Washington State Health Care Authority

# Report to the Legislature

## Cohort of Medicaid Clients That Receive Smoking Cessation Benefits

**As Required by SENATE BILL 6421 Chapter 245, Laws of 2008**

December 23, 2011

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**Cohort of Medicaid Clients That Receive Smoking Cessation Benefits**
**As Required by SENATE BILL 6421** Chapter 245, Laws of 2008

**January 30, 2012**

EXECUTIVE SUMMARY

A recent study indicates the nation's Medicaid program could experience significant savings if the program included an effective smoking prevention and cessation program. Smoking remains the country's leading cause of preventable death. New data released by the U.S. Centers for Disease Control and Prevention (CDC) showed that smoking rates are no longer on the decline, and 45.3 million adults reported smoking in 2006. The CDC estimates that 20.8 percent of the adults in the U.S. smoked in 2006, and of these adults, 80.1 percent smoked every day.

In 2008, the WA state Legislature passed SB 6421 directing the Department of Social and Health Services (department), now the Health Care Authority – Medicaid Program, to provide a smoking (smoking) cessation benefit for the medical assistance program that includes smoking cessation counseling services, as well as prescription and nonprescription products. The department may initiate individualized review and develop rules for appropriate coverage limitations as required to encourage the use of effective, evidence-based services and products. The department must track per-capita expenditures for a cohort of clients that receive smoking cessation benefits, and submit a cost-benefit analysis to the Legislature by January 1, 2012.

To date, 21,452 clients have enrolled with the quitline. Of these 24.1% overall have reported quitting tobacco since July 2008. It was estimated that there was a prevalence of 39.9% of tobacco use among Medicaid Fee-For-Service clients based on claims data. Targets for enrollment with the quitline were set at 4% annual enrollment per year. The agency has consistently performed at or above the target. These data are reported each quarter in the Governor's GMAP reporting process.[1] Since July 2008, $3.7 million was billed through the quitline for counseling services.[2]

The Health Care Authority – Medicaid Program provides a smoking cessation benefit for all Medicaid adults as well as pregnant women in order to improve birth outcomes. The smoking cessation benefit includes access to counseling, over-the-counter nicotine replacement therapy, and prescription drugs.

In 2011, the Department of Social and Health Services (DSHS)-Research and Data Analysis (RDA) developed a retrospective cohort comparison, tracking per-capita expenditures of clients who received smoking cessation counseling. From July 2008 to May 2011, there were 15,715 paid claims for quitline counseling services. Of these claims, approximately two-thirds (72.5%) of clients (n=10,777) were found to be in the categorically needy – SSI/disabled eligibility group. As a result of this finding, the cohort analysis was limited to this population of medically complex disabled clients for research purposes. A matched population was identified who did not receive smoking cessation counseling. There was a twelve month follow-up of medical expenditures for these two populations as well as a review of emergency department and inpatient admissions. There were no significant differences found in cost and utilization of services nor were there differences in hospital related medical costs or emergency room visits. It is speculated that more time is needed to determine if there is an impact on future medical expenditures.

[1] http://performance.wa.gov/HealthCare/hc111611/HealthyState/ChronicDiseaseInjuryPrevention/HeartDisease/TobaccoUsePercentofa/SmokingamongMedic/Pages/Default.aspx
[2] Health Care Authority – Medicaid Program. Budget & Finance Section. January 13, 2012

## INTRODUCTION

A recent study indicates the nation's Medicaid program could experience significant savings if the program included an effective smoking prevention and cessation program. Smoking remains the country's leading cause of preventable death. New data released by the U.S. Centers for Disease Control and Prevention (CDC) showed that smoking rates are no longer on the decline, and 45.3 million adults reported smoking in 2006. The CDC estimates that 20.8 percent of the adults in the U.S. smoked in 2006, and of these adults, 80.1 percent smoked every day.

The Health Care Authority – Medicaid Program provides a smoking cessation benefit for pregnant women to improve birth outcomes. The smoking cessation benefit includes access to counseling, over-the-counter nicotine replacement therapy, and prescription drugs. In 2008, the WA state Legislature passed SB 6421 directing the Department of Social and Health Services (department), now the Health Care Authority – Medicaid Program, to provide a smoking cessation benefit for the medical assistance program that includes smoking cessation counseling services, as well as prescription and nonprescription products. In 2008, the Agency was directed to initiate rules for appropriate coverage to encourage the use of effective, evidence-based services and products. The department must track per-capita expenditures for a cohort of clients that receive smoking cessation benefits, and submit a cost-benefit analysis to the Legislature by January 1, 2012.

## COHORT STUDY DESIGN

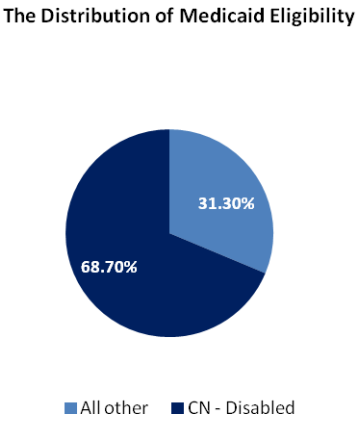
In 2011, the Department of Social and Health Services (DSHS)-Research and Data Analysis (RDA) developed a retrospective cohort comparison tracking per-capita expenditures of Medicaid clients who received smoking cessation counseling compared with clients with tobacco use diagnoses in their claims data who did not access the quitline.

## METHODS

WA state Medicaid claims data were used for this analysis. The population for this study was fee-for-service Medicaid clients. The intervention group was defined as have received smoking cessation counseling using the billing procedure code (S9453) from the claims data; this information was then linked to information client eligibility. In order to insure completeness of measures of baseline risk factors, only clients with eligibility for at least 6 months before receipt of counseling were included in the treatment (intervention) group used in the analysis.

Of clients receiving smoking cessation counseling services, approximately two-thirds (69%) of clients were found to be in the categorically needy – Disabled eligibility group in their first month of receipt of this service. As a result, this analysis was limited to clients in this coverage population for research purposes.

| Medicaid Eligibility in First Service Month | |
|---|---|
| **Eligibility Group** | **Percent** |
| CN – Disabled/Blind | 68.7% |
| CN TANF | 8.6% |
| GA-U | 5.8% |
| ADATSA | 4.5% |
| MN – Disabled/Blind | 3.5% |
| CN – Aged | 2.7% |
| CN Other Women (Pregnant) | 1.0% |
| Ticket to Work | 0.5% |
| Other/none | 4.8% |




A matched comparison group was derived from the universe of other clients in the categorically needy – SSI/disabled eligibility group. As a first step, potential comparison group members were randomly assigned an index date to be used for building time-varying baseline risk indicators. The baseline risk profile measures developed for the intervention and an initial comparison group "matching frame" included baseline demographics (gender, age, race/ethnicity) as well as a series of risk factors including cardiovascular and pulmonary disease, receipt of alcohol and other drug treatment, psychiatric illness, smoking use related diagnoses and homelessness.

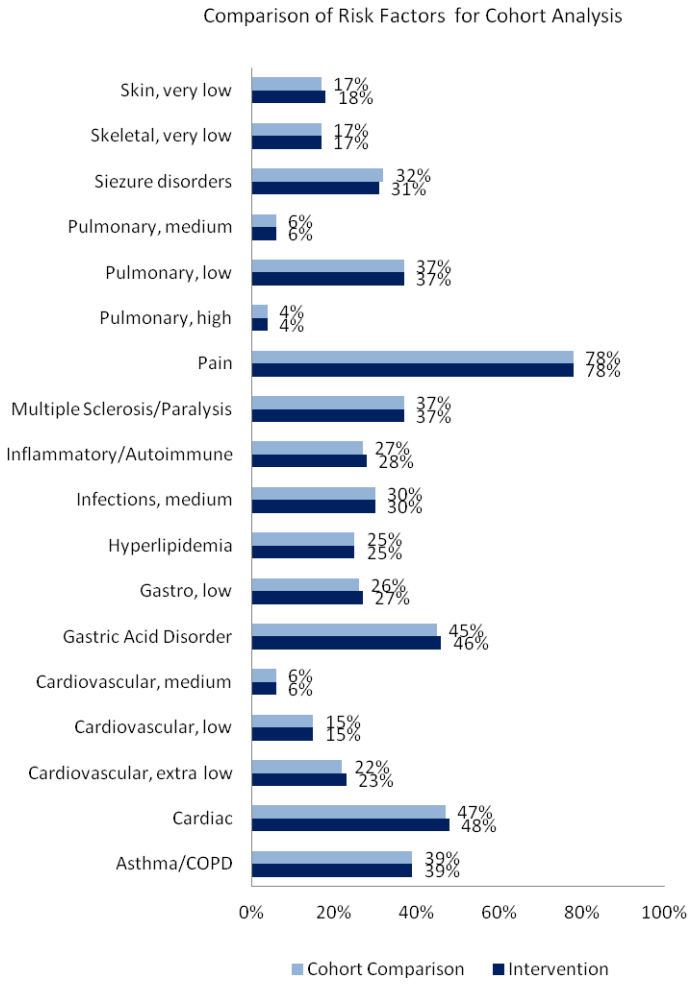
FINDINGS

The final analysis is based on 4,156 Medicaid clients who accessed quitline services, and 4,156 clients in the matched comparison group who had a similar baseline risk profile but did not receive quitline services. The table below demonstrates that the matching process identified a comparison group that is well matched to the demographics of the population receiving quitline services.

| | Intervention (n=4,156) | | Matched Comparison Group (n= 4,156) | |
|---|---|---|---|---|
| | Count | Percent | Count | Percent |
| **Gender** | | | | |
| Female | 2,701 | 65% | 2,701 | 65% |
| Male | 1,455 | 35% | 1,455 | 35% |
| **Race/Ethnicity** | | | | |
| Asian | 29 | 1% | 21 | 1% |
| Black | 236 | 6% | 233 | 6% |
| Hispanic | 153 | 4% | 147 | 4% |
| Native American | 121 | 3% | 121 | 3% |
| Other | 29 | 1% | 28 | 1% |
| White | 3,588 | 86% | 3,606 | 87% |
| **Age Group** | | | | |
| 18-24 | 200 | 5% | 200 | 5% |

| | Intervention (n=4,156) | | Matched Comparison Group (n= 4,156) | |
|---|---|---|---|---|
| | Count | Percent | Count | Percent |
| 25-34 | 576 | 14% | 576 | 14% |
| 35-44 | 909 | 22% | 909 | 22% |
| 45-54 | 1,593 | 38% | 1,593 | 38% |
| 55-64 | 878 | 21% | 878 | 21% |

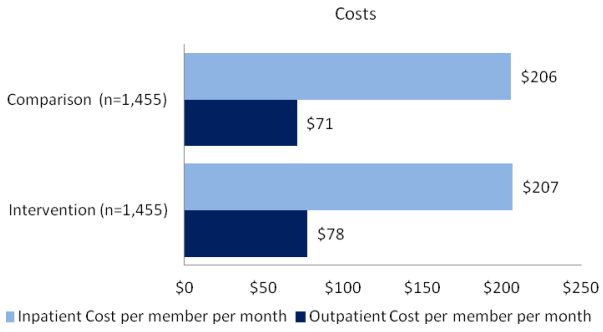
The following table below demonstrates that the matching process identified a comparison group that is extremely similar to the population receiving quitline services across many dimensions of health risk.

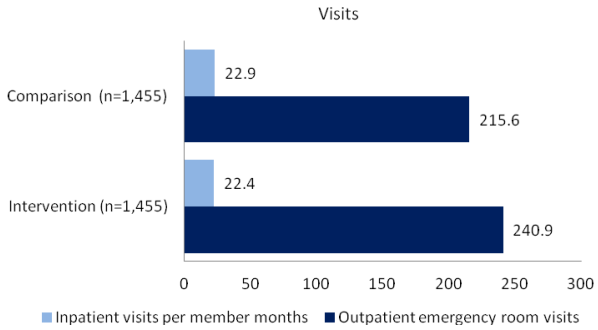


| | Intervention Group | Matched Comparison |
|---|---|---|
| **Baseline Measures** | **Average or Percent** | |
| Medical risk score (1 = average Medicaid-only CN Disabled) | 1.55 | 1.59 |
| Cardiovascular, medium | 6% | 6% |
| Cardiovascular, low | 15% | 15% |
| Cardiovascular, extra low | 23% | 22% |
| Skeletal, very low | 17% | 17% |
| Pulmonary, high | 4% | 4% |
| Pulmonary, medium | 6% | 6% |
| Pulmonary, low | 37% | 37% |
| Gastro, low | 27% | 26% |
| Skin, very low | 18% | 17% |
| Asthma/COPD medication | 39% | 39% |
| Cardiac medication | 48% | 47% |
| Gastric Acid Disorder medication | 46% | 45% |
| Hyperlipidemia medication | 25% | 25% |
| Infections, medium medication | 30% | 30% |
| Inflammatory/Autoimmune medication | 28% | 27% |
| Multiple Sclerosis/Paralysis medication | 37% | 37% |
| Pain medication | 78% | 78% |
| Siezure disorder medication | 31% | 32% |
| Count of coverage months during baseline 12 month period | 11.40 | 11.43 |
| Count of Outpatient ER visits during baseline 12 month period | 2.90 | 2.90 |
| Count of ER-related Medical Inpatient admissions during baseline 12 month period | 0.25 | 0.24 |
| Count of total Medical Inpatient admissions during baseline 12 month period | 0.36 | 0.36 |
| Count of Mental Health Inpatient admissions during baseline 12 month period | 0.06 | 0.05 |
| Count of arrests during baseline 12 month period | 0.15 | 0.15 |
| Count of months of homelessness without housing during baseline 12 month period | 0.49 | 0.44 |
| Count of months of homelessness with housing during baseline 12 month period | 0.29 | 0.30 |
| % of persons with smoking disorder during baseline 12 month period | 52% | 52% |
| % of persons with smoking history during baseline 12 month period | 52% | 52% |
| % of persons with AOD Treatment need during baseline 12 month period | 34% | 33% |
| % of persons diagnosed with Psychotic disorder during baseline 12 month period | 15% | 15% |
| % of persons diagnosed with Maniac disorder during baseline 12 month period | 26% | 26% |
| % of persons diagnosed with Depression disorder during baseline 12 month period | 43% | 42% |
| % of persons diagnosed with Anxiety disorder during baseline 12 month period | 35% | 35% |
| % of persons receiving Antipsychotic medication during baseline 12 month period | 34% | 34% |
| % of persons receiving Anti-mania medication during baseline 12 month period | 6% | 6% |
| % of persons receiving antidepressant medication during baseline 12 month period | 37% | 37% |
| % of persons receiving anti-anxiety medication during baseline 12 month period | 65% | 66% |
| % of persons receiving AOD treatment during baseline 12 month period | 17% | 16% |

RESULTS

The following outcome measures were examined: (1) Outpatient ER costs per member per month (pmpm), (2) ER-related Inpatient costs pmpm, (3) Outpatient ER visits pmpm, and (4) ER-related Inpatient admissions pmpm during the twelve month time period following onset of use of quitline services (or a comparable time period for the matched comparison group). No statistically significant reductions in costs or utilization were found for persons accessing quitline services when these measures were analyzed in a regression framework.




DISCUSSION

Other research has found that evidence-based quitlines are a good investment in smoking cessation[3],[4],[5] However, there are no articles exploring cost offsets specifically for the disabled population though there are strategies aimed at smoking cessation for this population.[6] Further, effective July 1, 2011, the Centers for Medicare and Medicaid (CMS) allowed states to claim administrative cost expenditure for quitline services. CMS indicated that the Congressional Budget Office estimated that its savings from preventable health problems and costs [such as smoking use] would outweigh its costs, resulting in reduced costs for States and the Federal government.

The results of this retrospective cohort analysis are consistent with a 2002 WSIPP report, "Smoking Cessation and Medicaid Expenditures: A Cost-Benefit Analysis", that found smoking cessation programs reduce health care expenditures and increase the lifespan of successful quitters, but "do not appear to save more money than they cost in the short-term state budget." Further, the key finding from the WSIPP report are consistent with the results of this cohort analysis.

- Although smoking cessation programs reduce health care expenditures and increase the life span of successful quitters, they do not appear to save more money than they cost in the short-term state budget.
- Medicaid program costs for smoking cessation treatment occur immediately, but many of the benefits (in terms of reduced health care expenditures) occur in the future.
- The percentage of individuals receiving treatment who successfully quit and remain abstinent is small. Therefore, health care costs are reduced for only a small fraction of

[3] Lawrence C.; Zhu, S.; Nelson, D. Arikian, N., Nugent, S., Partin, M., Joseph, A. (2006). Benefits of telephone care over primary care for smoking cessation. Arch Intern Med (vol. 166), Mar 13, 2006. www.archinternmed.com

[4] Stead LF, Lancaster T. Telephone counselling for smoking cessation (Cochrane Review). In: *The Cochrane Library*, Issue 3, 2002. Oxford: Update Software.

[5] Hollis, J., McAfee, T., Fellows, J., Zbikowski, S., Stark, M, and Riedlinger, K. (2007). The effectiveness and cost effectiveness of telephone counselling and the nicotine patch in a state smoking quitline. Smoking Control (16), 53-59.

[6] National Institutes of Health Project to Develop a Smoking Cessation for People with Disabilities; http://bsch.phhp.ufl.edu/2011/05/19/nih-project-to-develop-a-smoking-cessation-for-people-with-disabilities/

persons receiving treatment. Due to changes in employment and family situations over time, individuals leave the Medicaid program. If individuals were to receive smoking cessation treatment and then leave Medicaid, the benefits associated with reduced health care costs would not accrue to the state Medicaid program.

Because this study population was limited to a disabled population which had significant health needs as determined through a comprehensive analysis of risk factors, perhaps it is unreasonable to expect significant impacts on emergency room visits and inpatient medical costs with a 12-month follow-up period. Longer follow-up might show different outcomes.