THE ECONOMIC ANALYSIS OF MEDICAID EXPANSION | TECHNICAL REPORT

WYOMING DEPARTMENT OF HEALTH
THOMAS O. FORSLUND, DIRECTOR

DECEMBER 2014

Executive Summary

Passed in 2010, the Affordable Care Act (ACA) provided the opportunity for states to participate in an optional expansion of existing Medicaid programs. In Wyoming, this optional expansion is estimated to create approximately 800 jobs and increase State GDP by approximately $50 million, representing 0.13% of a $38.4 billion economy.

500 of these new jobs are projected to be created in Wyoming's health care industry, representing an increase of approximately 1.7% in that sector. The other 300 jobs will be created in other non-agricultural sectors (e.g. retail) across the economy, but the projections do not specify specific sectors.

These 500 healthcare jobs are likely to be widely distributed across Wyoming, based on both where the individuals who newly-eligible for Medicaid live and where those individuals end up receiving healthcare services (not always in their home communities). If it is assumed that job creation is proportional to spending, these health care jobs are expected to be distributed across the State as follows:

Table 1: By County Distribution of Estimated Health Care Spending/Jobs

County	Est. Percent	Est. Jobs
Albany	10.1%	50
Big Horn	1.1%	6
Campbell	7.3%	36
Carbon	1.7%	8
Converse	1.7%	8
Crook	0.3%	1
Fremont	8.3%	41
Goshen	2.1%	11
Hot Springs	1.0%	5
Johnson	1.0%	5
Laramie	16.2%	81
Lincoln	2.1%	10
Natrona	16.4%	82
Niobrara	0.3%	2
Park	6.1%	30
Platte	1.0%	5
Sheridan	5.0%	25
Sublette	0.5%	2
Sweetwater	6.0%	30
Teton	5.5%	28
Uinta	4.0%	20
Washakie	1.9%	9
Weston	0.6%	3

Background

In the summer of 2013, the Wyoming Department of Health (WDH) was asked to analyze the 'potential economic impact' of an optional (traditional) Medicaid expansion under the Affordable Care Act. For the purposes of this analysis, the WDH interpreted 'potential economic impact' to mean any potential change in economic activity and jobs resulting from the injection of out-of-State money as part of the high federal match rate for an optional expansion. To answer this question, the WDH worked with the Department of Administration and Information Division of Economic Analysis (EA), as EA had both the experience and the specialized tools to model the potential impact of an injection of federal funds over time. To model the impact, EA used a Wyoming-specific, statewide, 160-sector economic impact model provided by Regional Economic Modeling, Inc. (REMI).[1] REMI is a regional economic forecasting and policy analysis model that goes beyond traditional input/output modeling to include dynamic feedback loops associated with economic changes.

Within the REMI model, the additional federal spending in Wyoming would be considered an "economic shock." Compared against a baseline forecast with no shock, REMI estimates the changes that occur in the forecast for each year that the shock is projected. Specifically, REMI projects the change in jobs, State Gross Domestic Product (GDP), total economic output, and personal income.

The following technical report details the methodology used to arrive at the results using the REMI model, as well as the in-depth results of this model as they relate to changes in Wyoming's economy if an expansion of Medicaid were to occur.

Methodology

In order to complete the modeling, the Division of Economic Analysis (EA) required data related to three starting assumptions:

(1) The total amount of outside (federal) funds, by year, from 2014 to 2020.
(2) The projected distribution of remaining in-state funds by economic sector.
(3) The projected amount of out-of-state "leakage" for each year.

The WDH provided estimates for these three assumptions based on actuarial projections of federal spending, existing Medicaid spending distributions, and national private medical spending distributions estimated through survey data.

Total outside funds

To calculate the impact of a potential Medicaid expansion on the State economy in terms of potential new jobs and change to State Gross Product, the REMI model compares two simulations from 2014 to 2020 -- a "baseline" simulation against an "expansion" simulation. WDH assumed the "baseline" would include the mandatory Medicaid expansion ("woodwork" plus kids) and the "expansion" scenario would include all three groups. This is represented in the Table 2, on the next page.

[1] http://www.remi.com/products

Table 2: Baseline vs. expansion assumptions

Simulation	"Woodwork" population	Mandatory kids	Expansion
Baseline			
Expansion			

Total estimated Federal spending (in millions of dollars) for each group was derived from the Milliman Medicaid Cost Study "best estimate," reproduced in Table 3, below.

Table 3: Milliman projections for additional federal spending[2]

Group	2014	2015	2016	2017	2018	2019	2020
"Woodwork"	$3.9	$7.8	$7.7	$7.9	$8.3	$8.7	$9.1
Mandatory kids	$3.5	$8.2	$10.6	$12.3	$12.8	$13.2	$12.7
Expansion	$50.0	$103.6	$110.8	$114.1	$115.9	$120.1	$123.1

Distribution of new spending by sector

In addition to aggregate spending, REMI requires a breakdown of where (by sector) new Federal spending will be injected. Economic sectors in the model are designated by North American Industry Classification System (NAICS) codes. The relevant sectors for new health spending include:

NAICS code	Sector
6211-6213	Offices of health practitioners
6214-6215, 6219	Outpatient, laboratory and ambulatory care
6216	Home health care
622	Hospitals

In addition to the increased spending in the detailed health care industries, consumer spending associated with "Pharmaceutical and Other Medical Products" were estimated as well.

To estimate a percentage breakdown of federal funds by the economic sectors above, WDH made the assumption that both the "Woodwork" population and the Expansion group would distribute their health expenditures by sector similar to the average current spending distribution of insured non-disabled adults (ages 19 – 64) with incomes under 138% FPL.[3] WDH similarly assumed that the mandatory child-related expenditures would be similar to that of currently insured children. To estimate the current spending distributions of insured adults and children, WDH relied on two data sources, each with advantages and limitations:

(1) The *Medical Expenditure Panel Survey* (MEPS), which began in 1996, is a set of large-scale surveys of families and individuals, their medical providers (doctors, hospitals, pharmacies, etc.),

[2] "Wyoming Medicaid Expansion Analysis: Results Summary." Milliman Inc. Sept. 5th, 2012. Page 25.
[3] If either "Woodwork" or Expansion adults had serious health issues or disabilities, they would likely be both categorically eligible and already enrolled in Medicaid.

and employers across the United States, managed by the Department of Health and Human Services' (HHS) Agency for Healthcare Research and Quality. MEPS collects data on the specific health services that Americans use, how frequently they use them, the cost of these services, and how they are paid for, as well as data on the cost, scope, and breadth of health insurance held by and available to U.S. workers.

The advantages of using MEPS data include its comprehensive and tested survey design, and being able to tailor the data to useful characteristics (age, income, disability, insurance status) that are similar to a potential Medicaid expansion population. The disadvantage of MEPS data is that it is national, not Wyoming-specific.

(2) *Wyoming's Medicaid Management Information System* (MMIS) contains current expenditure information for current beneficiaries. The advantage is that it is Wyoming-specific. However, the disadvantage is that the current Medicaid population may be very different from an optional expansion group. WDH could only exclude clearly inapplicable programs (e.g. DD/ABI Waivers) from the analysis.

The estimated total distribution of expenditures by NAICS code for the two data sources were as follows:

NAICS code	Sector	MEPS	MMIS
6211-6213	Offices of health practitioners	24%	32%
6214-6215	Outpatient, laboratory and ambulatory care	8%	20%
6216	Home health care	7%	3%
622	Hospitals	40%	24%
	Consumer spending on prescription drugs	21%	21%

For more robust results, both distributions were entered into REMI. The tables below (and on the next page) show the potential increased federal spending that would happen in Wyoming if it expanded its Medicaid program under both scenarios:

Table 4: First Scenario (MEPS)

Sector	2014	2015	2016	2017	2018	2019	2020
Office of Health Practitioners	12.0	24.9	26.6	27.4	27.8	28.8	29.5
Outpatient, Lab, & Ambulatory	4.0	8.3	8.9	9.1	9.3	9.6	9.8
Home Health Care Services	3.5	7.3	7.8	8.0	8.1	8.4	8.6
Hospitals	20.0	41.4	44.3	45.6	46.4	48.0	49.2
Pharmaceutical Spending	10.5	21.8	23.3	24.0	24.3	25.2	25.9
Total	50.0	103.6	110.8	114.1	115.9	120.1	123.1

Table 5: Second Scenario (MMIS)

Sector	2014	2015	2016	2017	2018	2019	2020
Office of Health Practitioners	16.0	33.2	35.5	36.5	37.1	38.4	39.4
Outpatient, Lab, & Ambulatory	10.0	20.7	22.2	22.8	23.2	24.0	24.6
Home Health Care Services	1.5	3.1	3.3	3.4	3.5	3.6	3.7
Hospitals	12.0	24.9	26.6	27.4	27.8	28.8	29.5
Pharmaceutical Spending	10.5	21.8	23.3	24.0	24.3	25.2	25.9
Total	50.0	103.6	110.8	114.1	115.9	120.1	123.1

Estimated out-of-state "leakage" (16%)

To determine what fraction of additional health care spending would remain inside Wyoming (instead of going to hospitals and providers in Montana, Utah, Colorado and Nebraska), the Department of Health combined information from two datasets:

(a) Medicaid claims data was analyzed to determine the percent of current Medicaid spending in each county that was billed to in-state providers. Not surprisingly, in-state spending was higher in interior counties compared with border counties. Natrona, Converse and Hot Springs Counties had the highest percentages of in-state spending (approximately 95%), and Teton, Crook, Weston, Lincoln and Goshen counties had the lowest (approximately 75%).

(b) US Census Small Area Health Insurance Estimates (SAHIE) data for 2012 was used to weight each county-level leakage percentage by the estimated number of current uninsured between 18-64 years of age and under 138% FPL -- the likely expansion population.

Using this methodology, the weighted average fraction of health care spending remaining inside the State of Wyoming was estimated at 84%.

Estimating by-county spending

Two data inputs were used in this analysis:

(a) SAHIE estimates of the distribution of uninsured between 19 and 64 and under 138% FPL were used to determine the initial amount of spending by county. These estimates can be seen on the map in Exhibit 1.

(b) Medicaid claims data between SFY 2008 and SFY 2014 for inpatient, outpatient, and office visits (excluding waiver and long-term care spending) were used to generate a matrix of the proportion of in-State medical spending by Medicaid member county that stays in that county (pay-to provider county). This matrix can be seen in Exhibit 2. Note that counties like Natrona attract a significant amount of spending from surrounding rural counties in addition to keeping a significant amount of spending themselves.

The SAHIE estimates (a) were adjusted using the spending matrix (b) to come up with the adjusted percentages reported in Table 1 in the Executive Summary, as shown in Table 6.

Table 6: Original and adjusted spending distributions

County	SAHIE Estimate	Adjusted Estimate
Albany	10.4%	10.1%
Big Horn	2.4%	1.1%
Campbell	6.9%	7.3%
Carbon	2.7%	1.7%
Converse	1.8%	1.7%
Crook	1.2%	0.3%
Fremont	9.3%	8.3%
Goshen	2.6%	2.1%
Hot Springs	1.0%	1.0%
Johnson	1.5%	1.0%
Laramie	14.8%	16.2%
Lincoln	2.6%	2.1%
Natrona	12.9%	16.4%
Niobrara	0.4%	0.3%
Park	4.9%	6.1%
Platte	1.5%	1.0%
Sheridan	4.2%	5.0%
Sublette	1.5%	0.5%
Sweetwater	7.3%	6.0%
Teton	4.2%	5.5%
Uinta	3.5%	4.0%
Washakie	1.5%	1.9%
Weston	1.0%	0.6%

Results

The results of the REMI simulation, which projected the impact of federal funds in Wyoming due to a potential expansion of traditional Medicaid, are presented in the following section. The results of the model represent an average of two scenarios using different distributions of the injected funds.

A summary of the results are found in Table 2. These figures show the projected changes in Wyoming's economy due to the possible expansion of Medicaid compared to the baseline economic status of not expanding. Measured economic indicators include:

- *Employment*, representing total new jobs created.
- *Personal income*, the income received by residents in a particular area from all sources. This sum includes net earnings (earned from working), rental income, personal dividend income, personal interest income, and transfer payments (Social Security, government assistance.)

- *Economic output*, the total value of new goods and services produced by the economy.
- *Gross Domestic Product*, the measurement of a state's *value-added* output from all industries within the state; in other words, GDP is the subset of output that accounts for all new economic activity (output) *minus the goods and services used as inputs to produce that output*. GDP is considered one of the most comprehensive measures of economic activity in a state and is an excellent gauge to use in determining how the overall economy of Wyoming is affected by an economic impact.

The reader should note that the numbers in Table 7 do not represent additive year-on-year growth, but are instead a point-in-time simulation result (i.e., the jobs cannot be added together across the years; the figure applies to just the year in question).

Table 7: Economic changes due to potential expansion (REMI simulation results)

Category	Units	2014	2015	2016	2017	2018	2019	2020
Total Employment	Jobs	409	826	861	852	822	806	783
Gross Domestic Product	Millions of 2013 Dollars	26.31	53.70	56.43	56.19	54.51	53.75	52.42
Economic Output		44.29	90.53	95.30	94.88	91.98	90.47	87.96
Personal Income		19.60	42.08	47.69	50.67	51.92	53.18	53.66

Employment

The REMI model estimates that the expansion of traditional Medicaid would lead to approximately 850 total additional jobs in Wyoming. This number is adjusted by 95%, to account for the reduced spending on benefits under the SHARE Plan,[4] to arrive at the final figure of 800 jobs.

The type of jobs created vary from sector to sector. Table 8 details employment changes by specific sectors. In addition to the 75- 80 State and local government jobs created, approximately 220 - 240 jobs will be created in other private, non-agricultural sectors. This is the most granular level of detail provided by the model; projections for specific sectors are not included.

Table 8: Job changes due to potential expansion, by sector.

Category	2014	2015	2016	2017	2018	2019	2020
Total	409	826	861	852	822	806	783
Private, Non-Farm	370	749	780	771	744	730	708
Total Government	39	78	81	81	78	77	75
Health Care	251	501	513	505	489	486	478
Offices of health practitioners	82	162	165	161	155	153	150
Outpatient, lab, ambulatory	45	89	92	91	89	89	88
Home health care	43	86	89	88	86	86	85
Hospitals	81	161	165	163	159	158	156

[4] See The SHARE Plan (2014) report at: http://health.wyo.gov/default.aspx

Personal Income

The results from the REMI analysis show increased total direct and indirect personal income for the State above the baseline values for every year of the analysis. Personal income gains associated with increased employment lead to greater consumption and indirect employment gains in the state.

Gross Domestic Product (GDP) and Output

In each year of the REMI analysis, under a potential Medicaid expansion, Wyoming will experience increases above the baseline values for GDP and output.