

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.

¹ Land T, Warner D, Paskowsky M, Cammaerts A, Wetherell L, et al. (2010) Medicaid Coverage for Tobacco Dependence Treatments in Massachusetts and Associated Decreases in Smoking Prevalence.

² Land T, Rigotti NA, Levy DE, Paskowsky M, Warner D, et al. (2010) A Longitudinal Study of Medicaid Coverage for Tobacco Dependence Treatments in Massachusetts and Associated Decreases in Hospitalizations for Cardiovascular Disease. PLoS Med 7(12): e1000375. doi:10.371/journal.pmed.1000375

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>

