Poster

Preventing Avoidable Hospitalizations at Low-Cost Across Large Populations

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Abstract

Background: People suffering from chronic illnesses account for greater than 85% of health care spending, and in many cases these costs can be significantly reduced, but many connected health solutions have not had the scale or levels of adherence that would be required to make an impact. Part of the problem is that on most days, chronically ill individuals feel well and as such don't feel compelled to follow a regimen using connected devices or recording vital signs. Another problem is that most disease management programs address a single condition and neglect the high prevalence of people with multiple chronic conditions (comorbidities).

Objective: Our objective was to address the above concerns of compliance and multimorbidity management in an affordable and scalable way. Guided by the triple aim, our solution uses the only technology that is accepted and embraced by our entire population—the telephone. In the case of the elderly high-risk population (generally 80 and older), they have telephones and use them to communicate with their families. In the case of the younger and more mobile at risk population, the mobile phone has become ubiquitous. The second key objective was to address the multiple conditions in each patient's unique case mix. Our solution requires only a small amount of data entry including patient demographics, a listing of the multiple health conditions (chronic, acute, and behavioral), and an acuity rating such as low, medium, or high. The demographics and conditions can be prepopulated via integration with the health system's electronic medical record (EMR).

Methods: The primary study measure has been reduction in 90-day hospital readmissions comparing a control group with a study population. For each emergency department visit that is prevented, the solution saves $6000 or more.

Results: Early results have demonstrated a 75% reduction in preventable rehospitalizations. One lesson learned was that success with the solution requires an onboarding process where the patient is educated about the solution by someone they trust, and it requires monitoring of the results. Thus far the solution has been deployed by home health care organizations who are finding that they can reduce face-to-face visits while increasing patient satisfaction and reducing admissions. Another great application is for chronic care management in primary care.

Conclusions: Since the patient only needs to answer the phone or respond to a text, they can't forget to use it, and since it addresses multiple health conditions, results have the potential to surpass those of single-disease programs. Lastly, since the solution uses technology that the patients already have, the costs of deployment are minimal. We are confident that this solution can go a long way towards achieving the triple aim of high patient satisfaction, low cost, and the ability to reach a large population.

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KEYWORDS

chronic illnesses; preventing hospital readmissions; population health management; remote patient monitoring

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This poster was presented at the Connected Health Symposium 2016, October 20-21, Boston, MA, United States. The poster is displayed as an image in Figure 1 and as a PDF in Multimedia Appendix 1.

Figure 1. Poster.

Multimedia Appendix 1

Poster.

[PDF File (Adobe PDF File), 2MB - iproc_v2i1e4_app1.pdf]

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