Stopping the Revolving Door:
Advancing Community Paramedicine to Engage High Utilizers

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BACKGROUND

Hospitals face scrutiny from payers and governmental oversight bodies for unnecessary ED visits and readmissions within 30-days of discharge. In an effort to reduce unnecessary hospital and ED utilization, a unique partnership between Rockland Paramedic Services, Inc. (RPS) and Montefiore Nyack Hospital yielded an innovative “Community Paramedicine Program (RPS-CPP)” designed to provide “gap filling” services in patients’ homes. The pilot project, supported by an innovation fund grant from the Montefiore Hudson Valley Collaborative, provides personalized goal-directed services that address underlying drivers of unnecessary healthcare utilization. These drivers include poorly controlled chronic disease, social determinants of health needs, substance use and co-morbid behavioral health issues, and chronic health conditions (COPD, CHF, acute MI and asthma.)

AIM

This innovation project aimed to reduce unnecessary readmissions and costs of care, and improve patient and provider experience (IHI Quadruple Aim) by providing “gap filling” services to individuals who, for medical, social and/or behavioral health reasons, over-utilize emergency departments, or are at high risk for hospital readmission.

TARGET POPULATION

Two patient cohorts were targeted for the Community Paramedicine intervention.

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<tr>
<th>Cohort #1</th>
<th>Cohort #2</th>
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<tr>
<td>“Super-Utilizers” of the Montefiore Nyack Hospital Emergency Department*</td>
<td>Recent Hospital Discharges (with Chronic Conditions) at “High Risk” for Readmission*</td>
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<td>(233 patients with ≥10 visit/year in 2016)</td>
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INTERVENTION

Case managers and ED care navigators at Montefiore Nyack Hospital identified patients who met ED “super-utilizer,” or “high risk for readmission” criteria, and invited them to participate in the Community Paramedicine program. Once enrolled, field based community paramedics, supervised by mid level providers in the Nyack ED, visited the patients at home. “Twiage” technology was utilized to share patient health indicators and assessments with supervising providers. Home based assessments conducted during the first in-home visit included SDH stressors and drivers of utilization including comorbid substance use and/or behavioral health issues. Paramedics and care navigators asked each patient “what matters to you?” listened carefully to what each person shared, and incorporated what they learned into personalized care plans. In the field, patients were examined, vital signs monitored, health education and self management support provided, and medications adjusted. The paramedics provided navigation within the primary care system with an emphasis on improved health, suggested strategies to prevent unnecessary ED utilization, and hospital readmission and often identified creative solutions to address the social determinants of health needs of the patients. A focus group comprised of staff involved in the program was conducted to understand the program’s impact on provider experience.

RESULTS

Case management services were provided over 24 episodes of care, yielding an estimated 66% decrease in hospital admissions for Cohort #1 (373 in 2017, 245 admissions in 2018) and (Graph #2). Estimated hospital cost savings resulting from decreased repeat visits by the ED visits (Graph #4).

CONCLUSIONS

The Community Paramedicine pilot program has had a significant impact on ED utilization at Montefiore Nyack Hospital. Outcomes included: (1) A 24% reduction in ED utilization for cohort # 1 (original cohort of 233 “super utilizer” patients identified in 2016, 92% visited the ED in 2017 and only 68% visited the ED in 2018.) (2) A 52% decrease in the overall number of ED visits for patients in Cohort #1 (2028 visits in 2017, 1074 visits in 2018. (3) A 66% decrease in hospital admissions for Cohort #1 (373 in 2017, 245 admissions in 2018) and (4) A 61% decrease in multiple visits/day (89 same day repeat visits in 2017, 55 same day repeat visits in 2018). A patient story makes the benefits of the program clear:

One patient with co-morbid substance use and multiple SDH stressors was seen in the ED 154 times in 2016 including multiple visits on the same day. The patient was enrolled in the program and actively engaged. He was connected to community based resources and the paramedics and care managers worked to help reconnect him with his family. The patient continues to be engaged with the team and has not returned to the ED in over 5 months (since July 2018).

This impact directly translates into measurable cost savings for the hospital. For example, because the hospital is not paid for multiple visits in a single day, losses due to write-offs for multiple ED visits in the same day have decreased from $31,150 (average $350 loss/visit based, 89 repeat visits in 2017) down to $19,250 (average $350 loss/visit based, 55 repeat visits in 2018). In addition to the decrease in write offs, because people’s needs are met without the ED, the pilot has had a systemic impact, in effect eliminating future high utilizers (Graph #2). A full ROI analysis is underway.

A focus group with program team members captured qualitative data demonstrating impact of the program on staff Joy in Work. Team members verbalized “this program helps not only the patients, but also the providers and paramedics.” They described the frustration of seeing the same people in the ED over and over again (“there was a visceral feeling of failure”). After implementing this program, they “saw that they made a difference” which gives them “reassurance I can go home and sleep at night.”