

MEMORANDUM

To: Colorado Commission on Affordable Health Care  
 From: Michele Lueck, Amy Downs and Emily Johnson, Colorado Health Institute  
 Re: Analysis of Personal Health Care Spending by Income  
 Date: September 22, 2015

The Colorado Commission on Affordable Health Care asked the Colorado Health Institute (CHI) to estimate personal health care spending in Colorado based on several demographic characteristics. This memo summarizes CHI’s analysis of personal health spending by income in Colorado.

**Spending on Personal Health Care by Income**

Data on personal health care spending by income are not reported at the state levels. In order to estimate spending by income group in Colorado, CHI overlaid state income and insurance data with estimates of spending by insurance coverage. Specific methods are summarized at the end of this memo.

Table 1 contains CHI’s estimates of total personal health care spending by income group in Colorado.

**Table 1. Total Personal Health Care Spending, by Household Income, Colorado, 2013.**

Household Income	Total Personal Health Care Spending, Colorado, 2013 (in millions)
Under \$25,000	\$6,660
\$25,000 - \$49,000	\$8,420
\$50,000 - \$74,000	\$6,725
\$75,000 - \$99,000	\$4,887
Over \$100,000	\$9,323
Total	\$36,015

Total personal health care spending is highest in the cohort with household incomes of more than \$100,000. However, similar to age, spending by income is largely influenced by the number of Coloradans in each income cohort.

Table 2 controls for this by analyzing per capita personal health care spending within each income group. Spending per capita is lower as individual income increases.

**Table 2. Per Capita Personal Health Care Spending, by Household Income, Colorado, 2013.**



Household Income	Per Capita Personal Health Care Spending, Colorado, 2013
Under \$25,000	\$8,226
\$25,000 - \$49,000	\$7,489
\$50,000 - \$74,000	\$6,765
\$75,000 - \$99,000	\$6,334
Over \$100,000	\$5,956
Total	\$6,841

Coloradans with annual household incomes under \$25,000 have the highest per capita spending among all income groups. This trend is impacted by this income category’s large proportion of seniors and people with disabilities, who have relatively high health care needs.

## Methods and Notes

Because the data in this memo are not regularly available, CHI created and applied a number of methods. Details on these methods are described below.

### Spending on Personal Health Care by Income

No national or state-based data sets stratify total personal health care spending by income level. However, the American Community Survey (ACS) collects data on the number of Coloradans in each major payer category (private insurance, public insurance, and uninsured) by income level.

In this analysis, we assumed that the major reason for differences in personal health care spending by income is due to differences in health insurance coverage for those at higher or lower income levels. A limitation of this analysis is the potential for bias in both directions. Low-income individuals often have more complex medical conditions, which could mean spending on this population tends to be even higher than our estimate shows. On the other hand, low-income individuals are also more likely to be deterred from seeking care due to high co-pays, deductibles, or the time and travel required to visit a physician, which would lower the average spending on this population.

Given this assumption, CHI used the population distribution by income within each of these payers and applied those ratios to personal health care spending totals by payer – a value derived from an earlier CHI analysis submitted to the Research Committee on July 9, 2015.

For example, of the 1,245,944 Coloradans with private insurance, 390,850 (31 percent) have annual incomes below \$25,000. We applied this 31 percent to the \$14.5 billion spent on private insurance personal health care spending and estimated that \$4.6 billion in personal health care spending was





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attributable to privately-insured individuals with incomes under \$25,000.

CHI was able to match most of the payer groups from our earlier payer analysis submitted on July 9, 2015 to groups reported by CMS. However, CHI also reported spending in an "other" payer category, which included but was not limited to Indian Health Service, private revenues, workers compensation and Department of Defense programs. Due to the diversity of funding sources included in the "other" payer category, we assumed that users of health care in this category were no more or less likely to be at a high or low income level than the general population. Therefore, for this portion of the spending, we assumed the income distribution matched that of the overall Colorado population.

The original estimates of spending by payer type and associated methodology can be found in CHI's July 9, 2015 memo to the Research Committee. Please let us know if you have any questions. You can reach Amy Downs at [downsa@coloradohealthinstitute.org](mailto:downsa@coloradohealthinstitute.org)