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Searching for the Soul of American Medicine
*What Three High-Quality, Low-Cost Health Care Systems Can Teach
U.S. Policymakers*

By: Benjamin A. Paul

*Honors Thesis in Political Science
University of Richmond
Richmond, Virginia
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Advisor: Dr. Rick Mayes

When I was young, my mother dedicated her doctoral dissertation to me
and my future. I am delighted to return the favor.

For my mother, Dr. Christina Paul

-

“So be sure when you step.
Step with care and great tact
and remember that Life’s
a Great Balancing Act.”

-Dr. Seuss

For my friends and family who remind me of that every day

Acknowledgements

This thesis comes at the conclusion of a year-long inquiry into high-quality, low-cost health care systems and what they can teach policymakers. This endeavor would not have been possible without Dr. Rick Mayes's guiding hand. His commitment to his students is unparalleled, and he deserves all the accolades he receives. I could not imagine a more encouraging thesis advisor. I thank him for kindly agreeing to serve in that capacity.

One of my first political science classes was taught by Dr. Jennifer Erkulwater. During the first class, she jumped on a chair to fix a broken clock all while explaining James Q. Wilson and George L. Kelling's "Broken Windows Theory." Three years later I vividly remember that moment as the spark that turned me on to domestic politics and policy. Dr. Erkulwater was also the first professor to introduce me to the complexities of the United States health care system. I thank her for agreeing to serve as my second reader and for being one of the kindest professors I know.

I also thank Dr. Daniel Palazzolo for being one of the most challenging and enlightening professors I have experienced at the University of Richmond. I entered college believing that I was a strong writer. After four classes with Dr. Palazzolo, my papers have been criticized for everything from vagueness to the use of split infinitives (I can only hope I avoided this error as I still do not fully understand the term). I now leave college thinking, once again, that I am a strong writer. Thanks to Dr. Palazzolo, I think I am right this time.

I never would have finished this thesis if it were not for Jessica Walradt, fellow political science honors scholar and dear friend. Her dedication to health care policy inspired me to take on this challenge, and her support ensured that I met it. She is an older sister to me—always there with advice and encouragement when I need it most. I could not be prouder to follow in her footsteps.

I also appreciate the support I have received from my close friend, Chase Eager. Surprising as it may seem, there are not many people who get excited to discuss the implications of health care reform on states' rights or the unjustified variance in health care spending by geographic regions. But that's not what really matters. What matters is that Chase has always been there for me, even when I haven't realized it. And that takes someone special.

Finally, I thank my closest friends, Alex Kelly and Matthew Jordan. The conclusion of this thesis comes at the end of four years of ups, downs, and everything in between. I cannot think of the words to appropriately express my gratitude—and surprise—that you both stuck it out with me the whole time. I am honored to call you both my best friends.

Ben Paul

Author's Note

The title of this thesis is derived from a passage found in Atul Gawande's *New Yorker* article, "The Cost Conundrum." His expertise in the health care field is only matched by the eloquence of his prose.

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Introduction: What's Right with U.S. Health Care?

“The United States health care system is broken.” This common refrain has been echoed by policymakers and politicians, Democrats and Republicans, and liberals and conservatives alike. They point to the unacceptably high number of uninsured Americans, out of control costs, and questionable quality as just some of the problems that afflict American health care. Before the passage of the Patient Protection and Affordable Care Act in March, 2010, over 45 million Americans were without health insurance coverage.¹ Health care spending currently accounts for 17% of this country's gross domestic product. In contrast, most industrialized European countries cover all of their citizens for less than 10% of their gross domestic product. To make matters worse, the United States spends more money on health care than most industrialized countries but does not necessarily offer better quality. The infant mortality rate is recognized as a reliable indicator for determining the quality of a nation's health care system. The United States' infant mortality rate stands at 6.8 deaths out of every 1,000 live births. Japan claims only 2.8 infant deaths out of every 1,000 live births.² The United States also lags behind in preventable deaths. There are 110 preventable deaths per 100,000 Americans in the United States as compared to 71 preventable deaths per 100,000 Japanese.³ These statistics are part of a long litany of numbers and horror stories that have led lawmakers to call the United States health care a broken system.

On March 23rd, 2010, President Barack Obama signed the Patient Protection and Affordable Care Act into law. The Affordable Care Act makes great strides to increase access to health care, decrease costs, and improve quality. With regards to access, the law promises to

¹ The Staff of the Washington Post, *Landmark: The Inside Story of America's New Health Care Law and What it Means for Us All* (New York: PublicAffairs, 2010), 65

² *Ibid.*, 67

³ *Ibid.*

expand health insurance to an additional 32 million Americans beginning in the year 2014. The law will accomplish this through a vast expansion of Medicaid, the creation of health care marketplaces—referred to as the exchanges—and federal subsidies of up to 400% of the federal poverty level to Americans who have difficulty affording coverage.⁴ The law also significantly reforms the health insurance industry. Beginning last year, the Affordable Care Act began prohibiting insurers from denying coverage to Americans with pre-existing conditions. In addition, the law mandates that insurers allow children up to age 26 to stay on their parents' insurance plan.⁵ Starting in 2014, the law will outlaw insurers from rescinding coverage when a policyholder gets sick. In return for the requirement that insurance companies offer coverage to more high-risk Americans, the law mandates that all Americans, healthy or sick, obtain a health insurance policy by 2014. These provisions will bring the United States as close to universal coverage as it has ever been.

The Affordable Care Act attempts to dramatically expand coverage while simultaneously cutting into health care spending. This year, Medicare will offer a 10% bonus to primary care physicians and general surgeons in order to encourage more medical students to practice primary care medicine.⁶ Numerous studies, including a study published by Dr. Barbara Starfield of Johns Hopkins University, have demonstrated that regions with greater numbers of family physicians provide higher quality health care at a lower cost.⁷ Furthermore, in 2012, the Centers for Medicare and Medicaid Services will implement financial incentives to reduce costly preventable hospital readmissions.⁸ On top of that, Medicare will implement several pilot programs designed to reform the way doctors are paid. One program will attempt to move the

⁴ Ibid., 74

⁵ Ibid., 260

⁶ Ibid., 70

⁷ Barbara Starfield et al., "Contributions of Primary Care to Health Systems and Health," 461

⁸ The Staff of the Washington Post, *Landmark*, 70

U.S. health care system away from rewarding physicians for the volume of services provided to the quality of those services.⁹ Finally, beginning in 2018, the Affordable Care Act will seek to control costs by imposing an excise tax on employer-provided “cadillac plans.”¹⁰ Lawmakers hope that taxing these expensive insurance policies will push employers to purchase more affordable coverage. Whether or not the law successfully cuts health care costs remains a controversy. Nonetheless, meaningful cost control is necessary to keep the government, private employers, and American families from going bankrupt under the financial burden of rising health care costs.

The Patient Protection and Affordable Care Act is the Democrats’ most sweeping attempt to repair the United States health care system. During the health care debate, Democrats asked themselves what they considered to be “wrong” with the U.S. health care system. They decided that the primary answer was that lack of access to health insurance resulted in poorer health outcomes for the uninsured, increased costs for the privately insured through cost shifting and expensive emergency care, and medical bankruptcies that could affect anyone. Put another way, Democrats concluded that universal coverage would lead to decreased costs. On the other side of the aisle, Republicans argued that market-based solutions are the answer to the health care conundrum. They argued for tort reform, health savings accounts for consumers, and the ability for insurers to sell policies across state lines. In the eyes of most Republicans, if costs were controlled, the uninsured would be able to afford coverage and there would be no need for government regulations or mandates. Over the course of the health care debate, these ideas came to resemble ideological talking points instead of innovative policies to increase access and lower costs.

⁹ Ibid.

¹⁰ Ibid.

The absence of truly innovative ideas led to a health care reform law that is evolutionary, not revolutionary. Although the Affordable Care Act is the largest overhaul of the U.S. health care system since the inception of Medicare and Medicaid in 1965, it does not change the deeply cracked foundation of American health care. Democrats and Republicans alike missed an opportunity to truly reform health care in the United States. Once Democrats identified expanding access as the cure for American health care, they implemented a plan that would do that and little else. Besides enacting a series of pilot programs that will study different delivery and financing models, the U.S. health care model remains the same. In spending so much time debating what is wrong with of the U.S. health care system, lawmakers failed to ask themselves what is *right* with U.S. health care and how what works could be replicated throughout the nation.

This thesis seeks to answer that overlooked question. Across the United States there are health care systems that provide high-quality care at a low cost. Three health care systems are particularly impressive. The community of Grand Junction, Colorado is endowed with a health care system that boasts some of the highest quality clinical outcomes in the United States at an astonishingly low cost. In Pennsylvania, Geisinger Health System is an integrated health care network where payers and providers work together to improve their performance through innovation and experimentation. Finally, Mayo Clinic has long been recognized as the Mecca for high-quality, low-cost health care. Its mission, “the needs of the patient come first,” has driven their success for over a century.¹¹ Policymakers need look no further than these three health care systems to find the cure for U.S. health care. Moreover, these models can be

¹¹ Leonard Berry & Kent Seltman, *Management Lessons from Mayo Clinic: Inside One of the World's Most Admired Service Organizations* (New York: McGraw-Hill, 2008), 20

replicated through a combination of governmental action and what this paper terms “culture building.”

It is my hope that this thesis will offer insight into what currently an unfinished reform. As policymakers continue to debate the future of American health care, they are best served to first ask themselves what is *right* with the United States health care system before fixing what they decide is broken. Only under such a framework will our elected officials develop the proper policies to implement meaningful reform.

Grand Junction: Communication and Collaboration

Introduction

Grand Junction is special. Located in Mesa County, Colorado, Grand Junction offers breathtaking views of cliffs and canyons. It boasts beautiful rivers that are perfect for white water rafting. It is known for exotic vineyards and its annual peach festival.¹² But these features are not what separate Grand Junction from the rest of the nation. Grand Junction's fame comes from its high-quality, low-cost health care system. President Obama visited the community in 2009 to showcase to the nation what an efficient health care system looks like.¹³ The Dartmouth Atlas of Health Care's research supports the President's claim. In 2006, average national Medicare spending per capita was \$8,300. Average Medicare spending per capita in Grand Junction was \$5,900—a 30% difference.¹⁴ A separate Dartmouth Atlas of Health Care study analyzed the cost-effectiveness of treating twelve chronic diseases and found that Mesa County provided the “most cost-effective delivery of Medicare services in the country.”¹⁵ Furthermore, a 2006 study commissioned by the Chatfield Consulting group concluded that the Rocky Health Insurance Plan, the Medicare administrator in the region, had “saved the federal government more than \$13.7 million from 2000 to 2002.”¹⁶ Moreover, Grand Junction's low costs do not come at the expense of quality. On the contrary, Grand Junction is often cited as one of the highest performing health care systems in the United States. According to data from the Centers for Medicare and Medicaid Services, St. Mary's hospital and Regional Medical Center, the

¹² “Grand Junction: Colorado Wine County,” <http://www.visitgrandjunction.com/attractions/>

¹³ Conrad Wilson, “Grand Junction, Colo. Could be a Model for Healthcare Reform,” *The Christian Science Monitor*, August 15, 2009, <http://www.csmonitor.com/USA/Politics/2009/0815/grand-junction-colo-could-be-a-model-for-healthcare-reform>

¹⁴ Len Nichols et al., “Grand Junction, Colorado: A Health Community that Works,” *New America Foundation*, August 2009, <http://newamerica.net/files/GrandJunctionCOHealthCommunityWorks.pdf>

¹⁵ David West, “Mesa County Colorado, Health Care: The Best Health Care in the United States,” August 2009, <http://www.coloradoafp.org/pdf/article1.pdf>

¹⁶ Ibid.

region's tertiary care hospital, "performs above the national average on all but two of the twenty-four Medicare clinical quality indicators."¹⁷ In addition, Nicholas Riccardi of the Los Angeles Times reported in 2009 that "only 12% of Medicare patients required readmission 30 days after a hospital visit." The comparable nationwide figure was 20%.¹⁸ Grand Junction's hospital readmission rates are remarkably low and it has consistently been ranked in the upper 25% of Medicare's index on quality of care.^{19,20} Grand Junction's capacity to provide high-quality health care at an affordable cost makes it a model for other communities and the nation as a whole.

History

Grand Junction's history reflects an enduring commitment to developing community-wide solutions for community-wide problems. Its history also highlights the community's insistence on putting the good of the community ahead of each individual's self-interest. The Grand Junction health care system traces its roots to two nuns who wanted to serve the community. In 1896, Sisters Balbina Farrell and Louisa Madden opened St. Mary's Hospital with a mission to "reveal God's healing love by improving the health of the individuals and communities we serve, especially those who are poor or vulnerable."²¹ Sisters Farrell and Madden's emphasis on serving the community, particularly the downtrodden, continues to be the core of Grand Junction's philosophy. Whereas people who are unable to afford health care often receive subpar care under the U.S. health care system, Grand Junction's medical establishment prides itself on equitably serving all its members. Another major turning point came in the early

¹⁷ Marsha Thorson et al., "Grand Junction, Colorado: How a Community Drew on its Values to Shape a Superior Health System," *Health Affairs*, 29, no. 9 (2010): 1678-1686

¹⁸ Nicholas Riccardi, "Grand Junction a Microcosm of Efficient Healthcare," *Los Angeles Times*, August 14, 2009, <http://articles.latimes.com/2009/aug/14/nation/na-grand-jefferson14>

¹⁹ Nichols et al., "Grand Junction, Colorado: A Health Community that Works"

²⁰ Bill Scanlon, "Grand Junction, Colorado: Still the Health Care Poster Child," *Kaiser Health News*, August 19, 2010, <http://www.kaiserhealthnews.org/Stories/2010/August/19/Grand-jefferson-health-care.aspx>

²¹ "Our Mission," *St. Mary's Hospital & Regional Medical Center*, <http://www.stmarygj.com/body.cfm?id=14>

1970's in response to two crucial political events. The first event was the passage of Medicaid in 1965. Mesa County's rapid population growth throughout the 1960's in conjunction with its relatively poor population led to a substantial influx of Medicaid enrollees. Physicians feared that Medicaid's low reimbursement rates would dissuade primary care physicians from accepting Medicaid patients, who would receive worse care as a result. The second noteworthy event was the proliferation of health maintenance organizations (HMO). In 1973, President Richard Nixon signed into law the Health Maintenance Organization Act (HMOA) in order to combat rapidly rising health care costs. HMOA gave the federal government authority to provide grants and loans to help expand HMOs, preempt state regulations and restrictions affecting HMOs, and require that employers with 25 or more employees offer an HMO insurance policy option.²² In 1974, Grand Junction physicians responded to these momentous shifts in health care policy by forming the Rocky Mountain Health Maintenance Organization, later renamed Rocky Mountain Health Plans (Rocky).²³ Rocky was one of the earliest federally certified HMOs. While most other HMOs at that time were commercial organizations, the physicians of Grand Junction were determined to keep Rocky accountable to the community, not investors. Rocky remains a not-for-profit operation to this day. In addition to forming Rocky, Grand Junction's physicians founded the Mesa County Physicians Independent Association (IPA) as a way to encourage communication and collaboration among Grand Junction's physicians.²⁴ Another pivotal moment in Grand Junction's history was the opening of the Marillac Clinic in 1988. The clinic was designed to care for Grand Junction's most vulnerable residents, specifically the poor and uninsured. The Marillac Clinic stands as a testament to Grand Junction's commitment to care for

²² Paul Starr, *The Social Transformation of American Medicine: The Rise of a Sovereign Profession and the Making of a Vast Industry* (Basic Books, 1982), 396-398

²³ Thorson et al., "Grand Junction, Colorado: How a Community Drew on its Values to Shape a Superior Health System"

²⁴ Ibid.

all its citizens, no matter their wealth. Grand Junction has evolved from two compassionate nuns to an integrated network of health care providers and payers. Still, Grand Junction has never abandoned the principle that the community comes first. This core value continues to guide Grand Junction in the 21st century.

The Model

Contextual Factors

Grand Junction's health care model is driven by communication and collaboration. From top to bottom, the Grand Junction community maintains a system that serves patients equally. This paradigm is the foundation of Grand Junction's success as a high-quality, low-cost health care system. The Grand Junction model is worth reviewing in detail for ideas that could be replicated.

Two major contextual factors are at the heart of Grand Junction's success as a high-quality, low-cost health care system. The first is Grand Junction's not-for-profit status. The second is the leverage Rocky and the Mesa County IPA maintain over Grand Junction health care market. In Grand Junction, all the essential business entities including St. Mary's Hospital and Regional Medical Center, Community Hospital, the Mesa County Physicians IPA, the Marillac Clinic, and Rocky Mountain Health Plans are all not-for-profit.²⁵ Most hospitals throughout the United States operate as for-profit business ventures with a goal of maximizing the profitable parts of the business and cutting the unprofitable parts. In contrast, Grand Junction's first purpose is to serve the community. With that distinction in mind, there is no mystery as to why there were 38 MRI machines in Wichita in 2009 while there were only six MRI machines in all of Grand Junction (MRI's are highly profitable—and highly overutilized).²⁶

²⁵ West, "Mesa County Colorado, Health Care: The Best Health Care in the United States"

²⁶ Ibid.

Still, the Mesa County Physicians IPA and Rocky's not-for-profit status would not be as significant if it were not for the leverage the two organizations maintain over the Grand Junction community. Mesa County IPA represents approximately 85% of the physicians in the area. Meanwhile, Rocky Mountain Health Plans holds a 40% market share in the region.²⁷ With one player representing the vast majority of providers and a second player representing a significant plurality of health care consumers, the Mesa County IPA and Rocky are able to experiment with various health care delivery and finance innovations without being severely punished by the market. Grand Junction's high-quality, lost-cost model would not be possible if it were not for these two contextual factors.

Primary Care

A strong primary care base is a necessary condition for any health care system to be successful. Grand Junction understands the importance of primary care physicians and has taken the appropriate steps to maintain a strong primary care foundation. Grand Junction's efforts have largely been successful; Mesa County retains twice as many primary care physicians per capita as do most areas in the United States.²⁸ Moreover, in Grand Junction, primary care physicians are not simply triage agents or gatekeepers to specialists. Primary care doctors play a significant role in the health care community at all times. To encourage primary care at all levels of care, Rocky Mountain Health Plans compensates primary care physicians for visiting their patients in the hospital, even if their services are not required.²⁹ Primary care physicians communicate with the various specialists and other health care providers the patient encounters. This high degree of coordination between primary care and specialist physicians results in smooth transitions of care and better health outcomes for patients. Various studies demonstrate

²⁷ Nichols et al., "Grand Junction, Colorado: A Health Community that Works"

²⁸ West, "Mesa County Colorado, Health Care: The Best Health Care in the United States"

²⁹ Ibid.

that Rocky's investment yields decreased hospital readmission rates, shorter lengths of stay, and improved follow-up care.³⁰ The street runs the other way as well. Specialists in Grand Junction visit primary care physicians at their offices to offer advice and services.³¹ They also encourage primary care physicians to practice at the top of their license in order to avoid overutilization of specialist care. Dr. David West of Grand Junction claims that "most primary care physicians in Mesa County have provided extensive services to their patients, including care of minor trauma and infectious diseases, obstetrical care, geriatric care, and hospice care."³² Rocky also places a premium on primary care by insisting that its members have a "medical home." A medical home is best defined as a primary care physician who is responsible for the total health of a patient. From 1973 to 2000, Rocky even mandated that all its health plan members have a primary care physician's signature for all referrals.³³ Although this gatekeeper requirement is no longer in place, Rocky still insists that its members have a primary care physician. In sum, Grand Junction depends on its strong primary care base to maintain its success as a high-quality, low-cost health care system.

Data Sharing for Cost and Quality Control

Grand Junction relies on data sharing to enhance its quality of care while simultaneously reducing costs within its system. Data sharing also reinforces Grand Junction's commitment to communication and collaboration. It also encourages accountability among patients, payers, and providers, as well as efficiency throughout the entire system. The backbone of Grand Junction's data sharing system is the Quality Health Network (QHN). The network went live in 2005 after Rocky and the Mesa County IPA united to invest in an online medical records and

³⁰ Ibid.

³¹ Ibid.

³² Ibid.

³³ Ibid.

communication system. Len M. Nichols, Micah Weinberg, and Julie Barnes reported that “as of February 2009, there were 1,569 licensed users from 84 different organizations, including home health care, hospice, mental health providers, and the public health department.”³⁴ QHN primarily serves as a clearinghouse for patients’ medical records. Mesa County IPA physicians and Rocky administrators also use QHN to share patient information including primary and specialist care visits, prescriptions, and other medical information. The diverse group of stakeholders that lead QHN further demonstrates the culture of collaboration that permeates Grand Junction. The board of directors is comprised of members of the Mesa County IPA, Rocky Mountain Health Plans, and other health care leaders throughout the community.³⁵ QHN creates an extraordinarily efficient atmosphere where any Mesa County IPA physician can review medical records by simply logging into the system. QHN also simplifies the administrative burdens that infest most American health systems. In many cases, paper patient records are illegible, lost in transit, or riddled with errors. These inefficiencies negatively impact health care quality. Although electronic health records may seem like an obvious answer to some of the inefficiencies that dog the U.S. health care system, Grand Junction remains one of the few health care systems that take advantage of this technology.

Data sharing also enables physicians to peer-review their performance. The peer review process ensures quality and also guards against costly overutilization of health care services. Physicians work alongside Rocky to review physician processes and hospitalized patient outcomes. With regards to costs, Rocky supplies Grand Junction physicians with data designed to make providers more aware of the costs associated with physician procedures as well as clinical best practices. The data includes hospital bills, rankings of each physician’s cost-

³⁴ Nichols et al., “Grand Junction, Colorado: A Health Community that Works”

³⁵ Ibid.

effectiveness, length-of-stay by procedure, and lab costs by hospitals.³⁶ To supplement this data, Rocky sends a cost report to each specialty network that breaks down each physician's charges. Critically, the breakdown lists the doctors by name so physicians can compare themselves to each other within each specialty.³⁷ This level of transparency does not come without controversy. Although the peer review system works well in most situations, there have been times when Mesa County IPA doctors have left the association in response to poor peer reviews. Interestingly, according to Dr. David West, some of those same doctors later had their medical licenses revoked due to poor performance.³⁸ Data sharing underscores Grand Junction's culture of communication and collaboration. It also helps Grand Junction provide high-quality health care at an affordable price.

Incentivizing Better Care for More People at a Lower Cost

The United States health care system harbors perverse and unaligned incentives that drive costs upward while negatively impacting quality. In contrast, Grand Junction aligns incentives among providers, payers and patients so patients receive optimal care at a low cost. Whereas most health care systems in the United States remunerate physicians for each service they provide (fee-for-service), Grand Junction's physicians eschew piecemeal payment because of the perverse incentives it promotes. Under the fee-for-service model, doctors are paid for the quantity of services rendered, not for the quality of the outcomes. Consequently, doctors are incentivized to do more of everything even if the procedures do not actually benefit the patient. The Mesa County IPA and Rocky collaborated to introduce "incentive contracts" as a way to nudge doctors toward concentrating more on the quality of health care over the quantity. The

³⁶ West, "Mesa County Colorado, Health Care: The Best Health Care in the United States"

³⁷ Nichols et al., "Grand Junction, Colorado: A Health Community that Works"

³⁸ West, "Mesa County Colorado, Health Care: The Best Health Care in the United States"

incentive contracts offer financial rewards to physicians who meet certain quality metrics.³⁹ In addition, the Mesa County IPA allocates 15% of the fees individual doctors charge into a communal risk pool operated by the IPA. If the physicians spend too many health care dollars throughout the year, the risk pool is depleted and the doctors never see that 15%. On the other hand, if doctors keep costs down, they are rewarded the withheld money.⁴⁰ In short, Grand Junction maintains a set of incentives that encourage providers to practice high quality health care at an affordable cost.

Mesa County IPA physicians and Rocky administrators also incentivize preventive care self-management of chronic diseases. Improved preventive and chronic care keep Grand Junction residents from utilizing costly emergency care and keeps people healthier. For instance, Rocky reimburses physicians the same amount for treating Medicaid enrollees as it does for privately insured patients. Under this policy, physicians have no reason to cherry pick privately insured patients over Medicaid beneficiaries.⁴¹ Eliminating this barrier to care yields incredible returns for health care quality and spending. First, payment equalization has dramatically and effectively improved preventive care throughout the community. According to Nicholas Riccardi from the *Los Angeles Times*, “children on Medicaid in the HMO [Rocky] are four times as likely as other Colorado Medicaid children to receive all immunization treatment.”⁴² Bill Scanlon of Colorado Public News reported that Medicaid patients are “twice as likely to get preventive care—88% to 40%—as in other systems in Western Colorado,” according to data obtained from Rocky Mountain Health Plans.⁴³ Second, payment equalization has improved

³⁹ Nichols et al., “Grand Junction, Colorado: A Health Community that Works”

⁴⁰ Thomas Bodenheimer, “Low-Cost Lessons from Grand Junction, Colorado,” *New England Journal of Medicine*, September 29, 2010, <http://healthpolicyandreform.nejm.org/?p=12706>

⁴¹ Nichols et al., “Grand Junction, Colorado: A Health Community that Works”

⁴² Riccardi, “Grand Junction a Microcosm of Efficient Healthcare”

⁴³ Scanlon, “Grand Junction, Colorado: Still the Health Care Poster Child”

management of chronic diseases. Riccardi cites a report that “adults on Medicaid were up to ten times as likely to get comprehensive diabetes care.”⁴⁴ Third, improving preventive care and chronic disease management keep Medicaid beneficiaries out of the emergency department, where care is costliest.⁴⁵ In conclusion, payment equalization has greatly improved Grand Junction’s health system with regards to quality and costs.

In addition to incentivizing physicians to provide better care, Grand Junction incentivizes patients to take an active role in preventive care from birth to death. In 1990, the Mesa County IPA, in conjunction with Rocky, began the B4Babies & Beyond program. This program provides prenatal care to all women in the community at no cost regardless of income or insurance status.⁴⁶ Grand Junction’s investment in prenatal care stems from a growing body of research that suggests that the health of a fetus has a powerful impact on that person’s health throughout life. In light of that evidence, Grand Junction invests in the health of the fetus in order to avoid more costly care during life. In addition, Grand Junction offers educational programs that encourage maternal health and prenatal care at no charge. The program encourages mothers to see obstetricians who keep the mother and their babies healthy. Although there is not sufficient evidence to definitively conclude say that strong prenatal improves health care quality or lowers health care costs in the long run, it appears that Grand Junction’s B4Babies & Beyond program has had a positive impact on its health system and community.

Grand Junction residents are also incentivized to take an active role in end-of-life care decisions. End-of-life care is not a major priority throughout most of the United States. Consequently, most end-of-life care decisions in this country are costly and haphazard. In contrast, Grand Junction patients are encouraged to plan ahead for end-of-life care. Retired

⁴⁴ Riccardi, “Grand Junction a Microcosm of Efficient Healthcare”

⁴⁵ Bodenheimer, “Low-Cost Lessons from Grand Junction, Colorado”

⁴⁶ West, “Mesa County Colorado, Health Care: The Best Health Care in the United States”

physicians voluntarily teach community classes about end-of-life care and the usefulness of advanced care directives.⁴⁷ Instead of relying on the intensive care unit at the end of life, most Grand Junction residents utilize the hospice and Palliative Care Center of Western Colorado. These incentives keep dying patients out of the intensive care unit and save the health care system a significant sum of money.

Finally, Grand Junction incentivizes the poor and uninsured to seek care before their health conditions become acute and more costly to treat. Grand Junction's Marillac Clinic was opened in 1988 with a specific mission to serve the most vulnerable members of the community. The Marillac Clinic's stated vision is to welcome "underserved people" and to provide "compassionate, innovative, and essential health care" while taking a "leadership role to promote access to quality health care for all."⁴⁸ Marillac Clinic's doctors and administrators collaborate with members of the Grand Junction medical community including the Mesa County IPA and Rocky Mountain Health Plans to ensure high-quality health care for each patient. Moreover, the clinic offers integrated provider services. For example, uninsured or indigent residents can receive dental, internal, and psychiatric care all on the same day if necessary at an extremely low charge.⁴⁹ But who pays for this care? True to Grand Junction's emphasis on community solutions to community problems, much of the clinic's financing comes from donations. Furthermore, approximately 150 specialists take on referrals from the Marillac Clinic on a volunteer basis.⁵⁰ These volunteers are recognized in a community-wide newsletter. Small acts of recognition incentivize more providers to volunteer their services. The benefits of the Marillac Clinic are clear. Poor and uninsured patients alike are able to receive comprehensive

⁴⁷ West, "Mesa County Colorado, Health Care: The Best Health Care in the United States"

⁴⁸ "Our Beliefs," *Marillac Clinic*, <http://marillacclinic.org/about>

⁴⁹ Nichols et al., "Grand Junction, Colorado: A Health Community that Works"

⁵⁰ *Ibid.*

health care services before their conditions worsen and they must utilize costly emergency care. Moreover, by avoiding charity care in the emergency room, St. Mary's and Community Hospital do not have to shift costs to private payers. Grand Junction's various provider and patient-oriented incentives play a large role in ensuring that it remains a high-quality, low-cost health care system.

Grand Junction is an outlier from the United States health care system. It separates itself through its focus on the community as well as communication and collaboration. Moreover, Grand Junction succeeds because it understands that providing high quality, low cost health care is a community-wide challenge. While many health care scholars, politicians, and health care CEOs argue for more individual responsibility in health care, Grand Junction understands that individualistic solutions to community-wide problems are bound to fail. No doubt, the Grand Junction model is progressive and egalitarian (anathema to some), but the facts are clear. The Grand Junction model of health care works and should be replicated throughout the nation.

Geisinger Health System: Innovation and Integration

Introduction

Geisinger Health System is another model for high-quality, low-cost health care that could be replicated throughout the United States. Based in Danville, Pennsylvania, the Geisinger network spans 43 counties, 20,000 square miles, and serves a population of approximately 2.6 million.^{51,52} Unlike Grand Junction, Geisinger covers a largely rural area with a population that is poorer and sicker than the national average.⁵³ Still, Geisinger provides high-quality health care at an affordable price. The Dartmouth Atlas of Health Care reports that 2007 Medicare spending per capita in the Danville Hospital Referral Region was \$7,122. Nationwide, the figure was \$8,682.⁵⁴ In 2007, Medicare spent \$3,878 per capita in the Danville region for Part A and \$3,245 for Part B. The comparable nationwide expenditures were \$4,716 and \$3,965, respectively.⁵⁵ Furthermore, Geisinger's integrated health maintenance organization, Geisinger Health Plans, claims that the Geisinger network has lowered health care spending by up to 7%.⁵⁶ How has Geisinger been able to provide affordable, high-quality health care to a population that is poorer and sicker than most? The answer is a culture that promotes constant innovation and experimentation as well as an attitude that only the best is good enough. Although it serves a population that is in worse health than many other areas, Geisinger Health System is another

⁵¹ Susan Dentzer, "Geisinger Chief Glenn Steele: Seizing Health Reform's Potential to Build a Superior System," *Health Affairs*, 29, no. 6 (2010): 1200-1207

⁵² Ronald A. Paulus et al., "Continuous Innovation in Health Care: Implications of the Geisinger Experience," *Health Affairs*, 27, no. 5 (2008): 1235-1245

⁵³ Ibid.

⁵⁴ "Medicare Reimbursements Per Enrollee, by Race and Program Component," *The Dartmouth Atlas of Health Care*, http://www.dartmouthatlas.org/data/table.aspx_ind=124&loc=117&loct=3&tf=10&ch=35%2c19&addn=ind-124_tf-10_ch-35_132%2cind-124_tf-10_ch-35_133

⁵⁵ Ibid.

⁵⁶ Dentzer, "Geisinger Chief Glenn Steele: Seizing Health Reform's Potential to Build a Superior System"

example of a high-quality, low-cost health system that can offer lessons to policymakers at the national level.

History

The Geisinger story begins with Abigail Geisinger, wife of business magnate George Geisinger. After the death of her husband, Abigail used her inherited fortune to build the George Geisinger Memorial Hospital. Abigail’s vision for the hospital was to “make it the best.”⁵⁷ She relied heavily on Dr. Harold Leighton Foss, Geisinger’s first chief surgeon, to fulfill her vision.⁵⁸ Geisinger and Foss both admired the Mayo Clinic and modeled Geisinger Health System on the Mayo archetype. Like Mayo Clinic, Geisinger Health System is broken into many different departments that are led by a physician-administrator pair.⁵⁹ Each department maintains its own financial budgets and quality control. In addition, Dr. Foss endeavored to create an innovative atmosphere at Geisinger. In his own words, he committed himself to “putting the best medical equipment in the hand of the most skilled medical people.”⁶⁰ Although he retired from Geisinger over five decades ago, his imprint is still felt throughout the entire system. Since his retirement, two other hospitals have been added; one is open only to physicians affiliated with Geisinger Health Plans. The other two hospitals are open to non-Geisinger doctors who practice in the area.⁶¹ Geisinger Health Plans, the insurance company integrated into the Geisinger network, began operations in 1985 and now covers approximately 240,000 people.⁶² Like Grand Junction’s Rocky Mountain Health Plans, Geisinger Health Plans remained a not-for-profit organization even as most other HMOs became commercial business ventures throughout the

⁵⁷ Paulus et al., “Continuous Innovation in Health Care: Implications of the Geisinger Experience”

⁵⁸ “Geisinger History,” *Geisinger*, <http://www.geisinger.org/about/history.html>

⁵⁹ Paulus et al., “Continuous Innovation in Health Care: Implications of the Geisinger Experience”

⁶⁰ Ibid.

⁶¹ Ibid.

⁶² Dentzer, “Geisinger Chief Glenn Steele: Seizing Health Reform’s Potential to Build a Superior System”

1980's and 1990's. Nearly one hundred years after the founding of Geisinger Medical Center, Abigail Geisinger's values remain enshrined throughout Geisinger Health System and the Pennsylvania community it serves

The Model

Geisinger succeeds because of several cultural and organizational factors. First, Geisinger Health System is a not-for-profit, community-based organization.⁶³ Geisinger is not held accountable to investors that live thousands of miles away; instead, Geisinger is held directly accountable to the people it serves. In 2010, Geisinger spent \$9.7 million on community health programs that included education and outreach programs.⁶⁴ It spent another \$184.4 million on care for the elderly and poor not covered by either Medicare or Medicaid.⁶⁵ Geisinger also operates Geisinger Community Health Services (GCHS). GCHS is an entirely not-for-profit service that provides health care to approximately 60,000 patients through several innovative services and programs.⁶⁶ These programs offer care for people at work, social services for the elderly and 24-hour hospice care. Geisinger is able to offer these services because it is a community-based, not-for-profit organization. The first goal of for-profit health care systems is to turn a profit. This arrangement discourages health care systems from investing in long-term or community care because those investments do not offer immediate profits. In short, the market would not allow it. The rest of the Geisinger model is derived from its status as a not-for-profit, community-focused health care service entity.

⁶³ "Caring for Our Community," *Geisinger 2010 Annual Report*, <http://www.geisinger.org/about/2010CommunityBenefit.pdf>

⁶⁴ Ibid.

⁶⁵ Ibid.

⁶⁶ "Geisinger Community Health Services," *2010 Systems Report: Bringing Value to Health Care*, http://www.geisinger.org/about/ar_2010_2.pdf

As does Grand Junction, Geisinger succeeds as a not-for-profit organization in part because of the leverage it holds over its consumers. Since Geisinger is a fully integrated health care network, collaboration and communication flow freely between the providers and the payers. Geisinger Health Plans (GHP), the affiliated insurer for the Geisinger network, covers approximately 30% of Geisinger patients.⁶⁷ Geisinger physicians and administrators refer to that 30% as the “sweet spot” for innovation and experimentation because Geisinger serves as both the provider and payer. Being the provider and the payer for a decent-sized plurality of the population allows the physicians and GHP to experiment with various innovations without being punished by the market. Good ideas can then be expanded to the population at large—if other insurers are willing to participate—and bad ideas can be dismissed without major consequences.

Geisinger’s sweet spot fosters collaboration throughout the network that results in better innovations. Major innovative initiatives begin with a team of Geisinger providers and GHP administrators (and sometimes consumers). The team first asks itself “what realistic care model will most reliably deliver the maximum care value?”⁶⁸ Several teams are then put together to study the clinical literature, financial and delivery incentives, regulatory hurdles, and business models in order to advance the innovation. Finally, the providers and GHP put into place the appropriate payment designs needed to best implement the innovation.⁶⁹ Whereas health care demand, and spending by extension, is driven up by supply with no regard to actual consumer need, Geisinger’s innovations are backed by evidence-based medicine, best-practices, and quality and cost metrics.⁷⁰ Geisinger’s approach to innovation goes a long way to ensure that its initiatives are successful in improving quality and lowering health care spending.

⁶⁷ Dentzer, “Geisinger Chief Glenn Steele: Seizing Health Reform’s Potential to Build a Superior System”

⁶⁸ Paulus et al., “Continuous Innovation in Health Care: Implications of the Geisinger Experience”

⁶⁹ Ibid.

⁷⁰ Ibid.

Finally, Geisinger maintains a series of quality and cost incentives and policies that keep health care spending in check without sacrificing quality. In 1995, Geisinger became one of the first health care systems to implement electronic health records.⁷¹ Electronic records are made available to physicians, GHP administrators, and patients. Geisinger-affiliated physicians are able to access and edit their patients' medical records while non-affiliated referring physicians have read-only access to patient files. Geisinger patients can view their medical records but cannot make changes to them. Patients can also view and pay bills online, set up appointments, view their rights and responsibilities, and even obtain information regarding advance care directives.⁷² Electronic health records are a necessary condition to success for high- quality, low-cost health care systems.

In addition, Geisinger places a high premium on primary care. It maintains a network of 250 primary care physicians and over “1,000 nurse practitioners, physician assistants, pharmacists, and physician extenders” throughout its network.^{73,74} Furthermore, Geisinger cross-subsidizes primary care physicians so they can earn more than they would elsewhere. Geisinger also relies on medical homes to keep people in good health and out of the emergency room. Geisinger's medical homes offer many services including 24/7 access to primary and speciality care, virtual care through patient education videos and the “MyGeisinger.org” personal health record service, as well as nurse coordinators that are spread throughout the Geisinger community.⁷⁵ They also improve coordination and collaboration at the primary and speciality care level for consumers.⁷⁶ As is the case in Grand Junction, Geisinger's medical homes are

⁷¹ Ibid.

⁷² “Patient Tools,” *Geisinger*, <http://www.geisinger.org/patients/index.html>

⁷³ Paulus et al., “Continuous Innovation in Health Care: Implications of the Geisinger Experience”

⁷⁴ Dentzer, “Geisinger Chief Glenn Steele: Seizing Health Reform's Potential to Build a Superior System”

⁷⁵ Ibid.

⁷⁶ Paulus et al., “Continuous Innovation in Health Care: Implications of the Geisinger Experience”

promoted by physicians and GHP alike. Further adding to Geisinger's strong primary care foundation is the expectation that nurses and nurse practitioners practice at the top of their license. This expectation is important because Geisinger relies on nurses and nurse practitioners to provide care for residents in Danville County and throughout the Geisinger community who need help the most.

Geisinger Health System also breaks from the fee-for-service model to incentivize providers to avoid overutilizing health care services and instead focus on keeping their patients healthy. In fact, 800 Geisinger physicians are fully salaried.⁷⁷ Geisinger also experiments with pay-for-performance payment schemes. Under Geisinger's ProvenHealth Navigator program, up to 20% of physician salary is determined by performance.⁷⁸ Geisinger's payment innovations add to its success as a high-quality, low-cost health care.

Abigail Geisinger and Dr. William Foss designed Geisinger Health System with an eye toward innovation and experimentation. Their enduring vision has enabled the Geisinger network to become a positive deviant in the United States—an example to all for how health care could be delivered and financed. Two of Geisinger's most successful innovations, ProvenCare and the ProvenHealth Navigator are worth studying in further detail to grasp how Geisinger provides superior health care at an affordable cost.

ProvenCare & ProvenHealth Navigator

The United States health care system pays doctors the wrong way. Instead of incentivizing prevention and good health, the fee-for-service payment mechanism encourages overutilization of health care services that sometimes lead to poor health outcomes.

⁷⁷ Stacey Burling, "Health Care Cure or Anomaly? Private Health System Touted in PA. Unified Culture Might Not Work in Cities like Phila." *The Philadelphia Inquirer*, October, 18, 2009, http://articles.philly.com/2009-10-18/news/25272810_1_geisinger-medical-care-high-quality-care

⁷⁸ Paulus et al., "Continuous Innovation in Health Care: Implications of the Geisinger Experience"

Few members of the medical establishment would argue against the notion that fee-for-service is a poor financing scheme; however, most health care systems have done little or nothing to reform it. Geisinger is the exception. Geisinger developed the nationally acclaimed ProvenCare program as an experiment to see if fixed-price, bundled payments and pay-for-performance incentives could improve quality and lower costs. The data indicates that ProvenCare has dramatically lowered Geisinger's costs while simultaneously improving health outcomes for its patients. Geisinger's ProvenCare program is a beacon of light for what an efficient and effective U.S. health care system looks like.

ProvenCare began as an experiment designed to “test whether an integrated delivery system could successfully implement an evidence-based pay-for-performance program for coronary artery bypass graft (CABG) surgery.”⁷⁹ The program was intended to identify and implement best practices drawn from evidence-based medicine and medical literature, to develop a financing model that incorporated pay-for-performance facets and fixed payments, and to better involve patients in the care process.⁸⁰ Geisinger physicians and administrators began the experiment by documenting the existing processes for CABG surgery. They found considerable unjustified variation in how patients were cared for before, during, and after surgery. Geisinger's cardiac team addressed this issue by creating a 40-step checklist that drew upon best practices from the American Heart Association and American College of Cardiology's “AHA/ACC 2004 Guidelines Update for CABG Surgery.”⁸¹ They then linked the checklist to a pay-for-performance financing model under which physicians would be financially punished if they did not follow all components of the checklist. The Geisinger team took another step away

⁷⁹ Alfred S. Casale et al., “ProvenCare: A Provider-Driven Pay-for-Performance Program for Acute Episodic Cardiac Surgical Care,” *Annals of Surgery*, 246, no. 4, (2007): 613-623

⁸⁰ Ibid.

⁸¹ Ibid.

from the fee-for-service model by bundling all the payments for CABG surgery into one fixed price. In other words, instead of the anesthesiologist charging a patient for his work, the surgeon charging a patient for surgery, and the post-operative team charging a patient for post-operative care, the entire team would be paid a fixed amount.⁸² The Geisinger team also implemented a pay-for-performance component in the ProvenCare program in the form of a 90-day surgery warranty. Put simply, the warranty guarantees that if a patient is readmitted to the hospital or suffers complications, Geisinger will not charge the insurance company for treatment.⁸³ This aspect of the ProvenCare program was intended to realign the perverse incentives that often result in subpar care. The final component of the ProvenCare experiment was the implementation of a patient compact for all CABG surgery patients. The patient compact emphasizes the patient's roles and responsibilities in achieving positive health outcomes. Below is the patient compact that was used in the original ProvenCare study. The compact is worth quoting in its entirety as a way to illustrate its comprehensiveness:

COMMITMENT TO COMMUNICATE AS A TEAM

- I will alert my heart surgery team when I don't understand something, when anything worries me, or if anything unexpected occurs, knowing that my heart surgery team will work with me until I am satisfied.
- I will discuss all of my current medications, non-prescription products, vitamins or herbs as well as all of my current and past medical problems, recognizing how important this information is in guiding my care and making me safer.

COMMITMENT TO INVOLVE MY FAMILY AND LOVED ONES

- I will have a trusted family member or loved-one present with me during my hospitalization and clinic visits - to help support me during my care.
- I will work with my heart surgery team to develop a sensible plan for my transition from the hospital back to my home.

COMMITMENT TO COMPLETE IMPORTANT CARE STEPS

- I will alert my heart surgery team before I stop or start any of my medications so that we can discuss how any change might impact my care.
- I will work with my heart surgery team to develop a sensible schedule for my after-surgery care, follow-up visits and rehabilitation.

COMMITMENT TO IMPROVED HEARTH AND PREVENTION

- I will complete a cardiac rehabilitation program, understanding that it will give me a better, quicker and more lasting recovery.
- I will work with my heart surgery team to stop my use of any tobacco products - forever.
- I will discuss with my heart surgery team the important role that life-long nutrition, weight management, exercise and medications play in keeping

⁸² Ibid.

⁸³ Reed Abelson, "In Bid for Better Care, Surgery with a Warranty," *The New York Times*, May 17, 2007, <http://www.nytimes.com/2007/05/17/business/17quality.html>

my heart healthy. I realize that my decisions and behavior have a significant positive impact on my long-term health. Because I want to become and stay healthy, I fully accept my role as a partner in the ProvenCare Heart Program.⁸⁴

Geisinger's ProvenCare program radically reformed the delivery and financing of health care at Geisinger. Moreover, ProvenCare has been incredibly successful at increasing health care quality while lowering health care costs.

An October 2007 study published by Geisinger physicians and administrators including Glenn Steele, Geisinger's President and CEO, concluded that the ProvenCare program for CABG surgery dramatically improved health outcomes and lowered health care costs. Furthermore, the results demonstrate that best practices can be implemented and maintained for every CABG surgery. Before the ProvenCare experiment began, the cardiac team followed all forty best practice procedures only 59% of the time. After three months, compliance reached 100%.⁸⁵ In other words, every best practice procedure was followed for every CABG surgery patient. Moreover, Geisinger maintained 100% compliance throughout the rest of the ProvenCare experiment.

Clinical outcomes for the ProvenCare experimental group show that evidence-based medicine with pay-for-performance incentives can improve health care quality, and in turn, lower costs. For instance, the ProvenCare experimental group's total length of stay in the hospital was 5.3 days while the control group's length of stay was 6.3 days. One less day spent in the hospital may not seem like a significant difference, but it corresponded with a 5% reduction in hospital charges.⁸⁶ In addition, 91% of the ProvenCare group patients were discharged home while only 81% of the control group patients were allowed to go directly

⁸⁴ Casale et al., "ProvenCare: A Provider-Driven Pay-for-Performance Program for Acute Episodic Cardiac Surgical Care"

⁸⁵ Ibid.

⁸⁶ Ibid.

home.⁸⁷ The study found that difference to be statistically significant. Moreover, the hospital readmission rate—a good indicator of health care quality—was also lower for the ProvenCare group. Although not statistically significant, it is worth noting that readmission to the intensive care unit was 0.9% for the ProvenCare group and 2.9% for the control group.⁸⁸ Finally, complications in the ProvenCare group stood at 4.3% as compared to 5.8% for the control group.⁸⁹ Although the discharge location was the only statistically significant difference, the clinical results do point toward a clear trend in better health outcomes for patients that received CABG surgery under the ProvenCare program.

Geisinger Health System’s ProvenCare model has been successfully adapted to improve health care quality for patients with chronic conditions including diabetes, congestive heart failure, kidney disease, and hypertension. Referred to as ProvenHealth Navigator, Geisinger developed nine best practice procedures for diabetic patients that Geisinger’s health care providers are required to follow. To ensure compliance, 20% of provider compensation is attached to the best practice procedures as well as patient satisfaction and other quality metrics.⁹⁰ Following Abigail Geisinger’s insistence to “make it the best,” Geisinger only declares success when there is complete compliance for every quality metric.⁹¹ In addition to the pay-for-performance component, Geisinger cares for patients with chronic diseases by directly involving them in their own care. Geisinger provides patients with the ability to self-schedule appointments online and to manage their own care through their electronic health records. Patients receive report cards summarizing their progress and the health risks they incur if they do

⁸⁷ Ibid.

⁸⁸ Ibid.

⁸⁹ Ibid.

⁹⁰ Paulus et al., “Continuous Innovation in Health Care: Implications of the Geisinger Experience”

⁹¹ Ibid.

not stay active in their own care.⁹² Although it is too early to make any definitive claims, early studies have found statistically significant improvements in the treatment of diabetes patients as measured by adherence to the nine best practice, evidence-based guidelines.⁹³ If Geisinger is anywhere near as successful with its chronically ill patients as it has been with its ProvenCare participants, health outcomes should rise and consequently lower costs.

Geisinger Health System's spirit of innovation and experimentation in conjunction with its integrated structure contributes to its status as a positive outlier in the United States health care system. Furthermore, Geisinger's reliance on evidence-based medicine and best practices allows it to methodically reengineer health care delivery and financing to achieve better results at a lower cost. Finally, the Geisinger model proves that high-quality, low-cost health care can be delivered to communities that do not have particularly healthy populations. For all these reasons, Geisinger health system remains a shining star that can lead the way for other health care systems in the United States.

⁹² Ibid.

⁹³ Ibid.

Mayo Clinic: “The Needs of the Patient Come First”

Introduction

The Mayo Clinic is recognized throughout the world as the Mecca for high quality, low-cost health care. In 2010, U.S. News and World Report ranked the Mayo Clinic’s Rochester location second on its list of best hospitals.⁹⁴ According to the rankings, Mayo’s Rochester location was ranked first in three out of sixteen specialities and in the top eleven for all sixteen specialities.⁹⁵ Patients travel from all around the world to receive treatment at Mayo Clinic. When the King of Jordan fell ill with cancer, he travelled across the globe to the Mayo Clinic for treatment.⁹⁶ In both 2009 and 2010, Mayo Clinic came out near the top of a study that measured patients’ safety, average length of stay, and patient satisfaction.⁹⁷ Moreover, Mayo Clinic provides top-notch quality health care at an affordable price. The Dartmouth Atlas of Health Care reports that Medicare reimbursements per capita for the Rochester, Minnesota hospital referral region was \$7,206 in the year 2007. (Mayo Clinic dominates the Rochester hospital referral region). The national average was \$8,682 per capita.⁹⁸ Spending for diagnostic, lab, and x-ray services in the Rochester region was \$317 per capita in 2007 while national Medicare spending per capita on the same services was \$511 per capita.⁹⁹ Put another way, Mayo Clinic

⁹⁴ Avery Comarow, “Best Hospitals 2010-2011: The Honor Roll,” *U.S. News & World Report*, <http://health.usnews.com/health-news/best-hospitals/articles/2010/07/14/best-hospitals-2010-11-the-honor-roll>

⁹⁵ Ibid.

⁹⁶ Jamal Halaby, “Gravely Ill King Hussein Returns Home,” *Washington Post*, February 5, 1999, <http://www.washingtonpost.com/wp-srv/inatl/daily/feb99/hussein5.htm>

⁹⁷ “Thomson Reuters Names Mayo Clinic as one of Top 10 Hospital Systems in the Country,” *News Medical*, <http://www.news-medical.net/news/20100625/Thomson-Reuters-names-Mayo-Clinic-as-one-of-top-10-hospital-systems-in-the-country.aspx>

⁹⁸ “Medicare Reimbursement by Race and Program Component,” *The Dartmouth Atlas of Health Care*, http://www.dartmouthatlas.org/data/table.aspx?ind=124&loc=279&loct=3&tf=10&ch=35%2c19&addn=ind-124_tf-10_ch-35_132%2cind-124_tf-10_ch-35_133

⁹⁹ “Part B Medicare Reimbursements for Professional and Laboratory Services Per Enrollee, By Race and Type of Service,” *The Dartmouth Atlas of Health Care*, http://www.dartmouthatlas.org/data/table.aspx?ind=126&loc=279&loct=3&tf=10&ch=35%2c4&addn=ind-126_tf-10_ch-35_134%2cind-126_tf-10_ch-35_135%2cind-126_tf-10_ch-35_136

spends \$194 less for each diagnostic, lab, or x-ray it provides. Mayo Clinic also saves a significant sum of money by avoiding overutilization of intensive care for patients at the end of their life. In 2005, only 8.2% of decedents spent seven or more days in the intensive care unit during the last six months of their lives at the Mayo Clinic. The national average was 14.4%.¹⁰⁰ These quality and cost comparisons indicate that Mayo Clinic is a health care system that performs efficiently and effectively. Mayo Clinic's success is derived from its principle that "the needs of the patient come first."¹⁰¹ This value has enabled Mayo Clinic to cultivate and maintain a culture and business model that is always intended to benefit the patients Mayo serves. The Mayo experience is a guiding light for health care systems throughout the country—and the world.

History

The Mayo Clinic was born through collaboration. Following a catastrophic tornado in 1883, Dr. William Worrall Mayo and the nuns of Saint Francis of Assisi worked together to aid the tornado's victims. Dr. Mayo and the sisters of St. Francis continued their partnership after the disaster. Their collaboration culminated in the opening of St. Marys hospital in 1888. Mayo Clinic has since opened three more hospitals. Rochester Methodist Hospital was acquired by Mayo Clinic in 1954.¹⁰² The remaining hospitals are located in Phoenix, Arizona and Jacksonville, Florida. The Phoenix hospital was built in 1998 and the Jacksonville hospital was built in 2008. The Mayo family also collaborated amongst themselves to create the Mayo organization. Dr. William James Mayo and Dr. Charles Horace Mayo—the Mayo brothers—

¹⁰⁰ "Percent of Decedents Admitted to ICU/CCU During the Hospitalization in which Death Occurred, by Race," *Geisinger*,

http://www.dartmouthatlas.org/data/table.aspx?ind=128&ch=35&loct=3&tf=6&fmt=153&loc=279&addn=ind-86_ch-35_17%2cind-130_ch-35&rfp=0&rus=0

¹⁰¹ "The Needs of the Patient Come First," *Mayo Clinic*, <http://www.mayoclinic.org/needs-of-patient/>

¹⁰² "History of Rochester Methodist Hospital," *Mayo Clinic*, <http://www.mayoclinic.org/methodisthospital/rmhhistory.html>

both worked alongside their father in one of the earliest integrated group practices.¹⁰³ The organization was not officially known as the Mayo Clinic until 1914, when the Mayo brothers opened an outpatient building for patient services. Like the other health care systems that have been studied in this paper, the Mayo brothers converted their clinic into a not-for-profit organization. In fact, the original legal document, signed in 1919, stipulated that “no part of the net income of [the] corporation or of its property or assets upon dissolution or liquidation shall ever inure to the benefit of any of its members, or of any private individual.”¹⁰⁴ The Mayo Clinic retains the Mayo brothers’ values long after their passing. Although the Mayo Clinic has dramatically expanded from one family to over 55,000 affiliated health care providers, the needs of the patient still come first—exactly what the Doctors’ Mayo wanted.¹⁰⁵

The Mayo Culture

More so than the other health systems studied in this thesis, Mayo relies on its unique culture to provide high-quality, low-cost health care. Consequently, this section heavily relies on anecdotes that are intended to illustrate the power of the Mayo culture. The culture of the Mayo Clinic stems from three conditions Dr. William Mayo claimed would have to be met in order for the Mayo Clinic to succeed. The first condition: “continuing pursuit of the ideal of service and not profit” is satisfied by the Mayo physicians and administrators who always place the good of the community before their own self-interest. The second condition: “continuing primary and sincere concern for the care and welfare of each individual patient,” is displayed every time a Mayo Clinic physician or nurse spends extra time with a patient or goes out of his or her way to ensure a patient’s health and satisfaction. The third condition: “continuing interest by every member of the staff in the professional progress of every other member,” is represented by the

¹⁰³ “Mayo Clinic History,” *Mayo Clinic*, <http://www.mayoclinic.org/history/>

¹⁰⁴ Berry & Seltman, 98

¹⁰⁵ “Mayo Clinic History,” *Mayo Clinic*, <http://www.mayoclinic.org/history/>

team medicine approach Mayo Clinic institutes.¹⁰⁶ Dr. William Mayo's three conditions for success have blossomed into a culture that demands perfection in all aspects of care, respect for each other and the institution, teamwork, and volunteerism to meet the needs of the patient.

In Pursuit of Perfection

Mayo Clinic's culture includes an unyielding commitment to perfection in even the most mundane areas of health care. In the eyes of Mayo employees, perfection is necessary in every way in order to meet the needs of the patient. The following story recounted by Dr. Breannan Moore in Dr. Leonard Berry and Dr. Kent Seltman's book, *Management Lessons from Mayo Clinic*, captures the Clinic's obsession with perfection:

As we were walking out of the building at the end of the day, I asked my father, 'what was the most impressive thing you saw today...' He said, 'This back corridor in the lab here...I bet no patients or important dignitaries ever walk along this corridor, right?' I said, 'Yes, you are right.' He then said, 'Look how clean it is. That tells me that the janitors have the right attitude. And if they have the right attitude, probably each layer above them in the organization also has the right attitude. Now that's impressive.'¹⁰⁷

In another case, a Mayo Clinic employee criticized a nurse for yawning as she stepped forward to introduce herself to a patient.¹⁰⁸ The employee explained that she perceived the nurse's yawn to be a signal of boredom or apathy. Transparency further enables Mayo Clinic physicians to aim for perfection. Health outcomes from each Mayo location became open for public viewing in December 2007 at www.MayoClinic.org¹⁰⁹ Furthermore, Mayo Clinic's reliance on

¹⁰⁶ Berry & Seltman, 8

¹⁰⁷ Ibid., 182

¹⁰⁸ Ibid., 35

¹⁰⁹ Ibid., 231

integrated teams and electronic health records mean that any faulty outcomes or unjustified variance in procedure is seen by everyone on the team. Mayo Clinic's high level of transparency provides a strong incentive towards perfecting physician performance.¹¹⁰ Mayo clinicians even seek perfection in the aftermath of a mistake. Having committed an error during a lab test during the day, a technician returned late at night to repeat the test. In most other health care systems she would have repeated the test the next day. But at Mayo Clinic the pursuit of perfection prevails. This pursuit is a pillar in Mayo's mission to best serve the needs of the patient and a major contributor to its success as a high-quality, low-cost health care system.¹¹¹

Respect

Another central tenet of Mayo Clinic's culture is the respect its members have for each other and for the organization. There is a consensus among Mayo Clinic's members that the Clinic carries a mystique that must be upheld at all times. Fearful that new hires at the Scottsdale and Jacksonville locations would not understand or appreciate the Mayo Clinic culture, Mayo established the Mayo Clinic Model of Care in 1998 as mandatory reading for every new hire.¹¹² The Mayo Clinic Model of Care is "defined by high quality, compassionate medical care delivered in a multispecialty, integrated academic institution."¹¹³ The document carries significant weight throughout the entire organization. Dr. David Herman, a Mayo physician, compares the Mayo Clinic Model of Care to a constitution that codifies the principles that guide a country.¹¹⁴ The Mayo Clinic Model of Care is a holy document respected by all its members as the North Star for Mayo Clinic.

¹¹⁰ Ibid., 61

¹¹¹ Ibid., 185

¹¹² Ibid., 26

¹¹³ Ibid., 27

¹¹⁴ Ibid., 28

Within Mayo Clinic's culture is an expectation that each member respect each other no matter their rank or status within the organization. Mayo's members believe that mutual respect is necessary in order to best serve the needs of the patient. Dr. Berry and Dr. Seltman write that "a respectful organizational culture injects esteem into one's work; it underscores worthiness."¹¹⁵ Their words ring true at Mayo. Furthermore, respect for all members allows nurses or lower ranking doctors to ask questions to higher-up physicians in the organization. Consequently, Mayo providers learn more and provide better care for their patients. Respect is also a necessary condition for the team practice model employed by Mayo Clinic. Berry and Seltman observe that physicians and other providers at Mayo Clinic must automatically assume that their colleagues are competent and able before they engage in a team together.¹¹⁶ Without that basic respect, the entire team approach falls apart. In sum, respect for the organization and for each other remains an integral part of Mayo Clinic's culture.

Teamwork

Teamwork is another major component of the Mayo culture that goes hand-in-hand with respect. During an era in which physicians did most of their work individually, Dr. William Mayo advanced the idea that teamwork is essential to success. He asserted that a "union of forces is necessary...to develop medicine as a cooperative science."¹¹⁷ Mayo Clinic members follow his words to this day. In short, teamwork is required at Mayo Clinic.¹¹⁸ The Clinic seeks out providers who work well with others and does not hesitate to pass over a highly qualified candidate if he or she does not appear to fit into the team. Whereas most health care systems form teams in an ad hoc manner; Mayo strives to keep the same teams together. Familiarity

¹¹⁵ Ibid., 58

¹¹⁶ Ibid.

¹¹⁷ Ibid., 22

¹¹⁸ Ibid., 51

within the teams breeds friendship and trust as well as respect.¹¹⁹ The following story shows how teamwork is not only an integral part of the Mayo culture, but also an asset in serving in the needs of the patient:

One of our oncologists called to review some films taken on a patient he saw with metastatic colon cancer to the liver...Then I conferenced in with one of our radiologists to obtain his detailed opinions on some nuances of the images...We then made plans for the patient to have a surgical procedure...I would then install an intra-arterial catheter and pump which the oncologist could access a few weeks after surgery...to reduce the chances of recurrent metastatic cancer in the patient's liver.¹²⁰

This particular story shows how doctors confer and cooperate with one another in order to guarantee the best outcomes possible for their patients. Teamwork at Mayo Clinic is both institutionalized and extemporaneous. For instance, physician-administrator partners are tasked with leading the different departments that make up the clinic. While the physician leader is primarily responsible for patient outcomes, the top administrator must work with the physician to ensure fiscal responsibility and administrative efficiency. Although tensions sometimes arise between physician and administrative leaders, mutual respect and teamwork tend to override any short-term conflicts.¹²¹ Teamwork is also practiced spontaneously by Mayo Clinic physicians. Doctors informally consult with other physicians to best meet the needs of the patient. Although patients usually retain a primary doctor at the Clinic who manages their episodes of care, patients can expect to see other physicians depending on the path of their diagnosis and treatment.¹²²

¹¹⁹ Ibid., 59

¹²⁰ Ibid., 50

¹²¹ Ibid., 103

¹²² Ibid., 50

Rank and title among physicians do not play a large role among the Mayo team. Junior clinicians are expected to work as a team alongside senior clinicians and vice versa. In one situation, one of the most senior surgeons at Mayo Clinic sought a second opinion from a newly hired surgeon regarding a patient's care.¹²³ This level of teamwork is rare in the United States, but at Mayo, it is key to providing high-quality, low-cost health care.

Generosity and Volunteerism

Finally, Mayo Clinic's culture consists of an extraordinary degree of generosity and volunteerism. Mayo clinicians view each patient as a special individual who deserves the maximum amount of attention needed to best serve his or her needs. Like the other values that comprise Mayo Clinic's culture, generosity and volunteerism began with the Mayo brothers. Dr. Hugh Butt, a colleague of Dr. William Mayo, recalls that Dr. Mayo would anonymously donate money to patients so they could afford a private room where they would receive better care.¹²⁴ Physicians and nurses sometimes organize weddings for patients who fall ill before their wedding day. They sometimes arrange birthday parties for patients so that they have something to cheer about. Mayo clinic providers sometimes even organize memorial services and receptions for patients who pass away at the Clinic.¹²⁵ In one extreme situation, a nurse volunteered to take responsibility for an emergency room patient's dog while another nurse sought permission from the local police department to park the patient's truck in a commercial parking lot.¹²⁶ Although these particularly extraordinary instances of volunteerism are not seen every day, Mayo Clinic physicians and nurses go the extra mile for patients on a regular basis. Whereas the average length of a doctor's visit is 15 minutes, it is not uncommon for physicians

¹²³ Ibid., 55

¹²⁴ Ibid., 37

¹²⁵ Ibid., 56

¹²⁶ Ibid., 34

and nurse practitioners to listen to a patient's history for 45 minutes.¹²⁷ In short, Mayo clinicians are ready and willing to volunteer extra time and services for the needs of the patient. This level of generosity and volunteerism, in conjunction with the Clinic's pursuit of perfection, respect, and teamwork, comprise Mayo Clinic's culture.

The Mayo Model

Mayo Clinic's culture is not only an encapsulation of the principles and values that characterize the organization, but also the building blocks of the model that provides high-quality, low-cost health care. For organization and clarity, this paper breaks down the Mayo Model into two subdivisions: technology as well as financing and organizational structure. Furthermore, the Mayo model is special because it has already been successfully replicated. It has expanded from Rochester to Jacksonville, Florida, and Scottsdale, Arizona without sacrificing quality or cost control. Already viewed as one of the best health care systems in the world, the Mayo way offers hope for a better U.S. health care system.

Technology

Of the three health care systems discussed in this paper, Mayo Clinic may be the most successful in utilizing technology to achieve positive health outcomes and eliminating inefficiencies in the delivery of care. Like Geisinger, Mayo Clinic was one of the earliest pioneers of the electronic medical records system. Mayo began the transition to electronic medical records in the 1990's never looked back.¹²⁸ Mayo's electronic medical records offer physicians instant access to pertinent patient information. This level of efficiency is especially important for a physician-led organization that is as integrated and team-oriented as Mayo Clinic. Whereas electronic medical records are convenient to individual doctors who practice separately,

¹²⁷ Ibid., 23

¹²⁸ Ibid., 77

they are absolutely essential to physicians that practice together as Mayo patients often receive care from numerous doctors during a single visit. Electronic medical records make it easier for patients to go from one doctor to the next with little or no delay. Electronic medical records also enable physicians to consult with each other in real time even when they are miles apart from each other.¹²⁹ Electronic medical records also provide patients with quick laboratory results. Throughout most of the United States, MRI or cat-scan results can take hours, or even days. At Mayo Clinic, lab results are posted on the patient's electronic health record within fifteen minutes in emergency situations and between 30 to 90 minutes in non-emergency scenarios.¹³⁰ In total, electronic medical records allow Mayo to transform its culture and values into tangible results for the patients.

Finances and Structure

Mayo Clinic's financial structure greatly contributes to its success as a high-quality, low-cost health care system. Like Grand Junction and Geisinger, Mayo Clinic is an entirely not-for-profit operation; it is held accountable by the patients it serves and the community at large. Consequently, Mayo is heavily dependent on philanthropy to continue its operations. According to Mayo Clinic's 2009 annual report, \$369 million out of \$769 million in funding for research and education programs came from government, foundations, and sources within the health care industry.¹³¹ Furthermore, Mayo's not-for-profit status allows it to better focus on the values that are important to the organization and not just profits. In this vein, Mayo Clinic reported that in 2009, it delivered \$58 million in charitable care for needy patients. Its cost of benefit provided to the community reached \$400 million in education and research. Mayo's total estimated cost

¹²⁹ Ibid., 78

¹³⁰ Ibid., 88

¹³¹ "Investing in Research," *Bringing Light Through Hope and Healing: Mayo Clinic 2009 Annual Report*, <http://www.mayoclinic.org/mcitems/mc0700-mc0799/mc0710-2009.pdf>

of its quantifiable community benefit was \$690.5 million.¹³² Mayo is able to make large investments in the community for two reasons. First, as is the case with Grand Junction and Geisinger, Mayo is partially insulated from the market forces that drive for-profit health systems' revenues and expenditures. Second, the Mayo brand is so strong that it can afford to make costly investments in the community because it expects to be supported by benefactors and other organizations. Mayo's not-for-profit status also enables the Clinic to focus on the long-term health of its residents instead of focusing only on annual profits. For example, Mayo Clinic's Rochester location administered approximately 32,000 H1N1 influenza vaccines across the community in 2009.¹³³ Mayo Clinic continues to provide high-quality health care at an affordable price because of continued investments in the health and welfare of the community. These investments are only possible because of Mayo's status as a not-for-profit organization.

Part of Mayo Clinic's success in providing high-quality, low-cost care arises from a payment scheme under which all physicians and administrators are salaried employees. Mayo Clinic providers have accepted salaries since nearly the beginning of the organization. Mayo Clinic bases its salaries on data from other medical institutions and the marketplace at large.¹³⁴ By using the market as a baseline for salaries, Mayo maintains integrity with regards to what physician specialties are paid. Mayo also institutes policies that prevent provider salaries from spiraling out of control. According to Dr. Berry and Dr. Seltman, "newly employed doctors earn a salary that will, with annual increases, max out in five years."¹³⁵ Mayo providers have bought into the salary system and do not expect to get raises for every additional five or ten years of

¹³² "Community Benefit Summary," *Bringing Light Through Hope and Healing: Mayo Clinic 2009 Annual Report*, <http://www.mayoclinic.org/mcitems/mc0700-mc0799/mc0710-2009.pdf>

¹³³ "Health Care And Wellness," *Mayo Clinic Annual Report to the Rochester Community, 2009*, <http://www.mayoclinic.org/community/pdfs/annual-report-mn.pdf>

¹³⁴ Berry & Seltman, 120

¹³⁵ *Ibid.*, 121

service. Additionally, Mayo Clinic physicians receive raises if they take on leadership positions. Physicians retain their increased salaries even after they leave their leadership posts. Consequently, physician leaders are rewarded higher pensions when they reach retirement.

Mayo's salary model is derived from a culture that emphasizes the needs of the patient and the importance of teamwork. Whereas the fee-for-service model encourages physicians to overutilize services and the capitation model encourages providers to withhold services, salaries encourage providers to focus solely on the needs of the patient and nothing else. Mayo physicians understand that they are not likely to earn as much as other doctors in the field who drive up health care costs by overutilizing services. To them, the patients' needs are always more important than making a profit.

Salaries are also instrumental in promoting the team-oriented atmosphere at Mayo Clinic. Salaries create a sense of equality that allow Mayo physicians to work better with each other. Since most salaries top out after five years, a physician who has worked at Mayo Clinic for thirty years generally earns about the same amount as a physician who has been working at Mayo for five years. Instead of a top down organization based on seniority, senior and junior physicians rely on and work well with one another. Furthermore, Mayo physicians are not pressured to maintain leadership positions because they continue to earn an increased salary even after they step down. Consequently, doctors often rotate in and out of leadership positions. This system allows younger doctors to have a greater stake in the organization and older doctors the opportunity to step down from a position they may no longer wish to hold. In sum, Mayo's salary policies arise from its cultural values while simultaneously reinforcing them.

Mayo Clinic's organizational structure is key to its success as a high-quality, low-cost health care system. As is the case with Grand Junction and Geisinger Health System, Mayo

Clinic is a physician-led organization. John Herrell, a former chief administrative officer at Mayo, sums up the importance of the physician-led structure and its value in producing high quality health care at an affordable price:

Physician leadership does not necessarily mean physician management of everything, but physician leadership is an essential element in the direction of everything...What differentiates Mayo Clinic is the structure that makes the physician accountable for what happens throughout the institution. If the institution fails, the physicians have only themselves to blame.¹³⁶

Since the physicians are directly accountable for the direction and success of the organization, they take a much greater role in the Clinic's direction. Furthermore, the physician-led model fosters teamwork among providers, an essential component to high-quality care. In some ways, physician leadership at Mayo Clinic resembles what health care policymakers and analysts call Accountable Care Organizations (ACO). Many health care scholars believe that if physicians form ACOs, health care quality will rise and costs will fall because of increased efficiency among providers. Mayo Clinic, of course, has long been ahead of the nation in providing integrated care because of its physician-led model.

Mayo Clinic's success as a high-quality, low-cost health care system arises from a set of core values that have been enshrined in the organization since its founding. These values are the building blocks for the Mayo model, which serve to reinforce and strengthen the Mayo culture. This self-reinforcing loop is critical to Mayo's success. By asking itself how it can best meet the needs of the patient before, during, and after each procedure or appointment, Mayo sets itself apart from the rest of the U.S. health care system. Although it seems intuitive that meeting

¹³⁶ Ibid., 102

the needs of the patient should be the first goal of any health care system, Mayo Clinic remains an outlier.

Replication: Can it be Done?

Introduction

Grand Junction, Geisinger Health System, and Mayo Clinic all boast efficient and effective health care because each has built and maintained a culture that promotes high-quality health care at an affordable price. The culture is the product of core values that all three organizations share. All three health systems value themselves as not-for-profit, community-oriented organizations. They all value long-term care over short-term profits. They also value communication and collaboration amongst providers and payers to improve patient outcomes. Finally, all three organizations value innovation and experimentation as a way to make care more effective and efficient. These values are the pillars of a culture that demands excellence and efficiency in health care. Each organization's values and culture, is expressed in a tangible model that best fits each health system. Although the models may vary, Grand Junction, Geisinger, and Mayo all succeed because they share similar values and a culture that places high-quality, low-cost care as their first priority.

But what can be done to encourage more health care systems in the United States to construct a culture that shares the same values as Grand Junction, Geisinger, and Mayo Clinic? Fortunately, there is reason to believe that these health care systems can be replicated. At the macro-level, the federal government's role as the largest purchaser of health care in the United States affords it incredible leverage in the health care marketplace. The government has and will continue to dramatically shape the U.S. health care system. For instance, certain policies within the Patient Protection and Affordable Care Act are specifically designed to align incentives throughout the U.S. health care system. These policies have the potential to fundamentally alter the way health care is delivered and financed.

However, the government alone cannot use its heavy hand to reproduce high-quality, low-cost health care systems. In fact, many physicians resent government intervention into their practice. The truth is, while government can create incentives and penalties, it cannot create values and culture. Although the government can push providers in a certain direction, providers and administrators are responsible for developing and nurturing the culture of any health care system. But how does an individual or a group build culture, much less a culture that values high-quality, low-cost health care? After discussing this question with Dr. Michael Pramenko of Grand Junction, Dr. Meg Horgan: Vice President of Geisinger's Department of Innovation, and Dr. Kent Seltman of Mayo Clinic and author of *Management Lessons from Mayo Clinic: Inside One of the World's Most Admired Service Organizations*, the answer became clear. Two conditions must be met in order for a health care culture that values effectiveness and efficiency to succeed. First, there must be a mission statement or vision that clearly upholds high-quality, efficient care as a health care system's chief purpose. Second, a strong leadership structure is necessary to ensure that this vision is met. The possibility for a health care culture that demands excellence is only possible if these two conditions are met. Finally, it is worth noting that the role government plays in replicating high-quality, low-cost health care systems and the role doctors and administrators play are not mutually exclusive. In fact, it is likely that successful replication includes both government policies and culture building from the ground up.

Government

The Patient Protection and Affordable Care Act includes several provisions that will foster replication of high-quality, low-cost health care systems. One of the most significant provisions is found under Section 1322. The section is summarized by the Congressional Research Service:

Sec. 1322... requires the Secretary [of Health and Human Services] to establish the Consumer Operated and Oriented Plan (CO-OP) program to foster the creation of qualified nonprofit health insurance issuers to offer qualified health plans in the individual and small group markets. Requires the Secretary to provide for loans and grants to persons applying to become qualified nonprofit health insurance issuers. Sets forth provisions governing the establishment and operation of CO-OP program plans.^{137,138}

Put simply, Section 1322 states that the government will offer loans and grants to people who are interested in setting up not-for-profit insurance companies. These health insurance issuers would be similar to Rocky Mountain Health Plans—Grand Junction’s efficient and effective health insurance company. The provision goes on to state that the government will give priority to applicants that utilize integrated care models.¹³⁹ In addition, the section requires that applicants must “operate with a strong consumer focus, including timeliness, responsiveness, and accountability to members.”¹⁴⁰ The law appropriates \$6 billion to implement this program.

Section 1322 is a key example of how government can push health care providers and administrators to move in a certain direction. The law explicitly states the government’s preference for integrated, not-for-profit, consumer-oriented entities to be involved in the insurance market. Dr. Pramenko cited Section 1322 as a key to aligning the incentives that currently plague the United States health care system. He noted that there are people out there—some doctors, some not—that will use Section 1322 as a means to enter the health insurance

¹³⁷ U.S. Library of Congress, *Summary of H.R. 3590: Patient Protection and Affordable Care Act*, THOMAS Congressional Database, <http://thomas.loc.gov/cgi-bin/bdquery/D?d111:l:/temp/~bdnwac:@@D&summ2=m&/home/LegislativeData.php?n=BSS;c=111>

¹³⁸ Dr. Michael Pramenko was very helpful in pointing me toward this provision

¹³⁹ *Patient Protection and Affordable Care Act*, Public Law 111-148, 111th Cong., 2nd sess. (March 23, 2010), § 1322.

¹⁴⁰ *Ibid.*

market. “Ideally,” he remarked, “Section 1322 could help finance electronic health records and fund population health projects like Rocky does in Grand Junction.”¹⁴¹ Although the government cannot replicate high-quality, low-cost health care systems on its own, Section 1322 under the Affordable Care Act is a strong attempt to shift the trajectory of the U.S. health care system.

The Patient Protection and Affordable Care Act also encourages the development of Accountable Care Organizations (ACO) as a way to improve the quality of care while lowering health care costs. ACOs are broadly defined as a group of doctors and hospitals that shares responsibility for providing a full range of care to consumers.¹⁴² Section 3022 under the Affordable Care Act calls on the Secretary of Health and Human Services to do the following:

The Secretary [of Health and Human Services] shall establish a shared savings program...that promotes accountability for a patient population and coordinates items and services under parts A and B [of Medicare], and encourages investment in infrastructure and redesigned care processes for high quality and efficient service delivery.¹⁴³

The Medicare shared savings program is designed to incentivize providers and payers to form Accountable Care Organizations. If an ACO meets certain quality and cost metrics, the organization will receive payments from the shared savings fund. However, if the ACO does not meet these metrics, it must absorb the costs associated with forming the ACO. Furthermore, the Affordable Care Act requires that ACOs include a sufficient number of primary care ACO

¹⁴¹ Dr. Michael Pramenko, interview by author, Richmond, VA, March 28, 2011

¹⁴² Jenny Gold, “Accountable Care Organizations, Explained,” *National Public Radio*, January 28, 2011, <http://www.npr.org/2011/04/01/132937232/accountable-care-organizations-explained>

¹⁴³ *Patient Protection and Affordable Care Act*, Public Law 111-148, § 3022

providers for the total number of Medicare enrollees serviced by the program.¹⁴⁴ The fusion of incentives for integration and accountability with a mandate for a strong primary care foundation within any ACO exemplifies the power government has to replicate the models that characterize high-quality, low-cost health care systems.

The concept behind Accountable Care Organizations and Section 3022 is that health care can be provided more efficiently and effectively if providers work together to provide care and if they are together held accountable for the cost of care. The goal is that ACOs will incentivize providers and hospitals to integrate their services, fostering teamwork and efficient care. The Mesa County Physician Independent Physician Association is a prime example of what an ACO looks like. Instead of physicians practicing individually and being accountable only to themselves, Mesa County IPA collaborates and shares financial rewards as well as risk. Supporters of Accountable Care Organizations cite Grand Junction, Geisinger Health System, and Mayo Clinic as models for how ACOs can improve the quality of care while simultaneously reducing costs.

Already, there is evidence to indicate that the government's shared savings program has been successful in pushing health care providers, administrators, and insurers toward integration and accountability. Although the program does not begin until January 2012, National Public Radio (NPR) and Kaiser Health News asserted that "hospitals, doctors and insurers are all vying to run ACOs."¹⁴⁵ Kelly Devers, a senior fellow at the Urban institute, told NPR that health care providers and other players in the field are very interested in forming ACOs because the law intentionally leaves the language of the law very vague. The perceived flexibility appeals to people interested in forming ACOs because they see an opportunity to use the Affordable Care

¹⁴⁴ Ibid.

¹⁴⁵ Jenny Gold, "Accountable Care Organizations, Explained"

Act to penetrate the health care market without being micromanaged by the government.¹⁴⁶ Large commercial insurance companies have also expressed interest in forming Accountable Care Organizations because they already collect health information on patients that could be used to coordinate and improve the efficiency of care.¹⁴⁷ In sum, the government's incentives and mandates are extremely influential in the battle to replicate high-quality, low-cost health care centers.

Culture Building from the Ground Up

Although the government maintains significant sway over the direction of health care in this country, effective and efficient health care systems cannot be replicated unless there are dedicated people to build the systems from the bottom up. Moreover, they must construct a culture that emphasizes low cost, quality care. The first, and often overlooked, condition necessary to establish a culture that values high-quality, low-cost care is to develop a mission statement or vision that serves as a foundation for everything the health system does. For instance, every procedure at Mayo is the product of its mission statement, "the needs of the patient come first." Geisinger is dedicated to "enhancing quality of life through an integrated health service organization based on a balanced program of patient care, education, research and community service."¹⁴⁸ Finally, Grand Junction's St. Mary's Hospital promises to, "in the spirit of the Sisters of Charity, reveal God's healing love by improving the health of the individuals and communities...especially those who are poor and vulnerable."¹⁴⁹ The common theme among these three mission statements is a commitment to the patient and the community. Some may argue that all health care systems share this commitment, but a brief review indicates

¹⁴⁶ Ibid.

¹⁴⁷ Ibid.

¹⁴⁸ "Geisinger Mission, Vision & Values," *Geisinger*, <http://www.geisinger.org/about/mission.html>

¹⁴⁹ "Our Mission," *St. Mary's Hospital: The Regional Medical Center*, <http://www.stmarygj.com/body.cfm?id=14>

otherwise. One need only look to McAllen, Texas, one of the most expensive health care regions in the United States, to see that the needs of the patient do not always come first. Gawande's landmark article, "The Cost Conundrum," argues that certain health care systems including the one found in McAllen, Texas are driven by profits and entrepreneurial spirit instead of low-cost, quality care.¹⁵⁰ McAllen's Doctors Hospital at Renaissance's vision makes this disparity easy to see. According to its website, the hospital's vision is to "become the premiere Hospital of South Texas and leaders in the health care industry, addressing all health care needs of our community while eliminating the need to seek health care services outside of our region."¹⁵¹ Unlike Grand Junction, Geisinger, and Mayo, Renaissance's vision emphasizes being a leader in the industry and dominating the South Texas health care market. Providing high-quality, efficient care does not appear to be a primary goal. McAllen Medical Center does not even appear to have a mission statement on its website. However, the gift shop locations are easily located on the hospital's homepage.¹⁵² Also easily locatable were the different "advantage programs" available to McAllen residents. Advantage programs offer discounts at hospital dining rooms, gift shops as well as quicker registration into the emergency department. Having concluded this brief survey, there is no surprise why McAllen's costs are so high. Unless a health care system incorporates high-quality, low-cost care as its core values, it cannot replicate the success found at Grand Junction, Geisinger Health System, and Mayo Clinic.

Mayo Clinic's own attempt at replication further underscores the necessity of a clear vision that emphasizes high-quality, low-cost care. Dr. Kent Seltman acknowledged that it took ten years for the Jacksonville and Scottsdale locations to operate as well as Mayo Clinic at

¹⁵⁰ Atul Gawande, "The Cost Conundrum," *The New Yorker*, June 1, 2009, http://www.newyorker.com/reporting/2009/06/01/090601fa_fact_gawande?currentPage=all

¹⁵¹ "About us," *Doctors Hospital at Renaissance*, http://www.dhr-rgv.com/?page_id=82

¹⁵² "McAllen Medical Center," *South Texas Health System*, <http://www.southtexashealthsystem.com/Facilities/McAllen-Medical-Center>

Rochester. Dr. Seltman reasoned that the secondary locations were not immediately successful because they did not have a clear strategy. There was also confusion as to how closely Jacksonville and Scottsdale would work with Rochester. Eventually, the Mayo leadership recognized the problem and created a single governing board to operate all three locations instead of relying on three separate governing bodies.¹⁵³ The leadership also made clear that the three locations would collaborate instead of competing with one another.¹⁵⁴ Shortly thereafter, the Jacksonville and Scottsdale locations became as effective and efficient as the original Mayo Clinic.

Even with a vision that promotes high-quality, low-cost care as its primary values, a health system still needs to have a strong leadership structure in place to succeed. Dr. Meg Horgan of Geisinger Health System was particularly adamant in her assertion that a strong leader or group of leaders is necessary to create a high-quality, low-cost culture. She claimed that “leadership has to have the right vision, be consistent with that vision, allocate resources to support direction, align goals, and reward people for reaching those goals.” She repeated, “You must have the right leadership.”¹⁵⁵ She spoke on how Dr. Glenn Steele, President and CEO of Geisinger Health System, became Geisinger’s leader after a failed merger with Penn State Hershey Medical Center and immediately rebuilt the culture of the organization. He brought in eight new physician leaders and built the organization from the ground up with his vision for high-quality, low-cost health care. Without his leadership and adherence to Geisinger’s mission, innovations such as ProvenCare would be impossible. In conclusion, a strong leadership structure is absolutely necessary to ensure that a health system can successfully replicate a culture that values high-quality, low-cost care.

¹⁵³ Dr. Kent Seltman, interview by author, Richmond, VA, April 1, 2011

¹⁵⁴ Berry & Seltman, 202

¹⁵⁵ Dr. Meg Horgan, interview by author, Richmond, VA, April 14, 2011

Conclusion

Challenges

This thesis studies three high-quality, low-cost health care systems that must be replicated if this country is to truly reform its health care system. Although there is good reason to be optimistic that these models can be replicated, challenges remain. Perhaps the most difficult challenge facing replication of these health systems are geographic differences with regards to physical location and population health. Grand Junction, Geisinger, and Mayo Clinic's Rochester site are all located in relatively rural areas. Consequently, these organizations tend to dominate the regions they serve. For instance, St. Mary's hospital provides 85% of the care in Grand Junction.¹⁵⁶ Urban regions such as New York and Miami are already saturated with many competing health care systems. Replication into these areas would certainly be a challenge for a not-for-profit community health system that values patient care over profits. A further challenge to replication is the heterogeneity of populations. For example, although Geisinger serves a population that is sicker, poorer, and older than the national average, it still serves a relatively homogenous population. Jeffrey Kluger writes that Geisinger can better serve its patients because it serves a population with a "predictable range of ills."¹⁵⁷ Even if a health care system values high-quality, low-cost care, replicating its success into different geographic regions would be a challenge.

Another serious challenge to the replication of high-quality, low-cost health care systems are antitrust regulations. The Federal Trade Commission and Department of Justice walk a fine line between allowing health care organizations to integrate and collaborate and

¹⁵⁶ Dr. Pramenko, interview by author

¹⁵⁷ Jeffrey Kluger, "A Healthier Way to Pay Doctors," *Time*, October 26, 2009, <http://www.time.com/time/magazine/article/0,9171,1930501-3,00.html>

enforcing antitrust regulations to prevent monopolies from taking hold of the health care market.¹⁵⁸ This problem is not new. The FTC filed suit against Mesa County Physicians IPA and Rocky Mountain Health Plans in the mid-1990's, charging that the level of collaboration between the provider group and insurance company was anticompetitive and could drive up health care costs. Fortunately, the FTC found that contrary to driving up costs, the level of collaboration between Mesa County IPA and Rocky actually reduced health care spending.¹⁵⁹ Still, there is reason to worry that the FTC will go after Accountable Care Organizations. Some worry that ACOs will grow to the point where they employ most of the physicians as well as the insurers in a given area. Theoretically, this growth could lead to anticompetitive behavior in the market.¹⁶⁰ It is essential that as the Affordable Care Act is implemented and integrated models are replicated throughout the country that safeguards be put into place so collaboration is not mistaken for anticompetitive behavior.

Another significant barrier to the replication of high-quality, low-cost health care systems is the relationship among providers as well as the relationship between providers and payers. At Grand Junction, Geisinger, and Mayo Clinic, these relationships are usually positive. Unfortunately these positive relationships are the exception, not the rule. Replication of these health care systems is contingent on improving trust among physicians and between physicians and insurers. Currently, many doctors enjoy their autonomy and have no interest in collaborating with other physicians.¹⁶¹ Furthermore, the U.S. health care system encourages doctors to practice individually, as they are likely to earn more profits doing so than if they were to take part in a team model of medicine like Mayo Clinic. Improving the relationship between

¹⁵⁸ Dr. Michael Pramenko, interview by author

¹⁵⁹ Nichols et al., "Grand Junction, Colorado: A Health Community that Works"

¹⁶⁰ Jenny Gold, "Accountable Care Organizations, Explained"

¹⁶¹ Burling, "Health Care Cure or Anomaly? Private Health System Touted in PA. Unified Culture Might Not Work in Cities like Phila."

providers and payers may be even more complicated. The commercial insurers that dominate the market are often cautious of physician innovations or any outside-the-box thinking because they want to protect their profit margin. In the highly competitive insurance market, no insurer wants to take the first step to change the current model. When asked why commercial insurers were not participating in Geisinger's ProvenCare or PersonalHealth Navigator programs, President and CEO Glenn Steele had this to say:

I think they're [commercial payers] worried that to change their transactions just for us wouldn't make sense or earn dollars for them. Many of them have done very well in the old-fashioned way, and it's really hard to change if you've done well in that manner."¹⁶²

Insurance companies cannot be expected to participate in new models of care unless there is a significant amount of trust between providers and payers. Ideally, providers and payers would form integrated organizations as is the case with Geisinger. However, the current health care landscape is far removed from that ideal. The move toward replication of high-quality, low-cost models must involve trust-building before full integration is even possible.

A Roadmap for Health Care

The future of American health care remains murky at best. A year has passed since the Patient Protection and Affordable Care Act was signed into law, yet countless questions remain. Whether the act will improve the quality of care, reduce costs, or even be rendered unconstitutional are just a few of the pressing questions that, when answered, will impact all Americans. Moreover, political expediency and ideological convictions have made it nearly impossible for policymakers to have a rational discussion about the future of the U.S. health care

¹⁶² Dentzer, "Geisinger Chief Glenn Steele: Seizing Health Reform's Potential to Build a Superior System"

system. With politicians and policymakers seemingly unable to have a serious debate over the health care system, there is cause to be pessimistic about the possibility for positive change.

Ultimately, a country's health care system is the sum of its core values and principles agreed upon by its people. The three health care systems analyzed in this paper were all developed and maintained with core values and a clear vision of how to achieve them. Grand Junction has always valued equal care for all its residents. Geisinger dedicates itself to innovation and experimentation as well as a commitment to evidence and science. Mayo simply states that it will do whatever necessary to best meet the needs of the patient. Why should the United States health care system as a whole be any different? The American people have a responsibility to themselves to at least make these basic preferences clear. Unfortunately, the path-dependent nature of the United States health care system, coupled with unwillingness among politicians to have a serious debate over this country's core values, has led to a health care system with no anchor or direction.

It is my sincere hope that this thesis can serve as a roadmap for Americans of all ideologies. When the politicians lob their rhetorical grenades against each other, let this thesis be a guide for what has worked in the U.S. health care system. When the politicians say that paying for Medicaid enrollees is too costly, let them see that Grand Junction's policy of paying physicians the same amount for taking on Medicaid enrollees as privately insured patients has dramatically increased health outcomes that has, in turn, lowered health care costs. When the physicians lament over the perils of "cookbook medicine," let them see the positive outcomes of Geisinger's ProvenCare experimental group versus the control group. And when naysayers say that the U.S. health care system is beyond repair, let them take note of Mayo Clinic's century-long evolution from a generous family to a three-location, world-renowned health care system.

Grand Junction, Geisinger, and Mayo Clinic are three North Stars in the health care galaxy surrounded by darkness. Let these places be guides as Americans continue to fight for a better health care system. And let these places be guides as Americans continue the elusive search for the soul of American medicine.