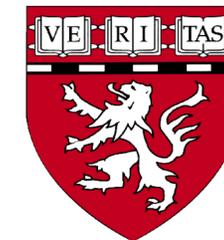




# Identify and Intervene with Frequent Emergency Department Users



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## INTRODUCTION

- Frequent ED use is associated with fragmented, costly care.
- Care coordination and community health worker interventions for frequent ED users are well studied in primary care settings, but less prevalent in EDs.
- Many frequent ED users are not enrolled in clinic-based care coordination.

## OBJECTIVES

- To evaluate a quality improvement intervention to improve care coordination and reduce ED visits and hospitalizations among frequent ED users.

## METHODS

- Outcomes were: 1) ED visits, 2) hospitalizations (inpatient or observation), 3) expenditures (direct cost), 4) hospital revenue (payments), and 5) net margin.
- We compared 4 months post-intervention to the 9 months prior to intervention.
- We standardized figures to represent visits and cost per patient per month (PPPM).
- We used difference-in-differences analysis with intention-to-treat approach.
- Excluded 15 patients who had zero costs in the follow-up period (2 moved, 4 died, others transferred care, 9 intervention and 6 control)

Figure 1. Study Design

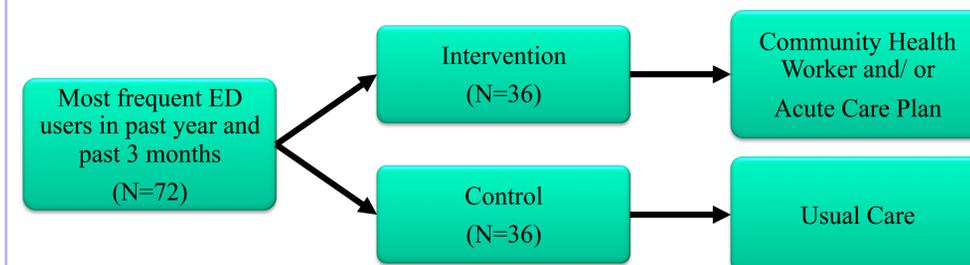


Figure 2. Effect on ED Visits and Hospitalizations

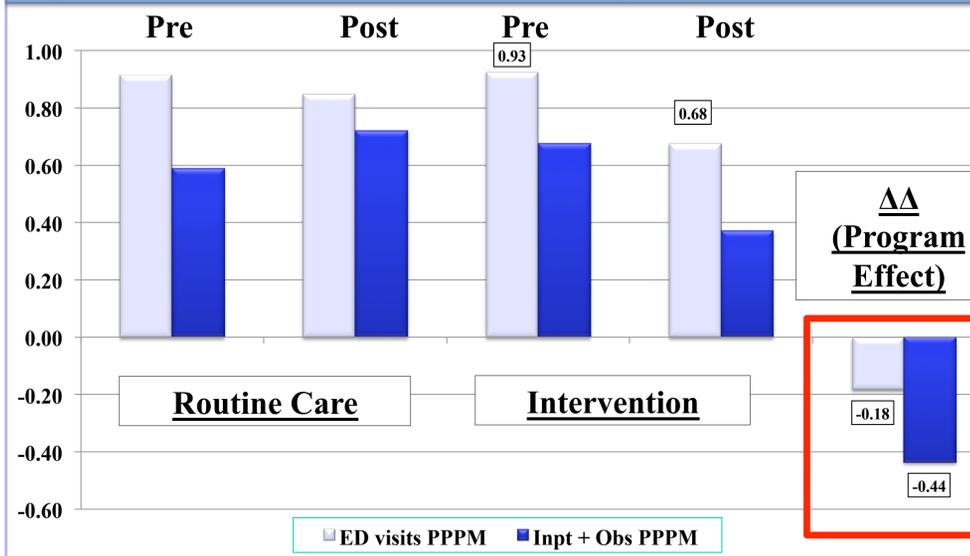
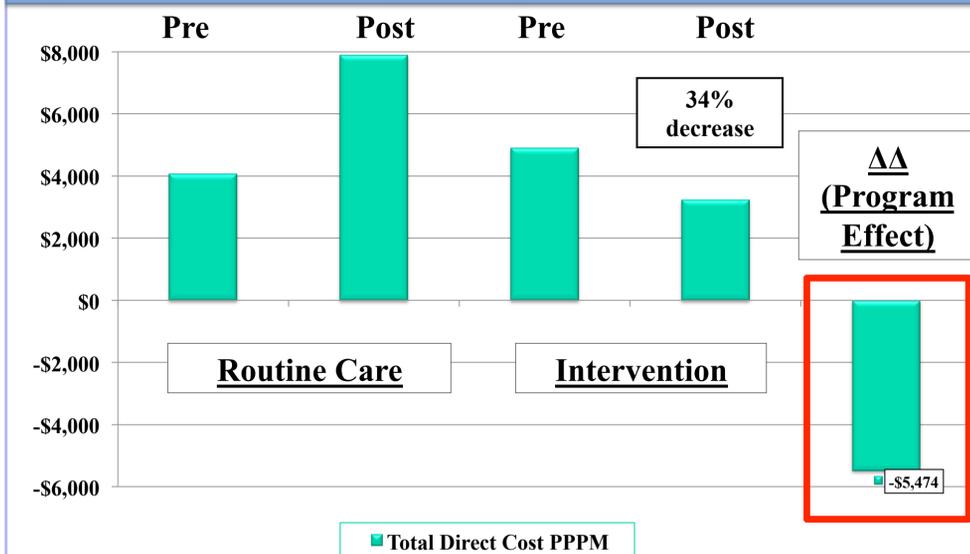


Figure 3. Effect on Hospital Expenditures



## RESULTS

- The average cost of care for all patients at baseline was \$4,195 PPPM.
- Among the usual care group, ED visits decreased but hospitalizations increased.
- ED visits and hospitalizations decreased in the intervention group.
- The program effect (difference in differences) was 0.18 fewer ED visits and 0.44 fewer hospitalizations PPPM in the intervention vs. control group.
- The program reduced direct costs (-37%), hospital revenues (-59%), and increased net margin (+99%) in the intervention vs. usual care group.
- These correspond to a total annualized net margin of \$275,449.
- Based on an annual program cost of \$63,000, the program's return on investment was 3.4.

## CONCLUSIONS

- An ED-based program to create acute care plans and engage a community health worker with frequent ED users is promising to reduce ED visits, hospitalizations and produce cost savings to the hospital and payers.
- Further investigation is needed to determine long-term effects and impact on quality.

## DISCLOSURES

- Michelle P. Lin: American Board of Medical Specialties; Jeremiah D. Schuur: Emergency Medicine Foundation, Emergency Medicine & Primary Care Scientific Advisor United Healthcare; Others: none