

# Are We “Closing the Loop” on Meeting the Therapeutic Needs of Critically Ill Patients?

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DOI: [10.4212/cjhp.v74i3.3136](https://doi.org/10.4212/cjhp.v74i3.3136)

Health care professionals provide tremendous care to critically ill patients from the moment they are admitted to the emergency department, after transfer to the intensive care unit (ICU), and eventually upon transition back to the community. Fortunately for patients with critical illness, survival rates following care in the ICU have increased. However, many survivors do experience short- and long-term complications from their ICU stay. Post-intensive care syndrome (PICS) is characterized by a constellation of physical, cognitive, and psychosocial consequences of critical illness that prevent patients from returning to their former level of functioning, thus reducing their quality of life and causing significant distress among their caregivers.<sup>1</sup>

In 2016, the James Lind Alliance Priority Setting Partnership (United Kingdom) recognized this syndrome as one of two research priorities, not only for critical care clinicians, but also for ICU patients and their families.<sup>2</sup> Organizations such as the Society of Critical Care Medicine under the Thrive Collaboratives are developing initiatives to address the issue of ICU survivorship and to identify the most effective model for post-ICU care.<sup>3</sup>

PICS clinics and peer support groups have been implemented to respond to the needs of patients who survive critical illness, and pharmacists are starting to embrace this new role within multidisciplinary clinics. I believe critical care pharmacists are well positioned to contribute to the care of these now-ambulatory patients within these clinics. Not only do they know the patient and family members from their time in the ICU, but they also know the patients' ICU pharmacotherapies and the associated complications that individual patients may be at risk of experiencing.

What role would be expected from pharmacist involvement in such a clinic? First and foremost would be completing a thorough medication review and reconciliation.<sup>4</sup> A wide variety of medications are prescribed for patients during their ICU admissions, but after discharge from the ICU, many of these medications are no longer indicated. Unfortunately, they are often continued through transitions of care and may also remain in place at the time of hospital discharge. Examples include diuretics initiated to

manage fluid overload,  $\beta$ -blockers used to prevent post-operative atrial fibrillation, or antipsychotics to cope with periods of ICU agitation. Participation of the pharmacist at the PICS clinic would allow all current medications to be reviewed, with those no longer necessary tapered and discontinued. The pharmacist would also reassess prior home medications that may not have been reinstated during hospitalization and would resume those required to avoid further adverse events resulting in visits to the emergency department or readmission.

Interactions with the patient and the family at this ambulatory clinic would increase awareness among all health care professionals of the significant toll that patients face after a prolonged ICU stay. Deconditioning, muscle weakness, respiratory compromise, chronic pain, anxiety, sleeping difficulties and nightmares, and posttraumatic stress disorder are common and can present daily challenges for patients and family members. Management of these broad adverse consequences necessitate a multidisciplinary approach and justify the need for peer support groups in which patients and family members can break their isolation and share common concerns.

The COVID-19 pandemic has made such initiatives more difficult to organize and maintain; however, from the patient's perspective, the isolation resulting from confinement is a compelling reason to continue. I suspect that the growing number of patients known as “COVID long haulers”, who suffer a variety of debilitating symptoms months after their initial infection and ICU stay, will become regular attendees at such clinics.

Implementation of PICS clinics, staffed by highly motivated individuals, currently occurs on a very small scale in Canada. Knowledge about patients' clinical outcomes associated with such initiatives is currently limited but is being addressed.<sup>5,6</sup> The involvement of a critical care pharmacist as an essential team member of the PICS clinic is crucial.

The most effective model for post-ICU care needs to be better defined. Through the PICS clinic, we may be closing the loop in terms of meeting the therapeutic needs of critically ill patients. However, until the role of these clinics is

better delineated and they become more widespread, let's make sure that a critical care pharmacist reviews all ICU medication discharge orders and develops a written plan to resume medications that are needed and stop those that are no longer required.

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**Competing interests:** None declared.

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## ON THE FRONT COVER



### Palestine Island, Georgian Bay, Ontario

This photograph of the setting sun was captured by Katrina Mulherin with a Canon Rebel XTi during her annual visit to Palestine Island (except for in 2020 and perhaps 2021 due to the pandemic). This location always compels her to run for her camera.

Katrina is currently the Deputy Registrar at the New Brunswick College of Pharmacists. In her spare time, she can be found outside mountain biking, swimming, skiing, skating, or hiking.

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