Submission Id: 3709

Title

The Economic Impact of a Hospital at Home in a COVID19 Pandemic

Priority 1 (Research Category)

COVID-19

Presenters

Thad Wilkins, MD, MBA, Matthew Lyon, MD, David Walsh, MD, Megan Furno, MPH, LSSBB, Stephen Shiver, MD, Christy Ledford, PhD

Abstract

Context: The COVID19 pandemic ignited rapid innovations in healthcare. The hospital at home (HAH) is one innovation adopted by some health systems to provide hospital level care to patients in the home; however, the economic impact in COVID19 patients has not been studied. Objective: To evaluate the economic impact of HAH versus usual hospital care for patients requiring admission for COVID19. Study Design: Matched case-control retrospective case series (100 HAH and 100 control). Setting or Dataset: Academic medical center Population studied: Patients admitted with COVID19 and, subsequently enrolled into the HAH program. Patients age <18 were excluded from consideration for enrollment. A Case-control cohort was matched on age, gender, and severity of illness. 200 patients were included. Outcome Measures: Inpatient length of stay (iLOS), rate of 30-day readmissions, direct, variable, and total costs. Results: This retrospective analysis included 200 patients (mean age 50.4, SD 14.2). Most patients (55%) were female, 48.5% were African American, 43.5% were white, and 8% were other races. Inpatient LOS (5.7 vs. 9.4 days, p=0.005) was shorter in the H@H group compared with usual care patients and there was no significant difference in 30-day readmissions (11% vs. 14%). Patients in the HAH were treated a mean of 7.3 days at home. Compared to the usual care group, the HAH group had lower inpatient fixed costs ($675,668 vs $1,439,719), lower inpatient variable costs ($593,277 vs $1,495,887), and lower inpatient total costs ($1,268,944 vs $2,935,601). The HAH group had an additional at home cost of $536,250 (715 days at $750 per day) representing a lower total cost of care ($1,805,194 vs $2,935,601). Conclusions: Our findings support a favorable economic impact of implementing a HAH program ($1.1 million). There are many advantages of a HAH program during a pandemic including decreasing nosocomial spread and reducing the strain on inpatient capacity. A major potential advantage of HAH programs is reducing healthcare spending by reducing the cost of care, but the true effect depends on how the program is implemented and other factors, e.g., rates of readmissions. Our results do not reflect the total economic impact because we did not include the impact of back filling beds vacated 3.7 days sooner in the HAH group compared to usual care. Future studies should prospectively study the fixed and variable costs of a fully developed HAH program.