage the recovery of these patients and their family with P/CCI requires consideration for government funding, policy, and support.

Policy Level

At the policy level participants reported a lack of formalized training at the professional curriculum level, mirroring barriers reported by participants at the intrapersonal level. Participant offered additional insights about how to reconcile the incongruence felt between setting, training, and the expectations to provide high quality P/CCI patients, adding to a growing body of research aimed at better understanding the specific care needs for patients and family with P/CCI (Harrison et al., 2023; Rose, Istanboulian, et al., 2022). Professionally diverse participants including nurses reported barriers and facilitators that included but transcended the intrapersonal and interpersonal levels suggesting the need to transform critical care processes and models (i.e., teams) for patients with P/CCI.

STRENGTHS AND LIMITATIONS

Strengths of this study include application of the Social-Ecological Model to frame our analyses enabling us to consider barriers and facilitators to care delivery from the policy to the intrapersonal level and that we recruited a sample of professionally and regionally diverse ICU HCPs. Limitations include a self-selected sample that may have influenced responses and despite including our diverse sample, the results of this Canadian study may not be generalizable to other countries.

CONCLUSION

In this descriptive qualitative study, we identified clinician reported barriers and facilitators to care delivery at each of the five levels of the Social-Ecological Model. Our findings will facilitate understanding of educational, practice, research, and policy needs to enable provision of quality care to P/CCI patients and their families. Addressing intra and interpersonal level factors can facilitate adoption of identified actionable processes of care for patients with P/CCI. Upstream strategies targeting policy and community level factors can also have a positive impact on patient care, safety, and clinician wellbeing.

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