Nonin Medical COPD STEP™
Readmission Reduction Plan

A Patient-Centered Disease Management Plan to Improving COPD Outcomes
THE PROBLEM: Most hospitals have programs in place to treat the acute aspects of COPD, but post-discharge programs supporting the chronic aspects tend to fall short.

COPD chronic disease management and acute exacerbation treatment often are disconnected. As a result, 30-day hospital readmission rates over 20% are common, and sub-optimal patient outcomes can occur. Chronic Obstructive Pulmonary Disease (COPD) is a progressive lung disease that has both acute and chronic components to it. In the later stages of the disease, acute exacerbations, called “flare-ups,” often occur with increasing frequency and intensity. Unfortunately, exacerbations that aren’t treated in a timely manner can often lead to worsening lung tissue and repeated flare-ups and re-hospitalizations.

What are the causes of high readmission rates?

- Infections, often the cause of an exacerbation, remain unresolved at time of discharge. An interruption in medication following discharge leaves the patient vulnerable to a relapse.
- Disjointed patient management occurs across the continuum of care. Providers for each step of care (primary care, emergency department, hospitalist, etc.) are not sufficiently coordinating the overall management of an individual patient.
- Patient training is inadequate. Often, patients don’t know how to manage their disease, resulting in inadequate medication administration, oxygen use, activity planning, etc. And studies show that patients often don’t remember a significant amount of information provided during their discharge process.
- There is a lack of professional follow-up care post discharge. 75% of patients being readmitted within 30 days have not seen their primary care provider. Additionally, home respiratory care visits are not typically provided.
- Equipment in the home is inadequate. Reimbursement reductions are resulting in some homecare providers having to source equipment that is less conducive to patient mobility.
- The patient lacks an exacerbation Rapid Action Plan. COPD exacerbations are usually addressed too late in their course so that by the time the exacerbation is detected, inflammatory and destructive processes that are part of the exacerbation are well developed.
**THE SOLUTION:** Nonin Medical’s COPD STEP™ Plan provides a practical, affordable, proven solution to the problem of comprehensive, seamless COPD treatment and management

Unlike other COPD programs, Nonin Medical’s COPD Seamless Treatment and Exacerbation Prevention (STEP™) Plan addresses both the *acute* treatment and *chronic* management aspects of the disease. The Plan incorporates both clinical and cognitive-behavioral treatment components. It also outlines a seamless transitional care plan from hospital to home clinic while teaching patients how to manage their condition and reduce the chance for re-hospitalization.

The COPD STEP™ Plan follows the six principles of a patient-centered disease management approach to improving COPD outcomes, including:

1. **Cross-continuum of care delivery.** Use a team approach to manage the chronic as well as the acute phases of the disease.²
   - a. Establish a COPD Coordinator function to train and seamlessly transition the patient from the acute through the chronic phases.
   - b. Efficient and effective communication between the care providers.
   - c. Seamless discharge and, where needed, a home visit to assess home environmental factors affecting the patient’s ability to adhere to a treatment regimen.

2. **Patient-centered care.** Patient training in self-monitoring and self-management as well as early recognition and response to exacerbations are central to the successful management of this progressive disease.²

3. **Active Lifestyle.** The centerpiece of successful COPD management, activity supports overall physical and mental health, supports airway clearance and helps with early exacerbation recognition and rapid response.²

4. **Patient Training.** Pulmonary rehabilitation and patient training begins at the “in-patient” stage and is reinforced after the patient is discharged. The patient should have a checklist of responsibilities and daily activities.²

5. **Proper Equipment.**
   - a. Oxygen equipment, titrated via pulse oximetry, to ensure oxygenation as well as mobility – vital to an active lifestyle.²
   - b. Pulse oximeter. This is useful in physician-directed oxygen titration as well as a biofeedback guide for pursed lips breathing.²
   - c. Airway clearance devices, meter dose inhaler (MDI) spacers, and other devices as needed.²

6. **Rapid Action Plan.** Patients should be trained to recognize the early signs of an exacerbation or exacerbation relapse. A checklist procedure should be in place for specific interventions by the patient and the care team.²
The Nonin Medical COPD Seamless Treatment and Exacerbation Prevention (STEP)™ Program
A comprehensive care plan and patient kit

Four Pillars of Commitment

The COPD STEP program should be implemented as a Quality Improvement Initiative in which clinical practice is changed to conform to evidence-based Best Practices and is measured against a standard quality measure, such as 30-day readmissions. Quality Improvement Initiatives are typically iterative and make continual evaluations and improvements.

1. **Care-Team Alignment**. This includes full alignment between hospital administration and clinical staff, a trained hospital COPD Coordinator, coordination with the primary care physician, and full patient participation.

2. **An Inpatient Hospital Care Plan**. This includes accurate diagnosis and treatment, and in-patient patient training on home equipment and Daily Rituals using the “teach back” method.

3. **An Outpatient Home Care Plan**. This includes a “Daily Rituals” activity plan, rapid access to the clinician for patients experiencing signs of exacerbation or relapse, and patient contact post-discharge as needed to assure adherence to plan and medications.

4. **Home-Care Devices**. These include home oxygen (including lightweight portable oxygen), a pulse oximeter, an airway clearance device, and an MDI spacer, as needed.

STEP Action Plan Components

### Management Map Algorithm

The COPD Management Map is a COPD decision process algorithm for the COPD Coordinator and cross-continuum care team.

### COPD Coordinator Training

On site and remote training developed by clinician authors of the COPD STEP™ Action Plan.
The Nonin Medical COPD Seamless Treatment and Exacerbation Prevention (STEP)™ Plan

**Daily Rituals**

COPD Daily Rituals are a set of routine steps condensed to their simplest form with a goal of keeping the patient active and healthy.

**Patient Kit**

Kit containing the devices and training materials needed for the COPD patient to stay on track.

EQUIP. EDUCATE. EMPOWER.

**Patient Training**

Video modules, 3-6 minutes in length, used to train COPD patients as well as reinforce the COPD Coordinator’s knowledge set.

1. About COPD
2. Smoking cessation
3. Inhaled medications and pursed lips breathing
4. Airway clearance
5. Exercise
6. Oxygen
7. Pulse oximetry
8. Flare-ups
9. Daily Rituals and visiting your doctor
A practical, affordable, proven solution designed to help hospitals achieve the healthcare **TRIPLE AIM**

---

**Improve the Patient EXPERIENCE**

**Obtain Better Health Through Improved OUTCOMES**

**Manage or Reduce COSTS**

---

**Achieve the Healthcare Triple Aim**

Successful management of the COPD patient embodies healthcare’s Triple Aim — outcomes are improved, per-capita costs are lowered and people living with COPD can experience fuller, longer and more active lives. Nonin Medical’s COPD STEP™ Plan is designed to help you achieve:

1. **Improved Clinical Outcomes** – maintenance of healthy tissue and FEV1 through avoidance of tissue remodeling associated with exacerbations.

2. **Improved Quality of Life** – an active patient living a fuller life.

3. **Improved Financial Benefits** – reduced cost of readmissions and exacerbation treatment, avoidance of readmission penalties.

---

**Act Now**

In the U.S. alone, the percentage of hospitals penalized for patient readmissions has increased each year since the federal Center for Medicare and Medicaid Services (CMS) began imposing penalties. More than 78% of hospitals were penalized for fiscal year 2015—the year that CMS included COPD when assessing readmissions performance.4

Don’t wait. Begin discussions now with your COPD Readmissions Committee about implementing a practical, affordable, proven plan for treating and managing your COPD patients.

Contact your Nonin representative today for more information about **Nonin Medical’s COPD STEP Readmission Reduction and Disease Management Action Plan.**
Inadequate SpO₂ information can compromise COPD patient outcomes

- **Low oxygen level with no shortness of breath** – patients can have low oxygen levels but not be short of breath. This can lead to pulmonary hypertension and lower cognitive function.⁷,⁸

- **Shortness of breath with acceptable oxygen levels** – dyspnea (shortness of breath) may lead to a cycle of reduced activity and deconditioning, which can lead to lower quality of life, and delayed recognition of an exacerbation onset. This is particularly true of patients who are short of breath even at acceptable oxygen levels.⁹,¹⁰

Patient education reduces anxiety and enables appropriate use of an oximeter⁵

- Gives the knowledge and confidence to be active⁵
- Enables oxygen titration under MD guidance¹¹

EQUIP. EDUCATE. EMPOWER.
References:
2. Tiep, B. COPD Patient 30-Day Hospital Readmission Reduction Program
5. Koff P. Pulse Oximetry at Home. May 2010
7. ClevelandClinic.org/health/diseases_conditions/hic_pulmonary_hypertension
8. Thakur, N. COPD and cognitive impairment; the role of hypoxemia and oxygen therapy. *Int J Chron Obstruct Pulmon Dis.* 2010;5:263-269

Nonin Medical invented finger pulse oximetry with its Onyx® brand.
In fact, more respiratory therapists (69%) use and trust Nonin finger pulse oximeters than any other brand.

nonin.com

Nonin’s GO2™ home-use oximeter helps patients easily manage their COPD, providing proven accuracy – even when oxygen levels are unstable.