Chronic Obstructive Pulmonary Disease (COPD)

Chronic Obstructive Pulmonary Disease (COPD) is a slow progressive lung disease that includes chronic bronchitis and emphysema. Tobacco smoking is the leading cause of COPD, and 15-20 percent of all smokers develop clinically significant COPD. The fourth leading cause of death in the U.S., COPD affects approximately 10 million adults and many more that have the disease but have not been diagnosed. The economic burden of the illness is great. COPD health care costs nearly 2.5 times as much as asthma with an annual financial impact of $37.2 billion. Of the direct medical costs of COPD, hospital expenses account for more than half of all costs (National Committee for Quality Assurance). For the North Carolina Medicaid program, patients with COPD are 4.7 times more costly than the average Medicaid recipient.

In 2006, Community Care began a COPD Disease Management Program as a pilot initiative in response to a legislative directive to expand disease management programs as well as network and provider interest in COPD. The COPD pilot initiative utilizes a Disease Management Model based on Community Care's Asthma Disease Management Program. Five networks elected to pilot the COPD initiative. The following best practice guidelines were chosen for the initiative (note that these guidelines have been updated further since):

- Global Initiative for Chronic Lung Disease (GOLD) Guidelines, updated July 2003.
- American Thoracic Society (ATS)/European Respiratory Society (ERS) Standards, updated 2004.

Networks utilized pilot funding from the N.C. Foundation for Advanced Health Programs to purchase spirometers for participating practices. They also sponsored local provider training sessions to review best practices for COPD diagnosis and management as well as the importance of spirometry. They offered ongoing training in the use of machines and interpretation of results.

The following tools were developed as a part of the pilot:

- Laminated [card listing the] COPD guidelines of care.
- COPD booklet listing hospital ED and discharge protocols that was distributed to hospital-based providers.
- Patient-focused smoking cessation tools, including 5A's card (Ask, Advise, Assess, Assist and Arrange), a list of smoking cessation medications covered by Medicaid and statewide resources such as the "Quit Now" call-in number.
- COPD Action Plan (piloted by one network) that targeted both health care professionals and patients.
- Case Management Assessment Tool that was incorporated into the Web-based Case Management Information System.
- Communication and referral processes with providers were defined.

The COPD program participants chose the following process performance measures derived from the annual chart audits:

- Stage of the disease is documented (mild, moderate, severe or very severe).
- Spirometry (pulmonary function testing) testing completed, including the last spirometry readings.
- Use of appropriate medications (includes classes of COPD medications prescribed).
- Action Plan completed.
- Flu vaccine offered annually.
- Pnemovax vaccine documented.
- Smoking cessation counseling documented.

The following outcome performance measures derived from claims data were chosen:

- ED visits for COPD exacerbations.
- Hospitalizations for COPD exacerbations.
- Medications (drug types and costs of filled medications).

In addition, program participants included a quality-of-life tool as a qualitative measure.

Based on the success of this pilot and the move to manage patients with multiple chronic conditions program-wide, the efforts described above were adopted by all CCNC networks and COPD became a key condition for care management and provider support. In addition to the supplying the tools produced by the pilots, the networks support the COPD initiative in a variety of ways:

- Local provider training sessions to review best practices for COPD diagnosis and management as well as the importance of spirometry.
- Ongoing training in the use of spirometry machines and interpretation of results.
- Technical assistance in quality improvement (eg. Practice re-design support, practice materials for providers to customize).
- Program, network, practice and patient level data on process measures (chart audits), outcomes measures (emergency room and hospital use data) and other data from the Medicaid claims system.
- Office tools such as sample COPD action plans.
- Care management services for patients with COPD.
- Disease-specific assessments utilizing the COPD assessment tool developed as part of the pilot.
- Quality-of-life assessment tools.
- Medication adherence counseling.
- Smoking cessation counseling.
- Coordination of care, including information on pulmonary rehabilitation and end-of-life resources.
- Follow up communications after emergency room and inpatient visits.
- Education on other available community resources.
- Practice assistance with quality improvement and the PDSA (plan, do study, act) cycle