Evidence-Based Prognostication in LTC

Designed to support goals of care conversations for LTC physicians

General Prognosis in LTC

- 35% mortality rate in the first 1-2 years after LTC admission
- The higher the degree of frailty, the worse the outcomes
- 25-30% yearly mortality rate, especially with severe frailty and cachexia
- 50% mortality in 10 months for patients with apathy without severe dementia
- Higher odds of death with indicators of functional decline (decubitus ulcers and dehydration)

Goals of Care and Interventions

ICU	*CPR*
Increased frailty has worse outcomes in CPR. **One study showed that no one with a frailty index of greater than 0.46 (CFS 6-7) survived past 90 day**	1.1% of frail patients (needing ADL support) had good neurologic recovery after out of hospital arrest

Dialysis	*IV Fluids*
Initiating dialysis in patients in long-term care has poor outcomes. At 6 months, 50% died and 20% had a functional decline. At 12 months, 75% had died and 10% had functional decline. Rarely helps with tiredness and insomnia; only occasionally helps with cramps, weakness, and pruritis.	Associated with edema Most did not experience hunger or thirst (of those able to communicate) at the end of life In advanced dementia, discomfort decreases over time without IV fluids Biochemical dehydration does not correlate with sense of thirst

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In End-Stage Dementia

- 50% 6 month mortality after first episode of pneumonia
- 40% 6 month mortality after onset of swallowing problems or decreased oral intake
- 45% 6 month mortality after first episode of febrile illness
- 4.1 month survival (mean) in severe dementia with loss of ability to walk
- 3 month survival (median) in severe dementia with pressure sores
- Feeding tubes: similar or higher risk of aspiration, pressure sores, and restraints. Only truly beneficial long-term for patients with oropharyngeal cancer and motor neuron disease.
- Minimal evidence for thickened liquids and association with more UTIs and dehydration

Specific Illnesses (for all patients in LTC)

Pneumonia

90% had severe disability or death within 2 months of hospitalization

25% mortality in 6 weeks (40% if hospitalized)

Overall reviews show no survival difference between routes of administration of antibiotics

60% mortality if all 3 of: higher respiratory rate, baseline needing feeding assistance, baseline altered diets (23% for 1-2 of these)

UTI

Asymptomatic bacteriuria (delirium and positive urinalysis) is common and hydration alone without antibiotics had similar outcomes at 30 days (though majority of LTC patients were treated with antibiotics)

In severe dementia:

- 25% mortality within 135 days
- No significant association between overall antibiotic use and mortality
- Hospitalization associated with shorter survival

Acute Illness

Outcomes of patients transferred to emergency from long-term care are poor:

50% died within 3 months and survivors associated with functional decline

Certain signs indicate worse prognosis:

- Higher CTAS score upon arrival to ER, shortness of breath, and changes in LOC more likely to die
- Higher respiratory rate (RR>40): poor prognostic sign, especially in respiratory illness
- Hypernatremia in febrile illness: poor prognostic sign (35% mortality)
- 25% of patients with hip fractures die within 3 months. 50% died or were unable to walk independently after 6 months. Increased risk if age >90, more comorbidities, or severe dementia

Other helpful resources:

1. Clinical Frailty Scale
2. FRAIL-NH criteria

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