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RESPIRONICS

One COPD

The Integrated **COPD Care Initiative**

Overview

The Integrated COPD Care Initiative was a 2017 pilot program aimed at reducing hospital readmission rates and acute to post-acute care-associated costs in patients with COPD.

Through the deployment of evidence-based care strategies, pathways, and processes, the Initiative achieved impressive 30-day readmission and cost reductions after just 3 fiscal quarters[1].

≈$1.3 **Million saved** in acute 30-day COPD readmissions[1]

80% **Reduction** in acute 30-day COPD readmissions[1]

Implementation of an integrated care pathway produced striking results for 30-day all-cause readmissions[1]:

≈$4.4 **Million saved** in all-cause diagnoses readmissions

>70% **Reduction** in all-cause diagnoses readmissions

>890 patients included in the initiative[1]

Learn how a coordinated pilot program, from acute to post-acute care, reduced COPD readmissions and costs in less than one year.

The need to improve outcomes and control healthcare costs in patients with Chronic Obstructive Pulmonary Disease (COPD) has never been greater. Despite advances in care, too many patients continue to suffer through repeated hospital readmissions, increasing the burden COPD places on their lives. Up to 40% of COPD patients are misdiagnosed each year. In addition, the Centers for Medicare & Medicaid Services (CMS) began penalizing hospitals in 2015 for readmissions within 30 days in patients with acute exacerbations of COPD—as well as denying hospitals payment for those reimbursements. Now, over 3 years later, healthcare systems throughout the US continue to scramble in pursuit of viable solutions.

To read more about the Integrated COPD Care Initiative, visit **www.philips.com/COPDCareInitiative**.

The good news is that a real-world model for success has been found. In Alabama, a group of institutions collaborated on an initiative, known as the Integrated COPD Care Initiative, to identify gaps in care and develop an integrated COPD care program that included continual data collection. This state-wide group was made up of a Philips Premier One COPD provider—a Home Medical Equipment (HME) provider, a hospital system, and a consulting and analytics firm. Through the implementation of published, evidence-based care strategies, the Initiative reduced hospital readmissions, lowered costs, and avoided penalties over the course of 3 fiscal quarters in 2017.

The results of this Initiative warrant a thorough review by any hospital system or payer committed to improving outcomes and controlling costs in their COPD populations.

Patients with COPD who were included in the Initiative:

- Experienced from 1 to 11 hospital readmissions in the year prior to initiation
- Were admitted to the hospital with COPD as a primary diagnosis or were screened for COPD as a comorbid condition

The Initiative aimed high

The objective of the Integrated COPD Care Initiative was ambitious and aligned with today's value-based care approach: provide real-world insight into acute to post-acute care, while reducing avoidable readmissions for patients with COPD.

Preparations began a full 18 months before the Initiative even launched, with the careful development of a robust COPD program designed for rollout to participating hospitals. The program consisted of care management and clinical pathways customized to COPD, including evidence-based strategies for:

- **Care transition management**
- **Care coordination**
- **Patient engagement**

The program pursued 4 key goals:

- **Reduce avoidable readmissions (COPD and related all-cause readmissions)**
- **Improve the visibility and data collection of patient care from hospital to home**
- **Improve patient engagement in the post-acute setting**
- **Improve outcomes**

To achieve these goals, the Initiative focused on:

- **Early detection of COPD within a patient's hospital stay**
- **Frequent follow-up and data collection with patients after hospital discharge**
- **Patient education**
- **Ongoing data analysis based on patient GOLD categorization to validate and/or refine the Initiative**
- **Continuous assessments of the efficacy of clinical pathways in pursuing the Initiative's goals**

During the program, longitudinal value-based care management pathways were implemented in the hospital. The purpose of these pathways was to increase visibility into post-acute care, improve quality, lower costs, and reduce avoidable readmissions for patients with COPD.

Existing data uncovered a bigger opportunity

The Initiative captured acute care event data from the following sources:

- **Hospital electronic medical records (EMRs)**
- **Physician portals**
- **MedAdept® respiratory therapy EMR**
- **Chart reviews**
- **Respiratory therapist (RT) interactions with patients during home visits**

Capturing acute and post-acute care patient data—and closely monitoring data from hospital and HME sources—led to a critical initial insight. They found that patients who were being readmitted to the hospital were identified with COPD as a primary diagnosis <10% of the time, which aligns with findings from previous studies.

Since the incidence of COPD in patients with related comorbidities is a significant contributing factor to all-cause readmissions, administrators embraced the opportunity to track, and potentially reduce, all-cause readmissions through enhanced COPD care management. This approach contributed to earlier diagnoses of COPD when patients arrived at the hospital, and also resulted in[2]:

- **Significant increases in previously unidentified COPD and Obstructive Sleep Apnea (OSA) diagnoses**
- **Improved patient data capture**
- **Enhanced patient care through additional testing and procedures**

Data insight

Patients who were being readmitted to the hospital Identified with COPD

<10% of the time

Two opportunities

Reduce COPD readmissions

Reduce all-cause readmissions
through enhanced COPD care management

The vital importance of coordinated care

Care coordination pathways played an essential role in producing positive results. Baked into the program's workflow processes, the pathways were adopted and implemented among participating hospitals.

This implementation helped raise awareness among hospital stakeholders of the utility of evidence-based care pathways and continuous data capture—including when and how to employ clinically appropriate therapeutic interventions.

As a result of this increased awareness, and the coordinated care driving it, the program achieved significant results (Figure 2). Importantly, it afforded hospitals greater visibility into what was going on with patients at home after discharge. Hospital staffs were able to stay connected to patients through RT medical record notes—which proved critically important in identifying patients who were exacerbating before they had to be readmitted to the hospital.

Figure 2

Care Coordination Pathways*	
Reduced avoidable hospitalizations	Improved patient outcomes
Reduced costs associated with care management	Lowered the total cost of care

Empowering RTs and HMEs

Following early diagnosis of COPD in the hospital, patients received increased attention from RTs after discharge. This was a major reason for the Initiative's success in reducing healthcare costs. And it helped empower RTs by:

- **Increasing high-touch with patients among HME RTs**
- **Providing regular data capture as well as more readily accessible electronic historical data on non-invasive ventilator patients**
- **Improving opportunities to detect early signs of exacerbations**

As a result, RTs played a significant role in helping reduce hospital-based care times and improve patient outcomes.

Adding up to dramatically lower costs

An analysis of costs associated with acute care events was conducted against a national average of costs per readmission.

Despite an increase in the number of patients served over time, data showed a decrease in the number of acute events over the Initiative's period. As a consequence, the estimated total reduction in healthcare costs over the Initiative period was significant: ≈$1.6 million combined in acute care and post-discharge settings.

Significant reductions in costs and readmission rates

The decision to focus on all-cause diagnoses proved itself successful by yielding ≈$4.4 million in cost savings (Figure 3) and >70% reduction in readmissions (Figure 4). These results point to the utility of directing care management improvements to all-cause readmissions, with a focus on COPD-related comorbidities, as a way of ultimately reducing both COPD and overall readmission rates.

The numbers were likewise impressive with respect to acute COPD events—with ≈$1.3 million in cost savings (Figure 5) and ≈80% reduction in readmissions (Figure 6) realized by the end of the Initiative.

Figure 3

≈$4.4 million in cost savings in all-cause diagnoses by Initiative end*

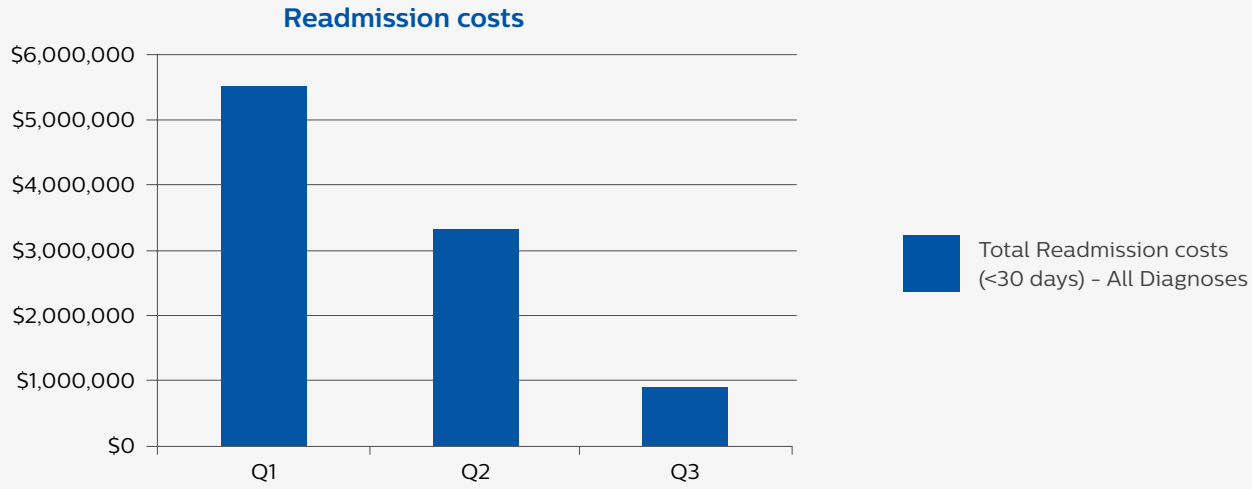
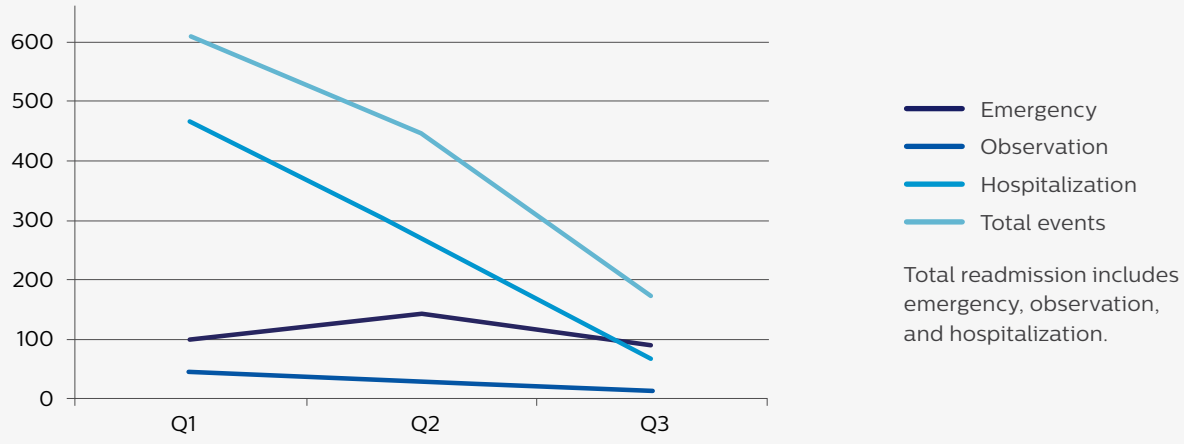


Figure 4

>70% reduction in total all-cause acute care events by Initiative end*



*Adapted from Alabama Hospital 2017 COPD Care Management initiative

Figure 5

≈$1.3 million in cost savings in COPD readmissions by Initiative end*

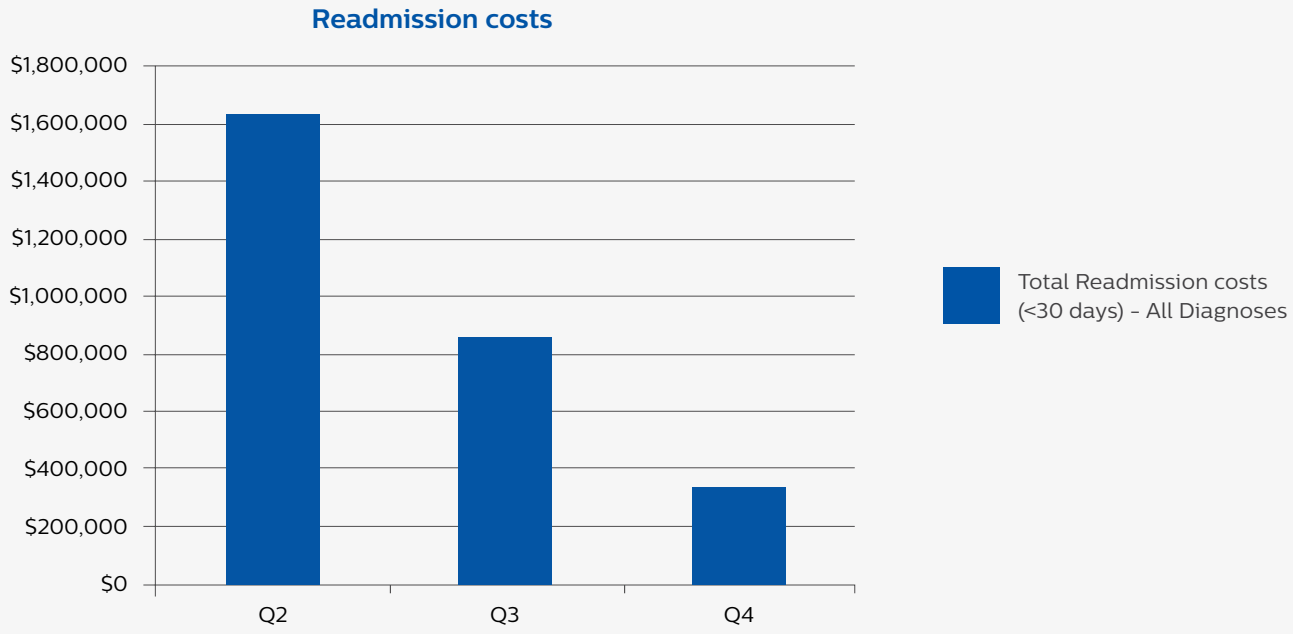
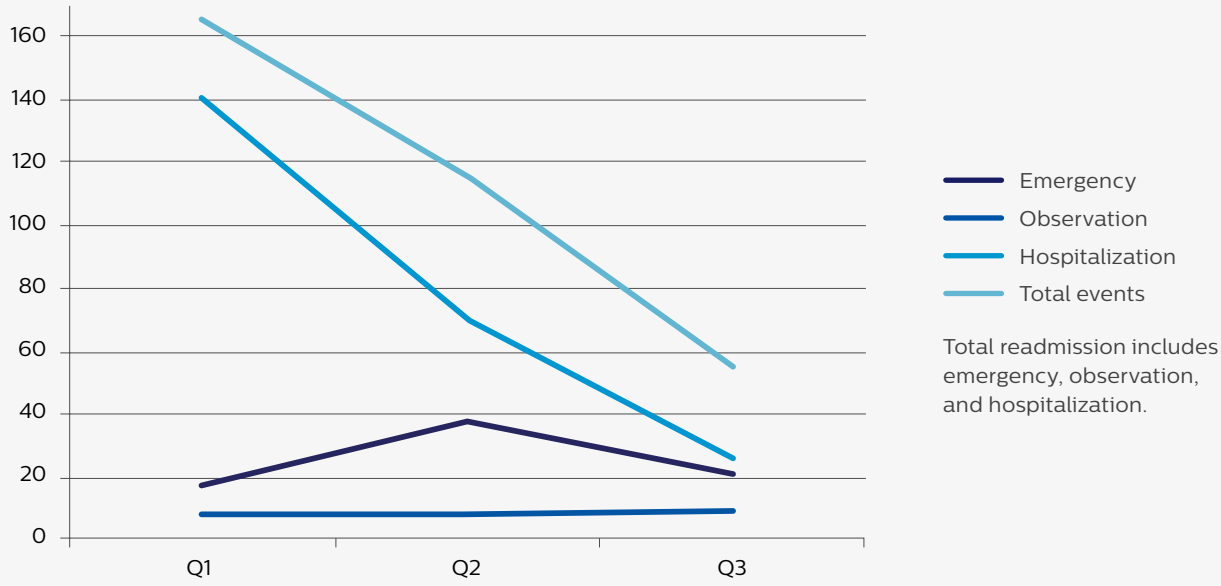


Figure 6

≈80% reduction in total COPD acute care events by Initiative end*



*Adapted from Alabama Hospital 2017 COPD Care Management initiative

Applying the learnings from the Initiative

Hospital systems continue to apply learnings from the Initiative to their own patient populations. Given the nationwide need for cost-efficient improvements in the care of COPD patients (in light of the CMS expansions and, more importantly, in pursuit of better outcomes for people with the disease), healthcare systems throughout the country would do well to emulate the Initiative's example.

The impressive results the Initiative achieved in such a short period of time can be attributed in part to the comprehensive program deployed. The focus on robust data aggregation and analytics, expanded and improved screenings, better care transition management, care coordination pathways, and RT empowerment, all contributed to the success of the Initiative. Customizing aspects of the program to the specific needs of COPD populations and hospital systems has the potential to provide better outcomes for patients as well as reduce readmission rates, costs, and CMS penalties across the US.

The critical need of Executive Sponsorship

The hospital system needed a person who has leverage at a senior level in order to execute upon this initiative. This is why Executive Sponsorship was involved. They played a key role in the launch and success of the Integrated COPD Care Initiative. Without the high-level driver and their passion for the Initiative, the care-specific success outlined below would not be possible.

Factors contributing to the success of the Integrated COPD Care Initiative

Data aggregation	Data analytics	Early screenings
Expanded screenings	Care transition management	Care coordination pathways
HME RT patient high-touch	Early detection	Access to historical data
Patient engagement	Evidence-based care pathways	Increased awareness

References: 1. Alabama Hospital 2017 COPD Care Management initiative. Author Incremedical using Medadept information technology. Solely funded by Philips. **2.** Lau CS, Siracuse BL, Chamberlain RS (2017). Readmission After COPD Exacerbation Scale: Determining 30-day readmission risk for COPD patients [Abstract]. *Int J Chron Obstruct Pulmon Dis.* 2017;(12):1891-1902. 1-.2147/copd.s136768.

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