Keeping PACE with Healthcare Reforms & COPD Standards of Care
Vi Bui, Thien Hoang, Loc Le, Nicholas Thrash

Introduction
The Ondenia Community Hospital Quality Improvement committee was called upon by the CEO to address the higher than average COPD readmission rate in light of the upcoming Medicare penalties. The events surrounding the admission, discharge, and readmission of four COPD patients were mapped and analyzed to determine the root causes. The committee then proposes the PACE Initiative to tackle the problems of high readmission rate and low patient satisfaction. The Initiative aims to not only resolve the apparent and ongoing problems but also establish a quality improvement process in order to adapt to future challenges.

Background
- Ondenia (Pop. 45,000) is the largest city in Gandon county, Ohio.
- Major industries: agriculture, diesel engine manufacturing plant, paper mill, coal power plant.
- Air Quality Index (AQI) > 151 for 30 days/year, reaching upwards > 200 at times.
- Health problems: 15% hospital admissions are for pulmonary diagnoses, 10% of ED visits are for COPD/COPD-related comorbidities.

Methodology
- Application of the DMAIC Cycle (Define, Measure, Analyze, Improve, and Control) to resolve the problems.
- Patient Adherence through Collaborative Exchange (PACE) Initiative, with a 2-pronged approach: patients and practitioners (P), and based on 3 keys: advocacy, communication, education (ACE).
- Timeline.
- Cost-benefit analysis.

Results

Root Cause Analysis

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Root Cause Analysis

<table>
<thead>
<tr>
<th>Patient Characteristics</th>
<th>Medical Staff</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low income</td>
<td>Lack of translation services</td>
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<tr>
<td>Lifestyle choices</td>
<td>Lack of coordination of care</td>
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<tr>
<td>Therapeutic noncompliance</td>
<td>Lack of pulmonologists</td>
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<td>Poor discharge process</td>
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Institutional Factors
- Lack of translation services
- Lack of coordination of care
- Lack of integrated electronic medical record

Environmental Factors
- Air pollution (Diesel engines, paper mills, coal burning power plants)
- Casino (smoky environment)

Quality Improvement:
Reassess budgets & benchmarks every quarter

Recommendations:
Develop processes & tools for improvement

Metrics:
Quarterly readmission rates for COPD patients

Goal:
15% reduction in 30 days COPD readmissions

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Overview
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Cost-Benefit Analysis
Monetized benefits:
- $6.6 million – 1st year (Net benefit)
- $2.3 million – 2nd year
- $3.2 million – 3rd year

Non-monetized benefits:
- Increased patient satisfaction
- Increased public trust
- Cleaner air for the greater Ondenia community

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