Program Development, Implementation, and Evaluation

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AIR PREP COURSE
MARCH 09, 2017
The problem of chronic illness

133 million American live with at least one chronic illness

Causes 7 in 10 deaths each year in the United States

More than 75% of health care costs are due to chronic conditions
The problem of chronic illness

“...it is not a question of knowing how to treat heart disease, diabetes or mental illness...we know how. We’re just not doing it. People are literally dying, waiting for the practice of medicine to catch up with medical knowledge. More than 57,000 people will die this year because there is a huge gap between what we know and what we do.” Margaret O’Kane (2003)
The asthma care paradox

Our understanding of the pathogenesis of asthma has improved

Our understanding of the steps to control asthma has improved
The asthma care paradox

Our understanding of the pathogenesis of asthma has improved

Our understanding of the steps to control asthma has improved

Morbidity and mortality from asthma around the world is still high
The asthma care paradox


The percentage of the U.S. population with asthma increased from 3.1% in 1980 to 5.5% in 1996 and 7.3% in 2001 to 8.4% in 2010.
Two possible explanations

Not recognizing the symptoms and/or seriousness of asthma
Two possible explanations

There is a breakdown in either the delivery or the receiving of therapy.
Two possible solutions

Chronic Care Model

Patient-Centered Medical Home
Two possible solutions

A PCMH is a smaller version of the ACO – a primary physician strives to provide patients with better coordination of care, access to services, prevention, quality and safety within the practice.

An ACO is larger and can serve a larger population of people—it looks to have multiple primary care providers and practices work together. In essence, an ACO is like a PCMH “neighborhood.”
### IV. ORGANIZATIONAL ISSUES

#### A. Needs Assessment
1. Identify outcome indicators
2. Obtain information (e.g., methods, data sources) about the asthma population and healthcare providers
3. Use findings to make recommendations

#### B. Program Development
1. Identify resources e.g.,
   - funding
   - facilities
   - personnel
2. Prioritize program features based on resources and characteristics of the target population (e.g., asthma severity, risk factors)
3. Compare evidence-based solutions to program needs
4. Create goals of program and specific objectives to meet those goals
5. Select teaching methods and settings that will best meet objectives for the target population

#### C. Program Implementation
1. Ensure safety and privacy of individuals with asthma e.g., x HIPAA x OSHA x infection control
2. Maintain a program database
3. Coordinate training for program staff

#### D. Program Evaluation
1. Select validated program evaluation tools
2. Assess program processes e.g.,
   - adherence (e.g., attendance, diary completion) of participant
   - the influence of the program on participants’ knowledge, skills, and / or attitudes (e.g., confidence, outcome expectations)
   - procedure and task implementation
3. Assess program outcomes e.g.,
   - key outcomes (e.g., quality-of-life, functional status, asthma control, healthcare utilization, participant satisfaction)
   - measures for key program outcomes
   - program effectiveness
4. Use findings to assess program impact and need for modifications
Needs Assessment

IV. ORGANIZATIONAL ISSUES

A. Needs Assessment

1. Identify outcome indicators
2. Obtain information (e.g., methods, data sources) about the asthma population and healthcare providers
3. Use findings to make recommendations
Needs assessment
A Needs assessment

Figure 2

Strategic flow for an asthma plan

<table>
<thead>
<tr>
<th>Generic Asthma Plan - to be adjusted for local and national needs</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Strategic Choices</strong></td>
</tr>
<tr>
<td>Practical action plan, not a consensus report</td>
</tr>
<tr>
<td>Strategies for: 1) those diseased, 2) general population</td>
</tr>
<tr>
<td>Quantitative and qualitative goals</td>
</tr>
<tr>
<td>Focus on primary health care and outpatient services</td>
</tr>
<tr>
<td>Promotion of asthma health</td>
</tr>
<tr>
<td>Asthma Control Tools for guided self-management to stop exacerbations</td>
</tr>
<tr>
<td>Search for critical mass for change through education and counselling</td>
</tr>
</tbody>
</table>

| **Goals, Measures**                                            |
| 1-3 key messages for the public                                |
| 3-5 numerical goals for Health Care to reduce the burden      |
| Tools to be used locally                                       |
| Measures to follow outcomes                                   |
| Time lines                                                    |

| **Activities**                                                 |
| Leadership, steering group (local, national)                   |
| Capacity building, funding                                    |
| New internet-based networking with specialists, GPs, nurses, pharmacists |
| In diagnostic work, improving early detection                 |
| In treatment, improving effective use of ICS                  |
| Education and publicity (with NGOs)                           |
| Legislation (essential medication, anti-smoking)              |
| Feedback, follow-up                                           |

| **Background**                                                 |
| NEW BODY OF KNOWLEDGE                                         |
| • Disability caused by asthma can be prevented                |
| EPIEMIOLOGY                                                   |
| • Morbidity                                                   |
| • Prevalence                                                  |
| ECONOMY                                                       |
| • Costs                                                       |
| EVIDENCE                                                      |
| • Implementation of best practice is highly cost-effective both on the patient and societal levels |

| **Conclusions**                                                |
| Public health problem                                         |
| Need for broad consensus                                       |
| Need for action                                               |
| Identification of key stakeholders                           |
| Focus on patients                                             |
| Focus on severe asthma to stop exacerbations                  |
| Focus on effective use of available resources and registers   |

**Process evaluation**

**Outcome evaluation**
Needs assessment

Outcome indicators

Prevalence of asthma
Missed work/school days
ED visits
Hospitalizations
Deaths
Health care costs
Lost productivity costs

Figure 2

Strategic flow for an asthma plan

Generic Asthma Plan - to be adjusted for local and national needs

Background

NEW BODY OF KNOWLEDGE
- Disability caused by asthma can be prevented

EPIDEMIOLOGY
- Morbidity
- Prevalence

ECONOMY
- Costs

EVIDENCE
- Implementation of best practice is highly cost-effective both on the patient and societal levels

CONCLUSIONS
- Public health problem
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STRATEGIC CHOICES
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- Legislation (essential medication, anti-smoking)
- Feedback, follow-up
Needs assessment
The asthma population

Asthma period prevalence, 1980-1996

Current asthma prevalence, 2001-2010
Needs assessment
The asthma population

Current Asthma Prevalence: United States, 2001-2010

One in 12 people (about 26 million, or 8% of the U.S. population) had asthma in 2010, compared with 1 in 14 (about 20 million, or 7%) in 2001.
Needs assessment
The asthma population

Current Asthma Prevalence by Race and Ethnicity:
United States, 2001-2010

Blacks are more likely to have asthma than both Whites and Hispanics.
Needs assessment
The asthma population

Child and Adult Current Asthma Prevalence by Age and Sex: United States, 2006-2010

Among children aged 0-14, boys were more likely than girls to have asthma.
Boys and girls aged 15-17 years had asthma at the same rate.
Among adults women were more likely than men to have asthma.
Needs assessment
The asthma population
Needs assessment
The asthma population

Demographics
Risk stratification
Use of controller medications
Use of an asthma action plan
Use of the asthma control test
Number of physician visits per year
Needs assessment
The asthma population

- Severe persistent
- Moderate persistent
- Mild intermittent
- Mild persistent
Needs assessment

The asthma population

![Bar chart showing the proportional impact of asthma prevalence, health care use, and mortality among children 0-17 years of age, by race and ethnicity, United States, 2003-2005.]

SOURCES: CDC/NCHS, National Health Interview Survey, National Ambulatory Medical Care Survey, National Hospital Ambulatory Medical Care Survey, and the Mortality Component of the National Vital Statistic System.

Figure 8. The proportional impact of asthma prevalence, health care use, and mortality among children 0-17 years of age, by race and ethnicity, United States, 2003-2005.
Needs assessment
Healthcare Resources

Primary care providers
Specialty care providers
Hospitals
Pharmacists
Community resources
Case managers
Social workers
Schools/school nurses
Family members
Other ancillary services
Findings become objectives

Outcomes indicators become outcomes objectives

Data about the asthma population become learning objectives

Data about the healthcare community become resource objectives
### B. Program Development

<table>
<thead>
<tr>
<th>Steps</th>
<th>1</th>
<th>3</th>
<th>1</th>
<th>5</th>
</tr>
</thead>
</table>
| 1. Identify resources e.g.,  
  - funding  
  - facilities  
  - personnel | | | | |
| 2. Prioritize program features based on resources and characteristics of the target population (e.g., asthma severity, risk factors) | | | | |
| 3. Compare evidence-based solutions to program needs | | | | |
| 4. Create goals of program and specific objectives to meet those goals | | | | |
| 5. Select teaching methods and settings that will best meet objectives for the target population | | | | |

**Diagram:**
- Needs Assessment
- Evaluation
- Design
- Implementation
- Launch
Program development

Identify resources

Prioritize program features
Compare solutions to needs
Create goals and objectives
Select program activities
Program development
Identify resources—General nonprofit
Program development
Identify resources—General nonprofit

<table>
<thead>
<tr>
<th>Subsector</th>
<th>Fee (%)</th>
<th>Private Gifts (%)</th>
<th>Government (%)</th>
<th>Investment Income (%)</th>
<th>Other (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>All</td>
<td>50.3</td>
<td>13.3</td>
<td>31.9</td>
<td>2.8</td>
<td>1.7</td>
</tr>
<tr>
<td>Arts</td>
<td>34</td>
<td>44.5</td>
<td>13</td>
<td>5.4</td>
<td>3</td>
</tr>
<tr>
<td>Education</td>
<td>61.1</td>
<td>17.2</td>
<td>14</td>
<td>5.8</td>
<td>1.9</td>
</tr>
<tr>
<td>Environment</td>
<td>30.2</td>
<td>49.1</td>
<td>14.6</td>
<td>3.2</td>
<td>3</td>
</tr>
<tr>
<td>Health</td>
<td>56.3</td>
<td>4.4</td>
<td>35.9</td>
<td>1.9</td>
<td>1.5</td>
</tr>
<tr>
<td>Human Services</td>
<td>27.5</td>
<td>20.2</td>
<td>48.5</td>
<td>2</td>
<td>1.9</td>
</tr>
<tr>
<td>International</td>
<td>8</td>
<td>69</td>
<td>20</td>
<td>1.6</td>
<td>1.4</td>
</tr>
</tbody>
</table>

## Program Development

### Identify resources—Funds & Facilities

<table>
<thead>
<tr>
<th>Revenue Type</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grants/Contracts/Contributions</td>
<td>Alficor</td>
</tr>
<tr>
<td></td>
<td>Heart of West Michigan - United Way</td>
</tr>
<tr>
<td></td>
<td>MSU Technical Assistance</td>
</tr>
<tr>
<td></td>
<td>Spectrum Health Community Benefits</td>
</tr>
<tr>
<td>Total Grants/Contracts/Contributions</td>
<td></td>
</tr>
<tr>
<td>Earned Income</td>
<td>Income Managed Care (165 asthma/COPD visits/month)</td>
</tr>
<tr>
<td></td>
<td>Interest Income</td>
</tr>
<tr>
<td></td>
<td>Honoraria</td>
</tr>
<tr>
<td>Total Grant/Earned Income Revenue</td>
<td></td>
</tr>
<tr>
<td>Carryover/(Shortfall)</td>
<td></td>
</tr>
<tr>
<td>In-Kind Revenue</td>
<td>Non-Reimbursed Home Visits (25/month x $200)</td>
</tr>
<tr>
<td></td>
<td>.12 Medical Director</td>
</tr>
<tr>
<td></td>
<td>Administrative Oversight (Saint Mary’s)</td>
</tr>
<tr>
<td></td>
<td>Office Space (Saint Mary’s) - 1,424 sq ft</td>
</tr>
<tr>
<td></td>
<td>Computers (Saint Mary’s)</td>
</tr>
<tr>
<td>Total Other/In-kind Revenue</td>
<td></td>
</tr>
</tbody>
</table>
Program development
Identify resources--Personnel

Asthma Case Management Team:

- CHAP Clinical Manager / ANWM Manager
- 2 Asthma Educators/Case Managers – must be Certified Asthma Educator (AE-C) – RN or RRT – or become certified within one year (bilingual preferred)
- LMSW (Masters-prepared social worker)
- 2 Community Health Workers (CHW)
  - .75 FTE combined
### Asthma Team Competencies

- Office based training – PFT, ACT, AAP, etc
- Home based disease management
- Care coordination, including non-asthma issues
- Social support, environmental assessment
- Smoking cessation
- Asthma education
- Family/parent relationships
Program development
Apply solutions to needs

Using the chronic care model as a blueprint, evidence-based solutions can be applied at the system level, provider level, and patient level.
Program development
Apply solutions to needs

CHAP Strategies:
System Level

- Integration of transition of care with inpatient setting
- Incentive Based opportunities
  - performance-based incentive
- Standardization of care with hospitals, schools, etc
- Connection to Community Programs
  - Partnership with ANWM
  - Connection with other community providers (maternal/infant health, Healthy Homes, behavioral health, basic needs, etc.)
Program development
Apply solutions to needs

CHAP Strategies:

Provider Level

- Medical Management
  - Asthma Care Team – standardize asthma care and quality measures for CHAP sites, inpatients and schools
  - Education of high ED/IP utilizers
- Sharing Best Practices and Physician Leadership
  - Quarterly physician meetings, monthly practice manager meetings
  - Asthma Care Team meetings
  - Office site asthma care profile and office based outcomes
  - Provider education
  - Quality improvement support
Program development
Apply solutions to needs

CHAP Strategies:

Family Level

- Appropriate Resource Utilization
  - Parent education re:
    - Inappropriate ED use
    - Importance of medical home and how to contact PCP
    - No shows
    - Importance of immunizations and well-child visits
  - Intensive asthma education and home-based case management
  - Resource coordination/referral to community services
  - Free same-day/next-day transportation
  - Assistance with interpretation services

Opportunity to participate in Parent Advisory Group, other feedback forums
Program development
Create goals and objectives

<table>
<thead>
<tr>
<th>Components of Severity</th>
<th>Intermittent</th>
<th>Mild</th>
<th>Moderate</th>
<th>Severe</th>
</tr>
</thead>
<tbody>
<tr>
<td>Impairment</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Normal FEV₁/FVC</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8–19 yr</td>
<td>85%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20–39 yr</td>
<td>80%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>40–59 yr</td>
<td>75%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>60–80 yr</td>
<td>70%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nighttime awakenings</td>
<td>≤2x/month</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Short-acting beta₂-agonist use for symptom control (not prevention of EIB)</td>
<td>≤2 days/week</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interference with normal activity</td>
<td>None</td>
<td>Minor limitation</td>
<td>Some limitation</td>
<td>Extremely limited</td>
</tr>
<tr>
<td>Lung function</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Normal FEV₁ between exacerbations</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FEV₁ &gt;80% predicted</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>FEV₁/FVC normal</td>
<td></td>
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<tr>
<td>Exacerbations requiring oral systemic corticosteroids</td>
<td></td>
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<td></td>
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<tr>
<td>0–1/year (see note)</td>
<td></td>
<td>≥2/year (see note)</td>
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<tr>
<td>Risk</td>
<td></td>
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</tbody>
</table>

Consider severity and interval since last exacerbation. Frequency and severity may fluctuate over time for patients in any severity category. Relative annual risk of exacerbations may be related to FEV₁.

Recommended Step for Initiating Treatment
(See figure 4–5 for treatment steps.)

In 2–6 weeks, evaluate level of asthma control that is achieved and adjust therapy accordingly.
Program development
Create goals and objectives

- Prevent chronic and troublesome symptoms
- Require infrequent use of inhaled short-acting beta2-agonist
- Maintain (near) normal pulmonary function
- Maintain normal activity levels
- Meet patients’ and families’ satisfaction with asthma care
Program development
Create goals and objectives

- Prevent recurrent exacerbations of asthma
- Prevent progressive loss of lung function
- Provide optimal pharmacotherapy with minimal or no adverse effects
Program development
Create goals and objectives

CHAP Asthma Program Goals:

- Identify and **address systems barriers** that prevent CHAP patients from optimally managing asthma
- Increase **access to and coordination** of asthma services for children on Medicaid
- **Standardize** asthma management in Kent County
- **Reduce emergency department use and hospitalizations** related to asthma among target population
Teaching methods include

- Private sessions vs. group sessions
- Caregiver education vs. patient education
- Demonstration and return demonstration
- Education materials
Teaching settings include

- clinic/office-based education
- emergency department/hospital-based education
- educational interventions by pharmacists
- educational interventions in school settings
- community-based interventions
- home-based interventions
### C. Program Implementation

1. Ensure safety and privacy of individuals with asthma e.g., HIPAA x OSHA x infection control
2. Maintain a program database
3. Coordinate training for program staff

<p>| | | | |</p>
<table>
<thead>
<tr>
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<tr>
<td>3</td>
<td></td>
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</table>
Program implementation

1. Exploration and adoption
   - Acquisition of information on evidence-based programs and identification of the most appropriate program.

2. Preparation and installation
   - Once the decision is made about the program selection, active preparation of the site beginning.

3. Initial implementation
   - Initial application of the program in the organization; this is the most difficult step.

4. Full implementation
   - The program is integrated in the community and in the organization's policies and procedures.
1. The following U.S.* currently licensed or credentialed health care professionals may be admitted to the examination:

- Physicians (MD, DO)
- Physician Assistants (PA-C)
- Nurses (RN, LPN, NP)
- Respiratory Therapists (RRT, CRT)
- Pulmonary Function Technologists (CPFT, RPFT)
- Pharmacists (RPh)
- Social Workers (CSW)
- Health Educators (CHES)
- Physical Therapist (PT)
- Occupational Therapist (OT)

2. Individuals providing direct patient asthma education, counseling or coordinating services with a minimum of 1000 hours experience in these activities.
Program implementation
Training program staff—CHWs

Training:

- Minimum of 2 days of experiential learning (job shadowing by discipline) in Kent County
- 1 – 2 days of observation on-site
- Min. 6 hours of didactic training
  - Guideline-based asthma management
  - Home visit basics
  - Educational content
  - Educational strategies/role playing
  - Social work role/services
Program implementation
Maintaining a dashboard

Asthma CCG Level Snapshot

Most recent 12 months to December 2015
Note varying y-axis scales

Admissions per 1,000 asthma population (adults)

AST_003 (asthma review) achievement 2014/15

Smoking_005 (smoking cessation) achievement 2014/15

<table>
<thead>
<tr>
<th>CCG</th>
<th>Total admissions</th>
</tr>
</thead>
<tbody>
<tr>
<td>NHS Corby CCG</td>
<td>37</td>
</tr>
<tr>
<td>NHS East Leicestershire and Rutland CCG</td>
<td>230</td>
</tr>
<tr>
<td>NHS Erewash CCG</td>
<td>45</td>
</tr>
<tr>
<td>NHS Hardwick CCG</td>
<td>62</td>
</tr>
<tr>
<td>NHS Leicester City CCG</td>
<td>463</td>
</tr>
<tr>
<td>NHS Lincolnshire East CCG</td>
<td>128</td>
</tr>
<tr>
<td>NHS Lincolnshire West CCG</td>
<td>121</td>
</tr>
<tr>
<td>NHS Mansfield &amp; Ashfield CCG</td>
<td>102</td>
</tr>
<tr>
<td>NHS Nene CCG</td>
<td>875</td>
</tr>
<tr>
<td>NHS Newark &amp; Sherwood CCG</td>
<td>53</td>
</tr>
<tr>
<td>NHS North Derbyshire CCG</td>
<td>157</td>
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<tr>
<td>NHS Nottingham City CCG</td>
<td>283</td>
</tr>
<tr>
<td>NHS Nottingham North &amp; East CCG</td>
<td>125</td>
</tr>
<tr>
<td>NHS Nottingham West CCG</td>
<td>52</td>
</tr>
<tr>
<td>NHS Rushcliffe CCG</td>
<td>52</td>
</tr>
<tr>
<td>NHS South Lincolnshire CCG</td>
<td>79</td>
</tr>
<tr>
<td>NHS South West Lincolnshire CCG</td>
<td>69</td>
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<tr>
<td>NHS Southern Derbyshire CCG</td>
<td>270</td>
</tr>
<tr>
<td>NHS West Leicestershire CCG</td>
<td>263</td>
</tr>
</tbody>
</table>

East Midlands: 2,966
Program implementation
Maintaining a dashboard

- Demographics: name, DOB, address, phone number, name of parent/guardian (if child), race/ethnicity, insurance status, household income, family size, zip code, address and phone number, medical home (and specialist), language spoken, other family members (names and ages)
- Date of home visit
- Who is present at home visit – client, mother, father, guardian, LMSW, CHW, interpreter, case manager
- Number of visit
- Type of visit – home visit, care conference, school visit
- Who made the visit – AE-C, LMSW, CHW
- Visit accomplished or no-show?
- Mode of transportation for family
- Marital status (of patient or parent/guardian)
- Employment status (of patient or parent/guardian)
- Referral source
- Reason for referral
- Engaged in behavioral health?
- Coordination with Dept. of Social Services?
Program implementation
Maintaining a dashboard

- Asthma symptoms – nasal congestion, watery eyes, coughing, SOB, wheezing, chest tightness, other symptoms
- Symptom frequency - # days/week, # nights/week
- Asthma trigger exposures – smoke, cold air, mold, dust, pollen, grass, trees, dogs, cats, birds, foods, GERD, ASA, NSAID, odors/fumes, respiratory infections, weather changes, roaches, other known triggers
- Education sessions – A&P/goals, EIA, PF/symptom monitoring, triggers, meds/devices, AAP
- Provide: spacer, pillow cover, PF meter, written information, other
- Plan – arrange care conference, refer to Healthy Homes, refer to ANWM LMSW, administer juniper to patient/caregiver
- Reason for discharge – declined services, graduated, lost eligibility, non-compliant, safety concerns, unable to contact
Program implementation
Maintaining a dashboard

- The following are tracked on enrollment and discharge (pre/post):
  - ACT score
  - Juniper score
  - Flu shot – yes/no
  - Asthma Action Plan – yes/no, understands AAP
  - Spirometry – yes/no
  - Smoke exposure? Inside or out?
  - # School days missed due to asthma
  - # Unscheduled office visits
  - # Parental work days missed due to asthma
  - # ED visits due to asthma
  - # Hospitalizations due to asthma
  - # Steroid bursts

- # Days/week with symptoms
- # Nights/week with symptoms
- Allergy testing
- Exercises without symptoms
- Seeing specialist
- Monitors peak flow
Program implementation
Maintaining a dashboard

Outcome Dashboards:
Process measures

- 2 asthma visits/yr
- Annual spirometry (>5 years old)
- Annual flu shots
- Asthma Action Plan (AAP) use
- ACT use
- ETS exposure documentation
- Use of long-term control medications – adherence to regimen
Program implementation
Maintaining a dashboard

Outcome Dashboards:
Outcome Measures and goals

- ED/1000
- Asthma ED visits/1000
- IP/1000
- HEDIS measures at 90%
- Cost per patient
CDC recommends a yearly flu vaccine for everyone six months of age and older.

**What Does the Research Say?**

- Health care workers who get vaccinated help to reduce the following:
  - transmission of influenza
  - staff illness and absenteeism
  - influenza-related illness and death, especially among people at increased risk for severe influenza illness

- Higher vaccination levels among staff have been associated with a lower risk of nosocomial (hospital-acquired) influenza cases.

- Influenza outbreaks in hospitals and long-term care facilities have been attributed to low influenza vaccination coverage among health care workers in those facilities.

- Higher influenza vaccination levels among health care workers can reduce influenza-related illness, and even deaths, in settings like nursing homes.
Program implementation
Safety and privacy—**Flu shots**

**Figure 1. Seasonal Flu Vaccination Coverage, by Age Group and Season, United States, 2009-2015**

- Children (6 months - 17 years)
- Adults (18 years)

![Graph showing seasonal flu vaccination coverage for children and adults from 2009-2015](image-url)
Program implementation
Safety and privacy—**Flu shots**

![Bar chart showing flu vaccination coverage estimates](chart.png)
Program implementation
Safety and privacy—**Flu shots**

![Bar chart showing reasons for not getting flu shots](chart.png)

- I don’t need it: 28%
- I didn’t get around to it: 16%
- I don’t believe in flu vaccines: 14%
- I might get sick/suffer side effects: 14%
- Others need it more: 6%
- I dislike needles: 5%
- It costs too much: 4%
- A doctor did not recommend it: 3%
- No vaccine was available: 3%
- Other: 8%
Program Evaluation

<table>
<thead>
<tr>
<th>D. Program Evaluation</th>
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<tbody>
<tr>
<td>1. Select validated program evaluation tools</td>
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<td>2. Assess program processes e.g.,</td>
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<td>• adherence (e.g., attendance, diary completion) of participant</td>
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<td>• the influence of the program on participants’ knowledge, skills, and / or attitudes (e.g., confidence, outcome expectations)</td>
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<td>• procedure and task implementation</td>
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<td>3. Assess program outcomes e.g.,</td>
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<td>• key outcomes (e.g., quality-of-life, functional status, asthma control, healthcare utilization, participant satisfaction)</td>
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<td>• measures for key program outcomes</td>
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<td>• program effectiveness</td>
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<td>4. Use findings to assess program impact and need for modifications</td>
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![Program Evaluation Diagram](image.png)
Program evaluation

Process evaluation vs. outcome evaluation

Quantitative vs. Qualitative Methods
Program Evaluation

Process evaluation

Outcome evaluation
Program evaluation
Processes

- adherence of participant to the asthma management plan
- procedure and task implementation by the asthma team
- the influence on participants’ knowledge, skills, and/or attitudes
Program evaluation
Outcomes

- quality-of-life
- functional status
- asthma control
- healthcare utilization
- participant satisfaction
Program evaluation
Select validated tools

- Juniper QOL surveys
- St. George Respiratory Questionnaire
- Spirometry, pulmonary mechanics, work days or school days missed

Observations: Observer's role, protocol, taking notes, observer comments, field notes, observer skills

Interviews: Structured, semi-structured, unstructured, focus groups
Program evaluation
Modifying the program

Model for Improvement

- **AIM**
  - What are we trying to accomplish?

- **CURRENT KNOWLEDGE**
  - How will we know that a change is improvement?

- **CYCLE for Learning and Improvement**
  - What changes can we make that will result in improvement?
Program evaluation
Modifying the program

Establishing/re-establishing the aim
Determining who will do what, when, where, and why
A needs assessment might be needed to re-establish the aim
Involves executing the plan for change
Assess the implementation of the plan for change
Program evaluation
Modifying the program

This the analysis part of the cycle
Are observed outcomes congruent with desired outcomes
A process and/or outcome evaluation can be used here
Program evaluation
Modifying the program

The CQI team determines what needs to be changed
The cycle is then repeated over and over
Program Development, Implementation, and Evaluation

JAN FIELDS
AIR PREP COURSE
MARCH 09, 2017