Community Care of North Carolina – NC's PCCM program

http://www.communitycarenc.com/asthma.htm:

Asthma Disease Management Program

Asthma was the first program-wide quality improvement initiative chosen by the Community Care of North Carolina Clinical Director's group in 1998. The decision was based on the guidelines for selecting a QI initiative, and on review of Medicaid claims utilization data. Some of the key utilization factors included:

- In fiscal year 1998, the North Carolina Medicaid program spent more than 23 million dollars on asthma related care. (*The Childhood Asthma in North Carolina Report*, March 1999 by the State Center for Health Statistics)
- Approximately 14% of the Medicaid population had a diagnosis of asthma. (*The Childhood Asthma in North Carolina Report*, March 1999 by the State Center for Health Statistics)
- Analysis of Medicaid claims data from the Community Care of North Carolina sites demonstrated that the primary and secondary reason for both hospital admissions and emergency room visits for patient under 21 was asthma.

Core Elements of the Asthma Disease Management Program

The Community Care of North Carolina networks developed core elements of the Asthma Disease Management Program in order to streamline the process of identifying "best practices" and to reduce the potential for duplicating efforts in the development process. Listed below are the core elements of the Asthma Disease Management Program:

1. **Build Capacity for Routine Assessment of Asthma**
    - Adopt the NIH (National Institute of Health) guidelines on the diagnosis and management of asthma.
    - Develop a method for identifying and recruiting asthma patients in the participating provider network.
    - Develop and implement a simple questionnaire that allows providers to quickly stage the severity of an asthmatic patient.
    - Develop a method to record severity staging on a regular basis.
    - Establish peak flow meter readings as a tool for all asthma patients, a nd record the peak flow at all appropriate times and in all appropriate settings.
    - Record each patient's personal best peak flow in the medical record and/or the care management plan.
    - Stock peak flow meters and spacers in all providers' practices and care settings to assure availability and ease in dispensing to patients.
    - Use spacers/ holding chambers, when appropriate.
    - Identify one staff person per practice as the "asthma QI champion".

2. **Reduce Unintended Variation in Care and Establish Consistency of Care**
    - Educate all medical personnel regarding the proper use of maintenance medications based on NIH guidelines.
    - Educate all medical personnel regarding the step approach to asthma management based on NIH guidelines.
    - Offer physician profiling as a part of this effort- conduct detailed visits with staff and physicians to review each practice's prescribing histories, including a case-by-case discussion of diagnoses and recommended medications.
    - Utilize case managers to coordinate information gathering, transfer, and care delivery as appropriate.

- Assess home environment for smoking, allergenic materials, and other known asthma triggers. Coordinate sharing of this information with all caregivers.
- Educate all medical personnel to stage asthmatics appropriately and write an asthma action plan accordingly.

3. **Build Capacity to Educate Patients, Families and School Personnel About Asthma**
    - Develop and implement simple asthma management plans that include the patient performing and monitoring peak flows.
    - Develop the capacity to teach each child and family how to properly use peak flow meters, inhalers, spacers and/or holding chambers.
    - When possible, collaborate with school nurses, teachers, administrators, and day care personnel to assure appropriate education, assessment, and treatment for school-age children with asthma.
    - For young children who cannot use peak flow meters, educate family on symptom-based management.

4. **Report Outcomes and Process Measures to all Providers and Staff Regularly**
    - Develop the information system capability to collect, monitor, and analyze data for measuring performance. Collect and disseminate information by physician, by practice, and by network.
    - Use this information to assess current performance, to encourage efforts to improve care processes at all levels, and to set goals and performance improvement targets.

Asthma Disease Management Program Performance Measures
The Community Care of North Carolina network leadership chose the following outcome measures:

- Inpatient Admission Rate
- Inpatient Admission Rate for Asthma
- Emergency Department Utilization Rate
- Emergency Department Utilization Rate for Asthma

And the following process measures were chosen:

- Percentage of asthma patients staged
- Percentage of asthma patients staged II, III, and IV on maintenance medications
- Percentage of asthma patients with a written Asthma Management Plan
- Percent of asthma patients receiving an annual influenza vaccine

2007 Asthma Update

CCNC Asthma Disease Management Quality Initiative

Asthma Staging Card

CCNC Asthma Guidelines

http://www.communitycarenc.com/diabetes.htm:
Diabetes Disease Management Program

The Clinical Directors chose Diabetes as the second program-wide quality improvement initiative in 2000. Following the guidelines for selecting a QI initiative, the decision was based on the following:

- There is a high percentage of adults with a diagnosis of diabetes with inpatient admissions and emergency department visits.
- Diabetes is one of the predominant diseases in the adult Medicaid population and the incidence is increasing.
- Poorly managed / uncontrolled diabetes may lead to multiple serious and costly long term complications.
- Evidence based best practice guidelines for the care of diabetes is evident and accepted in the medical community.
- There was room for improvement in the management and care of enrollees with diabetes in our networks.

Core Elements of the Diabetes Disease Management Program

The planning and development of the Diabetes Disease Management Program occurred in 2000 and the program began the implementation phase in January of 2001. The initial base-line audit reflects the last six months of 2000. As in other quality improvement efforts, the identification of and leadership by a "diabetes champion" is a critical component to successful implementation.

Step One: Definition of Diabetes

- Determine diagnostic criteria for Diabetes Mellitus for non pregnant adults

  Diabetic Testing:

  - A random plasma glucose >/= 200 mg/dL (11.1 mmol/L) or
  - Fasting plasma glucose >/= 126 mg/dL (7.0 mmol/L) after 10-12 hr caloric abstinence or
  - 2 hour plasma glucose during OGTT (Oral Glucose Tolerance Test) >/= 200mg/dL (11.1 mmol/L)
- Impaired glucose tolerance as a risk factor
- Hospitalization for Diabetic Ketoacidosis (DKA)

Step Two: Identify and Implement Your Diabetes Team(s)

- Define and assemble a collaborative multi-disciplinary diabetes health team at the Community Care of North Carolina network level.
- Define the "Diabetes QI Champion" in each practice.
- Develop a role delineation/job description for your Diabetes QI champion.

Step Three: Define and Develop Diabetes Resources and Tools

- Identify and develop/customize tools for the providers and the patients on diabetes management.

- Define the practice assessment process to determine the patient's needs and assets.
- Develop a diabetes education program that maximizes diabetes self-care behavior.
- Circulate draft educational and management tools to providers and their staff for input and buy-in.

Step Four: Work with Community Resources

- Identify and collaborate/coordinate with existing community resources focusing on Diabetes.
- Identify resources and processes for hospital to community transition for newly identified diabetics.

Step Five: Educate Providers, Facilitate Buy-In, and Implement Processes

- Provide technical assistance to practices for implementation of PDSA cycles targeted to improve provider processes and patient outcomes.
- Finalize tools and processes for Diabetes disease management and educate all providers/staff in your network.
- Work with practice level "Diabetes Champion" to track and monitor program implementation.
- Identify new and ongoing needs for provider and staff education on the management of Diabetes.

Diabetes Disease Management Program Performance Measures

The CCNC network leadership chose the following outcome measures:

- Inpatient Admission Rate
- Inpatient Admission Rate for Diabetes
- Emergency Department Utilization Rate
- Emergency Department Utilization Rate for Diabetes

The following process measure were chosen for adults and children, as indicated by ADA Guidelines:

- Diabetic Flow Sheet in use on the medical record
- Continued care visits at least 2 x year
- Blood pressure at every continuing care visit
- Referral for dilated eye / retinal exam every year
- Foot exam every year
- Monofilament / sensory exam every year
- Glycosylated Hemoglobin (HgbA1c) at least 2 in 12 months
- Annual Lipid profile
- Annual Flu Vaccine
- Pneumococcal vaccine done once (repeat IF first dose was given at <65 yrs. old AND pt. is now >65 AND first dose was given > 5 yrs ago)

CCNC Diabetes Management Quality Initiative Results

2007 Diabetes Update

2008 ADA Guidelines - Executive Summary

2008 ADA Summary for CCNC Adults

2008 ADA Summary for CCNC Children

CCNC Diabetes Guidelines