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Editor's Spotlight/Take 5

Editor's Spotlight/Take 5: Universal Health Insurance Coverage in Massachusetts Did Not Change the Trajectory of Arthroplasty Use or Costs

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In 2006, Massachusetts became one of the first states to provide universal health insurance coverage to all residents. These reforms, entitled "An Act Providing Access to Affordable, Quality, Accountable Health Care (Chapter 58 of the Acts of 2006)," had the simultaneous goal of "bending the cost curve down" [5]. Soon after, the federal Patient Protection and Affordable Care Act (PPACA), colloquially known as Obamacare, was signed into law in 2010. The PPACA's goals were twofold: Provide improved access for low-income Americans to affordable, quality health insurance, and to reduce the costs of healthcare. The PPACA aimed to expand the affordability, quality, and availability of private and public health insurance through consumer protections, regulations on coverage, subsidies, taxes, and insurance exchanges, among other reforms. Much of the PPACA was explicitly modeled on the reforms enacted in Massachusetts in 2006 [4]. Thus, the Massachusetts experience may provide an advanced look at the effects of large-scale health insurance reform.

In their study, entitled "Universal Health Insurance Coverage in Massachusetts Did Not Change the Trajectory of Arthroplasty Use or Costs," Steven M. Kurtz and his colleagues looked at whether the number of cases, payer mix, and inpatient costs changed in Massachusetts after reform, compared to the United States as a whole. They found that these reforms had no effect on the rate of utilization or the cost of hip and knee. As one might expect, they did find that more patients were covered by Medicaid and "safety net" forms of insurance. The usage of THAs and TKAs in Massachusetts increased steadily throughout the study period, and paralleled a similar increase in the rest of the United States. And although the inpatient cost of total joint arthroplasty dropped slightly over time for the entire United States, the cost in Massachusetts rose slowly, but steadily, both before and after the change in insurance. Thus, the authors conclude that health insurance reform seems to be a "nonevent" for surgeons and patients involved with joint surgery.

Note from the Editor-In-Chief: In "Editor's Spotlight," *one of our editors provides brief commentary on a paper we believe is especially important and worthy of general interest. Following the explanation of our choice, we present* "Take Five," *in which the editor goes behind the discovery in a one-on-one interview with an author of the article featured in* "Editor's Spotlight."

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What about other health measures? While the full results of the PPACA are not yet known (and indeed, provide for endless and occasionally enlightening political discussion), we do have a steadily increasing body of knowledge on what has happened in Massachusetts after enactment of insurance and health care reforms. First, let us look at the positive outcomes.

By 2008, more than 96% of Massachusetts residents had health insurance—well above the 85% in the nation as a whole. Improvements in the percentage of people covered occurred in every age and ethnic group. Access to care, as reported by patients, was better, and the burden of out-of-pocket costs was reduced, particularly for lower-income residents.

However, several problems became evident. First, provider supply was an issue by 2009, when one adult in five reported problems finding a doctor willing to see him or her. Second, costs continued to rise, both at the level of the individual patient and for the system as a whole, despite the recession.

Additionally, the evidence for improved health in Massachusetts residents is mixed at best. One study found no improvements in hyperlipidemia, diabetes, or blood-pressure control [7], and while overall population mortality improved, particularly in low-income areas, the effect was minor [6]. Although Massachusetts residents self-reported better health than patients in neighboring states, usage of preventative care in Massachussetts was only slightly greater [9]. In some respects, this is similar to the "Oregon Experiment," which compared the health of residents who obtained Medicaid coverage through a lottery to those who did not; although patients with diabetes in Oregon who received coverage were more likely to get treatment, outcomes overall did not appear to improve [2].

Healthcare, of course, is more than broad treatment of populations for chronic disease. Providing high-quality care, controlling costs, and assuring access for lower-income patients are all worthy goals. However, the results here show that good intentions may not be enough. With that in mind, let us talk with Steven M. Kurtz PhD, the first author of "Universal Health Insurance Coverage in Massachusetts Did Not Change the Trajectory of Arthroplasty Use or Costs."

Take Five Interview with Steven M. Kurtz PhD, first author of "Universal Health Insurance Coverage in Massachusetts Did Not Change the Trajectory of Arthroplasty Use or Costs"

Paul Manner MD: *The Massachusetts reform effort has been described as a blueprint for the PPACA. From a policy viewpoint, what differences do you see between the two? Are they directly comparable?*

Steven M. Kurtz PhD: The legislation for a single state is going to be less complex than the PPACA, which is intended to cover the entire United States, but from a universal coverage perspective, the spirit of the two pieces of legislation is really similar. The idea is to ensure that all citizens, to the extent reasonably possible, have access to health insurance.

Dr. Manner: *A possible confounder is that the residents of Massachusetts are not wholly comparable to the citizens of the United States. For example, Massachusetts residents are more likely to be white rather than black or Hispanic, older, and more likely to have a college degree or higher. Median household incomes in Massachusetts are higher, despite smaller households, and the poverty rate in the state is lower than in the rest of the US. All of these may affect health. How do we separate these factors from insurance as a reason for differences in health [8]?*

Dr. Kurtz: While I agree that differences in age, race, and socioeconomic status influence both the incidence of total joint replacement and subsequent outcomes, I do not believe these are possible confounders in our study. As shown by Figure 1 in our study, the

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incidence of total joint replacement is pretty similar for the United States and Massachusetts and has increased over time at a similar rate. We have shown in a previous study that the incidence of total joint arthroplasty is most strongly correlated to health expenditures, that is, society's willingness to pay [3]. I think macroeconomics is more at play here than population differences, or as we showed with the US trend, access to health insurance.

Dr. Manner: *Most patients who undergo hip and knee arthroplasty are 65 years of age and older. In the United States, most of these patients are covered by Medicare, which is the predominant payer for joint replacement. With that in mind, what can we learn from studying changes in insurance for a relatively small number of patients?*

Steven M. Kurtz PhD

Dr. Kurtz: I disagree that the vast majority of patients undergoing total joint replacement are over 65 and that they differ in a meaningful way between Massachusetts and the US as a whole. Looking at Table 3 in our paper for example, you can see that Medicare paid for 56.6% of TKAs in Massachusetts and 56.7% of TKAs across the United States. So in both Massachusetts and across the United States, an important segment of the total joint replacement population is paid from sources other than Medicare, including a combination of private insurance, Medicaid, and other sources. We have also shown in a previous study that there is an increasing proportion of total joint arthroplasties covered by private insurance. Depending upon whether you expect the future demand to come from younger or older patients, private payers shoulder a large portion of the financial burden for total joint replacement and may be expected to do so in the future.

Dr. Manner: *An interesting finding here is that the cost of joint replacement has dropped slowly but steadily in the United States as a whole, but has increased in Massachusetts. Similarly, Ayanian and colleagues [1] have noted that Massachusetts has traditionally been a high-cost state. From 1998 through 2009, Massachusetts had the highest personal healthcare spending per capita of any state. Since 2001, personal healthcare spending as a percentage of the economy has also risen more rapidly in Massachusetts and other New England states than in the United States overall. To what degree might the changes enacted by legislation exacerbate this?*

Dr. Kurtz: The Massachusetts legislation did not address cost containment in 2006, and so (perhaps unsurprisingly) the costs of care were not derailed from their historical trajectories. Starting in 2011, new provisions of healthcare legislation were imposed that are intended to address this issue. We will see in a few years the extent to which that has influenced the cost of total joint replacement in Massachusetts. On the other hand, the megatrend in healthcare cost containment should eventually play a role here in Massachusetts as it has in other states.

Dr. Manner: *What does your study imply for the outcome of the PPACA? Can we expect similar equivocal results for cost containment?*

Dr. Kurtz: I do not expect that universal coverage as specified in the PPACA, in of itself, will have a dramatic effect on the utilization of total joint replacements across the United States. I think that other trends, such as the increasing resource allocation for

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total joint replacement will play a greater role. As long as society continues to allocate sufficient resources for total joint replacement, as it has in the past, the demand trajectories will most likely continue. Just because the volume of surgery increases, however, does not imply that the cost of surgery will stay the same. To accommodate the increased demand, new economic models will have to be developed so that high-quality surgeries can still be performed for a larger population but at a reduced per capita cost. The forces driving increased demand for arthroplasty are an aging population that would like to remain active in their golden years, improvements in technology, and access to care. As more people have access to value-enhancing healthcare interventions such as total joint arthroplasty, the US healthcare system will need to work collaboratively to provide patient-centered, cost-effective care to people who suffer from disabling arthritis of the hip and knee.

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