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ASTHMA CARE FOR CHILDREN BASKET OF CARE SUBCOMMITTEE

Report to:

Minnesota Department of Health

June 22, 2009

BASKET TOPIC DETERMINED BY BASKET OF CARE STEERING COMMITTEE:

Asthma Care for Children

BASKET TOPIC DETERMINED BY BASKET OF CARE SUBCOMMITTEE:

Ambulatory Care of Asthma in Children Ages 5-18

SCOPE STATEMENT: [1]

Comprehensive asthma care for children ages 5 to 18 years, diagnosed with asthma. This care is provided in one year and includes assessment and monitoring, education, control of environmental factors, medications and devices. Emergency Department and hospital in-patient care is excluded. Also excluded from this basket are children with severe cardiovascular and/or chronic respiratory diseases. Licensed and or certified medical professionals will provide these services.

Rationale for Scope Selection:

- What patients - those with a diagnosis of asthma (persistent and intermittent), children ages 5-18.

  Definition of Asthma: Asthma is a chronic inflammatory disorder of the airways. It is characterized by airway inflammation resulting in an acute, subacute or chronic process that alters airway structure reversibly or permanently. The airway becomes hyperresponsive to allergens, environmental irritants, viral infections and exercise. Airflow obstruction is caused by acute bronchial constriction, edema, mucus plugs and frequently, permanent remodeling.

  Younger children can be diagnosed, however it is more difficult, and for this first attempt at designing a basket of care it was agreed that the starting age should be at 5.

- Which providers - in ambulatory care services including urgent care. Emergency department and hospitalization would not be included. Medical professionals considered providers are physicians, nurse practitioners and physician assistants.

- Other medical professionals that are considered part of the team included pharmacy, home care, nurse educators, public health nurses, school nurses, caregivers.
- What exclusions - children with cardiovascular disease and children with other chronic respiratory diseases. There were other thoughts given on exclusions, but no workgroup consensus on those suggestions.
- Care coordination considerations - the group agreed "care coordination" services are within this scope of care. Areas for consideration included the school setting, and other places the asthma team professionals would deliver care.
- What care -It was proposed that the care provided within the basket would be based on recommendations from the National Heart, Lung, Blood Institute (NHLBI) guideline

BASKET OF CARE COMPONENTS:

Basket components were identified based on current literature, existing guidelines, current standards of practice and in some cases evidence informed consensus. They are grouped in this manner:

- Asthma assessment and monitoring (diagnosis of asthma already determined)
- Education for a partnership in care
- Control of environmental factors and co-morbid conditions
- Medications and devices

Assessment and Monitoring	**Frequency in One Year**
Classify severity—as described in evidence-based guidelines	Initial assessment
Assess Control [2] Impairment and Risk	Minimum 2 times / year
Referral to specialists (pulmonologist, allergist, etc.)	When needed for consistent poorly controlled asthmatics
Spirometry [3]	Once per year
Peak-Flow Monitoring (Consider when spirometry not available)	Minimum once
Medical assessment [4]	2 times /year
Consider In-Home Assessment (for consistently poorly controlled asthmatics). Includes identifying triggers and allergens	If needed
Education [5] (culturally and developmentally appropriate) Provided by a Certified Asthma Educator	**Frequency**

Basic facts about asthma (includes): • Normal airways vs airways during an asthma episode • Role of inflammation, muscle constriction, mucus production • Asthma symptoms (coughing, wheezing, shortness of breath, chest tightness • Goals of asthma control	Initial visit and additional if needed
Trigger/Environmental control (includes): • Identifying and avoiding triggers such as allergens, smoke, infections • Pre-treatment for exercise	Initial visit and when change in environment
Patient Skills (includes): • Inhaler technique and care of equipment (provide holding chamber X2 for home and school) • How to know and calculate when the MOI canister needs replacing • How to take medications and when • Symptom recognition and monitoring • Peak flow monitoring (if applicable) • When to seek care • Importance of asthma check-up every 6 months	Update if needed
Role of medications [may be taught by a Certified Asthma Educator pharmacist (includes)] • Controller medications • Reliever medications • Discuss adherence and how to work meds into daily routine • Care of metered dose inhalers • Nebulizer technique and care of equipment	At each visit
Written Asthma Action Plan—standardized form when possible (copies to family for daycare, pre-school and school, camp, etc.)	Minimum once; update each time there are changes of care
Asthma Care Coordinator [6] (coordinate communications, education, care)	For consistently poorly controlled asthmatics
Co-morbid conditions	**Frequency**
Flu shots, pneumococcal vaccine	Influenza yearly Pneumococcal once in childhood
Identify co-morbid conditions	As needed
Medications [7] (The cost of medications are included in the basket)	**Prescribed per guidelines**
Long-term meds (long acting $Beta_2$Agonists, Corticosteroids)	
Quick-relief meds (short acting $Beta_2$Agonists)	
Durable Medical Equipment (holding chambers, nebulizers, etc.)	

Notes:

1. **Scope**

   The care within this basket does not include care received in the Emergency Department or in a hospital as an in-patient. However, the use of an Urgent Care center is covered. The utilization of Urgent Care centers is encouraged when clinics are not open; instead of Emergency Departments

2. **Assess Control**

   Assess signs and symptoms of asthma, triggers and allergens, history of exacerbations, quality of life, pharmacotherapy for adherence and side effects. (This is not an all-inclusive list.)

   A standardized asthma control test or questionnaire with a personal interview may be used. Standardized test will allow for comparison over time. Face to face discussion is important for clarification/validation.

3. **Spirometry**

   Spirometry should be performed once per year. At this time there is not strong evidence that more frequent testing improves outcomes although FEV1 measurement helps predict risk of exacerbations.

   Follow-up spirometry every 1-2 yrs in mild asthmatics will reconfirm the diagnosis and objectify serial change and level of control. More frequent monitoring should be considered for the moderate and severe asthmatics.

4. **Medical Assessment**

   A medical assessment includes Height/growth curve, physical exam, emotional and psychological assessments, environmental trigger exposure, etc.

5. **Asthma Education**

   This Asthma Basket of Care encourages innovations to care delivery. Asthma Education should be available in a variety of locations using creative modes of delivery; such as phone, e-mail, face-to-face and group visits, etc. Schools should have trained asthma educators. Inhaler technique could be taught and assessed each time the patient comes to the clinic for a visit. An MD, Certified Asthma Educator (Nurse or Pharmacist) could do this.

   Educating the patient and family on what asthma is and what they can do to control and manage it, is the most important group of components on this list. The time needed to educate must be allotted in this basket.

   Primary care providers need to be knowledgeable about the education they will be providing for asthmatic patients.

6. **Asthma Care Coordinator**

   Care coordination is necessary for this chronic disease. This component coordinates provider, patient, family, school and environment, in educating and monitoring the disease.

   The intent is that, for consistently uncontrolled asthma patients a coordinator or navigator would coordinate the management of the disease. The 'who' can be any asthma clinical team member such as physician, clinic or home nurse, asthma educator, etc. This may only be necessary in the 15-20% of patients whose asthma is consistently poorly controlled.

7. **Medications**

   One enormous problem with patients not filling or taking their medications is the cost of the medications. We are proposing that the cost of medications (and delivery devices) be included in the price of the basket.

   Providers and payers will be able to be innovative as they develop pricing and billing processes. It is not proposed the provider be responsible for dispensing medications, although that could be an additional innovation should a provider chose to do so. Collaboration with a pharmacist would also be imperative. An additional phase of the baskets of care initiative includes the development of a workgroup to identify administrative and operational challenges associated with baskets of care. It is likely that these questions could be addressed with that effort.

Components considered but not included:

- Allergy testing and treatment of comorbid conditions was considered, but not included. Referral to specialists for these components is recommended.

OPPORTUNITIES FOR INNOVATION INCLUDE:

- The Asthma care team is multidisciplinary. This includes physicians, nurse practitioners, certified asthma educators, pharmacists, school nurses, parents and other patient care givers. In the future it is hoped that all care team members will have access to the child's electronic medical record and/or written asthma action/care plan.
- Some of this care may be done as non-visit (Physician office) care (ex: having a RN Care Coordinator call for symptom updates).
- The inclusion of drugs, devices and durable medical equipment, as well as a home assessment and care coordination, in this basket represents a bold step forward in improving care of chronic disease by making sure that patients will have access to all needed diagnostic, care coordination and treatment requirements for their asthma.

- The Baskets of Care project encourages innovations to care delivery. Asthma Education should be available in a variety of locations using creative modes of delivery; such as phone, e-mail, face-to-face visits, etc. Schools should have trained asthma educators. Inhaler technique could be taught and assessed each time the patient comes to the clinic for a visit. An MD, C-AE (Nurse or Pharmacist) could do this.

- The intent is that, for consistently uncontrolled asthma patients co-management of the disease by a care coordinator would improve outcomes.. The 'who' can be any asthma clinical team member such as physician, clinic or home nurse, asthma educator, etc. Again, this may only be necessary in the 15-20% of patients whose asthma is consistently poorly controlled

- An enormous problem is that patients don't fill prescriptions because of the cost. We are proposing that the cost of medications (and delivery devices) be included in the price of the basket.

- Providers and payers will be able to be innovative as they develop pricing and billing processes. Collaborating with pharmacists would be imperative. An additional phase of the baskets of care initiative includes the development of a work group to identify administrative and operational challenges associated with baskets of care. It is likely that these questions could be addressed with that effort.

ADDITIONAL CONSIDERATIONS:

- The Asthma care team is multidisciplinary. This includes physicians, nurse practitioners, certified asthma educators, pharmacists, school nurses, parents and other patient care givers. In the future it is hoped that all care team members will have access to the child's electronic medical record and/or written asthma action/care plan.

- Specialists also provide routine asthma care and can offer an asthma BOC; they can provide primary care in some cases and be a consultant in others.

- Some of this care may be done as non-visit (Physician office) care (ex: having a RN Care Coordinator call for symptom updates). If there are concerns of incomplete control (per NHLBI/NAEPP guidelines) or concerns regarding level of asthma severity, then these are the children that should receive additional care.

- This care is delivered at small rural practices and large, integrated systems. Home, schools and summer camps are also examples of sites of care.

- This basket appears to require a functioning delivery system that includes pharmacy and device delivery capability, something that currently may be beyond independent practices.

- (copied from one responder). This is a very innovative basket of care and is perhaps the best example of how innovation in payment policy could improve care outcomes. The inclusion of drugs, devices and durable medical equipment, as well as a home assessment

and care coordination, in this basket represents a bold step forward in improving care of chronic disease by making sure that patients will have access to all needed diagnostic, care coordination and treatment requirements for their asthma. In many respects, this basket should be a model for all chronic care baskets or bundles that might be developed in the future.

JUNE 4, 2009 STEERING COMMITTEE REVIEW AND COMMENT:

- Acknowledged operational challenge with medications being included in the basket.
- For those situations requiring inpatient care, acknowledged the importance of coordination of care for this basket.

SUPPORTING REFERENCES:

These care components are supported by the following evidence and guidelines:

National Heart, Lung, Blood Institute, 2008

Institute for Clinical systems Improvement Management of Asthma guideline, 2008