



# Tracking Healthcare Cost Growth Through a New Measure of Productivity

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FEBRUARY 2013

## Summary

This brief provides a new explanation for why healthcare cost growth is showing restraint. Specifically, we find evidence that the healthcare sector is finally managing to use its workers more productively.

In this policy brief we define a new measure of healthcare productivity, Gross Medical Productivity (GMP). We define GMP as the number of potential patients per healthcare worker, where the pool of potential patients is the entire population. GMP measures healthcare productivity by looking at how effectively the sector uses its workers. So, if the potential patient population grows faster than the number of healthcare workers, GMP rises.

We argue GMP is a reasonable proxy for healthcare productivity, and could be a *leading indicator* for trends in healthcare cost growth going forward. Research shows labor accounts for over half of total healthcare costs<sup>1</sup>, suggesting a strong relationship between labor productivity and cost growth. Indeed, historically GMP has been falling at a rapid rate, corresponding to rapid growth in healthcare costs. That suggests a rise in GMP, or a rise in the number of potential patients per worker, will place downward pressure on healthcare cost growth. And because we can see changes in GMP well before official healthcare cost data is available, we believe GMP can provide early insight on the direction of cost growth.

From this approach we find evidence to suggest healthcare cost growth continued to show restraint in 2012, especially for the elderly population. We found that GMP rose considerably in 2012 for the 65 and over population, one of the largest drivers of healthcare cost growth, as healthcare workers became more productive in treating older patients. However, we also note that GMP for the entire potential patient population continues to fall.

## Healthcare Costs: What's Behind the Restraint

The growth in healthcare costs has finally slowed. According to new estimates from CMS, the cost of healthcare grew just 3.9% in 2011 after rising by a similarly

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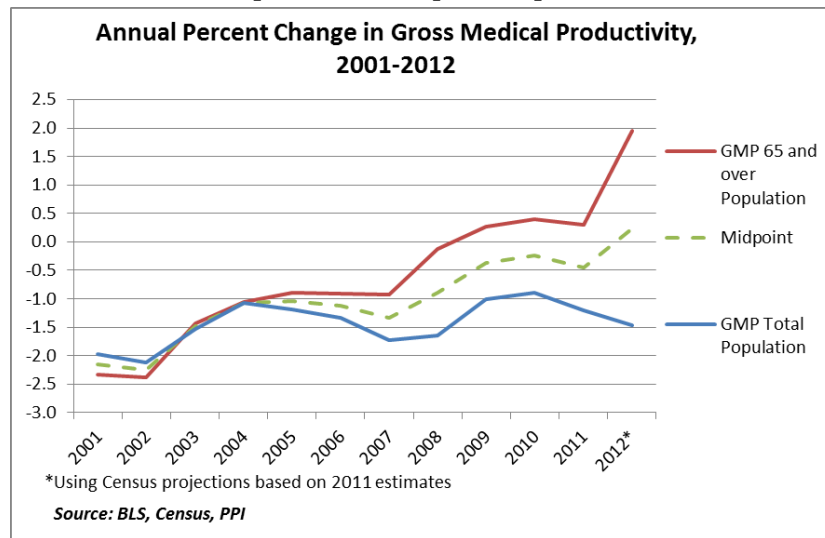
small amount in 2010 and 2009.<sup>2</sup> Considering cost increases averaged over 7% annually in the decade prior to 2009, and total healthcare spending reached \$2.7 trillion in 2011, this restraint is a welcome trend.

To understand why, let’s think about what drives healthcare costs a little differently. Healthcare costs depend on the number of people demanding care and on the number of people providing the care. Because healthcare is a universally demanded service, the pool of potential patients is the entire population. The people providing medical care are those employed by the healthcare sector. That means we can think about cost in terms of how effectively the healthcare sector uses its workers relative to the potential patient population.

First, we look at the long-term relationship between growth in healthcare workers and in the older potential patient population. Prior to 2009, the number of workers grew faster than the population age 65 and over. In other words, the number of potential older patients per healthcare worker was falling.

Starting in 2009 there was a fundamental shift, as illustrated in the chart below. In 2009 the number of workers grew slower than the 65 and over population, a trend which became significantly more pronounced in 2012. In other words, since 2009 the number of potential older patients per healthcare worker is rising.

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The recent increase in how effectively healthcare allocates its workers – in its worker productivity – may explain the recent restraint in healthcare cost growth.

We term this new measure of healthcare productivity “gross medical productivity” (GMP). GMP is defined as the ratio of the potential patient population to the number of healthcare workers, or the number of potential patients per healthcare employee. Gains in GMP can come from changes in industrial organization, changes in insurance plan structure, or from implementation of new innovations and technology in the workplace. Changes where the number of workers required

to provide the same or greater level of care per patient falls.

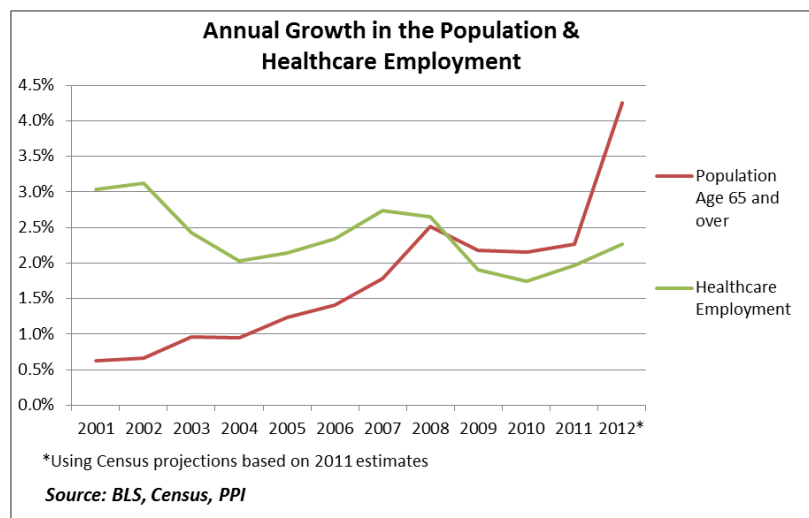
Of course, increasing GMP alone does not necessarily result in better patient outcomes. A new innovation could lead to fewer administrative personnel being needed at the doctor's office, but that doesn't mean the patients will have a more successful treatment. Conversely, a new technology could have no impact on the number of workers – or it could require more workers per patient if patients are living longer, actually decreasing GMP.

Up to now we've focused on the 65 and over population because that is the segment of the population with the highest spending per capita for medical treatments and services<sup>3</sup> – and one of the largest drivers of total healthcare spending. To be sure, the large jump in the 65 and over population in 2012 could be influenced by our use of projections instead of official estimates.<sup>4</sup> But the 2012 projection is based on 2011 population estimates, so it's reasonable to say the older population still grew faster than healthcare employment.

A major benefit of GMP is that it can be calculated sooner than actual healthcare costs.

Certainly we must also look at the GMP for the entire potential patient population. This includes people across all ages regardless of how likely one person is over another to require healthcare services in a given year. With this broader interpretation of GMP, we found healthcare productivity to have fallen at a relatively constant rate over the last decade. That is to say that when the entire potential patient population is considered, the number of potential patients per healthcare worker continues to fall.

The two estimates of GMP presented here form an upper and lower bound of healthcare productivity. The chart below maps out this range, along with the mid-point.



A major benefit of GMP is that it can be calculated sooner than actual healthcare costs. CMS healthcare expenditures data for 2011 was just released on January 7,

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The longer term trend of rising GMP for the older population could suggest the restraint in healthcare costs is more permanent than just temporary from the recession.

2013;<sup>5</sup> we won't know 2012 healthcare expenditures for another year. But we can already estimate changes in GMP for 2012, changes that shed light on healthcare cost growth especially since labor accounts for over half of total healthcare costs.<sup>6</sup>

In fact, using GMP as a leading indicator<sup>7</sup> provides evidence that the recent restraint in healthcare costs may continue in 2012. A positive trend in the GMP for the older potential patient population reflects a gain in healthcare productivity for an age cohort that is a principal driver of healthcare costs. The rising GMP for the older population means this cohort likely did not place upward pressure on healthcare costs over the last year. Still, more data is needed to determine whether or not the GMP for the total population will begin to rise.

Further, the longer term trend of rising GMP for the older population could suggest the restraint in healthcare costs is more permanent than just temporary from the recession. The 2009 shift in the GMP of the older population supports the idea that older Americans aren't actually consuming less healthcare. Instead, the sector is genuinely becoming more productive with respect to treating the older population.

If this trend holds, or extends to the total population, it could represent a major change in how the healthcare sector operates, be it through changes in organization of healthcare delivery, insurance plan structure, or implementation of new innovations and technology in the workplace. And in a sector where labor productivity is widely documented as falling, such gains could have enormous implications on the future of healthcare and on resource allocation elsewhere in the economy.

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## Endnotes

<sup>1</sup> Robert Kocher and Nikhil R. Sahni, “Rethinking Healthcare Labor,” *New England Journal of Medicine*, October 2011:

<http://www.nejm.org/doi/full/10.1056/NEJMp1109649>.

<sup>2</sup> Micah Hartman, Anne B. Martin, Joseph Benson, and Aaron Catlin, “National Health Spending in 2011,” *Health Affairs*, January 2013:

<http://content.healthaffairs.org/content/32/1/87.abstract>.

<sup>3</sup> “Healthcare Costs: A Primer,” Kaiser Family Foundation, May 2012:

<http://www.kff.org/insurance/upload/7670-03.pdf>.

<sup>4</sup> The official estimate will be available in June 2013.

<sup>5</sup> “Health Spending Rose 3.9 Percent In 2011, Reaching \$2.7 Trillion, CMS Says,”

Bloomberg BNA, January 2013: <http://www.bna.com/health-spending-rose-n17179871766/>.

<sup>6</sup> Robert Kocher and Nikhil R. Sahni, “Rethinking Healthcare Labor,” *New England Journal of Medicine*, October 2011:

<http://www.nejm.org/doi/full/10.1056/NEJMp1109649>.

<sup>7</sup> As with any leading indicator, GMP is intended to be an early warning of current and future trends. It is not designed to be a precise measure.

## About the Author

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## About the Progressive Policy Institute

The Progressive Policy Institute (PPI) is an independent research institution that seeks to define and promote a new progressive politics in the 21st century.

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