

# Frailty and the Association Between Long-Term Recovery After Intensive Care Unit Admission

Carmel L. Montgomery, RN, MN<sup>a</sup>, Darryl B. Rolfson, MD, FRCPC<sup>b</sup>, Sean M. Bagshaw, MD, MSc, FRCPC<sup>a,\*</sup>

## KEYWORDS

- Frail • Critical illness • Aged • Prognosis • Outcome • Recovery of function
- Health-related quality of life • Mortality

## KEY POINTS

- Frailty is often affiliated with aging and older persons; however, recent data have shown frailty is common among patients developing critical illness and admitted to the intensive care unit.
- Frail patients developing critical illness have greater risk of death.
- Among survivors, frail patients have greater impairment in quality of life, risk of new disability, and health services use compared with patients who are not frail.
- Additional work is needed to understand optimal methods for screening for frailty among patients admitted to intensive care, characterize contributions to frailty, and develop customized approaches to rehabilitation.

## INTRODUCTION TO FRAILITY

Vulnerability to stress, or homeostenosis,<sup>1</sup> is a well-known aspect of natural aging. By comparison, frailty is a separate and distinct state of exaggerated vulnerability, with more clinically meaningful drivers and outcomes, although it may be misattributed to chronologic age. Frailty is considered to be an emerging public health priority,<sup>2</sup> is

---

Disclosure Statement: Dr S.M. Bagshaw holds a Canada Research Chair in Critical Care Nephrology. C.L. Montgomery is supported by an Interdisciplinary Fellowship from the Canadian Frailty Network. Dr D.B. Rolfson has no conflicts of interest to disclose.

<sup>a</sup> Department of Critical Care Medicine, Faculty of Medicine and Dentistry, University of Alberta, 2-124 Clinical Sciences Building, 11350 83 Avenue, Edmonton, Alberta T6G 2G3, Canada; <sup>b</sup> Division of Geriatric Medicine, Department of Medicine, Faculty of Medicine and Dentistry, University of Alberta, 1-198 Clinical Sciences Building, 11350 83 Avenue, Edmonton, Alberta T6G 2G3, Canada

\* Corresponding author.

E-mail address: [bagshaw@ualberta.ca](mailto:bagshaw@ualberta.ca)

Crit Care Clin ■ (2018) ■-■

<https://doi.org/10.1016/j.ccc.2018.06.007>

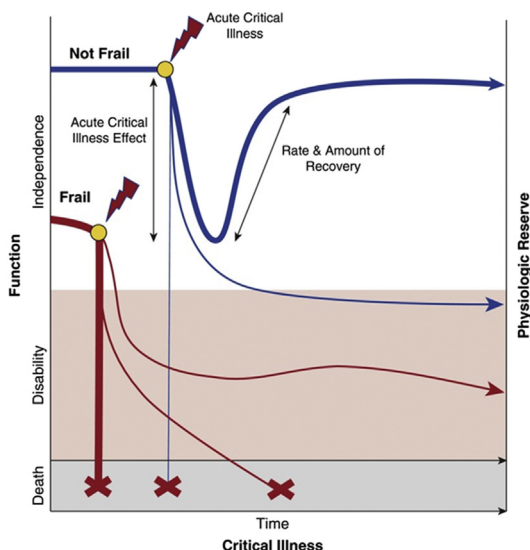
0749-0704/18/© 2018 Elsevier Inc. All rights reserved.

[criticalcare.theclinics.com](http://criticalcare.theclinics.com)

a common trajectory in late life,<sup>3</sup> and perhaps the most problematic expression of population aging. It is a “state of exaggerated vulnerability and poor resolution of homeostasis following a stress” (Fig. 1).<sup>4</sup> This excessive state of vulnerability has both biological and mathematical underpinnings, represented by the 2 best-known models of frailty, to be described further herein. Regardless of the model, frailty is a powerful predictor of adverse outcomes including mortality, morbidity, functional decline, falls, health services use, and subsequent institutionalization.<sup>5–10</sup> It is, therefore, increasingly vital to screen for a prefrail and frail state to case find at an early stage those persons who are perceived to be vulnerable and to anticipate and possibly modify the risk of these adverse events. Beyond this, frailty measurement before critical illness in particular, and any acute care hospitalization in general, can provide important knowledge about the clinical course and trajectory of recovery, along with prognostic information to help inform health care decisions by individuals, families, and health care professionals. One key focus for discussion should be early, informed decisions on the intensity and duration of advanced life support in an intensive care setting and an understanding of patient and family preferences for goals of care in this context. Beyond case finding, a multidimensional frailty measure can direct attention to the precise system(s) of vulnerability in a survivor of critical illness, allowing targeted multimodal assessments and interventions to strengthen and build resilience against a future episode of heightened stress. Likewise, health care delivery can be reimagined to better meet the needs of a rising number of older adults who are living with frailty and survivors of critical illness.

#### **PATHOPHYSIOLOGY OF FRAILITY**

Frailty is a state of reduced homeostatic reserve (ie, physical, cognitive, physiologic, immune) and exaggerated vulnerability to adverse events after seemingly relatively minor stressor events. Frailty can be considered simultaneously as both a syndrome and



**Fig. 1.** The theoretic trajectories of frail and not frail patients before and after an episode of critical illness. (From Singer JP, Lederer DJ, Baldwin MR. Frailty in pulmonary and critical care medicine. *Ann Am Thorac Soc* 2016;13(8):1395; with permission.)

Download English Version:

<https://daneshyari.com/en/article/10215924>

Download Persian Version:

<https://daneshyari.com/article/10215924>

[Daneshyari.com](https://daneshyari.com)