LEVERAGING LEAN TO INFORM APPLIED RESEARCH IN ACUTE CARE: A CASE STUDY TO IMPROVE COPD OUTCOMES

McWilliams A1,2,3 | Schoen M4 | Bacon M5 | Roberge J3 | Krull C3
Bilancia J5 | Pena E1 | Howard D2,5 | McCall A6
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BACKGROUND
- The US healthcare system is under increasing pressure to improve value and affordability.
- Value-based care transformation in the acute care setting has neither an evidence base nor clear methodology to guide rigorous, implementa-
tion evaluation.
- A conceptual framework to guide the generation of real-
world evidence in acute care is needed.1,2

PURPOSE
- We combined methods from Lean manufacturing—process improve-
ment and applied research to rapidly design and test the feasibility of a stan-
dardized care pathway as preparation for a pragmatic, randomized controlled trial, called the AECOPD Pathways Trial (Acute Exacer-
bation of Chronic Obstructive Pulmonary Disease).

CONCLUSIONS
- In the Pre-Pilot period, 82 patients met inclusion compared to 147 in the Pilot period.
- Volume increase linked to an unrelated system initiative to redirect Emergency Department admissions to this facility.
- Utilization of the COPD order set and bronchodilator protocol (both key comp-
ponents of this care pathway) increased from 34% and 73% in 2016 to 73% and 76% in 2017 respectively.
- Long acting bronchodilator orders placed prior to discharge increased from 74% in 2016 to 84% in 2017.
- This finalized care pathway was successfully implemented using a step-wedge, randomized controlled design across 8 hospitals in the AECOPD Pathways Trial.