What is chronic critical illness?

- Variable definitions
  - Mechanical ventilation, mechanical ventilation for more than a few days, length of stay in the ICU, need for tracheostomy, inability to be discharged home [Nelson et al AJRCCM 2010]

Growing population, however it is defined

- Predicted growth in need for mechanical ventilation and demand for intensive care [Cox et al CCM 2004]

Overall long-term survival after critical illness is poor

- But not so different from hospitalized patients
- Much worse for mechanically ventilated

Survival is poor

- Recent cohort study by Cox et al [CCM 2009] of 126 patients who received either tracheostomy placement or 21+ days of mechanical ventilation
  - 56% survival at 1 year
  - Poor prognostication by clinicians and inappropriate expectations by families
    - Most surrogates expected patients to survive (93%), as well as to have no major functional limitations (71%); at one year 9% were alive with independent function

Increasing use of other care facilities (sub-acute nursing, skilled care, long-term acute care facilities) for care of critically ill patients after initial stabilization

- Are we doing the right thing for patients by discharging patients to these facilities?
  - Poor outcomes associated with discharge to LTACs, but may just be the patient mix [Kahn et al JAMA 2010, Kahn et al Medical Care 2013]

Quality of life after intensive care

- Difficult to study due to the problem of quantifying quality of life prior to the illness [Wunsch and Angus, Critical Care 2010]
- Post-traumatic stress disorder, depression, delirium, physical weakness
  - “Post-Intensive Care Syndrome” [Needham et al CCM 2012]
- Worsening dementia [Iwashyna et al JAMA 2011]
- Depression not so clear-cut [Davydow et al Am J Ger Psych 2012]
- Will be improvement in this area of research as ability to link data from different healthcare domains improves

Potential interventions to improve quality of life

- Better end-of-life planning
Palliative care acts in California and New York

- ICU diaries [Jones et al, Crit Care 2010]^{10}
- Improvements in drug reconciliation [Bell et al, JAMA 2011]^{11}
- Early physical therapy and rehabilitation [Schweickert et al, Lancet 2009]^{12}

References