

## **Making Health Care More Affordable: Estimated Savings from Care Coordination, Lifestyle Change, and System Redesign in Senator Obama's Health Care Plan**

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A major component of Senator Obama's health care plan is to improve the quality of care and make health care more affordable over time.<sup>2</sup> Several components of the Obama plan would reduce both the overall level and growth of health care spending over time. These savings would be produced through improvements in the health care delivery system's efficiency. Overall, by 2012 the Obama initiatives could reduce national health care spending by \$200-\$275 billion and federal spending by approximately \$100 billion. Key initiatives include:

- Expanding evidence-based, best practice coordinated care management programs (and payment reforms to facilitate the transformation) in the public sector—Medicare, the Federal Employees Health Benefits Program (FEHB)—and the new public health care plan;
- Accelerating the adoption of electronic health information technology systems through up-front investments;
- Promoting wider use of lifestyle change and wellness programs designed to reduce obesity (and associated costly chronic diseases such as diabetes and heart disease) and smoking;<sup>3</sup>
- Reducing administrative costs in the system;
- Creating a clinical effectiveness research institute to discourage high-cost, low-value care and reduce unproductive health care spending;
- Improving patient safety and decreasing costs by reducing preventable medical errors.

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<sup>1</sup> The views expressed here are his own and do not necessarily reflect those of Emory University.

<sup>2</sup> The estimates presented below do not include other aspects of the Obama plan that would reduce the cost of private insurance, including the reinsurance proposal.

<sup>3</sup> Wellness and lifestyle interventions are the focus of inquiry here, not disease detection (screening), upon which virtually all previous work on "prevention" and its efficacy have focused.

The Obama plan also includes several additional initiatives designed to reduce the cost of private insurance not included in these estimates. These include his proposal to lower costs associated with catastrophic illness (a reinsurance pool), requiring price and quality transparency, creating a pathway for generic biologics, negotiating prescription drug prices within Medicare Part D, reducing overpayments to Medicare Advantage plans, and recapturing a substantial portion of the Disproportionate Hospital Share (DSH) payments that would be superseded by his coverage proposals.

These proposals are an integral part of his broader coverage proposal and in many cases would be effective only in the context of such a plan with its associated pooling mechanisms. In addition, his proposals—particularly his health information technology proposal—make significant up-front investments that are necessary to reap future gains from care coordination. Taken together, his coverage and cost proposals attack the core causes of rising health care spending and address the issues surrounding more effective clinical management of patients with multiple chronic health care conditions. Some potential implementation approaches are presented below.

In summary, this analysis extrapolates from the existing literature to find that the Obama proposals would reduce national health expenditures by \$203-\$273 billion by 2012, or about 6% to 9% of total spending. While these savings are substantial, they are significantly lower than the estimated 30% of “waste” estimated by researchers from Dartmouth and the RAND Corporation. About half of the savings would accrue, directly and indirectly, to the federal budget.

## The Issue

The U.S. health care system was built to deliver services to acutely ill patients requiring episodic care, not to patients who are chronically, persistently in need of medical care. And as a result of that structural deficiency, today's chronically ill patients receive just 56% of the clinically recommended preventive and maintenance care they need.<sup>44</sup> It is this systematic discrepancy between what is and what should be that must be addressed in any health care reform.

The clinical protocols for preventing and treating diabetes, hypertension, and other chronic conditions, and preventing costly secondary complications, are well established in the provider community. But our system does not deliver the required services, because physicians and hospitals are not paid to provide them (or

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<sup>44</sup> Elizabeth A. McGlynn, et al. “The Quality of Health Care Delivered to Adults in the United States. *New England Journal of Medicine* 348 (2003):2635-2645.

paid poorly), and we have neither a care delivery model nor modern health information technology that facilitate doing so. As a result, we find ourselves facing six unhealthy truths about America's health and health care:

1. **Chronic diseases are the number one cause of death and disability in the United States.** More than 133 million Americans, *45% of the total population*, have at least one chronic disease. Chronic diseases kill more than 1.7 million Americans each year, and are responsible for 7 of 10 deaths in the United States.<sup>5</sup>
2. **Chronic diseases account for 75% of the nation's health care spending.** During 2007, the U.S. spent over \$2.2 trillion on health care, and *75 cents of every dollar went towards treating patients with one or more chronic diseases*. In public programs, treatment for chronic diseases constitutes an even higher portion of spending: 83 cents of every dollar in Medicaid and more than 95 cents in Medicare. Even among our elders, the distribution of spending is highly skewed: More than three quarters of total Medicare spending is associated with patients with *five or more chronic health care conditions*.<sup>6</sup>
3. **About two-thirds of the rise in health care spending is due to the rise in the prevalence of treated disease, primarily chronic disease.** From 1987 to 2000, health spending for non-institutionalized populations doubled from \$314 billion to \$628 billion per year—and fully \$211 billion of that increase was attributable to the increase in treated disease.<sup>7</sup>
4. **The doubling of obesity between 1987 and today accounts for 15% to nearly 25% of the rise in health care spending.** The percent of overweight children and youth has tripled since 1980, reaching such alarming proportions that in July 2008 the American Academy of Pediatrics endorsed the use of cholesterol-reducing statins for children as young as eight to stave

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<sup>5</sup> Centers for Disease Control and Prevention. *Chronic Disease Overview* (March 20, 2008), <http://www.cdc.gov/nccdphp/overview.htm> (accessed July 21, 2008).

<sup>6</sup> Centers for Disease Control and Prevention. *Chronic Disease Overview* (March 20, 2008), <http://www.cdc.gov/nccdphp/overview.htm> (accessed July 21, 2008).

Also:

Partnership for Solutions National Program Office. "Chronic Conditions: Making the Case for Ongoing Care. September 2004 Update," (2004), <http://www.rwjf.org/pr/product.jsp?id=14685> (accessed July 21, 2008).

<sup>7</sup> Kenneth E. Thorpe. "The Rise In Health Care Spending And What To Do About It," *Health Affairs* 6 (2005):1436-1445.

Also: Kenneth E. Thorpe, Curtis S. Florence, Peter Joski. "Which Medical Conditions Account For The Rise In Health Care Spending?," *Health Affairs* W4 (2004):437-445.

off heart disease.<sup>8</sup> If the prevalence of obesity was the same today as in 1987, health care spending in America would nearly be *10% lower per person—about \$220 billion less.*<sup>9</sup>

5. **The vast majority of cases of chronic disease could be better prevented or managed.** The World Health Organization calculates that at least 80% of all heart disease, stroke, and type 2 diabetes and more than 40% of cancer would be prevented if people ate healthier, exercised, and stopped using tobacco.<sup>10</sup> Unfortunately, America's health care payment and delivery systems don't facilitate these common sense actions. Less than 1% of our nation's health spending is invested in prevention. Instead, virtually all our annual outlays go to attempting to restore health—or some measure of it—once it is already lost.<sup>11</sup>
6. **Most Americans (five in six) are unaware of the extent to which chronic disease harms their health—and their wallets.** Fewer than one in six Americans realize that chronic diseases account for more than 70% of deaths in the U.S. and more than 70% of health care costs. Even fewer are aware of the toll chronic disease takes on U.S. productivity, further adding to costs.<sup>12</sup> Direct health care costs represent only a quarter of the total cost of chronic diseases. Indirect costs such as absenteeism and presenteeism, or lost productivity that occurs when employees come to work but perform below par due to any kind of illness, cost America's businesses over \$1 trillion a year.<sup>13</sup>

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<sup>8</sup> Stephen R. Daniels, Frank R. Greer and the Committee on Nutrition. "Lipid Screening and Cardiovascular Health in Childhood," *Pediatrics* 122 (2008):198-208.

<sup>9</sup> Kenneth E. Thorpe, Curtis S. Florence, David H. Howard, Peter Joski. "The Impact of Obesity in Rising Medical Spending," *Health Affairs* Web Exclusive (October 20, 2004): <http://content.healthaffairs.org/cgi/content/full/hlthaff.w4.480/DC1> (accessed July 21, 2008).

<sup>10</sup> World Health Organization (WHO), *Preventing Chronic Diseases: A Vital Investment* (Geneva: WHO, 2005).

<sup>11</sup> Julie L. Gerberding, "Protecting Health—The New Research Imperative," *JAMA* 294 (2005): 1403-1406.

<sup>12</sup> Partnership to Fight Chronic Disease, "An Unhealthy Truth: Rising Rates of Chronic Disease and the Future of Health in America" (2007), [http://www.fightchronicdisease.com/pdfs/PFCDLaunch\\_FINAL5.14.ppt](http://www.fightchronicdisease.com/pdfs/PFCDLaunch_FINAL5.14.ppt) (accessed July 21, 2008).

<sup>13</sup> Ross DeVol and Armen Bedroussian, *An Unhealthy America: The Economic Burden of Chronic Disease* (Santa Monica, California: The Milken Institute 2007), [http://www.milkeninstitute.org/pdf/chronic\\_disease\\_report.pdf](http://www.milkeninstitute.org/pdf/chronic_disease_report.pdf) (accessed July 21, 2008).

## **Savings Accruing From Best Practice Lifestyle Interventions, Electronic Medical Records, and Care Management**

Important elements of the Obama health care plan are the investments made in health information technology (HIT) and the movement to universal coverage. Broad-scale adoption of health information technology, along with changes in the financial incentives facing physicians through care coordination, are necessary components of generating the savings in health care outlined in the Obama plan. Many analysts, including the Congressional Budget Office, have noted the central role widespread adoption of health information technology plays in creating the opportunities for the savings outlined in this paper.<sup>14</sup> The savings likely to occur through adopting all elements of the Obama plan are less likely to transpire in the absence of widespread adoption of HIT created through his \$50 billion, five-year investment.

Broad adoption of health information technology would also reduce administrative costs. HIT would make operations within clinics and physicians' offices more efficient and less expensive. The elimination of paper and paper claims would add further savings. HIT would also facilitate more efficient exchange of information across providers, reducing the need for duplicative tests and procedures. These savings are accentuated by the movement to universal coverage anticipated in the plan and new rules in the insurance industry. Creating large risk pools combined with guaranteed-issue policies would eliminate underwriting costs and create substantial economies of scale for other administrative functions. Combined, both the HIT investments and the move to universal coverage would provide powerful tools for reducing high-cost, low-value care and administrative spending that produce no clinical benefits.

Restructuring our systems of financing and delivering care to better meet the needs of people with chronic conditions will also require a renewed focus on preventing disease when possible, identifying it early when it occurs, and implementing secondary and tertiary prevention strategies that slow disease progression and the onset of activity limitations. An analysis from the RAND Corporation focused on just four chronic diseases—diabetes, asthma, congestive heart failure, and chronic obstructive pulmonary disease—found that lifestyle changes, prevention, and better management of chronic disease could result in 20 million fewer inpatient days,

<sup>14</sup> Congressional Budget Office, *Evidence on the Costs and Benefits of Health Information Technology* (Washington, D.C.: U.S. Congress, May 2008), <http://www.cbo.gov/ftpdocs/91xx/doc9168/05-20-HealthIT.pdf> (accessed July 21, 2008).

5 million fewer emergency department visits, 9 million fewer office visits, and 20 million added workdays each year.<sup>15</sup>

Several randomized trials have examined the impact of wellness on disease incidence, and the design of chronic care management programs on spending and outcomes.<sup>16</sup> The randomized trials on wellness indicate that well-designed lifestyle interventions can produce dramatic reductions in the incidence of hypertension and diabetes.<sup>17</sup> A recent analysis from the Trust for America's Health, the Urban Institute, the Prevention Institute, and others found significant reduction in total health care spending linked to community-based lifestyle interventions—these savings ranged from a short-term return on investment of one dollar for every dollar invested, rising to more than six dollars over the longer term.<sup>18</sup> Recent work has also shown the importance of medication compliance among chronically ill patients.<sup>19</sup> This growing body of research shows that each dollar spent on medications—a major part of care coordination—designed to prevent hospitalizations generates up to a \$1.65 reduction in total Medicare spending. This translates into an overall reduction in total Medicare spending of \$577 to \$709 per person per year. These reductions would produce recurring savings.

There have also been key lessons from several major demonstration projects in the Medicare program designed to test various models for treating and managing chronically ill patients. While many of the demonstrations did not yield savings, certain programs did. The successful programs had common features: the central role assumed by a primary care physician in patient enrollment, overall care coordination, a care manager (generally a nurse or nurse practitioner) to assist in patient self-management, progress monitoring, and the use of HIT in managing care. Results from these demonstrations showed, in some cases, reductions in hospitalization of 27%, and in the case of heart failure by up to 61% (in the Park

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<sup>15</sup> Richard Hillestad. "The Potential Benefits and Costs of Increased Adoption of Health Information Technology." Testimony before the Senate Finance Committee (July 17, 2008), <http://finance.senate.gov/sitepages/hearing071708.htm> (accessed July 21, 2008).

<sup>16</sup> Partnership to Fight Chronic Disease. "Keeping America Healthy: A Catalog of Successful Programs" (June 2008), [http://promisingpractices.fightchronicdisease.org/uploads/Best\\_Practice\\_Catalog.pdf](http://promisingpractices.fightchronicdisease.org/uploads/Best_Practice_Catalog.pdf) (accessed July 21, 2008).

<sup>17</sup> Lynda H. Powell, James E. Calvin III, and James E. Calvin Jr. "Effective Obesity Treatments," *American Psychologist* 62 (2007): 234-246.

<sup>18</sup> Trust for America's Health, *Prevention for a Healthier America: Investments in Disease Prevention Yield Significant Savings, Stronger Communities* (July 2008), <http://healthyamericans.org/reports/prevention08/Prevention08.pdf> (accessed July 21, 2008).

<sup>19</sup> Bruce Stuart, et al., "Cost Offsets from Recommended Medications for Medicare Beneficiaries with Diabetes," Presentation at Academy Health Annual Research Meeting (June 9, 2008), [www.academyhealth.org/2008/monday/delaware/6\\_9\\_2008\\_11\\_30/StuartB.ppt#536.16.Conclusions](http://www.academyhealth.org/2008/monday/delaware/6_9_2008_11_30/StuartB.ppt#536.16.Conclusions) (accessed July 21, 2008).



Nicollet physician group practice demonstration).<sup>20</sup> In the Medicare Health Support program, one of the sites reduced spending (relative to a randomized control) by nearly 8% in just the first 6 months.<sup>21</sup> A more recent randomized trial by Health Dialog showed a net savings (after program costs) of 5% to 7% in a commercially insured population.<sup>22</sup> Results from these randomized trials indicate that savings of approximately 5% are currently possible in the medical management of chronically ill patients, and could rise when coupled with other components such as health information technology and community-based interventions. The results from these demonstrations also indicate that intervention design matters—a *lot*.<sup>23</sup>

A recurring theme in most of the best practice care management models is the central role played by health information technology. One recent randomized trial found that one HIT application alone—physician decision-support software designed to detect and correct medical errors—reduced spending (charges) by 6% relative to a control group.<sup>24</sup> Other studies have highlighted the potential for similar results. Under our current national HIT efforts, the Department of Health and Human Services estimates by 2012 that only 40% all physicians' offices and 12% of smaller practices (those with five or fewer physicians) will have electronic health

<sup>20</sup> Randall Brown, et al., *The Evaluation of the Medicare Coordinated Care Demonstration: Findings for the First Two Years* (Princeton, NJ: Mathematica Policy Research, Inc., March 21, 2007), <http://www.mathematica-mpr.com/publications/PDFs/mccdfirsttwoyrs.pdf> (accessed July 21, 2008). Also:

Randall Brown, Deborah Peikes, Arnold Chen, and Jennifer Schore, "Can Care Coordination (CC) Help Control Medicare Costs?" Briefing to the Congressional Budget Office (June 22, 2007).

Deborah Peikes, Arnold Chen, Jennifer Schore, and Randall Brown, "Don't These Demonstrations Ever Work? Mixed Evidence from the Four-Year Medicare Coordinated Care Demonstration," Presentation at Academy Health Annual Research Meeting (June 9, 2008), <http://www.cms.hhs.gov/ResearchGenInfo/Downloads/AcademyHealth08.pdf> (accessed July 21, 2008).

<sup>21</sup> Nancy McCall, Jerry Cromwell, and Shulamit Bernard, "Evaluation of Phase I of Medicare Health Support (Formerly Voluntary Chronic Care Improvement) Pilot Program Under Traditional Fee-for-Service Medicare: Report to Congress (Washington, D.C.: RTI International, June 2007), <http://www.cms.hhs.gov/Reports/Downloads/McCall.pdf> (accessed July 21, 2008).

MHSO number 3 reduced total spending by 4% in the treatment group, which included enrolled and not-enrolled beneficiaries. When comparing the impact of the intervention on participants, the savings were approximately 7.6%. The study highlights the critical role of primary care physicians in enrolling participants, which program design must incorporate. It also highlights the need for more aggressive negotiation of management fees linked to these programs.

<sup>22</sup> David Wennberg, unpublished results presented at the World Health Care Congress meeting (Washington, D.C., April 21-23 2008). Most of the savings occurred through lower rates of hospitalizations among well-managed chronically ill patients.

<sup>23</sup> The results indicate that the primary care physician should be a centerpiece in enrolling and coordinating care. Results from the physician group practice programs also highlight the key role that information technology assumes. Senator Obama has proposed to invest \$10 billion a year over the first five years to assure the more rapid diffusion of health information technology relative to the baseline into physicians' offices.

<sup>24</sup> Jonathan Javitt, James B. Rebitzer, and Lonny Reisman, "Information Technology and Medical Missteps: Evidence from a Randomized Trial" *Journal of Health Economics* 27 (2008): 585-602.

records. Senator Obama has proposed an acceleration of this timeline by investing \$10 billion per year over the next five years in health information technology. Spurring the use of electronic records, e-prescribing, automated patient error reporting systems, and other electronic tools will give providers the essential means for more cost-effective medical management and higher quality patient care. It is already posting returns for one of the nation's largest integrated health care delivery systems.

Five years ago, Kaiser Permanente began implementing its HIT system, KP HealthConnect™, which securely connects patients with health care teams, their personal health data, and medical information 24 hours a day. This system enables health care teams to coordinate patient care at every point of service: physicians' offices, laboratories, pharmacies, hospitals, by phone, and online. And they are already realizing returns on that investment. In Colorado, their patients' cardiac mortality has dropped by 60%, more than 280 cardiac events are prevented annually, and more than \$2 million in hospitals savings are realized each year. In Oregon and Washington State, they have posted an 11% reduction in emergency department visits. In Southern California, they have increased mammography screening rates to 90% among women aged 50 to 69, an essential first step in catching breast cancer early and providing needed treatment.<sup>25</sup>

Several studies by the RAND Corporation<sup>26</sup> also indicate that well-designed interventions focused on primary care and coordination can yield modest savings, even in the current flawed system—in 2010 dollars about \$160 billion per year (\$79 billion in 2000 for a 50% participation rate in best practice care management and lifestyle programs). The magnitude of savings—about 5.9% of national health spending in the RAND studies (assuming only 50% participation)—is similar to

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<sup>25</sup> George C. Halvorson, Testimony before the Senate Finance Committee (July 17, 2008), <http://finance.senate.gov/sitepages/hearing071708.htm> (accessed July 21, 2008).

<sup>26</sup> Richard Hillestad, et al., "Can Electronic Medical Record Systems Transform Health Care? Potential Health Benefits, Savings, and Costs," *Health Affairs* 24 (2005): 1103-1117, <http://content.healthaffairs.org/cgi/reprint/24/5/1103.pdf> (accessed July 21, 2008).

Also:

Anthony G. Bower, *The Diffusion and Value of Healthcare Information Technology* [MG-272], Santa Monica, CA: RAND Corporation, 2005), [http://www.rand.org/pubs/monographs/2006/RAND\\_MG272-1.pdf](http://www.rand.org/pubs/monographs/2006/RAND_MG272-1.pdf) (accessed July 21, 2008).

James H. Bigelow, Kateryna Fonkych, Constance Fung, Jason Wang, *Analysis of Healthcare Interventions That Change Patient Trajectories* [MG-408], (Santa Monica, CA: RAND Corporation, 2005), [http://www.rand.org/pubs/monographs/2005/RAND\\_MG408.pdf](http://www.rand.org/pubs/monographs/2005/RAND_MG408.pdf) (accessed July 21, 2008).

Kateryna Fonkych and Roger Taylor, *The State and Pattern of Health Information Technology Adoption* [MG-409] (Santa Monica, CA: RAND Corporation, 2005), [http://www.rand.org/pubs/monographs/2005/RAND\\_MG409.pdf](http://www.rand.org/pubs/monographs/2005/RAND_MG409.pdf) (accessed July 21, 2008).

Federico Girosi, Robin Meili, Richard Scoville, *Extrapolating Evidence of Health Information Technology Savings and Costs* [MG-410] (Santa Monica, CA: RAND Corporation, 2005), [http://www.rand.org/pubs/monographs/2005/RAND\\_MG410.pdf](http://www.rand.org/pubs/monographs/2005/RAND_MG410.pdf) (accessed July 21, 2008).



results found in the recent randomized trial conducted by Health Dialog.<sup>27</sup> Of this total, approximately \$55 billion—or a third—would accrue to the federal government.<sup>28</sup>

The long-term impact of increasing the share of participating adults—particularly as they move into the Medicare program—could yield quite considerable savings. Two recent studies have demonstrated that seniors aged 65-70 who are normal weight, with no chronic diseases, spend about 15% to 40% less over their lifetime than do obese adults with chronic diseases.<sup>29</sup> The potential downstream savings to Medicare resulting from the wellness strategy alone could be substantial, if beneficiaries are in better health prior to enrolling in the Medicare program. A large study of both men and women found that those with favorable cardiovascular risk profiles before age 65 had substantially lower average Medicare charges—overall, two thirds lower for men and half as low for women. Charges related to both cardiovascular disease and cancer, specifically, were less for those who entered Medicare heart-healthy.<sup>30</sup> Another large study found that spending even in the last year of life—when charges are generally highest—was lower for those who entered Medicare at low risk for heart disease.<sup>31</sup> Unfortunately, that isn't true for many soon-to-be-eligible beneficiaries: In 2005, the Centers for Disease Control and Prevention documented that half of Americans aged 55-64 years had high blood pressure—a major risk factor for heart disease and stroke—and 40% were obese.<sup>32</sup> Reducing the number of Americans who enter Medicare chronically unhealthy is a cornerstone to reducing costs over the long term.

Another form of care coordination involves bundling payments around a hospitalization. This strategy is designed to improve quality and reduce costs—

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<sup>27</sup> James H. Bigelow, Kateryna Fonkych, Constance Fung, Jason Wang, *Analysis of Healthcare Interventions That Change Patient Trajectories* [MG-408], (Santa Monica, CA: RAND Corporation, 2005), [http://www.rand.org/pubs/monographs/2005/RAND\\_MG408.pdf](http://www.rand.org/pubs/monographs/2005/RAND_MG408.pdf) (accessed July 21, 2008).

<sup>28</sup> Even if the savings were half this amount, it would generate about \$12 billion in net savings per year in the traditional Medicare program alone.

<sup>29</sup> Darius N. Lakdawalla, Dana P. Goldman, and Baoping Shang, "The Health and Cost Consequences of Obesity among the Future Elderly," *Health Affairs* W5 (2005):R30-R41.

Zhou Yang and Allyson G. Hall, "The Financial Burden of Overweight and Obesity among Elderly Americans: The Dynamics of Weight, Longevity, and Health Care Costs," *Health Services Research* 43 (2008): 849-868.

<sup>30</sup> Martha L. Daviglus, et al., "Benefit of a Favorable Cardiovascular Risk-Factor Profile in Middle Age With Respect to Medicare Costs," *New England Journal of Medicine* 339 (1998):1122-1129.

Note: Men and women were classified as low risk for cardiovascular disease if they met these criteria: serum cholesterol <200 mg/dl, blood pressure ≤120/80 mm Hg, no current smoking, an absence of electrocardiographic abnormalities, and no history of diabetes or myocardial infarction.

<sup>31</sup> Martha L. Daviglus, et al., "Cardiovascular Risk Profile Earlier in Life and Medicare Costs in the Last Year of Life," *Archives of Internal Medicine* 165 (2005): 1028-1034.

<sup>32</sup> Centers for Disease Control and Prevention, National Center for Health Statistics, *Health, United States, 2005* (Hyattsville, MD: NCHS, 2005).

particularly by reducing unnecessary hospital readmissions. Today, about 18% of Medicare patients are readmitted to the hospital within 30 days, at a cost of over \$15 billion per year. Estimates from the Medicare Payment Advisory Commission (MedPAC) indicate that more efficient care coordination facilitated by bundled payments could reduce Medicare spending by \$12 billion per year.<sup>33</sup>

How do we ensure these savings are realized? The short answer is to link the future design of wellness and care management interventions to design features that have proven effective in randomized trials. That is, while the average program may yield few returns, some well designed programs have produced savings. We need to identify the characteristics of these programs and incorporate them into wellness and care management protocols. This notion is echoed in a recent report from the Government Accountability Office (GAO): “The care coordination programs used by the participating physician groups (in the prepaid physician group Medicare demonstration) show promise in achieving cost savings....”<sup>34</sup> The Obama plan would take the results from the proven best practice models for wellness and care management and apply them throughout Medicare. Well-designed programs (as opposed to the average program) will be required to diffuse quickly in order to realize the savings presented in this paper and envisioned by the Senator’s plan.

## Administrative Cost Savings

The Obama plan would also reduce administrative costs through several means, including virtually eliminating underwriting expenses (through guaranteed-issue insurance with no pre-existing condition exclusions), lowering costs of administering claims, and creating larger risk pools through the insurance exchange. Under current law, administrative costs account for 20.8% of total private insurance spending and about 7.1% of national health insurance spending (per CMS tabulations in 2012). Administrative costs vary widely by firm size, ranging from about 10% in the largest groups to nearly 50% in groups under 10 and in the individual market (see Table 1).

Under the Obama plan, accelerated use of electronic medical records will reduce the costs of claims administration and adjudication. Movement toward larger insurance pools (by some currently insured in small groups and individual insurance) will reduce underwriting, marketing, commission costs, and underlying risk built into

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<sup>33</sup> Medicare Payment Advisory Commission (MedPAC), *Report to the Congress: Reforming the Delivery System* (Washington D.C.: MedPAC, June 2008), 88-95, [http://www.medpac.gov/documents/Jun08\\_EntireReport.pdf](http://www.medpac.gov/documents/Jun08_EntireReport.pdf) (accessed July 21, 2008).

<sup>34</sup> Government Accountability Office, *Medicare Physician Payment: Care Coordination Programs Used in Demonstrations Show Promise, but Wider Use of Payment Approach May be Limited* (Washington, D.C.: GAO, 2008), <http://www.gao.gov/new.items/d0865.pdf> (accessed July 21, 2008).

smaller groups. In concept, overall administrative costs should approximate the costs of larger groups—about 10%. To be conservative, however, I have assumed that administrative costs in smaller groups (under 100) would be cut in half. Overall, total administrative costs would fall by 5% points to approximately 15% of health insurance benefits, a savings of \$53 billion by 2013.<sup>35</sup>

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<sup>35</sup> This estimate assumes that commissions, risk premiums, underwriting costs, marketing expenses, and claims administration fall to levels similar to those of larger firms. Since many employers and workers will continue to receive coverage through their current source of employment, their administrative costs would still exceed those of larger firms (but would be lower than what they currently pay).

**Table 1. Health Insurance Administrative Costs  
As Percent of Benefits by Firm Size**

<b>Firm Size (Employees)</b>	<b>Administrative Costs</b>
Under 10	48%
10-24	25%
25-99	20%
100-499	16%
500-999	13%
1000+	10%

Source: Joint Committee on Taxation.<sup>36</sup>

## Savings from Patient Safety and Decision-Support Initiatives

The Institute of Medicine estimated that medical errors accounted for an additional \$17 to \$29 billion in health care spending in 1999—2.7% of personal health care spending.<sup>37</sup> This translates into nearly \$70 billion in 2012. It is estimated that 50% of these errors are preventable.<sup>38</sup> Several promising approaches for reducing medical errors have been developed over the past several years. These include provider decision-support systems and automated hospital error reporting systems, among others. Recent randomized trials of provider decision-support systems have demonstrated substantial savings linked to their use in hospitals and physicians' offices. An application from Active Health (note 16) reduced total spending by 6% compared to the control group. The approach employed by this decision-support application could easily be replicated in concert with the broader Obama health information technology initiative. Other hospital-based applications have shown similar savings.<sup>39</sup> The same studies have also illustrated the potential of such applications reducing medical malpractice claims and associated costs. Thus, estimated savings associated with these error reduction efforts are likely

<sup>36</sup> Joint Committee on Taxation, *Estimating the Revenue Effects of the Administration's Fiscal Year 2008 Proposal Providing a Standard Deduction for Health Insurance: Modeling and Assumptions* (March 20, 2007), <http://www.jct.gov/x-17-07.pdf> (accessed July 21, 2008).

<sup>37</sup> Institute of Medicine, *To Err is Human: Building a Safer Health Care System* (Washington, D.C.: National Academy Press, 1999).

<sup>38</sup> Eric J. Thomas, et al., "Costs of Medical Injuries in Utah and Colorado" *Inquiry* 36 (1999):255-264.

<sup>39</sup> Kenneth E. Thorpe, "Potential Role of Automated Patient Safety Reporting Systems in Vermont Hospitals" (Presentation to the Vermont Legislature Commission on Health Care Reform, 2006), [http://www.leg.state.vt.us/CommissionOnHealthCareReform/PatientSafety-VT\\_files/frame.htm#slide0024.htm](http://www.leg.state.vt.us/CommissionOnHealthCareReform/PatientSafety-VT_files/frame.htm#slide0024.htm) (accessed July 21, 2008).

understated because they do not include the savings linked to reductions in adverse events and, with them, medical malpractice claims. Using these results, I assume that half of the medical errors that are preventable would be affected by the use of the technologies encouraged by the Obama plan—about \$18 billion in 2012.

## Comparative Effectiveness Research

Several studies have documented the substantial variation in per capita spending within states and across the country. These variations do not appear related to better quality, but to incremental spending that appears to produce no or few additional benefits. Senator Obama would create an independent comparative effectiveness research institute designed to improve the value of health care and reduce overall spending—particularly in high-cost areas. This institute would provide much needed information to make better care decisions – but it would not be a decision-making entity. Rather than focusing solely on devices or pharmaceuticals, this research institute would also focus on medical conditions, particularly those that drive health care spending. It would help answer the fundamental questions essential to health care and health policy: What works, for whom, under what conditions, and why? This information could be leveraged to improve care, reduce costs, and help address health disparities that persist across demographic groups. Research from the institute could be included as part of the health information technology used by providers and hospitals for decision support and real-time clinical information. But information by itself is not likely to contain spending. Realigning financial incentives, specifically through bundling health care payments as envisioned under the Senator's best practice care management proposals, could also be used to lower overall spending.

Researchers from Dartmouth have estimated that reducing the variation in health care practice could reduce Medicare spending by as much as 30%.<sup>40</sup> Incorporating the information produced by comparative effectiveness research could assist in a substantial reduction in high-cost, low-value health care. Estimated savings resulting from such an initiative are speculative. The estimates presented in Table 2, below, represent the average savings estimated by the Congressional Budget Office

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<sup>40</sup> Elliott S. Fisher E, et al., "The Implications of Regional Variation in Medicare Spending, Part I: The Context, Quality, and Accessibility of Care," *Annals of Internal Medicine*, 138 (2003): 273-87.

and those produced by the Lewin Group for the Commonwealth Fund—approximately \$15 billion nationally and \$5 billion in federal savings.<sup>41</sup>

## Medicare Advantage

Finally, Senator Obama would eliminate the higher payments received by Medicare Advantage plans, which are approximately 13% above the costs of traditional Medicare. The Congressional Budget Office has estimated that eliminating these additional payments would reduce Medicare spending by nearly \$15 billion in 2012.<sup>42</sup>

Table 2 presents estimates of potential national and federal savings by 2012 associated with the adoption of established best practice wellness and chronic care management design features as well as the other cost containment initiatives. When all aspects of the health plan are fully implemented, national savings would range from \$203 billion to \$273 billion (the lower using the randomized studies outlined here, and the higher from RAND estimates assuming a 50% participation rate). The federal government savings would range from \$56 billion using the more conservative assumptions from the randomized trials to approximately \$124 billion when applying the RAND methodology. These savings do not include the \$21 billion in federal budget savings from the Medicare and Medicaid disproportionate share programs (since these are transfers and not reductions in overall health care spending).

Table 3 provides examples of the types of programs proven to reduce health care spending used in the analysis. The studies presented below include those from randomized trials, with some using sophisticated multivariate techniques, that have shown net reductions in health care spending.

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<sup>41</sup>Cathy Schoen, et al., *Bending the Curve: Options for Achieving Savings and Improving Value in U.S. Health Spending* (New York: The Commonwealth Fund 2007), [http://www.commonwealthfund.org/usr\\_doc/Schoen\\_bendingthecurve\\_1080.pdf?section=4039](http://www.commonwealthfund.org/usr_doc/Schoen_bendingthecurve_1080.pdf?section=4039) (accessed July 21, 2008).

Also:

U.S. Congress, Congressional Budget Office, *Research on the Comparative Effectiveness of Medical Treatments: Issues and Options for an Expanded Federal Role* (Washington, D.C.: CBO, 2007), <http://www.cbo.gov/ftpdocs/88xx/doc8891/12-18-ComparativeEffectiveness.pdf> (accessed July 21, 2008).

<sup>42</sup> Ibid.



**Table 2. Estimated National and Federal Savings on Health Care Spending Associated with Senator Obama's Health Care Plan, In Billions of Dollars, 2012**

Policy	National		Federal	
	Lower Estimate	Higher Estimate	Lower Estimate	Higher Estimate
Bundled payments around Medicare hospitalizations (50% of MedPAC estimated potential savings)			\$12	
Care coordination model with best practice design features, HIT, and wellness incentives (net savings)	\$110	\$180	\$15	\$95
Lower administrative costs	\$53	\$53	\$4	\$4
Patient safety, reduce medical errors	\$10	\$10	\$5	\$5
Clinical effectiveness and reduced spending in high-cost areas	\$15	\$15	\$5	\$5
Pay Medicare Advantage plans at 100% of FFS	\$15	\$15	\$15	\$15
<b>Total</b>	<b>\$203</b>	<b>\$273</b>	<b>\$56</b>	<b>\$124</b>

**Notes:** The lower estimates are based on the randomized trials in the Medicare (top performers) and commercial health plan evaluations such as Health Dialog. National savings are estimated as 75% times 5% savings on best practice chronic care management interventions. In Medicare, chronically ill patients account for over 95% of total spending. The estimate here assumes a 5% (net) savings on Medicare beneficiaries enrolled in traditional Medicare. The calculation does not include any savings in the Medicare Advantage program or home health care. The higher estimate is from the RAND Corporation trended to 2012. It assumes a 50% participation rate in their best practice wellness and care management programs. The RAND estimate presumably also included the bundled coordination around hospitalizations, particularly for heart failure. These estimates are similar in magnitude to those provided by the Lewin Group for the Commonwealth Fund for a similar, though less inclusive, set of policy options ([http://www.commonwealthfund.org/publications/publications\\_show.htm?doc\\_id=620087](http://www.commonwealthfund.org/publications/publications_show.htm?doc_id=620087)). Their analysis estimates about \$200 billion in savings by 2014. **These totals do not include the estimated \$21 billion in federal budget savings from savings in the Medicare and Medicaid disproportionate share programs.**

**Table 3. Illustrative Examples of Cost-Reducing Health Care Interventions**

<b>Intervention</b>	<b>Study Design</b>	<b>Program and Description</b>
<b>Physician Decision Support with HIT</b> (6% reduction in spending)  Electronic Records, prevention and chronic care process management redesign (received performance bonus for cost savings in Medicare physician group practice demo)	RCT*  Pre-post with controls	Active Health ( <a href="http://www.activehealthmanagement.com/">http://www.activehealthmanagement.com/</a> )  Marshfield Clinic ( <a href="http://www.marshfieldclinic.org">www.marshfieldclinic.org</a> )
<b>Care Management</b>  Transition Coaching-Lower Readmissions (20-40% reduction in hospital readmissions)  Health Coaching (5-7 % net savings)  Care coordination (large reductions in ER, clinic, hospital use compared to controls)  Care coordination: advanced practice nurses (saved \$5000 per Medicare enrollee)  Community Care of North Carolina (Medicaid saved up to \$260 million in 2004—Mercer evaluation)	RCT  RCT  Pre-post with controls  Pre-post with controls  Pre-post with controls	University of Colorado, ( <a href="http://www.caretransitions.org">www.caretransitions.org</a> )  Health Dialog, ( <a href="http://www.healthdialog.com">www.healthdialog.com</a> )  Sutter Care Health ( <a href="http://www.sutterhealth.org">www.sutterhealth.org</a> )  University of Pennsylvania ( <a href="http://www.nursing.upenn.edu">www.nursing.upenn.edu</a> )  Community Care NC ( <a href="http://www.communitycarenc.com">www.communitycarenc.com</a> )

\*RCT is randomized controlled trial.

## Summary

In addition to moving to universal coverage, Senator Obama's plan includes several major changes in the health care payment and delivery system, the application of information technology, and new wellness and lifestyle programs. These major changes in the health care delivery system account for the source of savings in his proposals.

When all the elements of these changes are implemented, they will collectively reduce total national health expenditures by approximately \$203 billion to \$273 billion dollars by 2012. It is likely that about 50% of these savings would accrue to the federal government. The benefits of some policies, like health information technology, would likely accrue in proportion to the sources of national health spending. Other policies outlined above, such as the savings from reduced administrative costs, would accrue disproportionately to the private sector. Still other components of Senator Obama's plan, such as reducing higher payments to Medicare Advantage plans, would accrue primarily to the federal government. In addition, even some of the private savings could be reflected in increased federal savings if they result in wage increases and thus a larger tax base—the assumption used by the Congressional Budget Office and the Joint Committee on Taxation in scoring plans. Altogether, a conservative estimate is that the direct and indirect effects would be to improve the federal budget by more than \$100 billion in 2012 (without counting Senator Obama's other proposals to subsidize expanded coverage, which are beyond the scope of this analysis).

While these savings are substantial, they are significantly lower than the estimated 30% of “waste” estimated by researchers from Dartmouth and the RAND Corporation. The elements of the Obama plan work synergistically to address the leading drivers of health care spending—rising rates of preventable disease coupled with high-cost, low-value technologies and dollars directed to treating (ineffectively and inefficiently) the chronically ill. Moreover, these savings would reduce the overall growth of spending by approximately 1.5 percentage points—well within the experience of several states (relative to the national average rate of growth) with high-performing health care systems.

Fortunately, good interventions are already in use today, showing how a comprehensive system could work. Table 3 above presents examples of some of these interventions. The vital policy innovation is to take the critical design features of the interventions proven to work, and apply them more broadly in the health care system. Additional examples of approaches that have generated savings may be found at the web sites for the Agency for Healthcare Research and Quality ([www.innovations.ahrq.gov](http://www.innovations.ahrq.gov)) and the Partnership to Fight Chronic Disease ([www.fightchronicdisease.org](http://www.fightchronicdisease.org)).

Well-designed interventions will save health care dollars and improve Americans' health. Reductions in smoking and effective use of anti-hypertensive medications have been a key factor in the 26% reduction in deaths linked to coronary heart disease (as reported by the American Heart Association) since 1999. Reductions in hospitalizations and improvements in health outcomes overall are a major goal of effectively constructed wellness and care management interventions, improving individual wellbeing and our collective bottom line at the same time.