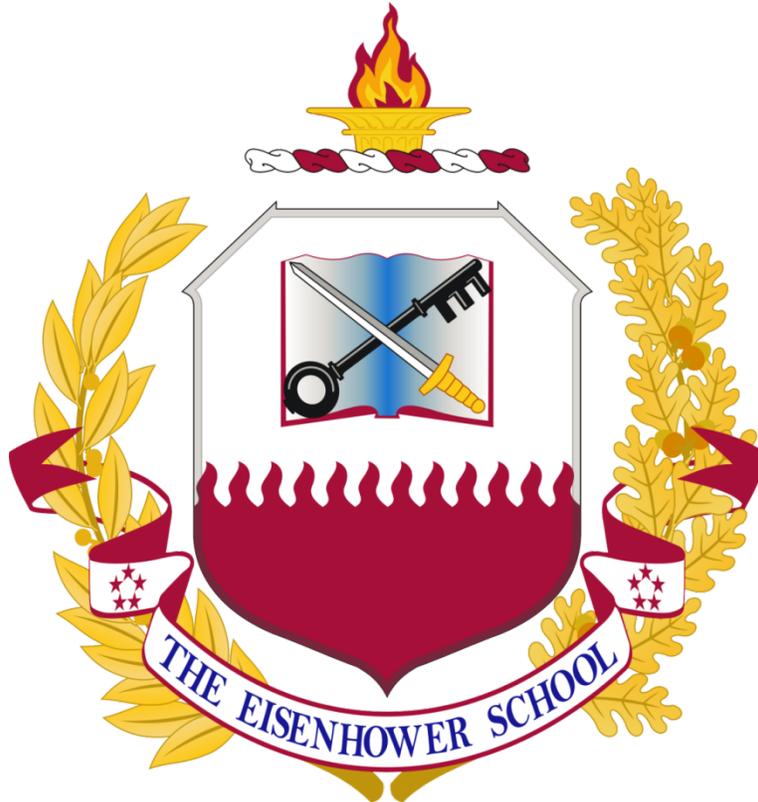


**Spring 2014
Industry Study**

**Final Report
*Health Care Industry***



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HEALTH CARE 2014

Abstract: Former Chairman of Joint Chiefs of Staff Adm. Mike Mullen stated that the most significant threat to our national security is the US debt.¹ Adm. Mullen's rationale was that mandatory government funding of debt payments has potential to crowd out areas of discretionary funding such as defense. Similar to the debt crisis, rising federal health care costs in the non-discretionary Medicare and Medicaid programs have potential to squeeze defense budgets. Health care costs are a growing share of business and individuals expenses. The Patient Protection and Affordable Care Act (PPACA) attempts to address rising costs, access to health care and improve quality of care. The PPACA triple aim of cost, access and quality are the basis for this paper's recommendations. The thesis of this paper is that the value of America's health care system can be improved by reducing costs, increasing access and improving the quality of care. This paper focuses on select provisions and policy changes that will improve the value of America's health care system by increasing access, improving quality, and controlling costs.

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PLACES VISITED

Domestic:

Premier, Inc. (Washington, D.C.)
 Greater Prince William County Community Health Center (Woodbridge, VA)
 US OPM/Office of Federal Employee Health Benefits (Washington, D.C.)
 Kaiser Permanente – Capital Hill Medical Center (Washington, D.C.)
 Robert Wood Johnson Foundation (Washington, D.C.)
 US DHHS/US Public Health Service (Washington, D.C.)
 La Clinica del Pueblo (Washington, D.C.)
 US House Ways & Means Committee (Washington, D.C.)
 US Chamber of Commerce (Washington, D.C.)
 Vox Media (Washington, D.C.)
 Center on Health Insurance Reform (Washington, D.C.)
 US DHHS/Center for Medicare & Medicaid Innovation (Baltimore, MD)
 US Office of Management & Budget (Washington, D.C.)
 US Veterans Affairs Maryland Health Care System (Baltimore, MD)
 Johns Hopkins Medical Center (Baltimore, MD)
 Humana (Washington, D.C.)
 National Governor's Association (Washington, D.C.)
 Congressional Budget Office (Washington, D.C.)
 Canadian Embassy (Washington, D.C.)
 IBM – Thomas J. Watson (Yorktown Heights, NY)
 Organization for Economic Cooperation & Development (Washington, D.C.)
 US DOD/Office of Health Affairs, April 25 2014 (Washington, D.C.)

International:

National Institute for Health and Care Excellence (London, England, United Kingdom)
 Chelsea and Westminster Hospital (London, England, United Kingdom)
 British United Provident Association (BUPA) Insurance (London, England, United Kingdom)
 Healthwatch Central West London (London, England, United Kingdom)
 HCA International (London, England, United Kingdom)
 Nuffield Trust (London, England, United Kingdom)
 Swiss-US Chamber of Commerce (Zurich, Switzerland)
 Geliko (Swiss Health Leagues Conference) (Zurich, Switzerland)
 UniversitätsSpital (Zurich University Hospital) (Zurich, Switzerland)
 ÖKK (Landquart, Switzerland)



Current State of Health Care System in America

It is often said in America that death and taxes are the only two certainties in life.² Arguably, health care should be added to that list. At some point in every person's life he or she will require some level of health care. This inevitable event will bring them into contact with the US health care industry, which is one of the largest and most high-impact industries in the nation.³ The health care industry is extraordinarily diverse, composed of multiple sectors that range from insurance companies, hospitals, and medical schools to the makers of adult diapers.⁴ Many participants in the health care industry operate for profit, but the industry also includes numerous non-profit entities. Moreover, both the federal and state governments in the US are heavily involved in the health care industry, both as participants and regulators.⁵

Unfortunately, the diversity of sectors in the health care industry makes it nearly impossible to characterize the industry's overall health. One thing that can be safely said about the health care industry is that it is plagued by costs that are very high and will continue to rise.⁶ America currently spends \$2.8 trillion annually on health care which constitutes over seventeen percent of our gross domestic product.⁷ The hospital industry accounted for 883.2 billion⁸ and insurance industry accounted for \$663.3 billion⁹ of this total expenditure. These figures are projected to rise to \$4.5 trillion and 40% by 2020.¹⁰ As the world's most successful and prosperous nation, the number of Americans without access to quality, affordable health care has risen to the point of being a national shame. Moreover, health care's propensity to consume an ever growing share of our national resources challenges US national security.¹¹ Without reform, health care costs will exacerbate the deficit and deprive the nation of the resources necessary to project power and operate freely on the world stage.¹²

The United States is not getting value for the resources it invests in health care. In January 2013, the Institute of Medicine released the *US Health in International Perspective Shorter Lives, Poorer Health* report. The report's purpose was to study why, despite the fact that the United States is one of the world's wealthiest nations and spends the most on health care, Americans lag behind similar countries with respect to overall health and life expectancy. The report showed that US life expectancy ranked last for males (75.64) and 16th out of 17 for females (80.78) when compared to the other 16 countries. The report identified nine health categories where Americans fared worse than their peers. Among those categories are obesity and diabetes, heart disease, and chronic lung disease.¹³

The US health care industry is in a state of flux and uncertainty due in large part to the Patient Protection and Affordable Care Act (PPACA).¹⁴ The PPACA is the federal government's effort to legislatively reform the American health care system.¹⁵ The PPACA attempts to meet this lofty objective through three lines of effort: First, by improving the quality of care provided in our health care system; second, by reducing the overall cost of health care; and finally, and most substantially, the PPACA attempts to provide greater access to the health care system by making health insurance both more comprehensive and more affordable.¹⁶



If successful, these measures will improve the quality of care, drive down cost, and provide even greater access to health care for millions of Americans. Despite the fact that the PPACA is lengthy and now includes literal reams of implementing regulations, PPACA, like any piece of legislation, was not complete at the time of its passage.¹⁷ Nearly all legislation addressing significant national challenges has required a continuing process of tweaks and adaptations.¹⁸ The PPACA is no different. While the PPACA is a good start, there are changes necessary in each of the three lines of effort defined by law.

One key way the PPACA attempts to address America's health care access challenges is by expanding individual access to health care through several provisions that make health insurance more affordable. These provisions include a mandate that all individuals have a minimal level of health insurance or face a tax penalty; a mandate that employers offer health insurance to their employees or face a tax penalty; federal funding for states to voluntarily expand their Medicaid programs; and premium support for individuals who cannot afford health insurance.¹⁹ It is too early to understand PPACA's impact on the health insurance industry and consequent access to health care, however, it is highly likely that many uninsured and underinsured Americans will soon have quality health insurance. This places increasing pressure on health care providers. Accordingly, this paper proposes policies to increase access to health care providers through adjustments to the management of the health care workforce and to ensure the sustainability of access to the Medicare Insurance program.

Select provisions of the PPACA that target the quality of health care including linking Medicare reimbursement to quality of outcome and incentives for providers to form Accountable Care Organizations (ACO), which are coordinated teams of care givers focused on delivering patient-centered care.²⁰ The federal and state governments should expand on these initiatives to improve patient safety and patient experience by establishing and enforcing standards for electronic health record systems and encouraging patient-centered care.

The PPACA also addresses the cost of care by taking aim at costly chronic medical conditions through several prevention initiatives. Key among these is a requirement that all new health insurance plans include no out of pocket expenses for preventive health care services and \$15 billion dollars to fund prevention and public health programs.²¹ The federal and state governments should implement additional policies to control health care costs by increasing transparency in health care pricing and by taking more aggressive measures to diminish the prevalence of high-cost chronic health conditions in America.

Although the PPACA is comprehensive legislation, and the health care challenges in this nation abound, this paper focuses on a few key provisions and a few critical policy changes that should be made to support the underlying objectives of the legislation's movement to improve the value of America's health care system through increasing access, improving quality, and controlling costs.



Improving Health Care Access

The centerpiece for this framework is the access to health care which is facilitated through health care insurance and health care financing. There are several access-related issues within the PPACA that can be enhanced to improve the value of health using the whole of government approach. This section will focus on two dimensions of access to health care. First is the physical or technological access to health care professionals. Expanding access to health care professionals includes increasing the health care workforce through federal funding of education and training programs and leveraging technology to provide access to underserved areas. The second dimension of access is the individual access to health care financing or insurance such as Medicare. This chapter addresses improving the solvency of Medicare by increasing the eligibility age. The combined recommendations improve health care access and increase value of the health care system.

Health Care Workforce

Internal challenges to the health care workforce are the growing shortages of physicians and nurses. An overall shortage of doctors is occurring and the workforce will be further stressed as baby boomers reach retirement age. Individual states can dictate appropriate health care workforce compositions through licensing. However, States lack the data to identify shortages and overages.

The management of the health care workforce is fragmented and decentralized to the State level and below. There is no federal agency that monitors the current and future status of the US health care workforce. States internally manage health care services and the rising cost of health care on their budgets has invoked new focus on regulatory procedures to control cost while ensuring they have an appropriate workforce to sustain services. State executives are taking a holistic assessment of funding and training programs that directly impact their health care workforce. They can influence their health care workforce capabilities through legislative procedures, or regulatory and accreditation standards for their colleges and universities. Growing competition for labor within health care services exist between states, and governors are utilizing multiple means to attract new health care labor while improving retention levels for current employees. Executives at the state level use various incentives such as tax credits, loan repayment programs credentialing simplification programs to obtain new labor into their states. Their goal is to increase and sustain a health care workforce that will support the aging population and ensure accessibility of health care services in rural areas that are a significant challenge because of the disparity of pay for these professionals between rural and urban areas.²²

The PPACA created the National Health Care Workforce Commission to serve as the first national agency focused on collecting data and provide oversight on the country's health care workforce. Congress failed to fund this commission so we still do not have a collective means to review our health care workforce. This hinders our ability to develop priorities and a



national strategy.²³ The Center for Medicare and Medicaid Innovation should develop criteria on what information to gather and establish a federal repository of information on the status of our health care workforce until the commission is funded. The National Governors Association Health Policy Framework and Projects should collaborate to establish this baseline of information. This organization is working closely with over ten states to identify issues and recommendations with the health care workforce.²⁴ The National Health Care Workforce Commission would maintain this information once funding for the commission is approved.

In addition to establishing a national health care workforce database, the federal government should increase the health care workforce through increased funding of education and training programs. The PPACA included legislation by including an additional \$1.5 billion in funding allocated for the National Health Services Corps with the intent to target general practitioners, nurses and other critically short health care professionals to work in rural areas.²⁵

Immigration reform is also being considered to increase the health care workforce. “Approximately 15 percent of all health care workers and 25 percent of all physicians in the United States were born and educated elsewhere.”²⁶ Acceptance into a US medical residency program is a major barrier for immigrants. In many cases immigrants complete the medical requirements for certification in their country of origin, but are still required to complete the US medical residency course that usually includes an 80 workweek. This requirement is viewed as overbearing in the eyes of a growing number of qualified immigrants who desire to come to the United States to pursue a medical career, and many are moving to Europe or other developed nations.²⁷ Canada has taken steps to recognize more high-quality training programs in other countries, thus streamlining their process while maintaining high standards to increase their health care workforce.

Increasing foreign medical graduates can increase the primary care workforce and assist with the current inequity of dispersion between urban and rural regions. Due to the increasing cost of medical care in the United States more doctors are opting to pursue their practice in urban areas that have higher pay or obtain a career in one of the more lucrative specialty fields.

Finally, the short-term will be a significant challenge but if steps can be taken now to administer this change it will make becoming a doctor more appealing and help reduce healthcare cost in the long term, and significantly reduce the high administrative fees doctors expend in their practices. Private practice is a business for doctors. They have to endure the high cost of their education and the extensive time it takes to become a doctor. This, coupled with the high cost of education and time consuming administrative costs, has led some doctors to leave private practice or chose another profession.²⁸

Physicians have become frustrated over increased administrative regulations that decrease the time they spend with patients. The Physicians Foundation Survey finds that 77% of 13,500 physicians feel negatively about the future of medicine. The increase of administrative



requirements has contributed to the growing number of doctors who are now working at hospitals, and Accountable Care Organizations. “As of April 2013, it’s estimated that 40% of primary care physicians who see patients are employed by the hospital, which has doubled since 2000.”²⁹

Managing the cost of our health care system is fragmented and our aging demographics have placed a significant strain on containing the rising cost. Standardization is essential to reducing administrative cost that will overall help contain the rising cost of health care. Reviewing best business practices of other industries or government programs will provide examples on how the health care system can take measures to control cost. A key example is what the Federal Reserve did to lower “administrative costs of banking by standardizing the way that computer systems from different banks communicated with one another. Similarly, Wal-Mart made suppliers conform to its computer standards if they wanted to sell to the retail giant, which led to enormous standardization of retail information systems.”³⁰ The United States government should use its buying power between DoD, Veterans Administration (VA), Medicaid and Medicare to influence the cost of prescription drugs and influence payment requirements to reduce administrative fees.

Telemedicine

The PPACA tasks the CMMI to explore as a care model how to, “[sic] facilitate inpatient care, including intensive care, of hospitalized applicable individuals at their local hospital through the use of electronic monitoring by specialists, including intensive and critical care specialists, based at integrated health systems.”³¹ PPACA regulatory guidance further requires States to provide a health home option for chronic conditions that includes “a proposal for the use of health information technology in providing health home services and improving service delivery coordination across the care continuum (including the use of wireless patient technology to improve coordination and management of care and patient adherence to recommendations made by their provider).”³² Telemedicine can easily be expanded as a means to provide access to under-served areas.

Access to Medicare Insurance

The Medicare Payment Advisory Commission in its 2014 report warned Congress of an imminent crisis in Medicare funding and stated the trust fund is expected to become insolvent by 2026.³³ Medicare’s financial crises stem from the changing demographics and rapid inflation of health care costs in the country. As the last of the baby boomers retire in 2030, Medicare enrollment will increase to over 80 million beneficiaries from 50 million participants today.³⁴ According to the Congressional Budget Office (CBO), Medicare spending is projected to grow as a share of the nation’s economy from 3.0 percent of the gross domestic product in 2013 to 5.8 percent by 2038 and total expenditures will exceed a trillion dollars by 2020.³⁵



The program is funded by a combination of payroll taxes, general taxes and premiums; its framework was based on the premise that current workers would finance current retirees. The program began with four workers per retiree contributing into the program; today there are only 3.4 workers per retiree and expected to decline to 2.3 workers by 2030 just as Medicare enrollment reaches its peak.³⁶ The growing population of retirees, the rapidly increasing health care costs and a declining taxpayer payer base is creating significant funding pressures on Medicare. The program will become insolvent unless it receives an influx of additional federal funding at an opportunity cost to other national priorities. It is evident that meaningful structural changes are needed to ensure our elderly and disabled population has continued access to Medicare health insurance program.

RECOMMENDATIONS

1. Provide funding and expand the scope of responsibility and authority of the National Health Workforce Commission. The PPACA's goal is compromised without the appropriate skill set of providers and health care workers to take care of our citizens.
2. Key to improving and transforming the value of health care is the development of a Health Care National Strategy that will integrate the management and delivery of health care in the US. This National Strategy provides strategic direction and key initiatives that the health care industry should undertake. Moreover, the strategy serves as a roadmap to inform, enhance, and guide public health efforts. It should also relate and contribute to the US National interests. To this end, the US National Strategy should encompass, at a minimum, National Health Care Workforce Commission, Complementary Alternative Medicine, Telemedicine Strategy.
3. The following structural changes should be made to Medicare to assure its long-term sustainability: (1) Raise Medicare eligibility age to 67 with an option to purchase Medicare for those desiring coverage age 65. Premium subsidies could be made available for those between 138 and 400 percent of federal poverty level (FPL). The savings will amount to about \$90 billion and may make it politically feasible to implement.³⁷ (2) Means test the premiums and deductibles for middle and high-income beneficiaries to create price sensitivity to reduce demand.



Improving Health Care Quality

Two measures to describe the quality of the health care received by patients are patient safety and patient experience. The complexity of the health care industry, several systems within a system, is manifested in remarkably fragmented, inefficient, and uncoordinated health care, which undermines both patient safety and patient experience. Although numerous drivers and potential solutions potentially address quality health care, this section focuses patient safety and experience as two centers of gravity for quality, and a few recommended solutions that could have broad impact.

The PPACA attempts to improve patient safety by penalizing hospitals for readmissions for certain categories of high risk health conditions. Future legislation should expand this focus to address inefficiencies and lack of coordination in health records and prescription medication systems, which contribute to medical errors and add to administrative costs. One key way to start improving all of these health care quality concerns is for the federal government to issue and enforce standards for electronic health record systems that require, at a minimum, standard templates and databases for health record information; interoperability with other electronic health record systems, including the capability to securely transfer information; and prescription medication features, including the capability to order and track prescriptions and to flag potential adverse interactions between medications.

As in patient safety, although numerous issues plague the quality of patient experience, this section highlights a few key recommendations to build upon PPACA's efforts to integrate fragmented care and improve patient experience. The federal government should encourage best practices observed in some Federally Qualified Health Centers (FQHC) that employ primary care physicians to coordinate all of a patient's health care and a team of professionals to provide ancillary services that contribute to a patient's overall health in addition to improving the patient's medical outcomes.

Patient Safety

The PPACA has taken several steps toward improving patient safety and decreasing preventable errors while providing care to patients. It authorizes demonstration project grants for states to develop, implement and evaluate alternatives to litigation for injuries as well as encouraging the reporting of all health care errors so they can be analyzed and ultimately reduced.³⁸ Another provision allows hospitals to receive more compensation or higher payments upon demonstration of better patient outcomes for conditions such as heart failures, strokes, and prevention of infections.³⁹ The hospitals are penalized for high readmission rates for heart attacks and hospital-acquired conditions, including infections, bed sores, and injuries from falls.⁴⁰ Another provision in the law attempts to make patients or consumers more aware of possible safety issues and, more importantly, to show how the hospitals have been improving.⁴¹ The PPACA mandates that the CMMS publish the medical error rates of each hospital.⁴² In



addition, it mandates the creation of a Patient Centered Outcomes Research Institute to provide the best recommendations for effective treatments.⁴³ The law also establishes the Center for Quality Improvement and Patient Safety, which will explore and research how to improve patient safety and reduce medical errors.⁴⁴

The PPACA has taken a major step toward reducing readmissions by penalizing health care providers with high rates of readmission. While these measures are substantial, other significant potential points of failure in the current health care system include medication errors, disadvantages to the use of paper medical records, cumbersome medical record documentation, and fragmented care.

Medication Errors

Medication error is any inappropriate medication use or any preventable harm to the patient due to medication usage. The medication must be under the control of a health care provider or the patient. The error could be caused by a multitude of reasons, including improper prescribing by a health care provider, transcribing of the prescription, improper labeling, faulty packaging of the medicine, dispensing of the medication and improper order communication. Many patients have more than one physician, and physicians may coordinate care to de-conflict potential prescription interactions. Also, the error could come from a lack of education and communication from the health care provider to the patient on the use of the medication.

Related to this is the need for more legible records. One study noted that compared to handwritten orders, Electronic Health Records (EHR) produced “a significant reduction in total prescribing errors, 43 percent in dosing errors, and 37.5 percent in adverse drug events. The use of computerized orders was associated with a 66 percent reduction in total prescribing errors in adults.”⁴⁵ This increased legibility and reduction of errors were some of the most significant benefits noted as a result of a Washington, D.C. clinic’s adoption of EHRs.⁴⁶

EHRs can also include safeguards for drug prescriptions. For instance, when a physician enters a new prescription, the EHR can check for adverse interactions with any other drugs the patient might be taking.⁴⁷ A senior physician at a Washington, D.C. health maintenance organization (HMO) noted that if she entered a prescription that was contraindicated or interacted with other prescriptions, her EHR system gave her a “pop-up” alert to indicate the problem. She had to deliberately override the alert in order to enter the prescription, which ensured she was aware of the issue.⁴⁸ A hospital in London, England tracked prescription error rates prior to and after EHR implementation. The hospital did not note an overall reduction in the number of errors, but did notice a significant reduction in the severity of the errors, particularly with drug interactions and allergies.⁴⁹ Similarly, EHRs can help a doctor follow-up and ensure a patient picked up prescriptions, sending the doctor an alert if the prescription remains unfilled.⁵⁰ One other patient safety aspect is remote monitoring. The Cardiology Consultants of Philadelphia used their EHR system to link to patients’ pacemakers and



defibrillators, downloading their status into the EHR system so that doctors can see how those devices are performing at the patient's next check-up.⁵¹ All of these EHR features greatly enhance individual patient care and safety.

In addition to individual patients, EHRs have benefits for the greater population. For instance, "physicians can use [electronic health records] to automatically report adverse drug effects to the Food & Drug Administration which will also increase drug safety monitoring for patients."⁵²

Electronic Records

EHR templates for different types of patient encounters ensure that the critical data for that type of encounter is added to the record, resulting in a more complete record and improving patient care.⁵³ A senior physician at a Washington, D.C. HMO echoed this sentiment, saying the templates for charting ensured she entered all the required data.⁵⁴ The information is instantly part of the EHR once entered, helping avoid a problem with traditional paper records, which tend to be "inaccurate, incomplete, untimely, fragmented, duplicative, and poorly documented."⁵⁵ Furthermore, there is only one paper record, which is problematic if more than one provider needs it. One medical practice noted that "before [electronic medical records], the practice had two or three people in the office looking for records all day long. 'Just keeping track of who had each chart was difficult. Someone is using it for billing, or a nurse has it trying to fill a prescription. Somebody was making copies for the patient or another doctor. A doctor was reviewing it and signing off on it. That was everyday life.'"⁵⁶ EHRs overcome this by being widely and simultaneously accessible.

Administrative efficiency is another area in which EHRs are superior to traditional paper records. A hospital in London, England noted that with its EHR system, the time to pass along a patient's admission records to their general practitioners was drastically reduced. Paper records could have taken up to three weeks, but 95% of EHRs were in the hands of general practitioners within 24 hours.⁵⁷

However, the ability to pass along an EHR to other members of a patient's medical team can be hindered by inconsistency and incompatibility between each provider's health record templates and databases. With different EHR vendors selling their own proprietary systems, there is no common standard across the industry. This is where the government can step in and assist industry by issuing and enforcing a national standard data template for EHRs as soon as possible. EHR vendors can still have unique user interfaces and workflows for their EHRs; however, the specific data items that make up an EHR, behind the scenes if you will, would be standardized to would facilitate transfer of EHR data between users of different systems.



Patient-Centered Care:

The Patient Centered Medical Home (PCMH) section of the PPACA contains a provision called “Quality of Care and Delivery System” that gets at the heart of improving patient experience and integrating fragmented care. Specifically, “the law provides enhanced federal Medicaid funding to states to establish health homes to integrate care for people with chronic illness.”⁵⁸

The Health Care Industry Study had the opportunity to see how the “home health” concept was implemented at two Federally Qualified Health Centers (FQHC) in the Washington, D.C. area. The FQHCs visited are considered to be PCMHs.⁵⁹ The FQHCs employ best practices in addition to PCMH regulatory requirements that enhance access to care for Medicaid patients by providing ancillary services.⁶⁰ For example, many of the Medicaid patients in the area speak Spanish as their first language. Many of the doctors, nurses and support staff are multilingual.⁶¹ The staff also has access to a translation service for patients who speak other languages. Additionally, when the patients are referred outside the clinic to specialists, the clinic is willing to make the appointments for the patients and ensure that the patients have the necessary translation services for those follow-up appointments, if necessary.⁶² The clinics found it important to forge relationships with specialty clinics to ensure that they are willing to accept Medicaid patients and when possible, able to speak to the patient in their preferred language. When a clinic is willing to conduct patient care in the native language of the patient, it forges trust, enhances patient care/experience and can lead to improved patient compliance with prescribed courses of treatment. Another ancillary service provided by the FQHC was access to the Northern Virginia Family Services (NVFS) office at the FQHC. NVFS works to improve the lives of its clients through a variety of programs in five mission initiatives: safe & stable housing, child & family enrichment, health access, emergency assistance and workforce development.⁶³ The FQHC provides this access to NVFS to help provide families in need with more stability with the idea that a more stable home life will lead to a healthier family. This is also known as improving social determinants of health.⁶⁴

In a PCMH, a physician at the clinic serves as a patient’s primary care physician (PCP) and gatekeeper to specialty care. For example, if after an examination by the PCP, the doctor determines that the patient needs to see a specialist (e.g., a cardiologist), the PCP is the one who makes the referral and follows up with the cardiologist to determine the results of the appointment. “This model of care helps to provide:⁶⁵

- A whole-person orientation to providing patient care
- Integrated and coordinated care
- Focus on quality and safety
- Reduction in cost of care.”



Another way the PPACA expands access to care is by running pilot projects and experiments. These pilots/experiments are run by industry and monitored by the newly established CMMI. CMMI's main focus is to produce "better experiences of care and better health outcomes at lower costs through improvement."⁶⁶

A couple of examples of the ways CMMI's work produces better outcomes were highlighted during a visit to CMMI. First, a patient was non-compliant with taking his insulin because he did not have a refrigerator to keep his insulin cold. Under a CMMI program, a person could be given a refrigerator to fix this issue.⁶⁷ Another example provided is when was a elderly person who would show up at the emergency room in the summer very hot and dehydrated. Although an air conditioner was provided to him he still continued to show up in the emergency room with hyperthermia and dehydration, because he did not know how to turn on the air conditioner. Once someone came to his home to teach him, he no longer became a "frequent flyer" in the emergency room.⁶⁸ CMMI does a great job at addressing these sorts of issues known as social determinants of health. This work helps to address the social issues that may preclude a person from having a high standard of health and health care.

RECOMMENDATIONS

1. The federal government should issue and enforce standards for electronic health record systems that include the following capabilities. A standardized electronic health record system has the potential to decrease preventable medical errors, improve the overall health of a patient and to decrease costs associated with these errors and administrative overhead. This system would contribute to the safety of patients and would cut down on medical errors by having the history and medical records available anytime and anywhere that they are needed. The electronic systems should be interoperable between all facets of the health care system. This requires a significant initial investment cost, but the future cost savings, safety, and efficiency will provide sufficient return on the investment. The electronic systems should include the use of electronic prescription ordering for all health care providers. These systems would eliminate many of the most common errors today from prescribing, transcribing and conflicting medications.
2. In the interest of improving electronic health records and prescription medication systems quickly, the federal government could choose to implement each of the capabilities described above incrementally. For example, because the DoD and the VA were unable to develop standardized electronic health record systems to be used by both, they are working to develop solutions to, at a minimum, make their distinct systems interoperable.⁶⁹ Another example is that under the Office of the National Coordinator for Health Information Technology (ONC), a number of groups are working to determine what the standards for EHRs should be. One such group is the Information Exchange Workgroup, which along with others, has representatives from the government, industry, and EHR system vendors. The ONC should establish an overall timetable with a defined end state, and with measurable intermediate milestone and regularly assess progress toward the goal of a national EHR data standard; or if such a product exists, make it public for all to see and publicize progress on the schedule.
3. Improve access to care so that Medicaid beneficiaries receive consistent and continuous care over time. Improve continuity of care through the expansion of the use of ACOs, like



PCMHs and FQHCs. These organizations are working actively to reduce medical errors, coordinate care among various providers that treat a patient, and ultimately work to keep them in a healthy status versus in sickness. In addition to improving patient experience and quality of care, this concept of coordinated care will also help to control and even reduce costs. In addition, having a PCMH involved with care of a Medicaid beneficiary will help to reduce the use of Emergency Rooms for non-emergency visits, a very expensive method of care. This cost reduction could help bring Medicaid spending under control so that the federal government can ultimately move dollars out of this entitlement program and over to other needs in discretionary spending.

4. Continue to encourage FQHCs to provide ancillary services to Medicaid beneficiaries. This access to ancillary care (e.g., access to behavioral health, social workers, translators) is a vital contribution to improving social determinants of health. The ancillary services such as providing access to behavioral health and social workers all contribute to improving the overall well-being of the Medicaid beneficiaries. Another ancillary service provided at the FQHC, which is vital to expanding access for the patient, is the presence of Navigators. The Navigators were responsible for helping patients to enroll in health care insurance (whether it be Medicaid, Medicare or some other insurance). The Navigators are well versed in the health insurance exchanges and help beneficiaries apply for health insurance. Navigators who speak the native language of the population being served also help remove barriers to access to care. The Navigators provide a vital service to improve access to care that cannot be overstated.

5. Expand education services in poor and underserved communities. One method of pulling an individual out of poverty is through education that enables him or her to qualify for and perform full-time work. Currently, our education system does not adequately meet the needs of the poor and underserved.

6. Continue to expand on the work of the CMMI. Their work to think creatively to solve health concerns is a positive step to improve health care quality and delivery. CMMI is willing to accept that there is no cookie cutter solution for every health care issue and through innovative thinking; the quality, costs and access to care can be improved through their research and implementation of health care improvement pilot projects.



DECREASING HEALTH CARE COSTS

America is facing an unprecedented crisis in health care costs. America spends far more than any other nation on health care—in fact more than twice the per capita average of other developed nations.⁷⁰ America spends \$2.8 trillion dollars annually on health care—a staggering 24% of the federal budget and 17.6% of our national GDP. However America gets poor value for the money.⁷¹ The CBO estimates health care costs will continue to rise over the next decade and will “squeeze out” other discretionary spending to the lowest levels since 1962.⁷² This massive cost is beginning to have a strategic impact for our nation by limiting America’s financial maneuverability both domestically and globally—we can no longer afford to fail to contain health care costs.

While there are multiple areas ripe for action, this section focuses on two key issues—the simple but powerful impact of achieving pricing transparency, and the potential impact of dramatic cost savings through successfully combating chronic diseases such as obesity, diabetes, hypertension, hypercholesterolemia, and smoking related diseases—and ultimately moving America from focus on health care to a focus on health.

Pricing Transparency

Health care policymakers and consumers are facing an insurmountable foe in tackling rising health care costs in America—a complete absence of meaningful cost data. Steven Brill’s 2013 Time magazine article *The Bitter Pill* shined national attention on “how outrageous pricing and egregious profits are destroying our health care system.”⁷³ His gripping examples highlighted a critical issue—hospitals use a cost-shifting strategy to preserve profit margins by passing costs from low-paying Medicare/Medicaid patients to private insurance payers. This brought national attention to the center of this cost-shifting strategy, the hospital “chargemaster,” a shadowy unpublished hospital pricing guide with wide discrepancies between actual cost to the hospital and charges to insurance companies and private paying patients.⁷⁴ One example is a case where a hospital passed a bill of \$13,702 to a patient for a cancer drug costing the hospital \$3500—a profit of 400%.⁷⁵ Without his months of investigative research, it is almost impossible for outsiders to understand hospital billing, compare pricing structures, or make free-market decisions based on cost. Health care policymakers and regulators are operating in the same vacuum of information, a critical barrier to designing strategies to contain health care cost.

The first step toward building public and political will to address cost shifting and pricing power in the non-Medicaid private segment of the health care industry is to achieve transparency. Articles like Brill’s *The Bitter Pill* have set the stage for the development of a “Truth in Pricing Act” to be a relatively easy win, and most of the key players should be on the same side in this issue—both political parties, the insurance industry, and the public should all voice loud support against the only opposition, hospitals. Simply forcing hospitals to publish their “chargemaster” process allows normal market forces to begin operating. It also allows the



establishment of watchdog groups and Better Business Bureaus and allows Congress to monitor the market better. Finally, it provides ammunition to build public and political sentiment for further battles if the hospital industry refuses to contain costs by seeking instead to preserve its profit margins.

Transparency alone will not produce market competition forces to reconcile the wide price variances between the three distinct pricing systems (Medicare/Medicaid, insurance, and private market payment systems), prevent cost-shifting, and ultimately bring health care costs under control. There is moderate truth behind hospital claims that Medicare/Medicaid rates are too low to cover overhead by themselves—but without transparency it is almost impossible to tell how much truth is there. If the current health care consolidation trend ultimately produces oligopolies unwilling to concede profit margins for a more reasonable cost structure, heavier regulation or taxation strategies will be required—yet currently the data to design that strategy is missing. The data and public opinion yielded from the first battle, transparency, will be critical in designing and winning the will to fight this second round of battles. Transparency, although seemingly simple, is the key and attainable first step in solving the market failures behind hospital pricing power and uncontrolled health care costs.

Data allows informed decision-making and allows policymakers and regulators to pursue a number of possibilities. One example is the British solution to set rates at a national standard based on sound data. An example closer to our system is the Swiss system, which has an arbitration court to settle differences when private insurance and hospitals cannot themselves agree on a reasonable rate. Both strategies work well for their systems, yet with the current absence of data in America it is almost impossible to design a well thought out solution to bend the cost curve. It all starts with the data...this seemingly simple action contains immense power.

Chronic Diseases

Benjamin Franklin is widely credited with writing, “an ounce of prevention is worth a pound of cure.” This sage wisdom may hold the key to bending the curve in America’s health care cost crisis. The economic costs of chronic health conditions in America is staggering—recent estimates suggest obesity-related conditions alone cost our nation over \$190 billion dollars a year.⁷⁶ Similarly, uncontrolled hypertension costs our nation \$131B annually,⁷⁷ and hypercholesterolemia costs the US \$2.8 billion annually.⁷⁸ Worse, many of these costs are accelerating—cost estimates for diabetes-related conditions rose 41% over the last five years to over \$245 billion dollars annually.⁷⁹ And even those conditions that are on the decline are still significant cost drivers—after a 50-year battle with smoking, almost 1 in 6 Americans still smokes, and our nation spends over \$133 billion dollars annually to treat its medical complications.⁸⁰ Taken together; these chronic conditions cost our nation close to \$1 trillion dollars annually—at almost a full third of our national medical expenditure, chronic conditions are a rich yet often forgotten target for our efforts.



Taken together, these chronic conditions underlie 70% of all deaths in America. For example, heart disease comprises the number one cause of death in American through myocardial infarction and congestive heart failure.⁸¹ The Framingham Criteria, which calculates risk for advanced heart diseases, includes age, cholesterol, smoking status, and blood pressure as its primary criteria for predicting 10-year cardiovascular risk.⁸² Our chronic conditions dominate these risk criteria. Similarly, smoking directly underlies the number two and three cause of death that are respectively lung cancer and chronic obstructive pulmonary disease (COPD).⁸³ Hypertension, hypercholesterolemia, and hypertension together contribute significantly to the risk for the number four cause of death stroke.⁸⁴ Finally, the number seven cause of death in America is directly related to diabetes complications such as kidney failure.⁸⁵ The chronic conditions underlying America's leading causes of death are in fact "silent killers" dominating health care's top ten most wanted list. When viewed through this lens, our five chronic conditions represent a very juicy high value target to reduce morbidity, mortality, and health care costs in America.

All of these chronic conditions respond extremely well to early identification and relatively cheap initial treatment. Good initial management of these chronic diseases can significantly delay or even prevent end-stage complications—such as stroke, heart attack, dialysis, and COPD—complications resulting in costly treatments and intensive care unit (ICU) stays. Although it is difficult to estimate the exact reduction in cost and morbidity associated with earlier intervention and more effective management of these conditions—indeed projections vary widely in the medical literature—all agree significant impacts would occur. Most significantly, many of these conditions are extremely inexpensive to treat in the initial stages—in the case of hypertension physical activity and medications costing pennies can often stay the tide. Other chronic conditions have similarly simple and cost effective initial interventions—in fact two of them incur no cost at all—in the case of obesity the simple equation of increased activity and decreased calorie intake, and in the case of smoking simply stop.

As hypertension illustrates, Americans are failing to realize the financial and health benefits of these early interventions—CDC data over the last decade indicates over 35 million Americans do not have their hypertension controlled.⁸⁶ Nearly 90% of US adults with uncontrolled hypertension do have a source of health care insurance, "representing a missed opportunity for hypertension control."⁸⁷ Other chronic conditions have similar missed opportunity statistics. There are many reasons America is failing to realize the critical opportunities to reduce the impact of chronic diseases. First and foremost, the medical system often fails to take notice and treat these diseases. As hypertension illustrates, despite a decade long focus on hypertension as a critical inspection item for the accreditation of hospital systems, a recent Geisinger Health System study noted a full 30% of the time patients with hypertension documented on multiple occasions in their electronic health record were not prescribed hypertension medications.⁸⁸ The statistics are similar for each of the chronic diseases.



Another major reason America is failing to realize opportunities to reduce the impact of chronic diseases is noncompliance. As hypertension further illustrates, even when the medical system does prescribe medications to treat a chronic condition, patients often fail to pick up or take the medication. In fact, a June 2013 IMS Institute study entitled *Avoidable Costs in US Health care* noted only 65% of patients ever picked up their prescriptions.⁸⁹ When one considers historical rates of secondary nonadherence (picking up the medication but not taking it regularly) typically run 30-40%, the magnitude of untreated chronic conditions due to patient noncompliance is staggering.⁹⁰ The IMS study concluded \$18.6 billion dollars in annual savings for hypertension, \$24.6 billion dollars for diabetes, and \$44 billion dollars for hypercholesterolemia were lost to nonadherence to prescribed medication regimes alone.⁹¹ Many causes account for this including fear of drug side effects such as impotence in hypertension management or liver damage in hypercholesterolemia medications. Digging deeper, perhaps the greatest factors are non-economic in nature—patients simply are not convinced it is important. All of these chronic conditions are insidious, doing silent damage over a long period of decades—patients themselves have “never felt sick a day of my life,” yet irreparable damage is being done. This is one of the key battlegrounds this paper will examine—the tide must be turned in the battle to *convince* patients their chronic disease is a silent killer they need to desperately fight.

The truth is the key battleground for all of these chronic conditions is not in the medical system at all. While the medical system is a key component in this fight, in reality during the early course of these chronic conditions the medical system has *less* than two total hours of contact time with a patient in a given *year*. This assumes five or six 20-minute visits for initial management and follow-up during the year, not an unreasonable estimate for initial control—keeping in mind the 30% who are already not complying. This is ample time to provide medical information, data, and treatment to patients, but it is *not* an adequate mechanism to provide the *accountability* necessary in a patient’s life to ensure the medication compliance and lifestyle changes needed to keep these conditions in check. Aside from baseline education and periodic monitoring, these interventions lie wholly outside the medical system—they instead rely heavily on an accountability system that resides with the individuals, their employers, and their communities. To fail to realize this by continuing to look only to the medical community for our answers will destroy any hope of negating America’s most wanted silent killers.

RECOMMENDATIONS

1. The position of Surgeon General has been vacant for over a year. The absence of a confirmed Surgeon General sends the wrong message about the importance and support of prevention. The first recommendation is confirm a United States Surgeon General—America needs a dynamic, visionary leader that is apolitical, but is capable of effectively operating in the interagency and able to advance prevention, health promotion, and public health initiatives. Once confirmed, the next Surgeon General needs to be public face of health and wellness readily recognized by the American public.



2. The second issue hampering the nation's efforts to move from a health care to health focus is the fact that Congress and the President have repeatedly used promised funding as political trade space, effectively gutting the capability of the Council to achieve its critical aim. The PPACA originally provided \$18.75 billion to the fund for the period from 2010 – 2022.⁹² But legislation in 2012 diverted funds away from the Prevention and Public Health Fund beginning in 2013. Congress passed, and the President signed legislation that diverted \$6.25 billion over nine years to prevent a cut to Medicare payments to doctors.⁹³ The fund lost an additional \$51 million in 2013 as a result of sequestration.⁹⁴ Lastly, the fund lost an additional \$453.8 million to the insurance marketplaces.⁹⁵ In 2013, the fund ended up with \$616.5 million out of the original \$1.25 billion authorized in the original bill—that figure assumes this practice of using its budget as political trade space is over.⁹⁶ Under current law, the fund has been reduced by one third and is under resourced every year between 2013 and 2021.⁹⁷ Investing in prevention is a smart investment in the future. A recent Urban Institute study concluded that every single percent reduction in preventable chronic diseases results in roughly \$1 billion of savings for Medicare and Medicaid by 2030.⁹⁸ The Urban Institute found that the “savings achieved through prevention programs can significantly and quickly outweigh initial, upfront investments.”⁹⁹ Continuing to take money from the Prevention and Public Health Fund is short-sighted and counterproductive in controlling health care costs and improving health and will end up costing more over the long term. The second recommendation is to restore this funding and make moving from a focus on health care to a focus on health a national true goal.

3. America must also shift the focus and accountability of the nation's efforts to the true battlegrounds—to individuals, their employers, and communities. One such example is the Duke's Community Engagement Model. This is a unique partnership between the Duke Hospital System and the Durham community under the guiding principle, “that health status can best be improved through care delivered in partnership with patients, families, and communities, using services based within community settings, evidence-based practices, and linked electronic health records.”¹⁰⁰ The initial community partnership was so successful it garnered the National Institutes of Health (NIH) Clinical Translational Science Award and secured NIH funding to broaden the concept under the newly established Duke Translational Medicine Institute specifically targeting community engagement of the chronic conditions diabetes and asthma.¹⁰¹ As the Duke-Durham model demonstrates, shifting accountability to the preferred community battleground is possible and effective.

4. One of the biggest success stories of the Duke-Durham partnership is that accountability was largely shifted from the medical system to the community, and it has made a dramatic difference. While the PPACA encourages Accountable Care Organizations (ACO) within the medical system, national leadership should also focus on creating incentives for “Accountable Community Organizations.” One idea to drive this change in focus is to tie current state and federal funding for schools, roads, and other projects to structured community performance criteria in areas such as obesity rates, smoking rates, diabetes control (Hgb A1c), and other measures. This is but one idea—our federal and state governments should brainstorm other ways to put teeth behind shifting community focus to the general health of its constituents.

5. Similarly, the federal government should institute a program to provide incentives for “Accountable Corporate Organizations.” The federal government could define criteria for a corporate health program—if met, participating corporations could receive significant tax breaks from the federal or state governments. The federal government could also broker better corporate rates with insurance companies for corporations meeting the program criteria.



6. Finally, individual accountability is the ultimate, but elusive goal—individuals need to take their health as a serious priority. One tangible incentive is allow people to voluntarily enroll in an Individual Accountability Program with their insurer. The federal government could create a program that makes insurers offer a voluntary program that gives reduced premiums for individuals meeting certain lifestyle modification criteria. Individuals would voluntarily allow big data to track their daily lives—gym attendance, fit-bit data, grocery purchase data, fast food data, and other parameters could give a detailed look at the “health” of an individual’s daily lifestyle. Big data could be a powerful tool for individual accountability and it should be incentivized.



Conclusion

The PPACA was the most comprehensive piece of medical legislation since the passage of the Social Security Act (SSA) of 1965. Similar to the SSA, the PPACA requires further legislative and structural changes to achieve the goal of greater access, reduced costs and improved quality of care. First, the federal government should expand ACO incentives and improve safety and patient experiences by establishing and enforcing standards for electronic health record systems. Second, the PPACA must address the cost of care by focusing on chronic medical conditions and implement additional policies to control health care costs by increasing transparency in health care pricing. Finally, the government should improve health care access to include empowering the National Health Care Workforce Commission to collect data on the industry. The DoD and military health care system can be the test bed for a majority of the recommendations and best practices expanded to Medicare. Positive changes in these areas will improve the value of health care and provide the US a sustainable and responsible future, thereby enhancing national security. These recommendations offer policy makers and industry leaders achievable and actionable steps to improve the health and health care for all Americans. The time to change America's unsustainable health care trajectory is now.



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- ⁹⁵ Ibid.
- ⁹⁶ Ibid.
- ⁹⁷ Ibid.
- ⁹⁸ Robert Wood Johnson Foundation, “Return on Investments in Public Health: Saving Lives and Money,” December 2013, linked from *Robert Wood Johnson Foundation Page Research and Publications Page*,” <http://www.rwjf.org/en/research-publications/find-rwjf-research/2013/12/return-on-investments-in-public-health.html> (accessed April 28, 2014). p2
- ⁹⁹ Ibid.
- ¹⁰⁰ J. Lloyd Michener et al., Improving the Health of the Community: Duke’s Experience with Community Engagement, *Academic Medicine*, Vol. 83, No. 4, April 2008, p. 408-413.



¹⁰¹ Ibid.

