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Grand Junction, Colorado:
A Health Community That Works

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Grand Junction, Colorado
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Introduction

Grand Junction, Colorado, is one of the lowest-cost, highest-quality health care systems in the country. A community of about 120,000 people on the western slope of the Rocky Mountains, its health care performance is on par with widely-admired high-performance integrated delivery systems like Mayo Clinic, Geisinger, Kaiser Permanente, the Billings Clinic, Denver Health, and Virginia Mason. Grand Junction does not have an integrated system; most of its health care payers and providers are unaffiliated, just like the majority of the country. Yet, this Colorado community boasts consistently excellent patient outcomes at relatively low cost. As policymakers develop national proposals to improve the quality, efficiency, and sustainability of our nation's health system, it is instructive to study Grand Junction's achievements.

As is true of the majority of markets in the country, Grand Junction has no formally integrated system; most of its healthcare payers and providers are unaffiliated with one another. Yet, Grand Junction engages in a community-wide effort that is far ahead of the curve in implementing a state-of-the-art health information technology network, which enhances care coordination and limits duplication. The community also boasts a high-functioning safety net system that works well with local doctors and hospitals and employs the latest innovations in primary, preventive, and palliative care.

Some news reports suggest that Grand Junction's healthcare performance may be a geographic and historical anomaly, a product of charismatic leadership in a particular time and place that cannot easily be replicated.[1] Questions have been raised about whether Grand Junction's high-quality health system can be sustained because it is subject to the same forces that have pushed the nation's health system to focus on maximizing revenue rather than delivering high-quality, patient-centered care.[2] Some features of Grand Junction's medical community may be unique. But it is also true that Grand Junction demonstrates that with a vision of mutual self-interest any community in the country can create and maintain a high-performance health system.

Grand Junction succeeds because of a deep sense of community, strengthened by data sharing and aligned incentives. The close-knit relationships among the lead actors and institutions can be characterized by their shared commitment to provide efficient, high-quality, and patient-centered care to all residents of Mesa County. Over the years, this has been made possible through aligned financial incentives to encourage the medical culture to focus on the needs of the greater community—and thrive. This commitment has led Grand Junction to become exceptionally cooperative by U.S. health system standards.

This paper aims to explain how this spirit of cooperation, aligned financial incentives, and overriding sense of common purpose combine to lower costs and improve outcomes. We hope that the example of Grand Junction can inspire other communities, including those that do not presently have an integrated delivery system, to discern and implement their own path to achieving far better performance, far more quickly than many voices in the national health reform debate now assume.

Something Special Going On

According to geographic comparison data, something special is happening in Grand Junction. The Dartmouth Atlas of Health Care rates Grand Junction as having one of the most efficient medical communities in the nation. In 2006, average Medicare spending per capita was $5,900, about thirty percent lower than the national average of $8,300 and only one-third that of high-cost areas such as McAllen, Texas.[3] Grand Junction also rates high on measures of medical quality: it has extremely low readmission rates to hospitals[4] and among the very lowest number of average days spent in the hospital by people at the end of their lives.[5]

Table 1 compares the Medicare cost per enrollee in Grand Junction to the averages for Colorado and for the United States across several reimbursement categories. Health spending in Colorado is roughly 10 percent lower than the national average,[6] but even by this higher standard, Grand Junction outperforms the average within Colorado. Only in outpatient services is Grand Junction spending comparable to elsewhere. Spending on diagnostic imaging, laboratories, and x-rays, for example, cost only slightly more than half the statewide average, and only 41 percent of the national average.

Currently available data alone are insufficient to present a complete picture of why a particular community consistently achieves excellent outcomes at relatively low cost. The data demonstrate, though, that Grand Junction residents have sufficient access to necessary medical care; the cost savings are not from withholding needed care.

Table 1: Grand Junction Hospital Referral Region Medicare Spending per Enrollee

Type of Spending	As Compared To	
	CO	US
Total (Part A and B)	78%	71%
Total Part A	79%	70%
Total Part B	77%	71%
Part A, inpatient long stays	53%	52%
Part A, inpatient short stays	75%	62%
Part B, outpatient services	101%	100%
Part B, diagnostic, laboratory, and X-ray services	53%	41%
Part B, medical and surgical services	67%	59%
Part B, medical care	60%	51%
Part B, professional and laboratory services	63%	54%
Part B, surgical services per enrollee	82%	77%

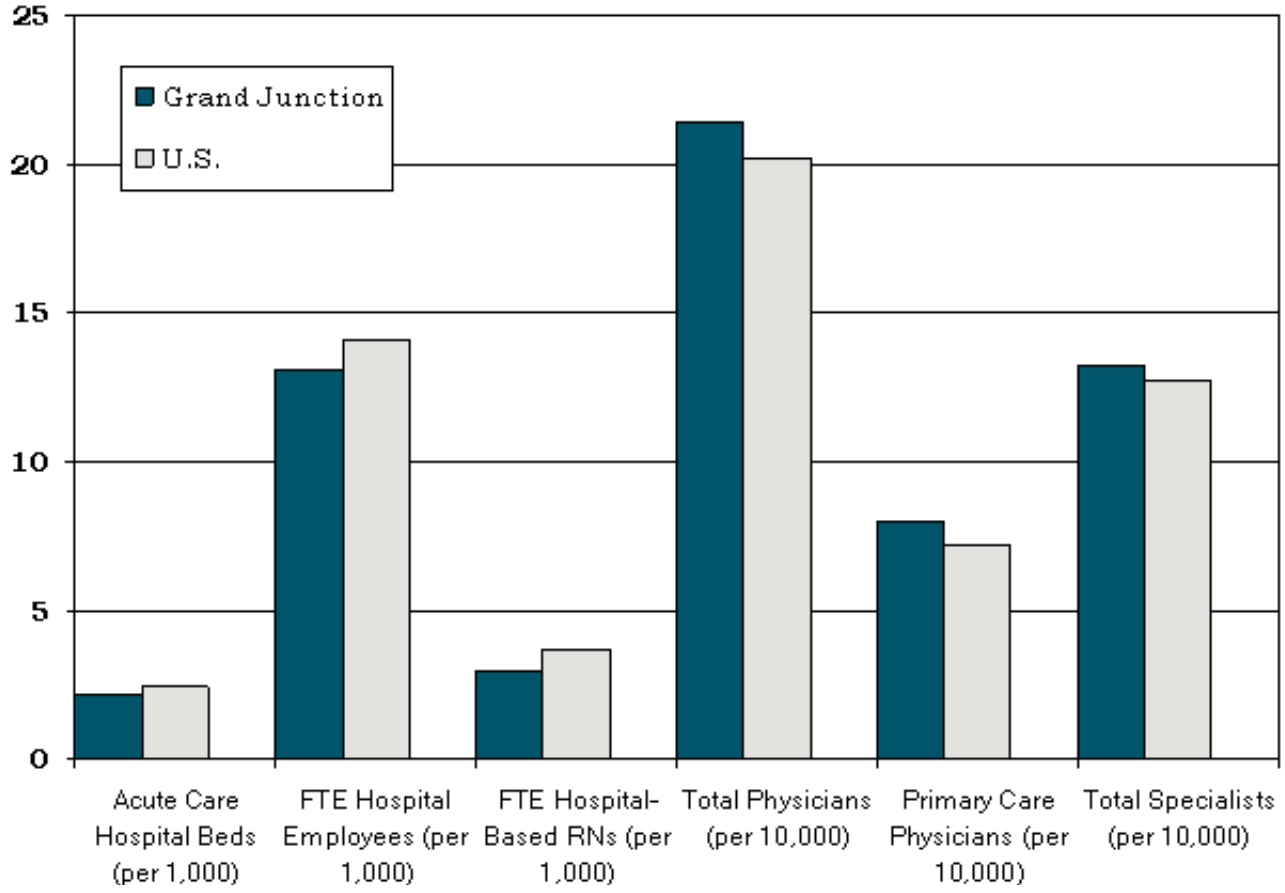
Source: Dartmouth Atlas of Health Care, 2006

On the whole, Grand Junction doctors perform slightly fewer procedures than their peers elsewhere. For example, Grand Junction's rate of surgical discharges is 92 percent of the national average. Overall healthcare costs in Grand Junction are dramatically lower, suggesting that providers deliver care more efficiently and effectively, generating less waste, and providing no more and no less than the care necessary to keep their patients healthy.

Care may be delivered more efficiently in Grand Junction for a number of reasons. For example, the underlying health of residents might be better (which can make treatments less complicated).[7] Lower levels of poverty in a community have been linked to better health given the proclivity and ability of patients to comply with their doctors' instructions.[8] Grand Junction however, does not have a particularly low poverty level.[9] But these factors generally explain less than one-third of observed variation in expenditures.

Figure 1 below shows that while the Grand Junction Hospital Service Area has slightly fewer hospital beds and employees than the national average, it does have more doctors than average. In particular, there are more primary care physicians (111 percent of national average) in Grand Junction.

Figure 1: Grand Junction HSA Hospital Resource and Physician Supply Compared to National Average (2006)



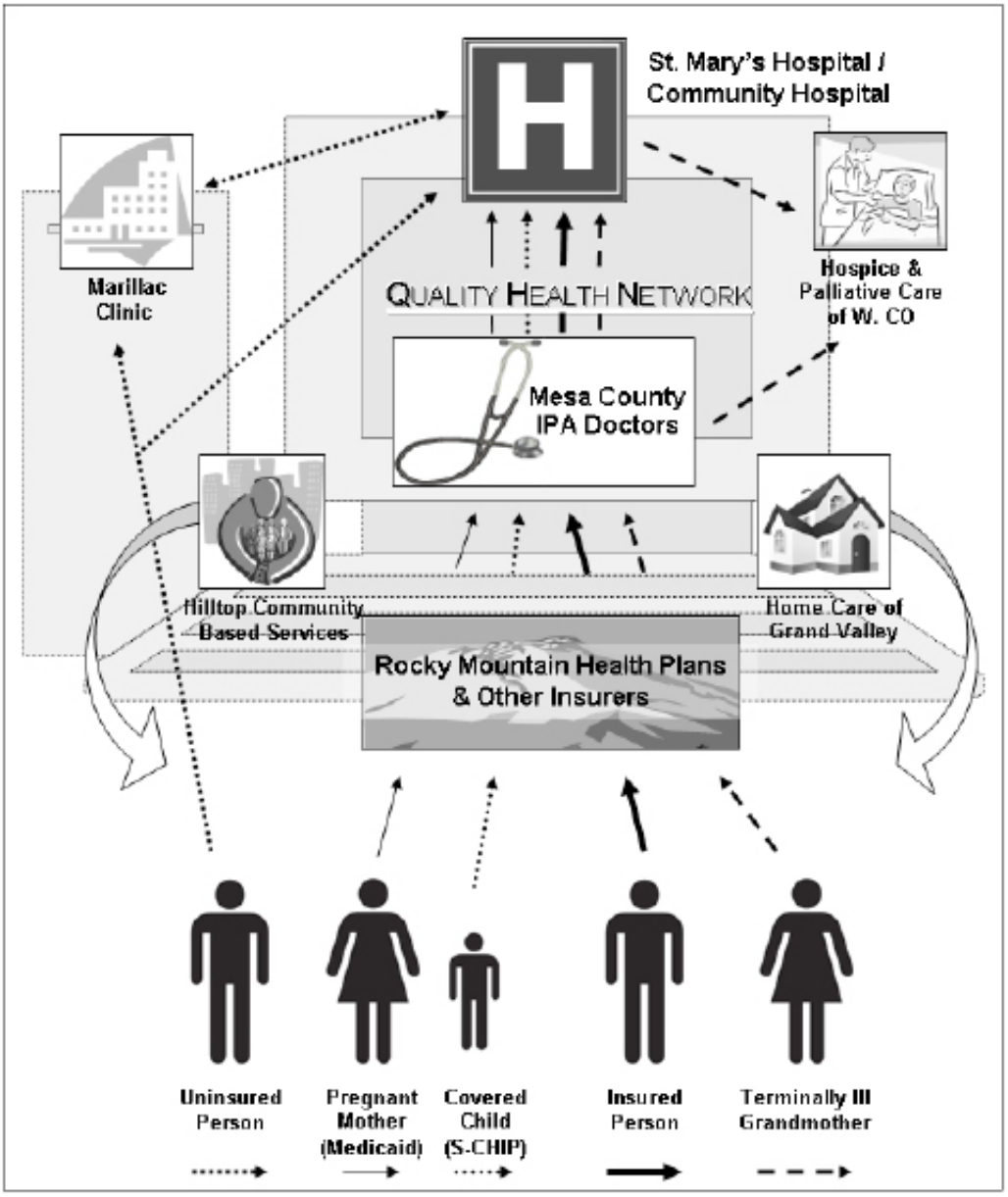
Source: Dartmouth Atlas of Healthcare

Recent research points to the culture, or practice patterns, of the local medical community as a major determinant of whether health care services are delivered efficiently or without regard for cost.[10] Some medical cultures are more focused on maximizing revenue by increasing the utilization of services. Such communities have dramatically higher health spending than those where providers focus on delivering high-quality, but efficient, patient-centered care. The puzzle is why cultures vary so markedly around the country and, indeed, within states.

Note: Marillac Clinic offers medical care exclusively to the uninsured, but provides dental services to Medicaid and SCHIP beneficiaries due to the poor or nonexistent reimbursement for general dental care under these programs.

The culture of Grand Junction encourages innovation and the provision of excellent medical care at relatively low cost. According to Dr. Atul Gawande "they made themselves into what Elliott Fisher of Dartmouth calls an 'Accountable Care Organization.' The leading payer, doctors and hospital system instituted measures to blunt the harmful financial incentives of our system; and they took collective responsibility for better serving the needs of patients."[11] The key to understanding why Grand Junction has such a high-performance health system, therefore, is identifying the lead actors and learning how—and why—they built relationships that strengthened their ability to work together toward a professionally satisfying and financially rewarding medical system that serves its population very well.

Figure 2: Primary Actors in the Grand Junction Medical Community



An Integrated, Innovative, and Informal Community

We describe the Grand Junction health system through the interaction of key institutions, illustrated in Figure 2. We cannot mention all the actors in Mesa County, but we do highlight those most often cited by interviewees as essential to understanding how the local system evolved and how it functions today.[12] These organizations are the physicians' group, the local Health Maintenance Organization (HMO), two hospitals, a clinic for the uninsured, and three local social service organizations providing hospice, prenatal, and home health services, respectively. All of these organizations are non-profit, and most interviewees identified this as a major reason for Grand Junction's success.

Independent Physicians Association

Grand Junction has a strong network of local physicians. Physicians in Mesa County first came together in 1971 as Western Colorado Professional Services, then an offshoot of the county medical society. Later they formed the Mesa County Physicians Independent Practice Association, Inc. ("Mesa County IPA"), which now represents about 85 percent of the region's physicians, approximately 218 doctors. The scope and longevity of the organization affords channels of communication and a level of trust that is critical to Grand Junction's community-wide collaboration on the delivery of health care services.

Describing something as intangible as local medical culture is difficult. It is worth considering, though, why and how the Mesa County IPA maintains a tradition of medical thrift that directs health resources to where they are needed while minimizing misdiagnoses and unnecessary procedures. Three elements seem key: incentives, data sharing, and physician cooperation.

Incentives

For more than 20 years, Mesa County IPA and the largest local health insurer, Rocky Mountain Health Plans (know simply as "Rocky" locally), utilize incentive contracts[13] to reward physicians for quality performance when the overall financial performance of the local, non-profit health plan permitted. Contractual specifics have changed over the years, but the core spirit did not: physicians who performed well on quality metrics would be rewarded, and the rewards would be greater if overall resource use was prudent. Thus, Rocky was among the first health plans in the country to create incentives including both quality and efficiency. The quality metrics continue to evolve.

Data-Sharing

To motivate physicians to provide the best quality of care, Rocky shares relative performance data on diagnosis-related resource use on each physician with all physicians, and more recently the Mesa County IPA followed suit. The data occasionally provoke tension and even withdrawal of a few physicians from Mesa County IPA, but the vast majority approve of the data sharing since it facilitates open and honest communication about many aspects of medical quality and has clearly led to improvement in outcomes over the years. Sometimes, pressure is exerted to ensure that patients receive the right care at the right time. This pressure, however, is applied quietly, using professional courtesy and hard evidence to demonstrate to a physician that he or she is ordering many more unnecessary tests or has poorer patient outcomes than his or her peers.

Data-sharing on pharmaceutical and new medical device information also raises cost-consciousness in Grand Junction. Physicians' incentive contracts have long encouraged them to inquire about the cost of new drugs or new devices, which helps explain why pharmaceutical representatives are a rare visitor in physicians' offices. A local newsletter that began circulating about 20 years ago, now called "Prudent Prescriber,"[14] provides facts about new drugs. It identifies which new drugs have advantages over older ones, but also highlights misleading and sometimes false information in drug company publications. Rocky also provides Epocrates,[15] which is medical software for a hand-held device that physicians may use to check drug interaction, drug prices, dosing, disease, medical dictionary, to its provider network. Epocrates highlights the drugs on Rocky's preferred formulary, so doctors know which ones are more affordable for patients. This information spreads beyond the Rocky network in the Grand Junction community and leads all physicians to prescribe less-expensive, higher-quality drugs.

Cooperation

The relationship between primary care physicians and specialists is another aspect of the positive medical culture in Grand Junction. Primary care physicians are encouraged to practice at the top of their license.[16] Rocky pays them to see their patients in the hospital even if they are under a specialist's care. Rather than being duplicative, the involvement of the primary care doctor brings readmission rates—and total costs—down because follow-up care is more consistent and transitions are smoother. Specialty physicians recognize and support the role of the primary care doctors, and insist that patients find a medical home with a primary care physician. Specialists share their knowledge and recommendations with primary care physicians in hospital hallways or through follow-up communication.

The reason for the cordial and collaborative relationship between Mesa County IPA and the most prominent health plan, Rocky, is no mystery. Like so many

regional HMOs that originated in the 1970s, Rocky was created by the physician members of Mesa County IPA. The physicians who led the IPA believed, as did many contemporaries, that the fee-for-service payment method was imperfect, that it rewarded volume rather than quality, especially when the payment rates per service were set low. The federal HMO Act of 1973 was seen as a vehicle to enable physicians to avoid anticipated underpayment by then burgeoning public insurance plans, Medicare and Medicaid. Prepaid HMO contracts also enabled Mesa County doctors to avoid the incentives toward excessive use that plague so many communities today.[17] The IPA welcomed this opportunity, as well as the benefit of having a local, home-grown vehicle to contract with the federal government for Medicare and Medicaid beneficiaries. With one payer through which many patients could be funneled, Mesa County IPA reduced its own administrative burdens by streamlining the number of plan rules, forms, drug formularies, billing procedures, information requests, and computer links.

Rocky's dual role as the federal contract administrator and a large private insurer led the Mesa County IPA and Rocky to a practical conclusion: paying physicians similar rates for all patients (public or private) would further reduce IPA overhead and help guarantee unfettered access for all residents, especially Medicaid beneficiaries.[18] The basic idea was a win-win—work together to provide high-quality and cost-effective care and allow physicians to reap financial rewards for doing so. This community-wide agreement was also possible because the great majority of doctors participated in the IPA, and because Rocky, as the seventh federally qualified HMO in the country, quickly became the primary option for employer-sponsored plans in the area.

Navigating the complicated space between clinical integration and anticompetitive behavior can be tricky. The Federal Trade Commission ("FTC") in the mid-1990s challenged the degree of Rocky-IPA cooperation as anticompetitive. Ironically, it alleged that it was driving up the cost of medical care in the county. The FTC in 1998, however, in at least partial acknowledgment of the positive outcomes of the Mesa County IPA-Rocky collaborations, issued a consent decree. The FTC believed the agreement would increase third-party payers' access to doctors in Mesa County while preserving the IPA's ability to coordinate on behalf of its members through a risk-based arrangement. More policy attention—through, for example, more explicit safe harbors from antitrust action—on how to foster the right amount and type of collaboration to benefit patients is clearly warranted.

Rocky Mountain Health Plans

As explained above, physician leaders of Mesa County IPA spearheaded the creation of what is now known as Rocky Mountain Health Plans in the early 1970s. Rocky is a non-profit managed care organization, originally competing with the local Blue Cross Blue Shield plan and indemnity insurers like Prudential and MetLife. Though it has lost market share from its peak and faces increasing competition from Anthem Blue Cross Blue Shield,[19] Rocky is still the largest single private payer in the region today, with a 40 percent market share overall.[20] Headquartered in Grand Junction, Rocky is a statewide organization with half a billion dollars in annual revenue and more than 160,000 enrollees. Although for many years it was exclusively an HMO with employer-sponsored, Medicare, and Medicaid products, it now also offers PPO and HSA-eligible insurance products that large (self-insured) employers prefer.

Rocky is one of the main vehicles of collaboration in the Grand Junction health care community. Responsible for at least part of the paycheck of nearly every physician in the area, Rocky can affect the financial incentives that help drive the quality of care across the entire community. Physicians are reimbursed based on the blended fee-for-service (FFS) payment structured for all patients regardless of insurance source. This means physicians have no incentive to cherry-pick private patients, or shun those from lower-paying public programs like Medicaid. Doctors are free to focus on the quality of care they provide to all their patients, and the bonus they can earn from doing so.

The negotiation and implementation of a new payment methodology in the Medicaid contract for this year (FY 2009-10) illustrates this value. Rocky, the IPA, and the state of Colorado used actuarially established guidelines to create incentives for physicians to attain quality metrics established by the state Medicaid program, such as emergency room (ER) utilization and hospital readmission rates. The lesson is important to the sustainability of public programs: doctors across the country refuse to see Medicaid patients, but physicians in Mesa County continue to accept patients supported by public funds.[21] Such innovative models can serve as a roadmap for payment reform and accountability in all public and private insurance arrangements.

Rocky also encourages coordination through regular reviews of physician practice patterns across various quality of care dimensions (process and clinical outcomes). Rocky convenes these reviews to promote preventive care and best practices, but physicians representing each specialty conduct them. Key players share results and take action to improve errant practices. Rocky also hosts monthly reviews of hospitalized patients with physicians caring for them, and encourages primary care physicians to visit their acute care patients in the hospital—and compensates them for this time.

Rocky information flow has turned physicians into partners in cost efficiency. Many physicians nationwide pay no

attention to the total cost of health care services that they order, but do not themselves provide (e.g., hospital charges, diagnostic testing, referrals to specialists, pharmaceutical costs). Over the years in Grand Junction, Rocky has utilized various methods to give this information to physicians so that they may be more cost conscious. For instance, Rocky provides doctors with copies of hospital bills, therapy bills, length of stay data on various procedures and comparative laboratory costs from hospitals and labs. It sends a biannual cost report to each specialty group in its network showing a breakdown of the costs charged to Rocky by each physician, identified by name. The report shows the fees charged, referrals to specialists, drug costs, and how much they cost Rocky. These cost reports act as a kind of specialty group report card. Rocky convenes Medical Practice Review Committees to review the physician practice patterns—a component of the local physician culture described earlier. Peer review is far more effective than bilateral discussions between physicians and health plan officials. Doctors are naturally competitive and do not want to be the least efficient or most out-dated physician in their group. In addition to the natural peer pressure, these cost reports help steer primary care physician referrals away from the most expensive specialists.

Perhaps the best example of the spirit of community within Grand Junction's health community is how cooperation arose when it was least likely to do so—after a lawsuit involving Rocky and the state Medicaid Department. After the trial, Rocky received a judgment from the state for approximately $21 million in 2002, which reflected underpayments from 1996 through 1999. Per Rocky's contracts with the IPA, most of these funds were paid to physician partners. A dispute surfaced over approximately $2.5 million, the interest on the back fees. Rocky officers and Mesa County IPA leaders met to determine how the money could benefit the community. They decided that Rocky, which was already helping physicians install electronic medical record systems in their offices, should create a community-wide electronic database. As a result, the Quality Health Network (QHN) was created as a repository of patient data for the entire medical community. This enabled providers to coordinate and improve the quality of care while keeping costs low. QHN is described in more detail below, but it is another example of how this community made a decision to benefit the whole rather than one or two players. Indeed, QHN permits the physicians to provide better care, while benefiting patients through streamlined office visits, avoiding unnecessary repetitive tests, and receiving better medical care.

Grand Junction's Hospitals

Grand Junction has two hospitals within one mile of each other: Community Hospital and St. Mary's Hospital & Regional Medical Center. Both hospitals are non-profit, play an integral role in the community, and have overlapping medical staff, which facilitates good communications and interactions about patient care.

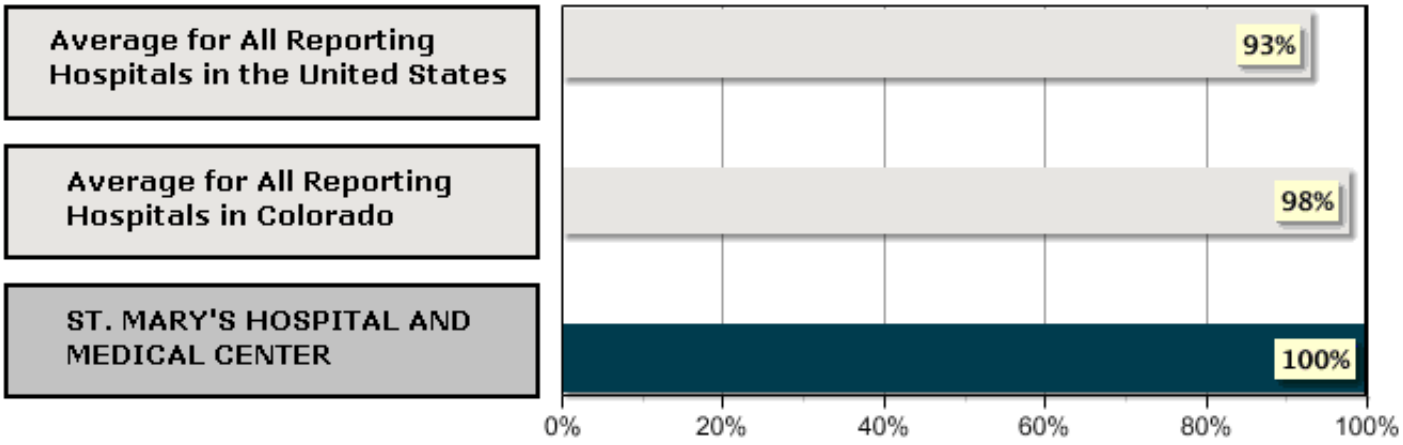
Community Hospital is a full-service, acute-care hospital licensed for 78 beds. As part of the Colorado West Healthcare System, it offers full outpatient diagnostic services and inpatient care for the Western Slope region of Colorado, and for Eastern Utah. An active partner in many community-wide health efforts, Community Hospital contributes to the success of QHN and provides one-quarter of the lab and radiology tests for Marillac patients.

St. Mary's Hospital & Regional Medical Center is the largest hospital in the area with 277 staffed beds, but is determined to remain "right-sized." In 2006, St. Mary's reported some of the lowest Medicare spending per enrollee in the country.[22] While keeping costs low, the hospitals consistently receive some of the nation's highest quality of care scores from Medicare.[23] Specifically, St. Mary's almost always meets and generally far exceeds both national and state averages on quality of care metrics on Hospital Compare, a database compiled by Medicare.[24] For example, the hospital has far greater than average quality in five out of six Heart Attack Process of Care Measures and is rated in the top 10 percent of hospitals nationwide on measures of the percentages of patients given aspirin, beta blockers, and smoking cessation advice at discharge. (see, e.g., Figure 3 below).

Over the years, St. Mary's expanded to meet—but not exceed—the needs of the residents of its region. The goal is to provide an appropriate amount of medical resources—not to expand to the maximum size that the economic resources of the community could support. Unlike hospitals that fight for ever-larger Certificate of Need licenses under the assumption that "a built bed is a filled bed," St. Mary's is loath to grow for the sake of growth. Keeping the number of beds appropriate to the needs of the community prevents the unhealthy incentive to boost volume, thereby keeping health care costs down.[25]

St. Mary's also plays a big part in the cooperative nature of Grand Junction's medical community, collaborating closely with the Marillac Clinic, the region's major safety net clinic, described further below. They are natural partners. Marillac sits on St. Mary's physical campus, just 500 yards from the hospital emergency room. They share the same parent sponsor, the Sisters of Charity of Leavenworth Health Systems. When an uninsured patient is in the ER, the hospital finance staff determines his or her eligibility for treatment at the clinic and notifies Marillac through a special unpublished "hotline." The clinic can then receive the patient as soon as he or she is discharged from the ER, thereby completing a "warm handoff"[26] and delivering prompt care. Again, this collaboration benefits the entire community. Marillac provides primary care and

Figure 3: Percent of Heart Attack Patients Given Beta Blocker At Discharge



treats chronic disease, reducing unnecessary inpatient hospitalizations and ER visits for St. Mary's. Marillac also reduces inpatient stays at St. Mary's because the Clinic is alerted by the hospital to follow-up after discharge through the Quality Health Network (QHN) system, which is described further below. In turn, this lowers the uncompensated care burden on St. Mary's—and lowers the costs the hospital would otherwise pass on to privately insured individuals.

Marillac Clinic

Located on the campus of St. Mary's Hospital in Grand Junction, the Marillac Clinic (Marillac) is an independent free-standing community clinic sponsored by the Sisters of Charity of Leavenworth Health Systems, which owns the hospital. Marillac's mission is to provide primary and preventive health care services for Mesa County's low-income, uninsured population in a manner that respects the individual's dignity. Eligibility criteria include Mesa County residency, household income and lack of insurance. While Medicaid recipients have access to private primary care doctors in the Rocky provider network, few dentists take Medicaid and Child Health Plan Plus (CHP+)[27] patients because reimbursement is so low.[28] As a result, about one-third of Marillac's dental patients are Medicaid recipients.[29] Marillac's Dental Clinic maintains a fully operational electronic dental record called Dentrix. In addition, Marillac is in the process of implementing eClinicalWorks electronic medical records for medical-mental records, to be funded by the Sisters of Charity of Leavenworth. This will integrate physical, mental, and dental records and should be live by July 2010. Simply put, Marillac fills the holes in the health system so everyone is treated and minor health problems do not become major health problems.

At Marillac Clinic, no one is denied care because of inability to pay; patients are charged on a sliding scale. The Colorado Indigent Care Program (CICP) pays some of the costs of the uninsured with incomes below 250 percent[30] of the federal poverty guideline. Marillac also receives grants and institutional and community donations.

Marillac is emblematic of the most important aspects of the health delivery system in Mesa County. Each provider is part of a team-based model of care, and the focus is patient-centered care, not provider competition. Marillac Clinic provides medical, dental, optical, and behavioral care in one "open appointment," which leads to fewer, more efficient visits.

This integrated model of care integrates behavioral health care into the primary care setting. The model focuses on same-day access to services that include individual counseling, family therapy, group therapy, case management, and psychiatric assessment. With an emphasis on disease prevention and education, Marillac patients receive diagnosis, treatment, and follow-up care for a wide range of acute and chronic medical and mental conditions. Both local hospitals offer sliding-scale fees for lab and X-ray services to Marillac patients. Patients can get affordable prescription drugs from the Clinic's on-site dispensary, and can enroll in a medication assistance program for ongoing prescription drug needs.

Marillac has three doctors and three dentists as a part of its staff of 77 full-time employees. In another display of professional cooperation in Grand Junction, 150 specialists also accept a number of Marillac referrals each month. The QHN facilitates the referrals; patients have already been screened by the Clinic, and the specialist can access the electronic medical record on QHN. That means the doctors do not have to depend on the patient's recollection or accuracy about their conditions. Marillac is judicious about using its specialist spots, so as not to abuse the volunteer force. As a result, Marillac follows-up to attempt to ensure the patient went to the appointment. If not, and they have a good reason, Marillac can try to get the specialist to reschedule. Volunteers are recognized in

the Clinic newsletter, a badge of honor that applies peer pressure within the community.

The clinic's board is debating whether to become a Federally Qualified Health Center (FQHC).[31] Qualified FQHCs are reimbursed at higher rates than typical Medicaid providers. Yet, Medicaid patients are treated willingly by Rocky's physicians because of the blended payment system that reimburses physicians similar amounts for Medicaid, Medicare, and privately insured patients. Therefore, Marillac only treats Medicaid patients for dental services. This makes the financial rewards of being an FQHC for Medicaid patients far less advantageous for Marillac than for most community health centers. Furthermore, the fixed FQHC prospective payment system (PPS) system encourages multiple visits and therefore contradicts Marillac's commitment to providing all of the patient's needs in one visit.[32] Marillac's leaders are also concerned that FQHC status would attract Medicaid patients away from Rocky's contracted Mesa County IPA physicians, and thereby undermine the effectiveness of the blended payment system. Again, cooperation is advanced over competition.

Community Service Organizations

Grand Junction's success in keeping health care costs down and the quality of care high is due in part to the role played by several impressive community service organizations that address a wide spectrum of needs from birth—or even before birth—to death.

Hospice and Palliative Care of Western Colorado (Hospice) was formed in 1992 by Rocky, the two hospitals in Grand Junction, and Hilltop Community Resources to provide comprehensive hospice, palliative care and bereavement services in Western Colorado. Today, it is well-known for its innovations in end of life care, including its ability to serve patients with advanced illness and their families in rural areas. Hospice also maintains a state-of-the-art inpatient facility for times when hospice patients cannot remain at home. In 2008, it cared for more than 1,400 patients and managed hundreds of patient transition and grief support groups.

Hospice was formed when three smaller hospices in the county were unable to operate efficiently on their own. While mergers are not always the solution in hospice, in Grand Junction it has proven to be another instance in which consolidation rather than competition appears to have led to superior outcomes. Hospice maintains strong working relationships with local hospitals and physicians, a necessity for coordinating during these sensitive, and sometimes heart wrenching, episodes of care. Too often, people with advanced illness spend more time in the hospital than they and their families would prefer. If the doctors at the hospital work seamlessly with and provide information about appropriate transitions to local hospice and palliative care services, this can dramatically improves the patient's experience.

The provider community in Grand Junction works hard to provide the care that seriously ill patients and their families want—so that the care is neither more nor less intensive or aggressive. Retired physicians teach community classes about advanced directives and urge their audiences to complete them, so that their wishes can be honored if they can no longer express them themselves. Primary care physicians also encourage advanced planning and communication, and assist specialists both in caring for the patient and in talking to families at the appropriate time. Hospice has been a very effective partner. Its delivery of palliative care extends patients' lives, enhances the comfort of the final days, improves the quality of family time together, and reduces costs. This community effort has been important to the success and local support of the health care system in Mesa County.

Hilltop Community Resources manages 24 community-based programs across every age group in support of its mission to "foster self-sufficiency and enrich quality of life." Hilltop is financially supported by individuals, businesses, service clubs, and foundations.

Hilltop offers an impressive array of services, including assistance to victims of domestic violence, residential care for adults with traumatic brain-injury, and two assisted living residences for seniors. An example of Hilltop's contributions is its B4Babies & Beyond program. Created 20 years ago by Rocky Mountain Health Plans, Hilltop took over this service to arrange for prenatal care for low-income women. It serves almost half of pregnant women in the entire county.[33] Hilltop staff identifies a local obstetrician, schedules a prenatal appointment and provides women with information on nutrition, growth and development, and healthy choices during pregnancy as well as information and referrals to community resources.

All B4Babies & Beyond services are free. A large consortium of funders subsidizes this effort, including Rocky Mountain Health Plans, Mesa County IPA, St. Mary's Hospital, Colorado Health Foundation, Colorado Trust, Caring for Colorado, March of Dimes, Mesa County Department of Human Services, and Mesa County United Way—another community partnership. The program improves the health of the women and their babies, and lowers healthcare costs for the community by reducing the need for intensive care services for premature or low birth weight babies. As in the case of the Marillac Clinic, certain cross-subsidies are necessary. As B4Babies is a service of Hilltop, it is integrated into a larger set of social services that are necessary to promote physical and mental well-being in underserved communities.

Figure 4 shows that hospital resource usage by patients at St. Mary's in the last six months of life is substantially lower than national averages, but there are a comparable number of home health agency visits and hospice enrollees. But hospice length of stay is longer in Grand Junction. Far fewer patients die in the hospital (62 percent of the national average).

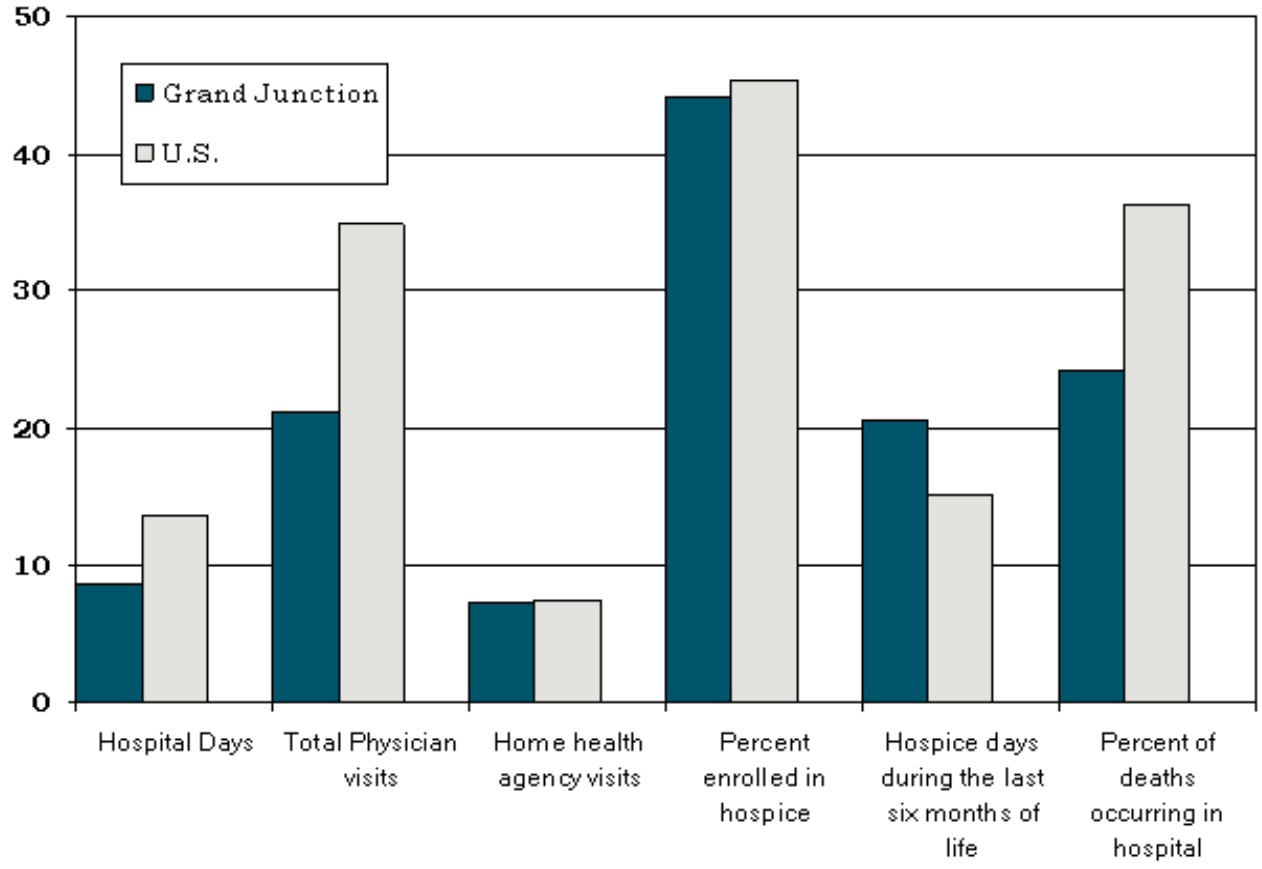
Physicians in Grand Junction understand that caring for patients in their homes with excellent nursing assistance is preferable to hospitalization for most patients, and far less expensive. There are a number of home health agencies in the Mesa County area, but *Home Care of the Grand Valley* is a key player in Grand Junction. Again demonstrating the collective focus of the community, Home Care of the Grand Valley (Home Care) began its work with donations from St. Mary's Hospital, Rocky Mountain Health Plans, and Hilltop Community Resources when St. Mary's Home Care closed in the 1980s—incorporating under its current name in 2002. It offers its services to both the insured and uninsured, serving about 800 clients annually.

The medical professionals in Grand Junction credit home health services like Home Care with the community's access to 24-hour / 7-day-a-week care and reduced hospital readmissions. To assess urgent care needs during off hours, physicians call Home Care nurses and rely on their reports. In addition to nighttime urgent care, Home Care provides nurses, therapists, and aides to the sickest and most vulnerable patients who are recovering from acute episodes or have chronic conditions requiring specialized services. Home Care provides adult and senior care, newborn and pediatric care, rehabilitation and physical therapy, and specialty and high-tech care. It is the only home care agency in the area to offer a "Lifeline Personal Monitoring System," a high-tech monitoring and alert system to assist people who experience frequent falls or who are recovering from surgery or injuries. This allows them to live independently in their homes with fast response if they need help. Typically, Home Care clinicians work with the Mesa County IPA physicians to help their patients recover after premature births, complicated orthopedic surgeries, and strokes.

Quality Health Network

Quality Health Network (QHN) is a nationally recognized regional health information network conceived by local physicians in Mesa County. QHN went live in 2005 and today serves western Colorado and eastern Utah. It is

Figure 4: Last Six Months of Life at St. Mary's Grand Junction as Compared to National Averages (2001–2005)



Source: Dartmouth Atlas of Healthcare

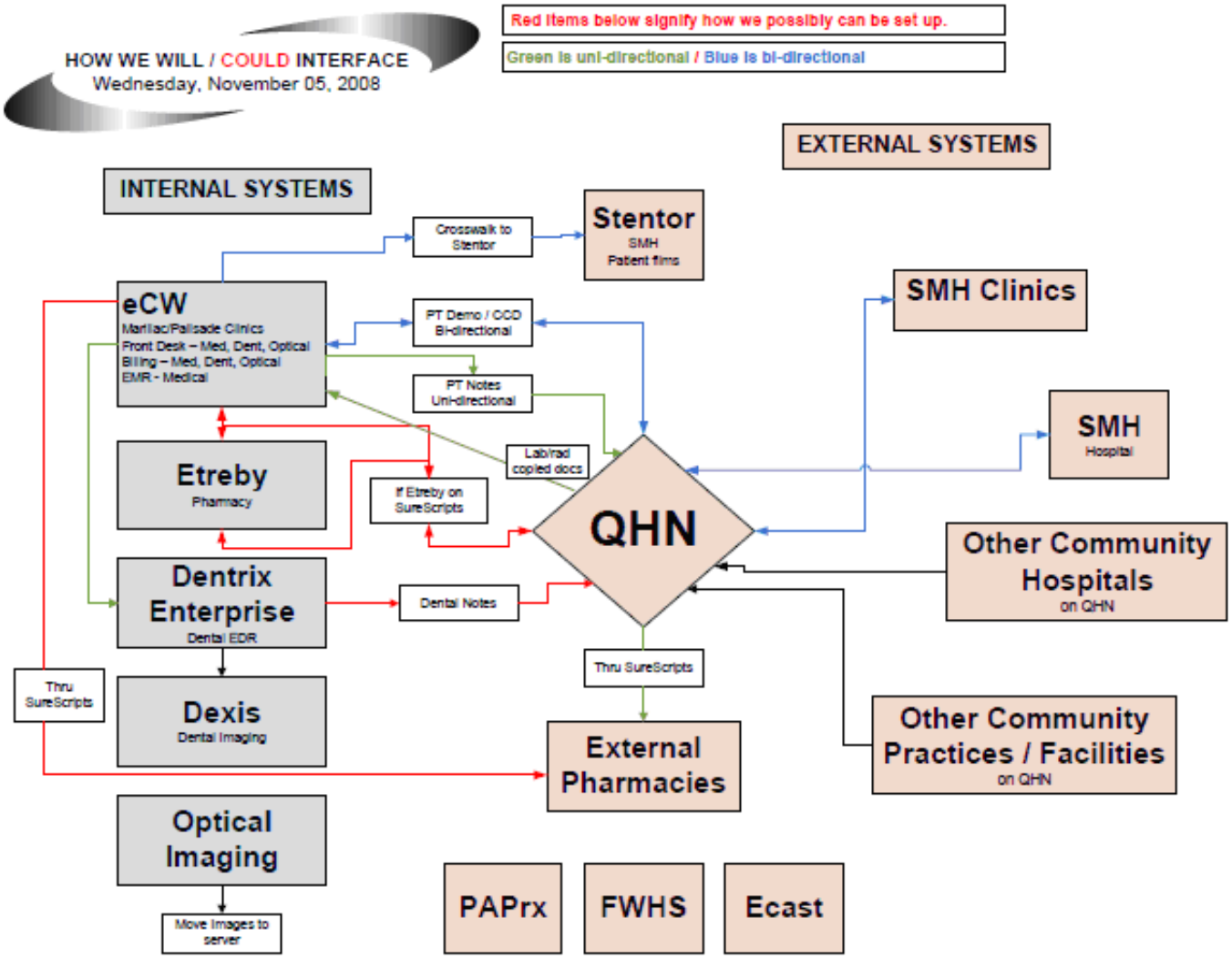
a community-wide effort, with a board of directors and several subcommittees of leaders from all areas of the health care community. About three-fourths of its funding comes from the two hospitals, Rocky, and Mesa County IPA.

QHN started about 15 years ago because Rocky and Mesa County IPA physicians wanted to have one place for information about patients who see specialists or other primary care providers. But it was early in the information age, and the first attempts failed. About three years ago, they tried again. Funding was secured through Mesa County IPA and Rocky, partially from the funds awarded as a result of the 2002 Medicaid underpayment lawsuit. A beta site was selected. Network users include physicians and hospitals, clinics, hospice, long-term care facilities, home care agencies, physical therapy, occupational therapy, schedulers, labs, transcriptionists, case managers, and insurers. 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. In just the first two months of 2009, there were more than three million requests of the server.

In June 2009, western Colorado was granted $4 million to install a QHN system that would connect outlying areas such as Gunnison and Montrose with an Internet database for physicians to access patients' medical histories. The grant is intended to cover the start-up costs of building the network. QHN's next phase will establish more compatibility with physicians' electronic medical records systems to allow information to flow more easily in and out of the QHN repository. QHN also continues to work with health care communities on the Western Slope and eastern Utah to create "neighborhoods" of health information that may then be connected to the larger network.

An example of how QHN works from Marillac Clinic's perspective is illustrated by **Figure 5**.

Figure 5: Quality Health Network Information Architecture



Lessons from Grand Junction for National Health Reform

Grand Junction's health care system excels because of extraordinary collaboration. This did not occur at random or in a vacuum. Effective collaboration results from the tenacious commitment of its key players to a shared vision of community performance, realized through incentives, information sharing, and appreciation of distinct comparative advantages. Many lessons of the Grand Junction experience should inform the national health reform debate.

Lesson #1: Vision *and* incentives are essential to an operational sense of community. Grand Junction's leaders view their own self-interest and the community's interests as congruent. This fosters a profound sense of community capable of withstanding the pressures of more than 30 years of health system and societal change. In addition, aligned incentives help drive providers to work together to best serve patients and the community. Grand Junction's major health players are united by a sprit of cooperation and recognized mutual self-interest. Marillac is supported by St. Mary's; Marillac reduces St. Mary's uncompensated care. St. Mary's, Rocky, and the Mesa County IPA all support Hilltop and B4Babies; universal prenatal care keeps uninsured children from needing expensive neo-natal intensive care services. Mesa County IPA physicians hit quality and efficiency targets to earn bonuses from Rocky. Without this shared vision, there is no real community and according to Proverbs, the people perish.[34] All the major players in Mesa County are non-profit. This likely makes it easier to keep their focus on the vision; however, we can imagine for-profit institutions having similar perceptions under the right circumstances, leadership, and incentive structures.

Lesson #2: Information systems and data sharing are essential for collaboration and trust. The electronic records system and the interoperability provided by the community-financed QHN enable evidence-based collaboration on complex and high-cost cases, across institutions and among clinicians. Mesa County IPA and Rocky have been sharing physician performance data for quite some time, long before electronic records. This tradition helps Grand Junction reduce unnecessary readmissions, in part by better coordinating and managing the care of patients with chronic conditions. In addition, information-sharing allows clinicians to see how their own performance on quality metrics compares to their peers. Once clinicians accept the metrics as valuable, they all want to perform at the highest levels.[35] Peer-to-peer communication based on quality data has great impact. Grand Junction's collaborative culture inculcates high and rising standards constantly because high-quality care processes work for the community as a whole.

Lesson #3: Complementary institutions pursuing their comparative advantages facilitate collaboration. Grand Junction's providers allow specialized complements—Marillac Clinic, Hilltop Community Resources (B4Babies), Hospice and Palliative Care of Western Colorado, and Home Care of the Grand Valley—to focus on specific populations to ensure that all residents get the right care at the right time. This attitude contrasts with other communities where providers compete aggressively for all patients (and the revenue that accompanies them) resulting in the delivery of lower-quality and higher-cost care. The appropriate distribution of care means that high-quality, efficient care by each organization is beneficial to all of Grand Junction's institutions. It allows all of them to focus on what they do best. Key players recognize this essential fact. This is another dimension of the vision of community in practice.

Lesson #4: Primary care is the core of any high performance health system. Throughout a patient's life, primary care physicians in Grand Junction are involved in all levels of treatment. Continuity and collaboration between primary care physicians, specialists, and other members of care teams leads to higher-quality care, better outcomes, and lower costs. Most importantly, team-based care refocuses the delivery system on the patient, not on the provider. Nevertheless, Grand Junction's leaders are concerned by the extreme shortage of new primary care physicians entering the workforce. Primary care plays a central role in every collaborative, high-quality, and efficient health system. Thus, we must support primary care expansion within reform legislation, not as an afterthought. Without increased support for primary care, the miracle of Grand Junction's health system could prove to be but an inspirational memory.

Endnotes

1. Harmon, Gary, "GJ's acclaimed health care system may not be easy to replicate," *Grand Junction Daily Sentinel*, Sunday, June 21, 2009.

2. Atul Gawande, "The Cost Conundrum: What a Texas Town can Teach Us about Healthcare," *The New Yorker*, June 1, 2009.

3. Grand Junction's population is likely somewhat healthier than McAllens, but illness variations explain only about 27% of variation in Medicare spending in the United States. John E. Wennberg, Elliot S. Fisher, and Jonathan S. Skinner, "Geography And The Debate Over Medicare Reform," *Health Affairs* (February 13, 2002): Web Exclusive. Also see, Atul Gawande, "The Cost Conundrum Redux," *The New Yorker*, June 23, 2009.

4. "Bennett cites Colorado examples in Senate plea for health-care reform" *Denver Business Journal*, June 11, 2009; Stephen F. Jencks, Mark V. Williams, and Eric A. Coleman, "Rehospitalizations among Patients in the Medicare Fee-for-Service Program," *N Engl J Med* 360, no. 14 (April 2, 2009): 1418-1428.

5. Decedents at St. Mary's, the largest hospital in Grand Junction, spent only 64% of the national average days in the hospital in the last six months of their lives. Dartmouth Institute of Health Policy and Clinical Practice, *Dartmouth Atlas of Health Care*, available at: http://www.dartmouthatlas.org.

6. Dartmouth Institute of Health Policy and Clinical Practice, *Dartmouth Atlas of Health Care*, accessed June 2009.

7. John E. Wennberg, *et al.*, "Geography and The Debate Over Medicare Reform."

8. Jack E. Fincham, *Patient Compliance with Medications*, (London: Haworth Press, 2007).

9. Mesa County, which houses Grand Junction, CO, has comparable median household income as the U.S. and Colorado, ($49,926, $50,740, and $55,517 respectively). In addition, they have similar numbers of people living below the poverty line as the U.S. and Colorado (12.0%, 13.0% and 11.5% respectively). As such, they cannot be considered to be a much wealthier comparison population. U.S. Census Bureau, "Quick Facts: Mesa County, Colorado," accessed August 2009.

10. Gawande, "The Cost Conundrum,"; Elliott S. Fisher, Donald M. Berwick, and Karen Davis, "Achieving Health Care Reform - How Physicians Can Help," *N Engl J Med* 360, no. 24 (June 11, 2009): 2495-2497; Rebecca Shackelton et al., "Does the culture of a medical practice affect the clinical management of diabetes by primary care providers?," *J Health Serv Res Policy* 14, no. 2 (April 1, 2009): 96-103; Brenda Sirovich et al., "Discretionary Decision Making By Primary Care Physicians And The Cost Of U.S. Health Care," *Health Aff* 27, no. 3 (May 1, 2008): 813-823; 1. Robert A. Berenson, Thomas Bodenheimer, and Hoangmai H. Pham, "Specialty-Service Lines: Salvos In The New Medical Arms Race," *Health Aff* 25, no. 5 (September 1, 2006): w337-343; Maggie Mahar, *Money Driven Medicine* (HarperCollins, 2006); Stephen M. Shortell et al., "An Empirical Assessment of High-Performing Medical Groups: Results from a National Study," *Med Care Res Rev* 62, no. 4 (August 1, 2005): 407-434; Elliott S. Fisher *et al.*, "The Implications of Regional Variations in Medicare Spending. Part 2: Health Outcomes and Satisfaction with Care," *Ann Intern Med* 138, no. 4 (February 18, 2003): 288-298.

11. Gawande, "The Cost Conundrum."

12. As a part of the research for this project, we conducted a series of focus groups and personal interviews from February 2009 to August 2009. These interviews included dozens of representatives from local, regional, and state provider and payer organizations as well as business and civic leaders.

13. Fee-for service with as much as 20% of the fees at risk.

14. www.prudentprescriber.com

15. www.epocrates.com

16. A number of physicians interviewed for this case study insisted that the comprehensive nature of primary care in Grand Junction was critical to its success. Family physicians deliver babies, go to the emergency room, admit patients to the hospital and then go on rounds to see them, assist on surgery on the patients, remove skin cancers, inject arthritic knees, perform ultrasounds, and manage complex illnesses. This is a far cry from a model of primary care wherein physicians typically refer such care to specialists.

17. The main features of the HMO Act were 1) grants and loans to start-up phases of new HMOs; 2) preemption of state laws that restricted HMOs; 3) a requirement that employers with 25 or more employees who already provide health benefits must offer an HMO product. Peter R. Kongstvedt, *The Essentials of Managed Health Care*, 2nd ed. (Boston: Jones & Bartlett Publishers, Inc., 1997): p. 6.

18. For the first three decades, Rocky received a capitated amount from Medicaid, but paid physicians on a FFS basis. In 2003, Rocky converted to an Administrative Services model with Medicaid, but continued to reimburse physicians at rates comparable to commercial rates. The state had an annual reconciliation process to quantify the cost savings and split those savings between the state and the insurers who then pass along savings through incentive contracts with physicians.

19. Anthem Blue Cross and Blue Shield, an affiliate of WellPoint, Inc., is the trade name of Rocky Mountain Hospital and Medical Service, Inc. in Colorado.

20. Anthem has a market share of 17 percent; Anthem is the primary competitor. American Medical Association, "Competition in Health Insurance, A Comprehensive Study of US Markets: 2007 Update," http://www.amaassn.org/ama1/pub/upload/mm/368/compstudy_52006.pdf.

21. About one-fifth of physicians (21 percent) reported accepting no new Medicaid patients in 2004-05, a rate six times higher than for Medicare patients and five times higher than for privately insured patients, according to HSC's nationally representative Community Tracking Study Physician Survey. Peter Cunningham and Jessica May, "Medicaid Patients Increasingly Concentrated among Physicians," Tracking Report no. 16 (Washington: Center for Studying Health System Change, 2006).

22. Dartmouth Institute of Health Policy and Clinical Practice, Dartmouth Atlas of Health Care, available at: http://www.dartmouthatlas.org.

23. Centers for Medicare & Medicaid Services, "Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) Survey," http://www/hcahpsonline.org, accessed July 2009.

24. U.S. Department of Health and Human Services, "Hospital Compare: A Quality Tool Provided by Medicare," http://www.hospitalcompare.hhs.gov/, accessed July 2009. We only provide data from Hospital Compare for St. Mary's Hospital & Regional Medical Center and not for Community Hospital because the sample size for Community Hospital was too small to draw statistically significant findings.

25. See Figure 1, Grand Junction has 13% fewer beds per capita than the national average.

26. This means that the hospital communicates directly with the staff of Marillac about the patients that they have referred to the Clinic, rather than simply telling the patient to go to the Clinic for follow-up care.

27. Child Health Plan Plus is Colorado's State Children's Health Insurance Program (SCHIP) plan.

28. For adults, Medicaid pays for extractions and emergency dental work only. The CHP+ program caps regular pediatric dental visits up to $600 of services. Most general dental services for these patients exceed this cost.

29. This is one of the reasons why Marillac must fundraise, to pay for the difference between what CHP+ pays and what services cost. Marillac subsidizes all preventive dental work in the community.

30. Two-hundrey and fifty percent of the federal poverty guidelines equals about $55,000 for family; $27,000 for a single adult; or, $13 per hour.

31. A federally qualified health center (FQHC) is a type of provider defined by the Medicare and Medicaid statutes. 42 U.S.C. § 1396d(l)(2).

32. For an FQHC, a patient in dental pain with four teeth that need to be extracted presents an incentive to bring them in on four different days to get four payments because the Medicaid FQHC PPS system pays per visit. By contrast, Marillac would serve all of the patient's needs during one visit, leaving money on the table if it were an FQHC. Policymakers should consider this when trying to support the indispensable and varied roles community health centers play in the nation's safety net. American Recovery and Reinvestment Act funds for community health centers, for example, are restricted to FQHCs. Clinics like Marillac, which only serve the uninsured, precisely the target population of these ARRA funds, are left to deal with the added burden of this recession with no extra federal help.

33. B4Babies serves 47% of all pregnant women in Mesa County. "In a Nutshell," *B4Babies & Beyond*, http://www.htop.org/child/b4b/, accessed July 2009.

35. Proverbs 29:18 (Revised Standard Version); see also Dartmouth Atlas of Health Care for literal corroboration.

36. Atul Gawande, *Better: A Surgeon's Notes on Performance*, (New York: Metropolitan Books, 2007).

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