The Problem

Cigarette smoking is the single most preventable cause of death and disease in the United States.

Cigarette smoking:
- Increases the risk for heart disease by 2-4 times;
- Increases the risk for stroke by 2 times;
- Increases the risk for chronic lung disease by 10 times;
- Is a leading cause for many types of cancer, including
  - Lung
  - Larynx
  - Esophagus
  - Pharynx
  - Mouth
  - Bladder
The Mandate

- April 2006 The Massachusetts Legislature passed MGLChapter 118E: Section 54. (An Act Providing Access to Affordable, Quality, Accountable Health Care.)
- This law, commonly known as Health Care Reform, was very broad in scope, and provided for near universal health insurance, as well as initiatives to control cost and promote wellness.
- One of these initiatives directed MassHealth (the Massachusetts Medicaid agency) to work with the Massachusetts Department of Public Health (MDPH) in development of wellness programs for MassHealth members, one of which was tobacco cessation.
- MassHealth had been working with MDPH on a tobacco cessation program.
- MDPH had a tobacco cessation effort in place devoted largely to a telephone consultation service.
- The legislative mandate would require coordination among:
  - MDPH
  - MassHealth Office of Acute and Ambulatory Care
  - Division of Health Care Finance and Policy
  - University of Massachusetts Medical School/MassHealth Office of Clinical Affairs (OCA)

The Program

Individual and Group Tobacco Cessation counseling and pharmacotherapy

- Eligible members – those eligible for:
  - Physician Services
  - Community Health Center Services
  - Acute Outpatient Hospital Services
  - Pharmacy Services
- Cessation Counseling Benefit
  - May require multiple attempts
  - Up to 16 Counseling sessions
  - Any combination of group or individual face-to-face sessions per 12 month cycle
  - Includes 2 Intake/Assessment sessions
  - Prior Authorization required for counseling beyond the specified limit.
The Program II

- Pharmacotherapy benefit
  - Covers “medically necessary” drugs
  - 90 day supply of nicotine patch, gum, lozenge per cessation attempt
  - Also covers Bupropion and Chantix (varenicline)
  - Copay $1 - $3
  - Zyban, Nicotine inhaler and nasal spray require PA
  - Two 90 day treatment cycles per member per 12 month cycle

- Counseling Provider Qualifications
  - Physician
  - Midlevel providers (Registered Nurse, Physician assistant, Nurse Practitioner, Nurse Midwife)
  - Other health care provider with specific tobacco cessation counseling training
    - Counseling training at least 8 hours
    - Degree-granting institution of higher education
  - Non physicians must provide service under physician supervision

- Coding and Billing
  - Coding for counseling uses HCPCS G0376
  - Rates vary by Provider type and location
  - MD approx $50 for 30 minutes; Midlevels $42 (85%)

The Launch

- Working together MassHealth and MDPH Tobacco Control Program (MTCP) built a multiprong campaign of information directed at members and providers
- Launch began in June of 2006 for implementation in July
  - A mailing to more than 20,000 providers in June
  - A mass mailing to 600,000 MassHealth members (after the providers)
  - Notices on MassHealth and MTCP websites
  - Press releases
  - Articles in health professional organization newsletters
  - Articles in Medicaid Managed Care Organization newsletters
- In August of 2006 fact sheets for both providers and consumers were sent to 1,000 community health centers, hospitals, practices and state and community agencies
- CHCs with grant support from MTCP were required to integrate the benefit into their activities.
- October 2006 MTCP promoted the benefit in a radio and public transit campaign in urban markets
Pharmacy Claims

Rx Count

31% Consumer awareness
75% Consumer awareness

BUPROBAN
CHANTIX
Nicotine Gum
Nicotine Inhaler
Nicotine Lozenge
Nicotine Patch
ZYBAN

MTCP Promotion

Declines in Smoking Prevalence (MDPH)

Smoking Prevalence in Massachusetts Adults (18 - 64):
MassHealth vs. No Insurance

MassHealth (Point Estimates)
No Insurance (Point Estimates)
MassHealth (Model Estimates)
No Insurance (Model Estimates)

Annual percentage rate (APR) change for smoking prevalence among MassHealth uninsured adults in Massachusetts aged 18-64.
**Short-Term Health Benefits of Smoking Cessation (MDPH)**

**Asthma**
- Mixed results in studies of smoking cessation
- Significant improvement lung function in first year

**Heart Attack: AMI**
- Rapid reduction in risk after quitting
- Majority of improvement in first 2 years

**Pregnancy Complications**
- Ectopic Pregnancy
- Pre-term labor
- Hemorrhaging during pregnancy/delivery

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**Description of Analytic Model (MDPH)**

<table>
<thead>
<tr>
<th>Time 1</th>
<th>Time 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>365 day Pre-period</td>
<td>365 day Post-period</td>
</tr>
</tbody>
</table>

**Date of each member's first use of tobacco cessation medication**

**Total # of Pharmacotherapy Benefit Users after exclusions:**
- 12,949

Includes no records from Managed Care Organizations (MCO). Includes only Fee For Service (FFS) and Primary Care Clinician (PCC). Primary diagnoses only. ICD-9 codes grouped using HealthCare Utilization Project (HCUP) scheme. Clients with less than 321 days of FFS and PCC eligibility in the year before and after first use of medication excluded. Counseling only clients excluded. Exclude all claims after 6/30/2008.
Asthma – Emergency Department Visits:
Preliminary Results (MDPH)

Estimated Number of Individuals
With Asthma ED Visits
(Per 1,000 Benefit Users)

<table>
<thead>
<tr>
<th>Average Annual Asthma ED Visit Rate Per 1,000 Benefit Users</th>
<th>One Year BEFORE Beginning Use of Medications</th>
<th>One Year AFTER Beginning Use of Medications</th>
</tr>
</thead>
<tbody>
<tr>
<td>22.7</td>
<td>17% drop in the number of individuals having ED visits with a primary diagnosis of asthma (p&lt;.05)</td>
<td>18.7</td>
</tr>
</tbody>
</table>

Includes no records from Managed Care Organizations (MCO). Includes only Fee For Service (FFS) and Primary Care Clinician (PCC). Primary diagnoses only. ICD-9 codes grouped using HealthCare Utilization Project (HCUP) scheme. HCUP Group code 129. Counseling only benefit users excluded from analysis. First use of medication prior to 7/1/2007. Subscribers must have at least 321 days of FFS and PCC eligibility in year prior to first use date and year after first use date.

Heart Attack (AMI) Hospitalizations:
Preliminary Results (MDPH)

Estimated Number of Individuals
With Inpatient AMI Visits
(Per 1,000 Benefit Users)

<table>
<thead>
<tr>
<th>Average Annual AMI Inpatient Rate Per 1,000 Benefit Users</th>
<th>One Year BEFORE Beginning Use of Medications</th>
<th>One Year AFTER Beginning Use of Medications</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.2</td>
<td>38% drop in the number of individuals having inpatient claims with a primary diagnosis of AMI in Time 2 (p=0.06)</td>
<td>2.0</td>
</tr>
</tbody>
</table>

Includes no records from Managed Care Organizations (MCO). Includes only Fee For Service (FFS) and Primary Care Clinician (PCC). Primary diagnoses only. ICD-9 codes grouped using HealthCare Utilization Project (HCUP) scheme. HCUP Group code 100. Counseling only benefit users excluded from analysis. First use of medication prior to 7/1/2007. Subscribers must have at least 321 days of FFS and PCC eligibility in year prior to first use date and year after first use date.
Complications in Pregnancy: Preliminary Results (MDPH)

Estimated Number of Individuals With Pregnancy Complications (Per 1,000 Benefit Users: Women 18-44)

- **7/1/2004 - 6/30/2006 (2 Years Pre-Benefit)**: 31.1 per year
- **7/1/2006 - 6/30/2008 (2 Years Post-Benefit)**: 25.7 per year

17% Drop in the Number of Individuals with Specific Pregnancy Complications (p<.01)

Includes no records from Managed Care Organizations (MCO). Includes only Fee For Service (FFS) and Primary Care Clinician (PCC). Results are computed for all females aged 18-44 who used the Tobacco Cessation Benefit in FY07-FY08, adjusted for length of eligibility. ICD-9 codes grouped using HealthCare Utilization Project (HCUP) scheme. HCUP Group codes used 180 (ectopic pregnancy), 182 (hemorrhage during pregnancy and/or delivery, abruptio placenta, and placenta previa), and 184 (pre-term labor).

Caveats (MDPH)

- Only 1 year of benefit use examined
  - Early users of benefit could be different
- No way to determine smoking status of non-users of the benefit
- MCO data not included
2006 Health Care Reform law required MassHealth to evaluate the effect of TCB on quit rates of MassHealth members.

Office of Clinical Affairs (CHPR) collaborated with the UMass Boston Center for Survey Research to field a member survey.

Surveyed two groups of MassHealth members:

- **Benefit Users**
  Members with one or more MassHealth claims for TCB use in Sept 2007.

- **Non-benefit Users**
  Members with no MassHealth claim for TCB use 7/06 to 9/07 and identified as having recent history of smoking.
  - Identified by brief survey of ~ 20,000 non-benefit users ‘have you smoked cigarettes in last 6 months’
Table 2: TCB Survey Response Rate

<table>
<thead>
<tr>
<th></th>
<th>Benefit Users</th>
<th>Non-Benefit Users</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mailed</td>
<td>1,673</td>
<td>1,405</td>
</tr>
<tr>
<td>Completed by mail</td>
<td>489</td>
<td>599</td>
</tr>
<tr>
<td>Completed by phone</td>
<td>369</td>
<td>178</td>
</tr>
<tr>
<td>Total completed</td>
<td>858</td>
<td>777</td>
</tr>
<tr>
<td>Response rate</td>
<td>51%</td>
<td>55%</td>
</tr>
</tbody>
</table>

Findings: respondent characteristics (UMASS)

Several statistically significant differences between the 2 groups (p ≤ 0.01)

Benefit User group
- Higher percent of females (73% vs. 54%)
- Higher percent race is white (84% vs. 73%)
  - Higher percent unknown for non-benefit users

Non-benefit User group
- Higher percent Hispanic/Latino (15% vs. 10%)
Findings:
Smoking status (UMASS)

Chart 1: Smoking status
Benefit Users = 844, Non-benefit = 743

Discussion

- Differences between MDPH and UMASS findings require further study and analysis.
- The MDPH evaluation used MBRFSS data which identify status but lack controls.
- The UMASS evaluation identified a control population but found significant differences between the control and intervention cohorts.
- The studies agree that the MassHealth tobacco cessation benefit may have reduced smoking behavior in the short term, but the effect on clinical health outcomes though suggestive, is not certain.
- Further and more detailed analysis is necessary to determine the benefit of the MassHealth tobacco cessation initiative.
- At this point a cost saving from the benefit can only be inferred from the short-term health benefits.
- Different data sources may produce different results.
Questions?

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