

# Customer Case Study Union Hospital

of Cecil County

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## For Better Chronic Care Transition

Improve health outcomes and lower readmissions for CHF, COPD patients.



The goal was to determine if such a program could help improve overall health and reduce 30 and 60-day unplanned readmissions among patients with chronic conditions.

As healthcare continues its transition from a fee-for-service model to value-based care, preventing or reducing unplanned hospital readmissions remains a major goal for both government and healthcare organizations. This is particularly true in the State of Maryland, whose hospital payment reform model requires all Maryland hospitals to reduce unnecessary hospital care and decrease hospital cost per capita growth. As part of this initiative, in the fall of 2015 the Maryland Health Care Commission (MHCC) began awarding grants to organizations to test the use of telehealth to improve the health of populations as well as the patient experience.

## The Challenge

Union Hospital of Cecil County (UHCC), a 122-bed private, not-for-profit acute care hospital, applied for and received a grant of \$30,000 to implement a remote patient monitoring (RPM) program. The goal was to determine if such a program could help improve overall health and reduce 30- and 60-day unplanned readmissions among patients with chronic conditions.

Many of UHCC's patients with chronic conditions did not understand the importance of self-managing their conditions after being discharged from the hospital. For example, patients with chronic heart failure (CHF) might forget to take medication to control water retention, as evidenced by a sudden spike in their weight. Not managing their conditions could lead to unplanned 30 and 60-day readmissions, which was bad for the patients and costly for all involved.

After reviewing several options, UHCC selected Vivify's RPM solution. The major selling point was that the Vivify solution came as a complete, integrated kit rather than separate components that had to be assembled and enabled individually. All the components in the Vivify kit arrive pre-paired and connected to the provided tablet, which meant

REDUCTION IN READMISSIONS

970%

The Value

ONE YEAR  
PILOT DURATION

\$336,000  
COST SAVINGS

CHF  
PQIs

-30

COPD  
PQIs

-28



With a small grant, patients can be 97% less likely to re-admit, and improve overall health.

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patients could begin using them immediately. UHCC also liked the user interface on the tablet, which was easy to understand and use, offered audible as well as visual cues to help patients with vision issues, and had a very intuitive flow.

To address the issue, UHCC used its grant to launch an RPM program aimed at patients with CHF and chronic obstructive pulmonary disease (COPD), who were among those with the highest frequency of readmission. Yet UHCC knew it couldn't just throw technology at the problem. Many of the patients in the targeted populations were elderly and could have trouble working with complicated systems. The key was to find an RPM technology that would capture all the data needed to prevent or forestall adverse trends that could lead to readmissions yet would be easy and intuitive enough for patients who were nervous about technology to understand and use at home.

## The Solution

UHCC used the grant money to obtain 60 Vivify kits. Care managers then began visiting CHF and COPD patients who had been hospitalized, talking to them about the program and asking them if they would like to participate in the trial. After discharge, those who had agreed to participate used the kit each day to take blood pressure, heart rate, weight, blood glucose levels, and pulse oximetry readings. This information was automatically gathered by the tablet and uploaded to Vivify's clinical call center.

If a patient's readings strayed outside parameters set by national standards and the hospital's own best practices, the call center would immediately send an alert to the appropriate care manager, who would follow up with the patient to be sure he/she was following the care plan. For example, if a CHF patient showed a sudden weight gain, a care manager would see the patient did not take their water pill and would make a video call to reinforce the importance of taking their medications to the patient.

Kits were provided to a total of 64 patients with CHF and 86 patients with COPD. Initially, CHF and COPD patients would receive the kits for 30 days, then have to return them. What UHCC discovered, however, is the patients disliked having to return the kits after only 30 days, as they were just getting used to them and liked the feeling of being connected. The program was then expanded to allow patients to keep the kits for 60-90 days, which helped them build their self-management routines more effectively.

## The Results

The RPM program was an unqualified success. UHCC was able to deliver outstanding improvements in the health of two of its most difficult-to-manage patients populations, such as:

- Avoided 48 30-day readmissions, achieving an estimated cost savings of \$336,000
- CHF Prevention Quality Indicators\* (PQI) decreased from 141 to 111
- COPD PQIs decreased from 205 to 177
- RPM patients had 0.27% readmissions versus 10.27% of patients with similar conditions who were not being monitored remotely

The success of this program has UHCC excited about future possibilities. The hospital has plans to extend it to more patients with CHF, COPD, and other chronic conditions, as well as patients with more fixed timelines such as those who have knee and joint surgeries, as funding and/or reimbursement becomes available.

\* PQIs are a set of measures that can be used with hospital inpatient discharge data to identify quality of care for "ambulatory care sensitive conditions," i.e., those for which good outpatient care can potentially prevent the need for hospitalization or for which early intervention can prevent complications or more severe disease.

