The Burden of Tobacco Use

Tobacco use, particularly cigarette smoking, is the most important cause of death and chronic disease in New York, accounting for 25,400 deaths per year from cardiovascular disease, respiratory disease and cancer. Second hand smoke kills as many as 3,000 more and is a contributing factor in many respiratory conditions, including asthma, in nonsmokers. Tobacco use is a frequent complicating factor in patients with multiple morbidities.

Data from a survey by the Department of Health’s Tobacco Use Prevention and Control Program (TCP) show that in 2009, the smoking rate among adult Medicaid clients 18 to 64 was 30.2 percent, and among those over 65 was 23.7 percent, twice the rate among privately-insured New Yorkers and those on Medicare. Although Medicaid enrollees attempt to quit using tobacco at rates as high as the general population, their success rate is lower. This has been attributed to enrollees having less support for cessation in their personal environment and less awareness and access to adequate assistance in quitting, including counseling and medication.

The impact of this higher tobacco use rate on Medicaid costs is enormous. The Centers for Disease Control and Prevention estimates annual (2006) tobacco-caused medical costs to the New York Medicaid Program to be $5.471 billion. As a result of the 1998 Master Settlement Agreement between tobacco product manufacturers and the state attorneys general, cigarette companies make annual payment to the states to compensate them for their tobacco-caused Medicaid expenses. These payments are not affected by changes in state smoking rates or consumption (but are affected by national cigarette sales). In 2011, New York State and local governments will receive an estimated $762.3 million in payments, barely one-quarter of what they spend to treat tobacco-caused disease.

Reducing tobacco use among enrollees can have a significant impact on Medicaid expenditures, even in the short term. A 2007 report by the American Legacy Foundation estimates that, were 25 percent of current Medicaid smokers to quit, annual medical costs among New York enrollees would decrease by $370 million (2005 dollars) within five years. See Policy Report 4: Saving Lives, Saving Money II at http://www.legacyforhealth.org/PDFPublications/saving_lives_saving_money.pdf
A large and growing body of evidence shows that the rate of tobacco use can be reduced through persistent, comprehensive interventions that help users quit while preventing children from starting. In its 2007 report, Ending the Tobacco Problem: A Blueprint for the Nation, the Institute of Medicine recommended, “All insurance, managed care, and employee benefit plans, including Medicaid and Medicare, should cover reimbursement for effective smoking cessation programs as a lifetime benefit” (p.240).

The Massachusetts Experience

Massachusetts reported a 26 percent decline in the smoking rate among its MassHealth Medicaid beneficiaries in the first two and one half years of a program to provide easy access to smoking cessation medication and counseling that began in July 2006. Among benefit users, there were 46 percent fewer hospitalizations for heart attacks and a 17 percent reduction in emergency-room visits for asthma symptoms. Claims for maternal birth complications fell 17 percent.

Based only on reduced hospitalizations for heart attacks and coronary atherosclerosis, the program estimated a return on investment of $2.00 for every dollar spent (see Attachment 1). This calculation does not include savings from reductions in asthma, bronchitis and other conditions, or from smoking-caused birth complications. Additionally, it does not include substantial long-term savings due to lowered incidence of ongoing chronic disease and reduced utilization of treatment, nursing home and home-care benefits by people with tobacco-caused conditions. The cost, including promotional costs, was $235 per individual using the cessation benefit.

Aggressive promotion of the benefit was key to the program’s success. The researchers note:

> It is unlikely that our findings would have reached significance without the high utilization rate of the Massachusetts Medicaid tobacco cessation benefit. Nearly 40% of subscribers used the benefit in the first 2.5 y after implementation. This rate was achieved, in part, by heavy promotion of the benefit in Massachusetts during the first 18 mo after implementation. The Massachusetts Medicaid Program and the Massachusetts Tobacco Cessation and Prevention Program (MTCP) formed a close working relationship to promote the benefit. ([http://www.plosmedicine.org/article/info%3Adoi%2F10.1371%2Fjournal.pmed.1000375](http://www.plosmedicine.org/article/info%3Adoi%2F10.1371%2Fjournal.pmed.1000375))

The Massachusetts Tobacco Control Program (MTCP) and MassHealth advertised the benefit to consumers and providers across the state using radio and transit ads. MTCP partners helped promote the new MassHealth benefit to community groups, statewide advocacy organizations, health plans and medical societies. In less than a year and a half, consumer awareness of the benefit jumped from 31% to 75%.
State of the Science

The United States Preventive Health Services Task Force (USPHSTF) recommends counseling and pharmacotherapy as effective interventions for tobacco use cessation. It rates “Asking About Tobacco Use and Providing Tobacco Cessation Interventions to Users” as a Grade A recommendation (“There is high certainty that the net benefit is substantial”). Recommended effective interventions are both counseling and pharmacotherapy. The Task Force states:

Intensity of counseling matters: brief one-time counseling works; however, longer sessions or multiple sessions are more effective. Telephone ‘quit lines’ also improve cessation rates. Combination therapy with counseling and medications is more effective than either component alone. FDA-approved pharmacotherapy includes nicotine replacement therapy (gum, patch, lozenge, inhaler and nasal spray), sustained release bupropion and varenicline.

The USPHSTF recommendations may be reviewed at: [http://www.uspreventiveservicestaskforce.org/uspstf09/tobacco/tobaccors2.pdf](http://www.uspreventiveservicestaskforce.org/uspstf09/tobacco/tobaccors2.pdf)

For a summary see Attachment 2.

The Federal Employee Health Benefits program, which provides insurance to eight million federal employees and retirees, spouses and dependents, provides coverage for the full range of cessation pharmacotherapy as well as individual, group and telephone counseling. See [http://www.cdc.gov/features/quitsmoking/](http://www.cdc.gov/features/quitsmoking/)

Currently New York Medicaid covers all forms of Nicotine Replacement Therapy (NRT) except the lozenge, but limits the duration and annual number of quit attempts. These limitations are a barrier to cessation for the most seriously addicted tobacco users, who are more likely to be on Medicaid due to co-morbidities including substance abuse and/or mental illness. Some plans require co-pays. Medicaid covers cessation counseling during a medical visit only for pregnant and post-partum women and children 10 – 21 and does not cover group counseling for anyone.

The Clinical Practice Guideline for Treating Tobacco Use and Dependence (Public Health Service, 2006) recommends a number of evidence-based systems interventions that facilitate cessation:

- Every clinic should implement a tobacco-user identification system.
- All health care systems should provide education, resources, and feedback to promote provider interventions.
- Clinical sites should dedicate staff to provide tobacco dependence treatment and assess the delivery of this treatment in staff performance evaluations.
• Hospitals should promote policies that support and provide tobacco dependence services (e.g., smokefree grounds, referral at discharge to quit services for relapse prevention).
• Insurers and managed care organizations (MCOs) should include tobacco dependence treatments (both counseling and pharmacotherapy) as paid or covered services for all subscribers or members of health insurance packages.

Several measures already in use are available to monitor implementation of a smoking cessation benefit and its impact on smoking rates. Progress toward goals can be tracked through a variety of indicators, including QARR (Quality Assurance Reporting Requirements) measures of counseling and drug utilization, and responses to behavioral health questions on the Consumer Assessment of Healthcare Providers and Systems (CAHPS) survey which provide plan-specific measures of individual smoking status and the frequency with which care givers offered smoking cessation advice and assistance (see Attachment 3). CAHPS survey can be found at https://www.cahps.ahrq.gov/CAHPSIDB/Public/QuexList.aspx questions 37 – 40.

Conclusions
• Tobacco use is an important driver of Medicaid costs;
• Tobacco use, and Medicaid costs, can be reduced by increasing the rate of cessation among beneficiaries;
• Proven effective modalities to reduce tobacco use are available and can be implemented at low cost;
• Ongoing, systematized promotion will increase beneficiary awareness and utilization of the cessation benefit;
• More can be done to reduce tobacco use among New York’s Medicaid beneficiaries. This will improve the quality of their care and their health while saving taxpayers’ money.

Recommendations
• Cover all seven first line tobacco use cessation medications and remove annual and lifetime limits on duration and frequency of use.
• Expand coverage of cessation counseling during a medical visit to all beneficiaries.
• Cover group counseling for all adult beneficiaries.
• Eliminate co-pays and prior authorization requirements.
• Encourage beneficiaries to consult their caregivers to determine which treatment option, or combination of options, is best.
- Require insurers to fund cessation counseling training to providers, including how to systematize tobacco user identification and assess the delivery of cessation treatment in staff evaluation (per USPSTF recommendation, Attachment 4).

- Require insurers to mandate that network providers adhere to USPHSTF guidelines and implement systems to monitor and provide care givers feedback regarding their performance.

- Set smoking cessation performance goals measurable by QUARR/HEDIS and CAHPS for all insurers that are written into contracts.

- Require insurers to invest in a robust information and media campaign to educate enrollees and care givers about the benefits of cessation and the availability of cessation assistance. Information should be made easy to read and access and available in multiple languages. Promote use of the state Quitline.
MassHealth Tobacco Cessation Benefit
Outcomes and Return on Investment

Background
Massachusetts Medicaid (MassHealth) adopted comprehensive coverage of tobacco cessation medications for all members in July 2006 as part of Massachusetts health care reform.

Outcomes
Smoking prevalence decreased 26% in the first 2.5 years from 38.3% to 28.3%.\(^1\) Use of the tobacco cessation pharmacotherapy benefit was associated with a 46% annual decrease in hospitalizations for acute myocardial infarction and a 49% annual decrease in hospitalizations for coronary atherosclerosis.\(^2\) Based on these findings, a short-term return on investment analysis was conducted by the Massachusetts Tobacco Cessation and Prevention (MTCP) Program.\(^3\)

Medical Savings Calculation
The projected number of reduced hospitalizations in the first two years after using tobacco cessation medications was calculated (81 for reduced heart attacks and 118 for reduced coronary atherosclerosis events).\(^4\) Average cost of hospitalization were derived from tables developed by the Healthcare Utilization Project and are based on national figures. Based on these figures, the average hospitalization costs is $54,412 for heart attack and $48,692 for coronary atherosclerosis.\(^5\) The total savings was calculated as $10,153,077.

Medical Cost Calculation
The cost of providing tobacco cessation medications was based on MassHealth utilization data. The cost for the 21,656 subscribers followed in the study was $4,521,665. An additional $558,500 cost was added for the cost of MTCP to promote awareness of the benefit among health care providers and Medicaid members. The total cost for these 21,656 subscribers alone was $5,080,165.

Return on Investment
Medical savings from reduced hospitalizations for heart attacks and coronary atherosclerosis in the first two years was an estimated $10.2 million for the study population. The cost of tobacco treatment medications and promotion was $5.1 million. Therefore, the net savings was $5.1 million, or $2.00 return for every dollar spent. This calculation does not include cost savings beyond 2 years and only includes savings from inpatient heart attacks and coronary atherosclerosis in the first two years after the first use of a tobacco cessation medication.

\(^3\) MTCP plans to conduct a return on investment analysis on all MassHealth inpatient and ambulatory hospitalizations in consultation with a health economist and biostatistician from the University of Massachusetts Medical School.
\(^4\) In the year prior to using the benefit, 21,656 MassHealth subscribers had 70 hospitalizations for heart attacks and 95 hospitalizations for atherosclerosis. Hospitalizations that occurred within 56 days of first medication use were excluded. Cost savings were calculated for 21,656 included in the study.
\(^5\) Hospital costs based on Healthcare Utilization Project estimates, accessed 12/8/2010: http://www.hcup-us.ahrq.gov/reports/statbriefs/sb42.jsp
COUNSELING AND INTERVENTIONS TO PREVENT TOBACCO USE AND TOBACCO-CAUSED DISEASE IN ADULTS AND PREGNANT WOMEN
CLINICAL SUMMARY OF U.S. PREVENTIVE SERVICES TASK FORCE RECOMMENDATION

<table>
<thead>
<tr>
<th>Population</th>
<th>Adults 18 years or older</th>
<th>Pregnant Women of any age</th>
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<tbody>
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<td>Grade: A</td>
<td>Grade: A</td>
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**Counseling**

The "5-A" framework provides a useful counseling strategy:
1. Ask about tobacco use
2. Advise to quit through clear personalized messages
3. Assess willingness to quit
4. Assist to quit
5. Arrange follow-up and support

Intensity of counseling matters; brief one-time counseling works; however, longer sessions or multiple sessions are more effective. Telephone counseling "quit lines" also improve cessation rates.

**Pharmacotherapy**

Combination therapy with counseling and medications is more effective than either component alone.
FDA-approved pharmacotherapy includes nicotine replacement therapy, sustained release bupropion, and varenicline.

The USPSTF found inadequate evidence to evaluate the safety or efficacy of pharmacotherapy during pregnancy.

**Implementation**

Successful implementation strategies for primary care practice include:
- Instituting a tobacco user identification system
- Promoting clinician intervention through education, resources, and feedback
- Dedicating staff to provide treatment, and assessing the delivery of treatment in staff performance evaluations

**Relevant USPSTF Recommendations**

Recommendations on other behavioral counseling topics are available at [http://www.preventiveservices.ahrq.gov](http://www.preventiveservices.ahrq.gov).

For a summary of the evidence systematically reviewed in making these recommendations, the full recommendation statement, and supporting documents, please go to [http://www.preventiveservices.ahrq.gov](http://www.preventiveservices.ahrq.gov).

This summary was first published in *Annals of Internal Medicine* in April 2009. (Ann Intern Med. 2009;150:553, [http://www.annals.org](http://www.annals.org)).

AHRQ Publication No. 09-01131-IF-2.
Table 5. Systems Strategy. Include tobacco dependence treatments (both counseling and medication) identified as effective in this Guideline as paid or covered services for all subscribers or members of health insurance packages.

<table>
<thead>
<tr>
<th>Action</th>
<th>Strategies for implementation</th>
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<tr>
<td>Provide all insurance subscribers, including those covered by managed care organizations (MCOs), workplace health plans, Medicaid, Medicare, and other government insurance programs, with comprehensive coverage for effective tobacco dependence treatments, including medication and counseling.</td>
<td>Cover effective tobacco dependence treatments (counseling and medication) as part of the basic benefits package for all health insurance packages. Remove barriers to tobacco treatment benefits (e.g., copays, utilization restrictions). Educate all subscribers and clinicians about the availability of covered tobacco dependence treatments (both counseling and medication), and encourage patients to use these services.</td>
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Attachment 4

Consumer Assessment of Healthcare Providers and Systems (CAHPS) survey, supplementary questions regarding tobacco use and interventions.

Q37  Do you now smoke cigarettes or use tobacco every day, some days, or not at all?
Q38  In the last 6 months, how often were you advised to quit smoking or using tobacco by a doctor or other health provider in your plan?
Q39  In the last 6 months, how often was medication recommended or discussed by a doctor or health provider to assist you with quitting smoking or using tobacco? Examples of medication are: nicotine gum, patch, nasal spray, inhaler, or prescription medication.
Q40  In the last 6 months, how often did your doctor or health provider discuss or provide methods and strategies other than medication to assist you with quitting smoking or using tobacco? Examples of methods and strategies are: telephone helpline, individual or group counseling, or cessation program.