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ABBREVIATIONS

Abbreviation	Full Name
ACA	Patient Protection and Affordable Care Act
ACO	Accountable Care Organization
ADRC	Aging and Disability Resource Center
CCM	Chronic Care Model
CCWNC	Community Care of Western North Carolina
CEO	Chief Executive Officer
CHF	Congestive Heart Failure
CMS	Centers for Medicare & Medicaid Services
CON	Certificate of Need
COPA	Certificate of Public Advantage
COPD	Chronic Obstructive Pulmonary Disease
CPOE	Computerized Physician Order Entry
CT	Computed Tomographic
DME	Durable Medical Equipment
D-SNP	Special Needs Plan for Dual Eligibles
ED	Emergency Department
EMR	Emergency Medical Record
EOL	End-of-Life
FCHCO	Federal Coordinated Health Care Office
FQHC	Federally Qualified Health Center
FFS	Fee-for-Service
GDAHC	Greater Detroit Area Health Council
HCBS	Home and Community-Based Waiver
HIT	Health Information Technology
HMO	Health Maintenance Organization
HRR	Hospital Referral Region
ICU	Intensive Care Unit
IDS	Integrated Delivery System
IHI	Institute for Healthcare Improvement
LTCH	Long-term Care Hospital

Abbreviation	Full Name
LTSS	Long-term Services and Supports
MA	Medicare Advantage
MAHEC	Mountain Area Health Education Center
MCO	Managed Care Organization
MHMC	Maine Health Management Coalition
MLTSS	Managed Long-term Services and Supports
MOST	Medical Order for Scope Treatment
MRI	Magnetic Resonance Imaging
PACE	Program for All-Inclusive Care for the Elderly
PCP	Primary Care Physician
PDAG	CMS Policy & Data Analysis Group
PHO	Physician Hospital Organization
POLST	Physician Orders for Life-Sustaining Treatment Options
POS	Point of Service
PPO	Preferred Provider Organization
QIO	Quality Improvement Organization
SNF	Skilled Nursing Facility
SNP	Special Needs Plan
UAW	United Auto Workers
VA	Department of Veterans Affairs

EXECUTIVE SUMMARY

The passage of the Patient Protection and Affordable Care Act (ACA) on March 23, 2010, awarded the Centers for Medicare & Medicaid Services (CMS) a greater mandate to explore patterns related to fragmentation of care delivery through the study of variations in costs and quality across the country. CMS was in particular tasked with understanding the impact such system-wide fragmentation has on the most vulnerable beneficiaries – those who have serious and/or multiple chronic conditions (specifically dual eligibles). Accordingly, the CMS Policy & Data Analysis Group (PDAG) contracted L&M Policy Research and its partner Thomson Reuters to explore patterns of care and best practice models in 12 hospital referral regions (HRRs) across the country with varying utilization and quality patterns. This qualitative, interview-based study is intended to serve as an exploratory step in helping CMS understand the factors and practices associated with these variations for Medicare beneficiaries.

Methods

Researchers at Dartmouth University developed HRRs by documenting patient referral patterns for major cardiovascular surgical procedures and neurosurgery; HRRs are now often used to delineate regional health care markets. CMS prepared data on cost and quality of care for all 306 HRRs nationwide and, in coordination with the team, chose five HRRs with relatively low costs and high quality and seven HRRs with relatively high costs and low quality.[1] Collectively, the selected HRRs reflect a mix of dual eligibles, those with serious chronic conditions, and those receiving end-of-life (EOL) care; regional diversity was also considered. The selected HRRs also include those that are at the extremes in terms of per capita costs – 46 percent of all HRRs have risk-adjusted and standardized per capita costs that range from Memphis (lowest of the high-cost HRRs) to Muskegon (highest of the low-cost HRRs). Furthermore, only two HRRs have higher per capita costs than Monroe, Louisiana, and only three have lower per capita costs than La Crosse, Wisconsin. The research team conducted site visits to each of the selected HRRs to discern variations in cost and quality outcomes between high- and low-performing HRRs. The low-cost, high-quality sites we visited were: Asheville, North Carolina; La Crosse, Wisconsin; Muskegon, Michigan; Portland, Maine; and Salinas, California. The high-cost, low-quality sites we visited were: Detroit, Michigan; Harlingen, Texas; Jacksonville, Florida; Las Vegas, Nevada; Memphis, Tennessee; Monroe, Louisiana; and Tuscaloosa, Alabama.

Results

Multiple factors, sometimes in unique and complex combinations, determine the extent to which a region is able to support practice patterns that result in the delivery of higher quality care with lower utilization (cost). Health care practices, while an important factor in determining an HRR's cost and quality outcomes, are not the only factor. Even exemplary practices cannot prevent the root causes (e.g. material deprivation, behavior, culture, genetics, or environmental exposures) that give rise to illness. For some, poor health behaviors (e.g. eating high-fat foods, tobacco use,

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[1] Throughout this report, the authors refer to HRRs visited as being part of a quadrant that reflects both a relative cost and relative quality ranking. The HRRs we visited were selected from only two of the four quadrants – low-cost, high-quality and high-cost, low-quality. These quadrants may occasionally be referred to by only their costs categorization for the sake of brevity. CMS did not select the low-cost, low-quality and high-cost, high-quality quadrants for inclusion in this study.

alcohol and drug use) reflect socio-cultural norms or develop as coping responses to life stress, such as that often associated with poverty or unemployment.[2] In effect, environment (both physical and social) matters in health, and often, it takes non-health care initiatives to mitigate any harmful effects and leverage opportunities.

While using HRRs as an organizing framework is far more meaningful than using traditional (and somewhat arbitrary) geographic designations, there are some considerations to keep in mind when interpreting results. Categorizing HRRs by cost and quality metrics that are not exhaustive in reflecting the cost or quality domains is a relative exercise. Low-cost, high-quality HRRs, for example, are faring better than the high-cost, low-quality ones, but they are not necessarily optimizing cost and quality or offering the same benefits or levels of service to all segments of the population. Further, there is great variance in the size of an HRR, ranging from a very small community to a multi-state area that includes large metropolises. The findings thus represent illustrative and likely factors underlying the observed cost and quality levels but should be regarded with reserve.

It should also be noted that while one aim of this study was to identify models of care targeting dual eligibles, those with multiple chronic conditions and those in the last year of life, no initiatives outside of the Program of All-Inclusive Care for the Elderly (PACE) or special needs plans for dual eligibles (D-SNPs) exclusively identified dual eligibles or Medicare beneficiaries with complex conditions.[3] These distinctions – important from a policy and program perspective – were somewhat arbitrary at the HRR-level, particularly given the high overlap between dual eligibles and those with chronic and complex health needs. Interviewees typically said they do not target their care management based on payer source. The results, therefore, refer to both of these populations. Additionally, HRR interviewees did not view beneficiaries in the last year of life as a distinct group, though selected HRRs had initiatives promoting advance directives and making palliative care more readily available throughout their communities.

From the hundreds of interviewees across the 12 HRRs, two overarching findings, taken together, distinguish the low-cost, high-quality from the high-cost, low-quality quadrants:

1. The prevalence of poverty in an HRR was highly associated with how the HRR fared in cost and quality and often appears to moderate the degree to which an HRR can function as a system.

2. Degree of systemness – whether an HRR can function as a system (or a limited set of systems) with a mission focused on the delivery of high-quality care appeared strongly associated with an HRR's status as low-cost, high-quality or high-cost, low-quality – that is, whether the HRR comprises a cohesive and mutually reinforcing set of structures and

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[2] Note that while the percentages of the overall population that are dual eligibles is greater in Ashville and Portland than the percentages in four of the seven high-cost, low-quality HRRs, researchers experienced a different world in an HRR where 14 percent of the Medicare beneficiaries are dual eligibles as opposed to 25 percent or more.
[3] Certain Medicaid initiatives included a component of services that were available to dual eligibles. In these instances, however, the dually eligible were part of the larger Medicaid population affected by state waiver programs rather than exclusively targeted for services.

stakeholders that together are actively striving to improve health while making services easier to access and use.

While there are myriad contributing factors and pathways through which they impact cost and quality, the ones presented for each of the findings below reflect the cluster of characteristics that nearly uniformly delineated the higher- from the lower-value HRRs in this study. Given the qualitative nature of the research, however, it is not possible to determine whether some or all of these factors are equally critical or if an HRR can achieve an optimal cost and quality level with just a subset of these factors in play.

Prevalence and impact of poverty

Poverty has long been heralded as the last frontier in public policy, a seemingly insurmountable hurdle permeating all aspects of society that manifests in a provider's case mix and associated challenges related to delivering high-quality and cost-effective care. Poverty- and resource-related problems were more prevalent in the high-cost, low-quality HRRs and appeared to adversely affect the delivery of care in several ways. There appears a tipping point where a sufficiently high proportion of poverty-related challenges (e.g. safe housing, transportation, air quality, water quality, residential segregation, neighborhood safety, and access to good nutrition and services) can thwart the ability of "systemness" to take root in an HRR and instead enable opportunism. Every HRR grappled with providing care to poorer and sicker segments of the population who often lack access to nutritional food, money for medications and cost sharing for medical care, and the ability to self-manage and access needed care. The low-cost, high-quality HRRs generally had markedly smaller proportions of these vulnerable populations than the high-cost, low-quality HRRs. Although poverty results in the obvious high percentage of Medicaid patients and dual eligibles, its effects are much more far-reaching than mere low reimbursement rates for providers. The interviews revealed ways in which poverty can impact the area's quality and cost outcomes, including:

- **Primary care access.** Notably present in a number of discussions with interviewees in high-cost, low-quality regions, a shortage in primary care physicians (PCPs) and its relationship with poverty seemed a driving factor in utilization patterns across those regions. While a paucity of PCPs is a problem in many areas of the country, this seemed exacerbated in the majority of the high-cost regions, particularly in the more impoverished areas, where maintaining a practice for an already low-paying discipline can be nearly impossible. The impact of this shortage extended well beyond basic health maintenance and outpatient care.

- **Unhealthy lifestyles.** HRRs in the high-cost, low-quality quadrant are faced with a patient population that has greater health issues resulting from poverty-driven unhealthy lifestyles. The correlation between chronic conditions and poverty is impossible to deny, and its impact can be felt directly and indirectly across the entire system – a fact that separates the high-cost regions from the low.

- **Health illiteracy.** Without an understanding of the importance of going for follow-up exams, regularly taking prescription medicines, and maintaining other habits that ensure

better health status, the illiterate patient population for the most part continues to cycle in and out of the hospital with severe – and for the most part preventable – conditions.

- **Transportation barriers.** For those residents who understand the importance of attending follow-up appointments or going for regular check-ups, limited or no access to transportation often proves an insurmountable hurdle, many interviewees said. Available public transportation ranged from nonexistent in a place like Monroe to limited in a place like Tuscaloosa, where the public bus system does not cross the river into neighboring Northport, where one of the two major hospitals serving the city is located.

- **Provider and patient challenges.** Interviewees in many of the high-cost, low-quality HRRs described a strained relationship between providers and patients that tended to perpetuate these patterns of care. For physicians serving Medicare and Medicaid beneficiaries in some of the low-income areas, there is an assumption that patients will miss appointments and be noncompliant. A similar provider attitude was pervasive in Harlingen, where physicians spoke of patients' low compliance and "fatalistic" attitude toward their health. Interviewees in Las Vegas also described an environment of detached patient-physician relationships, in which physicians lacked a vested interest in the population for which they were providing care. And similarly, patients are less likely to seek care from physicians with this attitude and expected to wait longer for care, which has resulted in higher ED utilization rates and late presentation for care.

- **Inappropriate use and abuse of the health care system.** Interviewees in high-cost, low-quality regions reported patterns of "gaming" the system – from the patient, payer, and provider sides. From the patient side, this manifested in patients proactively seeking the most from the system in terms of money and care. We heard numerous examples of payers and providers similarly "gaming the system" – areas with large elderly and illiterate populations were particularly vulnerable to the abusive behaviors interviewees described.

HRR capacity to function as a system

Health care providers and stakeholders in the low-cost, high-quality HRRs are much more likely to function as part of a system that strives for coordinated, high-quality care. A cluster of factors and issues were identified in the interviews as key drivers in HRR systemness:

- **Provider collaboration and competition.** In the low-cost regions, collaboration among providers and across settings occurred with relative frequency, and while competition was present in some of the low-cost HRRs, it was generally outcomes driven. In the high-cost regions, collaboration among providers and across settings occurred only in small pockets within a region (among employed physicians in a dominant health system, for instance), if at all. Competition in these HRRs was quite lively, though not productive in the way the outcomes-driven competition was in the low-cost regions.

- **Financial incentives.** Even in the low-cost regions visited, the most integrated delivery systems had yet to find a comprehensive way to align organizational and physician

financial incentives that impacted practice patterns.[4] The low-cost HRRs were simply more adept at working around this than the low-quality HRRs appeared to be.

- **Population-based active care management.** With few exceptions, care management was reported to occur more frequently and across broader population sets in the low-cost quadrant than in the high-cost quadrant. In regions where the culture is one of collaboration and communication, there is more likely to be an infrastructure for care management across settings; and conversely, in regions that are more fragmented and competitive, there is nothing to promote or sustain the type of cross-system infrastructure to deliver effective care management.

- **HIT systems and interoperability.** The best functioning information systems the research teams heard about reflect established infrastructure and integrated models of care that facilitate data collection and timely dissemination across the care continuum. These systems were present with far greater frequency in the low-cost regions and built and continually upgraded over the years, integrating data sources from different platforms over time. It is often the environment in which health information technology (HIT) is introduced and the methods used in sharing of accurate, complete, timely, and actionable information – rather than the technology itself – that has the greatest potential for improving the delivery of care.

- **Quality monitoring and data sharing**. Most HRRs located in low-cost quadrants reported some degree of quality data sharing and monitoring, while HRRs located in high-cost quadrants did not. With the exception of Asheville, quality improvement initiatives tended to be facility- or health system-specific; the sharing of quality data across providers was not common. The prevailing factor that seems to be inhibiting quality data sharing and monitoring is the culture of resistance or indifference to quality reporting.

- **EOL planning and care.** Much of what drove EOL care patterns across the HRRs depended on two variables: the culture and attitudes associated with dying for patients and providers and the level of EOL program acceptance and use in the community.

Intersection of poverty and systemness

Undoubtedly, the two overarching findings from this study mediate and moderate the other. Resource challenges can impact the capacity of an HRR to develop robust systemness, and well-functioning systems can help overcome the impact of resource deficits. In the low-cost quadrant, where poverty and its associated challenges were less frequent, both providers and patients took an overall conservative approach to utilization, revealing a provider awareness for limiting procedure orders and a patient understanding that health care resources are finite and care should

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[4] Outside of two health systems that operated their own managed care plans, few of the HRRs visited included large providers that operated under risk-bearing arrangements for a significant portion of the populations they served. In fact, all but two of the regions had Medicare Advantage penetration rates lower than the national average.

only be sought when appropriate. Also notably, physicians in the HRRs composing the low-cost quadrant for the most part exhibited a spirit of collaboration that permeated the system as a whole, allowing for processes that promote integrated and cross-setting care, such as outcomes-focused population health and coordinated care management.

On the other hand, the high-cost, low-quality regions were in many ways polar opposites, marked by liberal utilization of system resources on both the patient and provider side. It was unclear from the interviews to what extent the history of poverty in an area served to solidify undesirable utilization patterns – a history of using the emergency department (ED) because no other options are available can be difficult to reverse, even when access to other sources of care improves. The result, however, is that providers in the high-cost, low-quality HRRs served a higher proportion of patients who not only had significant health needs but also lacked the tools and resources to adhere to treatment plans and effectively manage their health.

On the provider side, supply-driven competition (notably absent from the low-cost regions) appeared to fuel liberal spending habits and moved focus away from outcomes to the bottom line. In the high-cost, low-quality regions, interviewees spoke of a dearth of PCPs and a plethora of specialists, many of whom practiced in single-specialty groups.

Conclusion

The findings from these site visits confirm that a large constellation of factors in unique and complex combinations underlie health care quality and cost outcomes. As one HRR interviewee put it: "There are a lot of variables in all of this. It's like trying to predict the weather." This research is only an exploratory step to help CMS broadly understand the factors and practices underlying variations in costs and quality for the Medicare program. Despite this complexity, the results highlighted two interrelated themes: the extent of poverty in an HRR matters, as does the ability of a region to function like a system.

INTRODUCTION

In a June 2009 *New Yorker* article, Atul Gawande examined why McAllen, Texas, spends dramatically more on health care per Medicare beneficiary than neighboring El Paso. The article spurred a torrent of attention to the two regions that, upon further investigation, seemed representative of the country as a whole: Some regions have significantly higher costs and lower quality than others, while others have lower costs and higher quality. While the Gawande article popularized these disparities, geographic variation across a wide variety of care process and outcomes measures is well documented in the literature (most notably *The Dartmouth Atlas of Health Care* work) and represents the inefficiencies of the country's increasingly costly health care system (Epstein, 2010).

For an industry that represents a sixth of the nation's gross domestic product and impacts all 307 million Americans in some capacity, questions pertaining to the factors driving cost and quality variations seem worth asking and even more worth trying to answer. Particularly because Medicare covers more than 43 million people nationwide (Kaiser Family Foundation, 2009) – many of whom are extremely sick with multiple chronic conditions or otherwise costly because they are dually eligible for Medicare and Medicaid – the type of discrepancies that Gawande noted in his case study could provide insight into prevalent trends in cost and quality drivers across the country.

The passage of the Patient Protection and Affordable Care Act (ACA) on March 23, 2010, awarded the Centers for Medicare & Medicaid Services (CMS) a greater mandate to explore patterns related to fragmentation of care delivery. In part to address major inefficiencies in the system, the ACA established the Federal Coordinated Health Care Office (FCHCO) to more effectively integrate benefits under Medicare and Medicaid and improve federal and state coordination for the nation's 8.8 million dually eligible beneficiaries (Kasper, O'Malley & Lyons, 2010). Dual eligibles are among the most vulnerable beneficiaries – most face multiple and severe chronic conditions that require complex and intense care – and because they receive both Medicare and Medicaid coverage, they must navigate two separate health care programs, which often yields fragmented, inefficient, and costly care. As part of its efforts to reduce the fragmentation of services provided to beneficiaries, CMS has enhanced its focus on studying variations in costs and quality across the country, with a specific focus to the most vulnerable beneficiaries: those who have serious and/or multiple chronic conditions as well as those who may be nearing the end of their lives.

Caring for the chronically ill population is expensive and has raised concerns about the appropriate role the government plays in financing and managing such care (Buhler-Wilkerson, 2007). Individuals with chronic conditions require more frequent services from a larger array of providers and are in need of better care coordination as well as social supports. Such significant needs are often addressed through a fragmented delivery system where providers are often not financially or logically aligned to provide strong care continuity – this reality often requires patients to coordinate their own care. Although some local area and private health care systems have developed models of care that promote continuity and manage transitions for individuals with serious and/or multiple chronic conditions, these models have not always proven effective and have been difficult to scale.

PURPOSE

The Policy & Data Analysis Group (PDAG) in CMS's Center for Strategic Planning contracted L&M Policy Research and its partner Thomson Reuters to explore patterns of care and best practice models in 12 hospital referral regions (HRRs) across the country with varying utilization and quality patterns. This study is intended to help CMS broadly understand the factors and practices underlying these variations for Medicare beneficiaries. CMS analyzed data on Medicare spending and quality of care and selected two types of HRRs – low-cost, high-quality and high-cost, low-quality – that allowed for comparisons between some of the highest and lowest performing HRRs on cost and quality outcomes. The project team was asked to focus on care delivery models for three segments of the age 65-plus Medicare population: dual eligibles, beneficiaries with serious chronic conditions, and beneficiaries in the last year of life. In addition, the research team also conducted site visits to two other HRRs that focused on the Program for All-Inclusive Care for the Elderly (PACE) in an effort to identify success factors and best practices as well as barriers to implementing, sustaining, and growing PACE programs.[5]

This report details the research methods employed when setting up and conducting the site visits between February and May 2011, presenting results and synthesizing salient findings.

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[5] Findings from the two PACE site visits to Portland, Oregon, and Rochester, New York, appear in a separate report.

BACKGROUND

More than two decades ago, *The Dartmouth Atlas of Health Care* began charting and documenting variations in the distribution and use of health resources across the country. Using administrative data and survey information, the researchers at Dartmouth unearthed glaring national discrepancies even after accounting for patient characteristics that affect the utilization of health care services, and in the areas of higher spending, patients were not being awarded greater quality care. In other words, higher spending did not equate with better outcomes (Epstein, 2010), suggesting that great opportunities exist to better manage health care costs without compromising the quality of care delivery.

According to a 2011 Medicare Payment Advisory Commission (MedPAC) study, service use in areas defined as higher use (top decile) is 30 percent greater than in the lower use areas (bottom decile). A study conducted by Zuckerman, Waidmann, Berenson, & Hadley (2010) similarly found that Medicare spending per beneficiary for physician and hospital services is 52 percent higher in regions within the top quintile of spending compared to those in the bottom quintile. More specifically, according to Sutherland, Fisher, and Skinner (2009), patients in the higher spending regions have longer hospital stays (an average of 2.1 as opposed to 1.4 days), see their physicians more frequently (14.5 visits per year as opposed to 10.7), and receive more magnetic resonance imaging (MRI) procedures (21.9 per year per 100 beneficiaries as opposed to 16.6) and computed tomographic (CT) scans (61.4 per year per 100 beneficiaries as opposed to 46.9).

Because the data are case-mix adjusted, discrepancies in utilization patterns theoretically account for differences in health and socioeconomic status across the regions (Sutherland, Fisher, & Skinner, 2009). In cases where researchers have tracked the extent to which socioeconomic factors impact variations in spending, they have similarly found a significant amount of unidentified factors: One study found that population characteristics account for only 18 percent of the differences in regional spending per beneficiary in the lowest and highest quintiles (Zuckerman et al., 2010).

Given that a substantial amount of the variation remains unexplained (Epstein, 2010), the question perplexing researchers now is: What factors are driving this unexplained variation? According to a study conducted by Sirovich, Gallagher, Wennberg, and Fisher (2008), patterns in health care spending strongly correlate with the tendency of local physicians to order discretionary clinical care. In areas that had higher spending, primary care physicians (PCPs) saw patients for more follow-up exams, recommended more tests, and chose interventions that required more resources than those practicing in the lower spending regions (Sirovich et al., 2008). Furthermore, Sirovich et al. (2008) found that physicians in high-spending areas and low-spending areas only differ in their discretionary decision-making: When it comes to decisions based on practice guidelines, providers in both areas recommend treatments at an equal rate.

Such trends beg the question as to why physicians in one area of the country are more likely to order an intervention than those in another. The Dartmouth team of researchers posits that the supply of medical resources in a region impacts the degree to which "supply-sensitive" services are overused; put another way, areas that have more physicians and beds will provide services more liberally than will areas with fewer physicians and fewer beds so as to meet market demands (Dartmouth, 2008). Sirovich et al. (2008) suggest that physician practices may be a

product of such non-clinical factors as the malpractice climate, patient expectations, and market forces in a fee-for-service (FFS) environment. Additionally, some of the more aggressive physicians might choose particular areas over others (Sirovich et al., 2008).

The ACA seeks to remedy some of the variations in system inefficiencies. The legislation calls for establishment of accountable care organizations (ACOs) that will be responsible for the overall care of Medicare beneficiaries by putting providers at risk for the services they provide and introducing incentives to reduce costs while delivering quality care. The ACA also calls for pilot programs to test bundled payments for hospital, physician, and post-acute services that give providers other incentives to deliver appropriate and efficient care.

Caring for the chronically ill, dual eligibles, and those nearing the end of life

Although variation in disease prevalence across the country accounts for a small fraction of the factors driving the variation (Dartmouth, 2008), regions with higher service utilization are still generally associated with a higher rate of chronic illnesses (Song et al., 2010). And regardless of the extent to which population health status drives utilization patterns, it is important to look at care practices associated with beneficiaries with chronic illness, those dually eligible for Medicare and Medicaid, and those in their last year of life, as they account for the bulk of Medicare spending. The five percent of Medicare beneficiaries that have the highest spending account for 43 percent of total program spending; the top 25 percent account for more than 85 percent of program spending (Reschovsky, Hadley, Saiontz-Martinez, Boukas, 2011). This group of high spenders represents some of the sickest patients in the system and many have multiple chronic conditions. More than 90 million Americans suffer from at least one chronic disease, and nine out of 10 deaths in the Medicare population are associated with congestive heart failure (CHF), chronic lung disease, cancer, coronary artery disease, renal failure, peripheral vascular disease, diabetes, chronic liver disease, and dementia (Dartmouth, 2008). Despite the particular need for comprehensive and coordinated care, these patients are often treated episodically, with poor results (Dartmouth, 2008).

For this group of chronically ill beneficiaries, Medicare per capita spending varies more than twofold among HRRs, according to a report released by Dartmouth in 2008. The researchers found that such differences resulted from not the price of providing care to these high-cost individuals but, rather, the volume of care provided. For example, for Medicare beneficiaries suffering from multiple chronic conditions, one HRR's patients spent an average of 30.3 days in the hospital during the last two years of life, while another HRR's beneficiaries spent 11.7 days on average (Dartmouth, 2008). The study also found patients saw a physician on average 50 times during the last six months of life in one region versus 15.7 times in another.

The Chronic Care Model

In response to shortfalls in clinical quality coupled with increased prevalence of chronic diseases, Edward Wagner developed his Chronic Care Model (CCM), which provides an organized framework through which to coordinate processes for the delivery of evidence-based primary care (Stock et al., 2008). The model includes six areas for quality improvement:

1. Health system and organization of care,

2. Self-management support,
3. Delivery system design,
4. Clinician decision support,
5. Clinical information systems with patient population data, and
6. Linkages to community resources for extension of care.

Combined, these areas are meant to foster improved patient-provider relationships to yield a proactive and planned approach to care and improved health outcomes as a result (Coleman, Austin, Brach & Wagner, 2009; Hung et al., 2008). According to Martin and Strumberg (2009), evaluations of elements associated with the CCM have revealed improved care processes through implementation of disease registries, patient self-management, and protocol-based management of diseases. Still, according to Stock et al. (2008), the CCM has been traditionally used to treat persons with just one chronic condition as opposed to those suffering from multiple, and its impact is limited to disease-management processes (Martin & Strumberg, 2009).

According to Siu et al. (2009), to achieve improved outcomes in chronic disease, the system must promote: improved clinical decision-making through, specifically, the use of evidence-based drug management and patient monitoring; patient self-management reinforced in the medical practice; and improved patient-provider relationships.

Dual eligibles

Beneficiaries dually eligible for Medicare and Medicaid in particular account for a large proportion of spending in each program, as many suffer from multiple chronic conditions that would benefit from the kind of care model outlined in the CCM. There are approximately 8.8 million low-income seniors and persons with disabilities that qualify as dual eligibles, and while they account for just 18 percent of Medicaid enrollment, they represent 46 percent of program spending (Kasper, O'Malley & Lyons, 2010). Likewise, this subgroup comprises 20 percent of Medicare enrollment and 28 percent of program expenditures (Kasper, O'Malley & Lyons, 2010). In terms of health status, a 2010 Kaiser Family Foundation study found that three in five dual eligibles have multiple chronic conditions, and two-fifths of those with multiple physical or physical and mental conditions were hospitalized in the previous year. Duals with multiple chronic conditions also used more home- and community-based services (HCBS) (Kasper, O'Malley & Lyons, 2010). In sum, annual mean spending per person for dual eligibles is $19,400, with Medicaid covering 56 percent, making this population a natural focus for care management initiatives – from a utilization and cost perspective, the relative size of the dual eligible population in a given area can have a notable impact on the local provider market.

Beneficiaries in the last year of life

The beneficiaries receiving end-of-life (EOL) care are likewise high utilizers, accounting for 32 percent of total Medicare spending, much of which is the result of multiple hospitalizations (Dartmouth, 2008). Although costs are high in any region, according to Barnato et al. (2007), HRRs vary drastically in per beneficiary expenditures during the last six months of life – from a low of $8,366 in Grand Junction, Colorado, to a high of $21,123 in McAllen, Texas. Such patterns are clearly reflective of resource use. For example, Barnato et al. (2007) found that in 2003, for patients in the last six months of life, the number of days in the intensive care unit

(ICU) in Grand Junction was 1.0, compared to 5.6 in McAllen. Similarly 16.7 percent of patients in Grand Junction died in an acute care hospital as opposed to 45.1 percent in McAllen. Most notably, the study did not find a relationship between patient preferences and local practice patterns. In other words, areas with higher EOL spending did not necessarily have patient populations demanding more aggressive treatments and resisting hospice and palliative services at the end of life. Rather, higher spending regions were associated with greater supply – of hospitals, specialists, ICU beds, and other technologies – and a group of physicians less likely to refer to hospice (Barnato et al., 2007).

Though the number of hospitals reporting that they have palliative care programs has been steadily increasing across the country, disparities persist and certain regions have shown greater growth than others. A 2008 report published by Goldsmith, Deitrich, Du & Morrison using 2003 data found that hospital-based palliative care programs had grown by 8.6 percent in the Northeast, 16.4 percent in the Midwest, 17.2 percent in the West, and 9.6 percent in the South, with much of the growth occurring in nonprofit facilities. Furthermore, across the states, the percentage of hospitals (only those with 50 beds or more were included) that had adult hospital palliative care programs ranged from a high of 100 percent in Vermont to a low of 10 percent in Mississippi (Goldsmith et al., 2008). For a population group that has historically had extremely high spending, such variations across the country seem consistent with and representative of overall utilization patterns among the HRRs as a whole. This population group warrants a closer look when examining variations in the cost and quality of care delivery across the country.

METHODS

Researchers at Dartmouth University created HRRs to delineate regional health care markets, which they defined by studying referral patterns for major cardiovascular surgical procedures and neurosurgery. This resulted in 306 HRRs, which sometimes cross state boundaries and are named for the city housing the referral hospital(s) residents of the region most often use.

For this study, CMS took Medicare spending data for 2008, standardized payment amounts so that payments for individual services were the same across the country, and then accounted for differences in beneficiaries' health by dividing the standardized spending of each beneficiary by the beneficiary's average risk score, using the risk scores CMS uses to pay Medicare Advantage (MA) plans. CMS also combined a variety of quality measures into a single composite measure.

CMS then assigned HRRs to four quadrants, based on whether each HRR's spending and quality figures were above or below the national average. CMS and the research team then chose five HRRs from the low-cost, high-quality quadrant and seven HRRs from the high-cost, low-quality quadrant. The 12 HRRs are shown on a map in Figure 1. CMS also selected an additional two HRRs for site visits that would focus on the Program for All-Inclusive Care for the Elderly (PACE) program, which provides a comprehensive package of services to individuals who need the level of care normally provided in a nursing home but wish to remain at home. Findings from the PACE site visits appear in a separate report.

Figure 1: HRRs Selected for Site Visits
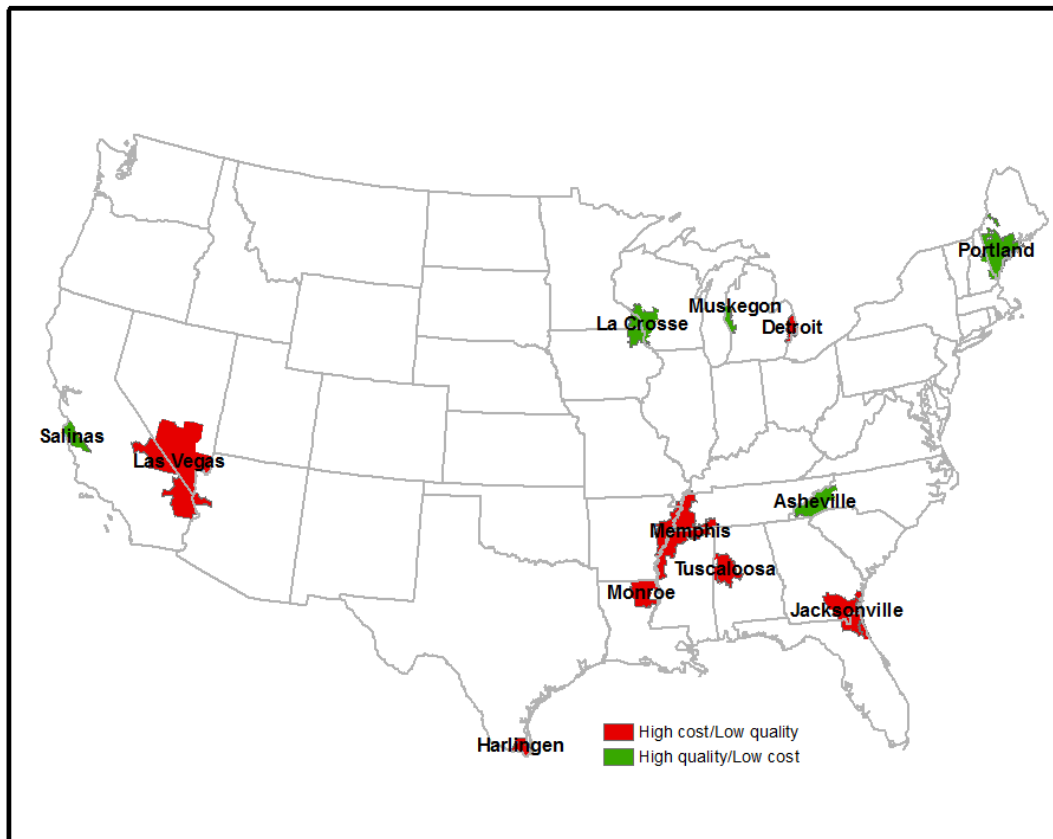
Identifying key stakeholders for qualitative interviews

To provide CMS with a basic foundation of knowledge related to patters of care and best practices associated with these population groups, the study team conducted interviews with key stakeholders during site visits to the 12 HRRs. The team sought input from four main groups of stakeholders:

- **Providers**, including health systems, hospitals, large primary care practices, specialty practices, community health centers, skilled nursing facilities, home health care providers, and hospices;

- **Purchasers**, including MA plans, Special Needs Plans (SNPs), and other payers;

- **Community-based organizations**, including area agencies on aging, consumer advocacy organizations, and state health insurance assistance programs; and,

- **State and regional officials,** including Medicaid offices, quality improvement organizations (QIOs), state health plan associations, and state associations of community health centers.

Representatives from each of these groups provided different perspectives on the regional health care system and, when taken together, depicted a larger picture of the factors driving care delivery.

Through a market research service provided by Thomson Reuters, the team requested reports on the 12 HRRs aggregated from the individual zip codes that made up each of the regions. These reports included a demographic profile, a map of the service area showing all of the hospitals, a bar graph with the Medicare market share by facility, a chart with insurance coverage estimates, a payer profile that includes the largest health plans in the HRR (preferably by Medicare enrollment), and a profile of the market volume by physician office (defined by Medicare patients if possible, but only including group practices).

The team also submitted requests through another service at Thomson Reuters that produced literature reports compiling major relevant characteristics of each HRR's health care delivery system. The report provided a picture of the overall health care market – including service area and profiles of major health care facilities – in addition to a list of major distinctions attributed to the HRR and citations for major articles and reports previously published on the health care system. The team supplemented these data with Web-based searches on each HRR to fill in any gaps and confirm the information already in hand.

In conjunction with these searches, each site leader then identified and spoke with CMS regional office staff and QIO representatives from each HRR to confirm the accuracy of the information gathered, begin generating interview candidates, and solicit background on local provider practices and networks, culture, key initiatives, regulatory issues, and best practices and important lessons learned. These combined efforts yielded an initial list of potential interviewees for each site that the team leader further vetted with individuals in the targeted HRR. The team leaders conducted brief telephone discussions with health care leaders and inquired as to whether the list of potential interviewees was appropriate given the research goals of the project. Pre-site discussions – particularly with QIOs and other state and regional actors – helped the research team make efficient use of its time in the field. The team compiled all of this information before finalizing the list of HRR interview candidates and recruiting them for participation.

Scheduling and conducting site visits

For each HRR, a three-person team conducted a number of interviews with individuals or groups representing regional/state organizations. On-site interviews included a combination of individuals, such as top-level executives and clinicians, managers, various health care provider types, and clinical/administrative/social support staff. Depending on the participating organization, some discussions involved one individual while others involved a small group (e.g., three to four individuals), for a maximum of 35 interviews for each site. Interviews were held once with interviewees and lasted approximately one to one-and-a-half hours in length. Table 1 details the breakdown of interview types by HRR.

Table 1: Interview types by HRR

HRR	Provider institutions and providers (clinical)	Health care purchasers	Community-based organizations	Government agencies	Totals
Asheville, N.C.	16 (37)	1 (1)	6 (15)	3 (4)	26 (57)
La Crosse, Wisc.	9 (31)	1 (2)	7 (12)	2 (4)	19 (49)
Muskegon, Mich.	7 (13)	1 (1)	5 (10)	2 (6)	15 (30)
Portland, Maine	15 (28)	3 (3)	5 (14)	1 (2)	24 (47)
Salinas, Calif.	8 (26)	1 (2)	2 (2)	2 (3)	13 (33)
Detroit, Mich.	23 (47)	2 (5)	5 (6)	1 (4)	31 (62)
Harlingen, Texas	11 (40)	1 (3)	1 (3)	1 (2)	14 (48)
Jacksonville, Fla.	13 (25)	0 (0)	3 (15)	3 (5)	19 (45)
Las Vegas, Nev.	9 (25)	1 (1)	5 (9)	4 (9)	19 (44)
Memphis, Tenn.	18 (23)	2 (9)	8 (9)	1 (1)	29 (42)
Monroe, La.	13 (37)	1 (3)	1 (3)	2 (4)	17 (47)
Tuscaloosa, Ala.	14 (39)	0 (0)	3 (5)	1 (1)	18 (45)
Totals	156 (371)	14 (31)	51 (103)	23 (45)	244 (550)

* Parentheses indicate the number of individuals

We scheduled site visits over three to five days to facilitate interviews with individuals from multiple organizations and providers located across the HRR. To fully explore variations in care delivered to the beneficiary groups of focus, the team developed an open-ended discussion guide (see Appendix A) intended to serve as an interviewer tool to ensure that a consistent range of questions and topics were addressed across the HRRs. It is important to note that the guide was tailored to the type of interviewee (e.g., non-clinical interviewees were not asked questions that required clinical judgment). The guide addressed organization background and operations, factors impacting variations in cost and quality, and patient population and care delivery patterns – specifically as they related to dual eligibles and those with chronic conditions. More specifically, the research team looked for the following processes as indicators of chronic care management:

1. Systematic and comprehensive assessment of patients;
2. Care planning and proactive monitoring;
3. Coordination of professionals within and across settings;
4. Promotion of active engagement of patients and caregivers in their own care;
5. Encouragement of patient-centered care planning, to include advanced directives and referral for palliative care when appropriate; and
6. Other innovative processes identified by key interviewees.

Throughout the site visit, team members debriefed internally to discuss prevalent themes present in the day's discussions. And during the last afternoon of the site visit, the team members met internally to discuss overarching findings and begin synthesizing some of the more dominant themes. A summary report for each HRR is included in Appendix B.

Upon completion of the site visits, the research team synthesized site visit notes with data from CMS's HRR analyses to profile the environment, communities, population, programs, and other key characteristics of health care delivery in each HRR. We systematically compared patterns within and across HRRs to highlight apparent best practices. The research team then assessed the factors that appeared to be associated with program outcomes – whether singular factors or potential clusters – to develop the content for the analysis section of this report.

REGIONAL PROFILES

Several distinct patterns separate the low-cost, high-quality HRRs visited from the high-cost low-quality sites. Each of the low-cost HRRs had relative populations of Medicare beneficiaries a few percentage points above or just at the U.S. average, while the high-cost HRRs were much closer to the national average. Asheville stands out in its percentage of residents 65 years old or older, with such individuals comprising 19 percent of the total population (see Table 2). The quality and cost rankings were not determined by the size of the HRR, with both the low- and high-cost sites ranging from smaller regions of around 30,000 beneficiary residents to large regions with over 100,000. The most populous HRRs visited fell into the high-cost, low-quality quadrant, with Detroit and Las Vegas containing approximately 243,000 and 211,000 beneficiaries, respectively. With the exception of Salinas, low-cost, high-quality regions were predominantly white (non-Hispanic), while high-cost, low-quality HRRs had significantly more variation in terms of race and ethnicity – typically with larger populations of both African-American and Hispanics. While the percentages of Asians and Pacific Islanders – in addition to the "all other races" category – were below the U.S. average for most regions visited, both low-cost Salinas and high-cost Las Vegas had distributions above the U.S. average for both populations.

Patterns related to the percentage of uninsured were also consistent across low-cost and high-cost regions. Each of the low-cost, high-quality regions visited had rates of uninsured lower than the U.S. average, while each of the high-cost, low-quality areas had rates above the U.S. average. Rates for the uninsured were extremely high in Harlingen and Monroe, at 51 percent and 25, respectively, compared to a U.S. average of 17 percent. Regarding the rate of uninsured, high-cost HRRs typically scored worse across a range of economic measures. The low-cost HRRs visited typically had higher median household incomes, lower rates of unemployment, and a lower percentage of residents living in poverty, although variation exists across the two categories. The study HRRs typically had lower rates of Medicare Advantage penetration compared to the U.S. average, with particularly poor penetration in high-cost regions. Conversely, most of the HRRs visited had higher rates of dually eligible beneficiaries.

On average, the high-cost regions visited had higher rates of chronic illness in the Medicare population compared with the low-cost regions. The five low-cost HRRs generally had rates of serious chronic illness that were lower than the high-cost HRRs: The prevalence of chronic obstructive pulmonary disease (COPD), diabetes, heart failure, and, to a lesser extent, lung cancer were all higher in the high-cost HRRs. In all but a few cases, prevalence rates for those diseases were above the U.S. average, while the converse was true for the low-cost HRRs visited. Table 2 below presents summary statistics for each of the study HRRs in addition to listing U.S. averages. Following the table, site-specific narrative profiles describe each region in further detail.

Table 2: Key HRR Characteristics

	Asheville, N.C.	La Crosse, Wisc.	Muskegon, Mich.	Portland, Maine.	Salinas, Calif.	Detroit, Mich.	Harlingen, Texas	Jacksonville, Fla.	Las Vegas, Nev.	Memphis, Tenn.	Monroe, La.	Tuscaloosa, Ala.	U.S. Average
Demographics/health coverage & conditions													
Overall population 65+[1]	19%	15%	14%	15%	13%	13%	11%	12%	12%	14%	14%	15%	13%
Number of Medicare beneficiaries (thousands)[2]	117	50	43	140	35	243	39	189	211	186	32	33	-----
White (non-Hispanic)[1]	88%	94%	84%	95%	34%	50%	11%	67%	51%	50%	62%	62%	65%
Black (non-Hispanic)[1]	4%	1%	9%	1%	3%	41%	0%	22%	9%	43%	35%	35%	12%
Hispanic[1]	5%	2%	5%	1%	53%	5%	88%	6%	29%	4%	2%	2%	16%
Asian & Pacific Is. (non-Hispanic)[1]	1%	2%	1%	1%	6%	2%	1%	2%	7%	1%	1%	1%	5%
All others[1]	3%	1%	2%	2%	3%	3%	1%	2%	4%	1%	1%	1%	3%
Serious chronic illness (% of Medicare population)[2]	15%	16%	17%	15%	13%	17%	18%	19%	15%	19%	21%	22%	-----
HRR economic environment (overall population)													
Median household income	$41,537	$46,686	$43,902	$65,138	$62,450	$45,219	$30,256	$53,939	$58,450	$45,240	$36,793	$40,389	$52,516[3]
Unemployment	6%	5%	11%	5%	9%	15%	8%	7%	7%	9%	8%	7%	6%
Percent of population in poverty/lower income strata	15%	12%	14%	11%	8%	17%	26%	12%	9%	18%	22%	22%	12%
Local health care delivery syste													
Medicare managed care penetration rate[2]	12%	29%	22%	14%	3%	14%	10%	12%	38%	4%	4%	2%	25%[3]

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[1] Thomson Reuters (2011). Market Report: Demographics Snapshot.

[2] CMS (2008). Aggregate HRR data.

[3] Kaiser Family Foundation (2009). Statehealthfacts.org.

	Asheville, N.C.	La Crosse, Wisc.	Muskegon, Mich.	Portland, Maine.	Salinas, Calif.	Detroit, Mich.	Harlingen, Texas	Jacksonville, Fla.	Las Vegas, Nev.	Memphis, Tenn.	Monroe, La.	Tuscaloosa, Ala.	U.S. Average
Private insurance (% of total pop) [5]	42%	57%	50%	57%	56%	48%	13%	56%	61%	44%	31%	50%	54%[3]
Medicare (% of total pop) [5]	18%	16%	17%	13%	9%	14%	7%	12%	10%	10%	12%	13%	16%[3]
Medicaid (% of total pop) [5]	13%	16%	20%	15%	18%	24%	23%	11%	7%	23%	28%	16%	12%[3]
Dual eligibles (% of total pop) [1]	4%	3%	3%	5%	2%	2%	4%	2%	1%	4%	4%	4%	3%[3]
Uninsured (% of total pop)[4]	16%	11%	14%	11%	16%	18%	51%	20%	20%	19%	25%	18%	17%[3]
Prevalence of chronic conditions in Medicare population													
COPD rate	10%	7%	11%	11%	8%	15%	12%	14%	13%	12%	15%	12%	11%
Diabetes rate	22%	23%	28%	24%	28%	38%	42%	29%	26%	28%	29%	29%	27%
Health failure rate	14%	17%	19%	15%	14%	26%	23%	18%	15%	20%	27%	20%	18%
Heart disease rate	24%	27%	30%	29%	30%	52%	45%	39%	34%	34%	40%	28%	35%
Breast cancer rate	2%	1%	2%	2%	2%	2%	2%	3%	2%	2%	2%	2%	2%
Colorectal cancer rate	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Lung cancer rate	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Prostate cancer rate	3%	3%	4%	3%	4%	4%	3%	4%	3%	3%	3%	2%	3%

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[4] Thomson Reuters (2011). Market Report: Current Insurance Coverage Estimate.

Low-cost, high-quality HRRs

Asheville, North Carolina

Situated close to the Blue Ridge Mountains, the Asheville HRR consists of an urban area (Buncombe County, with a population of 229,047[10]) surrounded on all sides by rural counties.[11] *Kiplinger's Personal Finance* ranked it seventh in its "50 Smart Places to Live" list, which recognizes cities that offer a reasonable cost of living and a great quality of life. The local population includes a large proportion of senior citizens and retirees. The health care system developed around the area's longstanding tradition of health and healing, with a focus on integrating the physical, social, and behavioral aspects of health across all settings. One large health system and one primary hospital dominate the health care market. This hospital, the only regional trauma center in western North Carolina, became the sole provider over 15 years ago when it merged with a smaller rival hospital. The region also includes one Department of Veterans Affairs (VA) medical center, one Indian hospital, five critical access hospitals, and at least eight community hospitals scattered across 18 counties. Medicare beneficiaries have low use of ambulatory surgeries, long-term care hospitals (LTCHs), EDs, home health, post-acute care, and inpatient rehabilitation facilities in the HRR. There is one tertiary care hospital system for the region, which over time has purchased a number of the smaller community hospitals in the region and has entered into management services agreements with others. Until recently, the hospital has enjoyed a virtual monopoly on tertiary care services in the western region of North Carolina. The insurance distribution of the market is approximately 42 percent privately insured, 13 percent Medicaid, 18 percent Medicare, four percent dual eligible, and 16 percent uninsured. The tertiary care hospital continues to operate under an unusual certificate of public advantage (COPA) issued by the Department of Justice, designed to protect consumers from anti-competitive actions by returning the community some of the savings the two systems received from joining forces in the form of community benefits.

La Crosse, Wisconsin

Located along the Mississippi River and overlooking the bluffs of southeastern Minnesota, the La Crosse HRR has two major health systems, which are vertically integrated, physician-led, and together the leading two employers in the region. Although mostly rural, the area has three regional colleges and universities which, along with the two health systems and the La Crosse county health department, participate in the Health Science Consortium, bridging the gap between the institutes of higher learning and the health care community. Of the two health systems, one comprises two-thirds of the market share and the other represents the remaining third. Both systems have hospitals, clinics, health plans, home care, and hospice care. The larger of the two systems is also affiliated with a company that owns a nursing home, memory care centers (catering to adults with Alzheimer's disease and dementia), assisted living facilities, and independent living facilities. Both systems' health plans have commercial and Medicaid products. One of the systems has a MA plan that boasts about 11,000 members in the HRR. The market is approximately 57 percent privately insured, 16 percent Medicaid, 16 percent Medicare, three percent dual eligible, and 11 percent uninsured. Few health maintenance organizations (HMOs) are available in the area. The regional branch of Family Care, Wisconsin's Medicaid

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[10] Source: U.S. Census Bureau, Population Division (2008).
[11] Source: Rural Data Bank (http://www.ncruralcenter.org/databank/rural_county_map.php).

managed long-term services and supports (MLTSS) program, administers long-term services and supports (LTSS) and some additional state plan Medicaid services (e.g., outpatient mental health, drugs) for dual eligibles in the HRR. In the Minnesota counties of the HRR, those 65 and older can enroll in the state's integrated Medicare/Medicaid acute and LTSS program (voluntary enrollment). Iowa, the third state encompassed in the La Crosse HRR, does not have a Medicaid managed LTSS program for dual eligibles.

Muskegon, Michigan

Located on the shores of Lake Michigan, the Muskegon HRR covers several counties in western Michigan. Many interviewees the team spoke with described Muskegon as an economically depressed, aging community, with younger generations leaving the area due to a lack of jobs. Up until mid-2008, two large, nonprofit hospital systems dominate the HRR; in June of 2008, the parent company, which owns the larger of the two systems, acquired the smaller hospital system. This consolidated system, owned by a large, faith-based, nonprofit health system, has roughly two-thirds of the Medicare market share and also owns a majority share of a physician hospital organization (PHO), which employs the vast majority of physicians in the area. The region is influenced by its proximity to Grand Rapids, the second-largest city in Michigan, with the HRR's remaining Medicare market share split between two independent community hospitals in more rural parts of the HRR and a large health system in Grand Rapids (outside the HRR).

About half the people in the HRR are privately insured, 20 percent have Medicaid, 17 percent have Medicare, three percent are dual eligible, and 14 percent are uninsured. Most people with private insurance are in "non-risk" plans, such as preferred provider organizations (PPOs), point of service (POS) plans, and other types. Dual eligibles are excluded from Michigan's Medicaid managed care programs; however, duals who require a nursing home level of care can receive comprehensive LTSS through a HCBS waiver, MI Choice. There is a one- to two-year waiting list, with faster access to those at risk of immediate nursing home placement. Individuals with lower intensity needs can receive home-care services through the state's home health state plan benefit (Michigan Home Help). Muskegon now has a popular PACE site; however, it was not in existence in 2008 and would not have affected CMS's data for the HRR.

Portland, Maine

The Portland HRR is geographically large, encompassing 11 Maine counties in the southern third of the state and three New Hampshire counties; about 900,000 of Maine's 1.3 million people live in the HRR. Portland is the state's largest city and the region's tertiary care center. The region is dominated by a nonprofit health system that grew out of the region's tertiary care center, which is also the state's only teaching hospital. Created in 1997, the system owns eight member hospitals, which combined account for approximately 55 percent of the market share in the region. The system also has strategic contractual relationships with three affiliated hospitals, bolstering the health system's market share to about 80 percent. Through its members, the health system also owns physician practices, ambulatory care centers, skilled nursing facilities (SNFs), labs, home health and hospice agencies. All hospitals in the region are nonprofit, and nearly all the key interviewees described provider relationships as highly collaborative. Though some in the region expressed concern about putting too much market power in the hands of a single health system, the prevailing sentiment is that the dominant system has used its scale to maintain high-quality services and promote a positive public health agenda in the region. There are few

physician-owned facilities in the region (e.g., ambulatory surgery or imaging centers), which interviewees attributed to the state's relatively stringent certificate of need (CON) process.

Fifty-seven percent of the region's population is covered by private insurance, approximately 15 percent by Medicaid, about 13 percent by Medicare, five percent are dual eligible, and 11 percent do not have insurance. The region has relatively little risk-based managed care on the commercial side, no risk-based Medicaid managed care, and relatively low MA penetration, though the latter has grown significantly in recent years. In addition, a relatively high number of Medicare beneficiaries maintain Medicare supplemental policies. The region has an active purchaser collaborative, the Maine Health Management Coalition (MHMC), comprised of the state's largest private and public employers. In addition to supporting its members, MHMC disseminates cost and quality data to the public through its Web site.

Salinas, California

The Salinas HRR is comprised only of Monterey County, located South of the major central coast cities of San Francisco and San Jose. Within Monterey County, the health care market is split into two geographic areas with distinct characteristics. Coastal Monterey in the West has a higher cost of living, a strong tourism industry, and a sizeable population of retirees. Inland to the East lies the Salinas Valley, the inspiration for John Steinbeck's *Grapes of Wrath* and home to a vibrant agricultural economy. Two dominant, independent, nonprofit hospitals essentially function as monopolies in their respective areas and do not employ any physicians; according to interviewees, hospitals are not allowed to employ physicians under California law, with the exception of county and university hospitals. A few groups of PCPs exist in the county, including a larger 23-member physician group, primarily serving the Salinas Valley. In addition, a robust network of safety-net providers operates across the county, including a county hospital, a federally qualified health center (FQHC) consisting of nine clinics, and a system of seven county public health clinics described as FQHC look-alikes.

Approximately 56 percent of the population in the Salinas HRR has private health care coverage, with nine percent of that direct private pay; 18 percent has Medicaid; 16 percent is uninsured; nine percent has Medicare; and two percent is dual eligible. Managed Advantage organizations have a small presence in the commercial and Medicare markets, which interviewees attributed to high prices charged by the dominant hospitals. In contrast, all of the HRR's Medicaid enrollees are covered under a mandatory, regional managed care coverage plan operated under a 1915(b) waiver. The plan is innovative in its use of patient monitoring, quality reporting, and incentives programs, and it is well regarded in the HRR for assisting in care coordination. There are no LTCHs in the county. Interviewees indicated residents requiring this level of care will stay in the HRR when possible and receive services in a SNF; however, occasionally, residents are transferred to LTCHs outside the HRR, typically in the San Jose or San Francisco areas. Due to low reimbursement rates and complexities of regulation, some physician practices in the HRR are beginning to restrict and even exclude Medicare and Medicaid patients from their practices.

High-cost, low-quality HRRs

Detroit, Michigan

The city of Detroit has been linked with the American motor vehicle industry for more than a century, and with the decline of this industry, the city's remaining population is now older,

sicker, and poorer, with more limited access to providers, as physicians and others have relocated to the more affluent suburbs. The Detroit HRR encompasses four counties and includes both rural farmland and sprawling suburbs, home to a diverse immigrant population. The city center in the East serves as its focal point, where there has been a 60 percent decline in its PCP capacity and a 40 percent increase in Medicaid enrollment over the past decade. Three major health systems with academic teaching hospitals make up the Detroit HRR hospital market. The three primary hospital systems are some of the largest remaining employers in the region, and there is an oversupply of providers and hospital beds. In particular, the HRR has one of the highest ratios of full-time hospital employees per 1,000 residents of any HRR in the country. This results in a highly competitive environment with duplication of services across systems and limited coordination across settings. In addition, a large presence of independent physicians and groups whose financial incentives are not aligned with those of the health systems results in hospitals having limited leverage to control independent physician practice patterns.

Detroit's FQHC network includes four organizations operating in 23 locations, without a county or city hospital to support them.[12] Almost half of the Detroit HRR's population is privately insured, while 24 percent is covered by Medicaid, 14 percent has Medicare, two percent is dual eligible, and 18 percent is uninsured. Multiple interviewees noted instances of lack of awareness among the Detroit elderly of their Medicare status and their potential eligibility for Medicaid. State-funded LTSS per capita for Michigan was well below the national average at $18 compared to $29,[13] despite a high need for such services, particularly in the Detroit area. According to a report by Wayne State University, *Dying Before Their Time*, approximately 1,700 Detroit seniors die each year because they do not have access to quality LTSS that would extend their lives.[14] According to this same report, there is a perception of substandard care in Detroit nursing homes that has created one of the most racially segregated LTSS systems in the country.

Harlingen, Texas

At the most southern point in Texas, the Harlingen HRR is located in the heart of the Rio Grande Valley, which separates Mexico from the United States. There are five main hospitals in the HRR, numerous individual physician practices, and one of the largest FQHCs in the state. There are three distinct regions in the Harlingen HRR – Harlingen, Brownsville, and Weslaco – each of which has its own dominant medical facility serving the population in the immediate geographic area, with little coordination or referrals across the three regions. There are no major physician health organizations; the majority of physicians and specialists are part of individual or small group practices. The population faces a high prevalence of chronic disease, with a diabetes rate of almost twice that of the national average. In terms of utilization of specific services, there is low use of SNFs and hospice, contrasted by high use of other post-acute care services, including inpatient rehabilitation facilities and LTCHs as well an exceptionally high use of home health

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[12] For purposes of comparison, one key interviewee volunteered Chicago, which has 75 FQHCs with 183 locations.

[13] These averages were part of the Thomson Reuters analysis of Table 2. State-Funded HCBS Programs for Older People, in Robert L. Mollica and Kristin Simms-Kastelein, National Academy for State Health Policy, and Enid Kassner, AARP Public Policy Institute, *State-Funded Home and Community-Based Services Programs for Older Adults*, AARP Public Policy Institute, June 2009.

[14]*Dying Before Their Time: The Startling Truth About Mortality and Detroit Area Seniors.* A compilation of Research Findings through Wayne State University, Commissioned by the Detroit Area Agency on Aging and The Detroit Senior Citizen's Department, 2003.

services. Approximately 13 percent of the population in the HRR is privately insured, 23 percent has Medicaid, seven percent has Medicare, four percent is dual eligible, and 51 percent is uninsured. There is relatively low MA penetration in the HRR, with a total of two health plans covering approximately 10 percent of the eligible population.

Jacksonville, Florida

The Jacksonville HRR includes several counties in northeast Florida and southeast Georgia. The City of Jacksonville is the largest in the state of Florida in terms of both population and land area and is the largest city by area in the continental United States. By contrast, the southeast Georgia portion of the HRR is rural and more sparsely populated, representing approximately 20 percent of the total population in the HRR. No single hospital system dominates the Jacksonville region. The four largest systems, all located in Jacksonville, comprise one half of the market and include two faith-based, nonprofit systems, a for-profit system, and a teaching hospital affiliated with the University of Florida Health Science Center, which is also the area's safety-net hospital. All systems offer a range of services. Large, single-specialty physician groups provide the majority of specialty care in the region, and according to interviewees, there is a shortage of PCPs throughout the entire HRR, most of whom operate in small private practices. Interviewees also noted that many physicians deny or limit available appointment slots to Medicaid patients or new Medicare beneficiaries due to reimbursement-level concerns. Approximately 56 percent of the population in the Jacksonville HRR is privately insured; 11 percent has Medicaid; 20 percent is uninsured; 12 percent has Medicare; and two percent is dual eligible. Comparatively, the region has a relatively low rate of MA penetration, with 12 percent of Medicare beneficiaries enrolled in this kind of managed plan, compared to 25 percent nationwide.[15]

Las Vegas, Nevada

Located in Clark County in the Mojave Desert basin, Las Vegas is the largest city in Nevada (population: 606,846[16]) and dominated by the gambling and related entertainment industries. In addition to three counties in southern Nevada, the Las Vegas HRR spans two counties in southeastern California and one in northern Arizona. Three competitive health systems, two national for-profit chains and a regional nonprofit, dominate the health care market. There is also a county hospital, which is located in the urban core and has 530 beds. According to interviewees, this hospital serves a disproportionately high number of uninsured and underinsured patients, including a high number of undocumented individuals. The county hospital is also the only level one trauma facility, the only public facility, and the only safety-net hospital in the region. Physicians remain largely separate and independent from hospitals, most remaining in small practices or belonging to one of two large PCP groups. Noticeably absent in the market is any integrated provider system. Each type of provider (primary, acute, post acute, ambulatory) tends to be organizationally separate from the other types. Several interviewees characterized the market as the "wild West" of medicine, in which each provider goes its own way, seeking market niches, with little collaborative planning or coordination across settings of care.

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[15]CMS (2008). Aggregate HRR data. Data for national average unreliable.
[16] Source: City of Las Vegas (2010) (http://www.lasvegasnevada.gov/files/CLV_Facts_Sheet_2010.pdf)

Approximately 61 percent of the population in the Las Vegas HRR has commercial health care coverage; seven percent have Medicaid; 20 percent is uninsured; 10 percent has Medicare; and one percent is dual eligible. Comparatively, the region has a high rate of MA penetration, with 38 percent of Medicare beneficiaries enrolled in a plan.[17] In 2008, the U.S. Department of Justice and the Nevada Attorney General settled allegations that a health care company's acquisition of another company would decrease competition among MA plans in the Las Vegas area, potentially leading to higher prices and reduction in quality or breadth of benefits available to MA enrollees. Under the settlement, the health care company agreed to divest all assets dedicated to the administration and selling of its MA plans for individuals in Clark and Nye Counties.

Memphis, Tennessee

The largest city in the state of Tennessee, Memphis is located at the crossroads of Mississippi and Arkansas, serving as the metropolitan hub for many of the adjacent rural communities that line the Mississippi Delta. Beyond Memphis, the larger HRR is composed of 35 counties across Tennessee, Arkansas, Mississippi, and Missouri. Two competitive, faith-based, nonprofit hospital systems dominate the market in the HRR and are among the largest hospital systems in the country.[18] Until the late 1990s, one of the systems owned a 2,000-bed hospital in downtown Memphis that has since closed and reopened with fewer beds in a more affluent part of the city. Both hospital systems offer a range of services in their facilities, including long-term acute care, skilled nursing, inpatient rehabilitation, hospice, and home health. The City of Memphis also houses the only regional trauma center for 200 miles – it serves parts of five states – which is in a struggling county hospital affiliated with the University of Tennessee Health Science Center. Large single-specialty physician groups provide the bulk of specialty care – some are nationally recognized leaders composed of more than 40 physicians – and the two hospital systems compete for physician business.

Approximately 44 percent of the population in the Memphis HRR has commercial health care coverage; 23 percent has Medicaid; 19 percent is uninsured; 10 percent has Medicare; and four percent is dual eligible. Comparatively, the region has an extremely low rate of MA plans, with just four percent of Medicare beneficiaries enrolling in this kind of managed plan, far lower than the 25 percent take-up rate statewide.[19]

Monroe, Louisiana

Situated on the Ouachita River, Monroe is the eighth-largest city in Louisiana. The Monroe HRR includes 10 counties, called "parishes" in Louisiana, in the northeastern part of the state, which is culturally and economically attached to southeast Arkansas and northwest Mississippi. In general, the HRR is poor, with 22 percent of the population living in poverty, extremely rural, and sparsely populated. Two competitive hospital systems, one for-profit and one nonprofit, comprise roughly half of the Medicare market in the HRR and offer a range of services,

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[17]Thomson Reuters (2011). Market Report: Current Insurance Coverage Estimate.

[18] Methodist Healthcare (2011). Retrieved from: http://www.methodisthealth.org/methodist/About+Us; Jamie, O. (2010). "50 Largest Hospitals in America," *Becker's Hospital Review*. Retrieved from: http://www.beckershospitalreview.com/lists-and-statistics/50-largest-hospitals-in-america.html.

[19] Thomson Reuters (2011). Market Report: Current Insurance Coverage Estimate.

including long-term acute care, inpatient rehabilitation, skilled nursing, and hospice. Several single-specialty physician groups provide the majority of specialty care in the region. According to interviewees, there is a shortage of PCPs throughout the entire HRR, and most operate in small private practices. Interviewees noted that many physicians deny or limit available appointment slots to new Medicare beneficiaries, citing reimbursement concerns.

Approximately 31 percent of the population in the Monroe HRR is privately insured; 28 percent has Medicaid; 25 percent is uninsured; 12 percent has Medicare; and four percent is dual eligible. The region has a low MA penetration rate, with only four percent of Medicare beneficiaries enrolled in this kind of managed plan.[20] Approximately 15 percent of people age 65 or older (two percent of total population) are not enrolled in Medicare because they did not pay Medicare taxes while working.[21]

Tuscaloosa, Alabama

A city of nearly 100,000 that houses the University of Alabama, Tuscaloosa serves as the metropolitan hub for some of the poorest rural communities in the country. For more than 85 years, a single hospital system has dominated health care in West Alabama. Combined, the four hospitals of the system account for 81.5 percent of the Medicare market share in the HRR.[22] Housing 583 beds and offering the gamut of specialty services, the hospital in Tuscaloosa serves as the focal point of the system, admitting patients from the extremely poor and underserved neighboring rural counties for tertiary care. Despite its size and influence on care patterns in the region, the system employs few physicians, who are primarily part of small- to medium-sized independent single-specialty groups (the largest, according to the estimates of one interviewee, is 12 physicians).

Although there is no shortage of specialty care physicians in Tuscaloosa, interviewees noted a paucity of PCPs, a fact that has, in part, resulted in reliance on urgent care centers, of which there are five in the City of Tuscaloosa – some owned and operated by a group of ED physicians. A large FQHC has influenced community care since 1977 and since its founding has expanded to include 13 satellite centers in seven of the nine counties incorporated in the HRR.[23] Additionally, Tuscaloosa houses the state's oldest and largest inpatient psychiatric facility, which, when it opened in 1861, was called the Alabama State Hospital for the Insane.[24] Approximately 50 percent of the population in the Tuscaloosa HRR has commercial health care coverage; 16 percent has Medicaid; 18 percent is uninsured; 13 percent has Medicare; and four percent is dual eligible. Comparatively, the region has an extremely low rate of MA plans, with just two percent of Medicare beneficiaries enrolling in this kind of managed plan, far lower than the 22 percent take-up rate statewide.[25]

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[20]CMS (2008). Aggregate HRR data.
[21]Thomson Reuters (2011). Market Report: Demographics Snapshot.
[22]Thomson Reuters (2011). Market Report: 2009 Medicare Market Share Chart.
[23]Whatley Health Services (2011). Retrieved from: http://www.whatleyhealth.org/content.asp?id=330575.
[24] Alabama Department of Mental Health (2011). Retrieved from:
 http://www.mh.alabama.gov/BryceHospitalProject/history.html.
[25] Thomson Reuters (2011). Market Report: Current Insurance Coverage Estimate.

RESULTS

Multiple factors, sometimes in unique and complex combinations, determine the extent to which a region is able to support practice patterns that result in the delivery of higher quality care at a lower cost. Health care practices, while an important factor in determining an HRR's cost/quality outcomes, are not the only factor. Even exemplary practices cannot prevent the root causes (e.g. material deprivation, behavior, culture, genetics, or environmental exposures) that give rise to illness. For some, poor health behaviors (e.g. eating high-fat foods, tobacco use, alcohol and drug use) reflect socio-cultural norms or develop as coping responses to life stress, such as that often associated with poverty or unemployment. In effect, environment (both physical and social) matters in health, and it often takes non-health care initiatives to mitigate any harmful effects and leverage opportunities.

While using HRRs as an organizing framework is far more meaningful than using traditional (and somewhat arbitrary) geographic designations, there are some considerations to keep in mind when interpreting results. Categorizing HRRs by cost and quality metrics – which are not exhaustive in reflecting the cost or quality domains – is a relative exercise. Low-cost, high-quality HRRs, for example, are faring better than the high-cost, low-quality ones, but they are not necessarily optimizing cost and quality or offering the same benefits or levels of service to all segments of the population. Further, there is great variance in the size of an HRR, ranging from a very small community to a multi-state area that includes large metropolises. The findings thus represent illustrative and likely factors underlying the observed cost and quality levels but should be regarded with reserve.

It should be noted that while one aim of this study was to identify models of care targeting dual eligibles, those with multiple chronic conditions and those in the last year of life, no initiatives outside of PACE or special needs plans for dual eligibles (D-SNPs) exclusively identified dual eligibles or Medicare beneficiaries with complex conditions.[26] These distinctions – important from a policy and program perspective – were somewhat arbitrary at the HRR level, particularly given the high overlap between dual eligibles and those with chronic and complex health needs. Interviewees typically said they do not target their care management based on payer source. The results, therefore, refer to both of these populations. Additionally, HRR interviewees did not view beneficiaries in the last year of life as a distinct group, though selected HRRs had initiatives promoting advance directives and making palliative care more readily available in the community.

From the hundreds of interviewees across the 12 HRRs, two overarching findings distinguish the low-cost, high-quality from the high-cost, low-quality quadrants:

1. The prevalence of poverty in HRR was highly associated with how the HRR fared in cost and quality and often appears to moderate the degree to which an HRR can function as a system.

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[26] Certain Medicaid initiatives included a component of services that were available to dual eligibles. In these instances, however, the dually eligible were part of the larger Medicaid population affected by state waiver programs rather than being exclusively targeted for services.

2. Degree of systemness – whether an HRR can function as a system (or a limited set of systems) with a mission focused on the delivery of high-quality care was highly associated with an HRR's status as low-cost, high-quality or high-cost, low-quality – that is, whether the HRR comprises a cohesive and mutually reinforcing set of structures and stakeholders that together are actively striving to improve health while making services easier to access and use.

While there are myriad contributing factors and pathways through which they impact cost and quality, the ones presented for each of the findings below reflect the cluster of characteristics that nearly uniformly delineated the higher from the lower cost HRRs in this study. Given the qualitative nature of the research, however, it is not possible to determine whether some or all of these factors are equally critical or if an HRR can achieve an optimal cost and quality level with just a subset of these factors in play. The following sections present the component factors underlying these key findings that the interviews revealed to be important. These details are presented for each key finding in turn, with a final section that highlights ways the two intersect.

Prevalence and impact of poverty

Poverty has long been heralded as the last frontier in public policy, a seemingly insurmountable hurdle permeating all aspects of society that manifests in a provider's case mix and associated challenges of delivering high quality and cost-effective care. Poverty- and resource-related problems were more prevalent in the high-cost, low-quality HRRs and appeared to adversely affect the delivery of care in several ways. There appears a tipping point where a sufficiently high proportion of poverty-related challenges (e.g. safe housing, transportation, air quality, water quality, residential segregation, neighborhood safety and access to good nutrition and services) can thwart the ability of "systemness" to take root in an HRR and instead enable opportunism. Every HRR grappled with providing care to poorer and sicker segments of the population who often lack access to nutritional food, money for medications and cost sharing for medical care, and the ability to self-manage and access needed care. The low-cost, high-quality HRRs generally had markedly smaller proportions of these vulnerable populations than the high-cost, low-quality HRRs. Although poverty results in the obvious high percentage of Medicaid patients and dual eligibles, its effects are much more far-reaching than mere low reimbursement rates for providers. The interviews revealed several ways in which poverty can impact the area's quality and cost outcomes, including primary care access, unhealthy lifestyles, health illiteracy, transportation barriers, provider and patient challenges and inappropriate use of the health care system.

Reduced access to and use of primary care

A number of conversations with interviewees in high-cost, low-quality regions centered on the shortage of PCPs and its relationship to poverty, which seemed to be a driving factor in utilization patterns across those regions. While a paucity of PCPs is a problem in many areas of the country, this seemed exacerbated in the high-cost regions, particularly in the more impoverished areas, where maintaining a practice for an already low-paying discipline can be nearly impossible. The impact of this shortage extended well beyond basic health maintenance and outpatient care. For the few PCPs working in the high-cost regions with the greatest shortage – interviewees in Memphis, Tuscaloosa, and Monroe particularly expressed this concern – the

shortage of PCPs allowed them to give preference to the higher paying patients at the expense of others. As one PCP in Memphis explained, he loses $15 for each publicly funded payer he sees, so he has to "find the things that can keep [him] open," which might include ordering extra tests. Likewise, in Monroe, a provider explained that "physicians just don't take Medicaid – they are not even taking new Medicare [patients]." By comparison, in an area such as Asheville's Buncombe County, where there is a wealth of PCPs and, compared to most of the high-cost HRRs, fewer people living at or below the poverty line, one doctor said "Most of the providers that we see will do whatever it takes to make sure the patient is taken care of. They don't pay attention to the monetary value. They do have to worry about the bottom line, but we have providers that see patients that have no income, knowing that they'll never get paid."

This phenomenon, coupled with the fact that for many poorer residents, paying for and finding transportation to a PCP for an annual check-up is difficult, has resulted in large groups of patients not receiving care until they are extremely ill and using the ED as a primary system access point instead. According to one physician in Tuscaloosa, "a lot of why the ED is so over-utilized here is that people don't feel that they have anywhere else to go." And the numbers show it: Interviewees at one rural facility in the Tuscaloosa HRR said that 80 percent of their admissions are through the ED. Such care patterns clearly strain the system, as high-cost ED visits that usually result in testing and costly procedures take the place of earlier low-cost preventive visits to a PCP. In contrast, Asheville attributed much of the care practices in the region to the presence of primary care. One interviewee noted, "Primary care in this area has a lot to do with what's going on and that affects a lot of things, whether it's hospital culture, specialty culture."

Unhealthy lifestyles

In addition to the impact the acute shortage of PCPs has on utilization patterns, HRRs in the high-cost, low-quality quadrant are faced with a patient population that has greater health issues resulting from poverty-related unhealthy lifestyles. The correlation between chronic conditions and poverty is impossible to deny, and its impact can be felt directly and indirectly across the entire system – a fact that separates the high-cost regions from the low-cost ones. Although not a new phenomenon, the impact poverty has on creating and perpetuating chronic conditions cannot be overstated. Due to lack of available healthy foods – what some interviewees described as "food deserts" – and safe areas in which to exercise or an awareness about its benefits, those living at or below the poverty level are more likely to have multiple chronic conditions. Interviewees in Jacksonville in particular discussed the impact of the "southern diet" on health and a widespread complacency toward health management. Similarly, interviewees in Las Vegas and Harlingen reference their regional "valley syndrome," a euphemism for obesity, hypertension, and diabetes. For members of the poorer population, this is compounded by the fact that they at times lack the resources to pay for necessary prescription drugs, do not (or cannot) devote the time and money to purchase healthy foods, and do not go for follow-up exams with a PCP (many residents do not even have this option). Severe illness, late presentation to the doctor and high-cost visits to the ED are common. Although there have been some efforts across the high-cost, low-quality regions to introduce prevention and wellness programs – such as a diabetes management program in the Jacksonville HRR – they have been limited in their scope and have not been directly tied to better outcomes across the system.

Illiteracy and low health awareness

Particularly in Tuscaloosa and Monroe, interviewees spoke of the impact illiteracy has on the acuity of conditions befalling the poorest in the region. "Part of the problem here…[is] the lack of education – even if you treat the patient, they won't be compliant," a provider in Tuscaloosa said. "They get sick again and keep coming back. There is no real education telling them how to take care of themselves." Without an understanding of the importance of going for follow-up exams, regularly taking prescription medicines, and maintaining other habits that ensure better health status, the illiterate patient population for the most part continues to cycle in and out of the hospital with severe – and for the most part preventable – conditions. As one Monroe provider explained, a patient needed to hear that "that little white pill is going to make your heart beat better." A Harlingen provider similarly noted that many patients will be taking 10 to 15 medications and will be unable to name one: "They have no idea what medicines they're taking," the interviewee said. In Tuscaloosa, one provider admitted that only in the last five years did the health system become aware of illiteracy – and the barriers it poses when providing care. "As a nurse, I always assumed that [the patient] can read," she said. "You always go to the patient and give them written instructions, until we became aware of the literacy of the patients. [Now] you have to document that the patient was able to repeat what you said." Such tactics are clearly important in a city that has a reported illiteracy rate of 23 percent, according to a University of Alabama study (Moya, 2009). The Detroit HRR may face an even greater hurdle in this regard, as an estimated 47 percent of adult residents in the city are functionally illiterate (Yung, 2011). It appeared from the interviews that providers in these regions generally felt the onus was on the patient to self-manage and did not report much in the way of best practices for addressing this concern.

Reduced access to transportation

For those residents who understand the importance of attending follow-up appointments or going for regular check-ups, limited or no access to transportation often proves an insurmountable hurdle, many interviewees said. In addition to the cost of public transportation services, residents of many cities face long commutes, undependable schedules, and inconvenient routes – issues that are enough to dissuade many from attending appointments, particularly those who would have to take off a significant amount of time from work to do so. For residents in rural areas, even in the best of situations, people must have the foresight to schedule the local bus service in advance of the appointment and are at the disposal of the limited schedule and long commutes, which often turns a quick follow-up exam into an all-day affair. Available public transportation ranged from nonexistent in a place like Monroe, to limited in a place like Tuscaloosa, where the public bus system does not cross the river into neighboring Northport, where one of the two major hospitals serving the city is located. Similarly, a Detroit interviewee explained: "Transportation is a huge challenge – there's no mass transit… In the 50s, there was a rail system; they got rid of the rail cars. Then the bus system deteriorated… It is hard to do mass transit that serves enough people." Not only is transportation a problem in terms of maintaining patient health, but it also weighs heavily on the health care infrastructure as a whole. According to one major hospital system in Detroit, it spends $1 million a year on non-reimbursable transportation. And when scarce resources must be allocated to simply transport patients to the hospital, funding for discretionary programs such as case management is impacted.

The provider-patient divide and the "culture of distrust"

In addition to some of the more obvious barriers associated with poverty, interviewees in many of the high-cost, low-quality HRRs described a strained relationship between providers and patients that tended to perpetuate these patterns of care. For example, in Memphis, there is a huge divide between the "haves," who mostly inhabit the eastern part of the city, and the "have nots," who reside in the West and line the banks of the notoriously impoverished Mississippi Delta. This divide has further entrenched what interviewees dubbed a generations-old "culture of distrust," that has strained the patient-physician relationship in the region. For physicians serving Medicare and Medicaid beneficiaries in some of the low-income areas, there is an assumption that patients will miss appointments and be noncompliant. A similar provider attitude was pervasive in Harlingen, where physicians spoke of patients' low compliance and "fatalistic" attitude toward their health. Interviewees in Las Vegas also described an environment of detached patient-physician relationships, in which physicians lacked a vested interest in the population for which they were providing care. Similarly, patients are less likely to seek care from physicians with this attitude, particularly when they are expected to wait longer in the office before being seen. This combination of factors has resulted in higher ED utilization rates and late presentation for care. A provider in Tuscaloosa explained a similar phenomenon: "If they come to the hospital and have a rich white guy as their doctor, they don't know if they can trust me."

Patterns of inappropriate use and "gaming" the system

Interviewees in high-cost, low-quality regions reported patterns of "gaming" the system – from the patient, payer, and provider sides. From the patient side, this manifested in patients proactively seeking the most from the system in terms of money and care. Interviewees in Harlingen spoke about an "entrepreneurial spirit" that resulted in patients finding ways to supplement their incomes through the health care system, such as becoming a certified home health aide and getting paid to take care of a family member. Interviewees in Monroe and Harlingen also described instances where families made health-related decisions based on the extent to which they would benefit financially, not on the well-being of the patient.

In a similar vein, interviewees in Tuscaloosa, Detroit, Harlingen, and Memphis described their experiences of working with a patient population that saw the health care system as a means to procure a level of resources unavailable to them in other sectors of life. As one Tuscaloosa provider explained, there is a belief among these patients that "they can have anything in the world of medicine for free." According to a Detroit provider, beneficiaries "use [their Medicare card] like a Gold card with no limits." In some extremely poor rural communities, providers described multiple instances of people going to the hospital for a "vacation." "We got people who met … [the ambulance] at the door with their suitcase and say, 'I'm going to the hospital to stay,' " one Tuscaloosa interviewee said. "We had one guy who chronically called [the ED] at lunchtime. He'd go to the hospital, get lunch, and go home." Memphis providers observed that patients who had been historically underserved see themselves as entitled to the "best care" possible, which equates to multiple tests and high-cost procedures.

Interviewees in Detroit and Jacksonville described another type of patient behavior driving utilization. A result of the legacy of the "first dollar" program, which historically provided robust

coverage to unionized workers in the automobile and manufacturing industries, residents have a pervasive expectation of access to unlimited health resources. Many older Detroit residents were members of the United Auto Workers (UAW), which negotiated with automobile companies for generous health coverage that was FFS without copayments for ED visits and limited, if any, out-of-pocket expenses. Although the coverage has changed a bit in recent years to require some copayments, those who have historically had UAW coverage – including many of those now on Medicare – still utilize the system as if they have limitless coverage, interviewees explained. In Jacksonville, interviewees similarly described a patient sense of "entitlement" to such services as diagnostic testing and durable medical equipment (DME) as well as an attitude that "the hospital will take care of me." This attitude completely diverged from some of the patterns described in the low-cost regions, where interviewees described residents as "frugal" and "conscientious" about their use of the health care system. This was particularly underscored in Muskegon, where interviewees attributed the attitude to the prevalent Dutch culture, and in La Crosse, where interviewees cited the high percentage of church-going patients and the dominant Norwegian roots.

The study team heard numerous examples of payers and providers similarly "gaming the system" – particularly in the Detroit and Tuscaloosa HRRs. Unsurprisingly, areas with large elderly and illiterate populations were particularly vulnerable to the abusive behaviors interviewees described. Such scenarios included beneficiaries unknowingly enrolling in MA plans at a local pharmacy or Walmart; hospice providers going door-to-door to enroll individuals in a "palliative benefit" without telling people they were enrolling in hospice; hospice providers promising around-the-clock care at the end of life and inappropriately billing for the continuous care benefit; DME companies attempting to inappropriately register elderly residents for unnecessary equipment by telling them it was free; and physicians going door-to-door in poor urban areas, providing unnecessary services. In Detroit, this manifested in the recent publicity of schemes involving over $23 million in fraudulent Medicare claims, underscoring the extent to which vulnerable populations can be taken advantage of in some of the poverty-stricken high-cost, low-quality HRRs.

HRR capacity to function as a system

Health care providers and stakeholders in the low-cost, high-quality HRRs are much more likely to function as part of a system that strives for coordinated, high-quality care. A cluster of factors and issues were identified in the interviews as key drivers in HRR systemness: provider collaboration and competition, financial incentives, population-based active care management, health information technology (HIT) systems and interoperability, quality monitoring and data sharing, and EOL planning and care.

A balancing act: Provider collaboration and competition

As important to the nature of care delivery in a region as poverty, the balance between provider collaboration and competition in a region was repeatedly raised in interviews as a key driver in utilization patterns and care coordination. Again, there was a discernable divide between the two HRR groups. In the low-cost regions, collaboration among providers and across settings occurred with relative frequency, and while competition was present in some of the low-cost HRRs, it was generally outcomes driven. In the high-cost regions, collaboration among providers and across

settings occurred only in small pockets within a region (among employed physicians in a dominant health system, for instance), if at all. Competition in these HRRs was quite lively, though not productive in the way the outcomes-driven competition was in the low-cost regions. Oftentimes this competition was not only between hospitals and systems for the independent physicians but also among a large number of relatively new market entrants in areas where entrepreneurs identified new opportunities to offer high-margin services (this was especially prevalent for home health and hospice services). Instead, competition appeared to be driven by the interplay between provider/payer supply and general market fragmentation.

Providers in four out of the five low-cost HRRs we visited engaged in frequent collaboration across settings and either did not describe any palpable competition or participate in competition based on quality outcomes. In a region like Asheville, which has limited physician specialty groups and a single tertiary care hospital, competition is essentially non-existent, and physicians do not feel pressure to recommend procedures or interventions purely for fear of losing a patient – and the revenue base associated with that patient – to another practice. Due to the large number of PCPs (particularly specialized in family medicine), the community focuses on whole-person and systems-oriented care based on collaboration across settings. "I think there is a lot of collaboration, which is the underpinning of why this seems to be a different atmosphere than other medical communities where there's more competition," an Asheville provider said. Unlike in the high-cost, low-quality regions, Asheville has a wealth of resources, having experienced significant economic prosperity in the last decade. The HRR has the luxury to focus on the quality of care as opposed to solvency issues. Interviewees in Portland described a similar environment, in which the major hospital system for the last eight years has adhered to self-imposed margins and cost caps that promote collaboration instead of competition. "The answer is collaboration and CON, not competition," a health system representative said. "We don't have an 'arms race' for resources."

The La Crosse region similarly bred a community-wide spirit of collaboration among local organizations and between the major hospital systems, but it was a different model from Asheville and Portland in that the collaboration went hand-in-hand with what interviewees described as "friendly competition" between the two major health systems. Rather than competing financially, systems in these HRRs focused on delivering better outcomes than the other.

The high-cost, low-quality regions generally had an entirely different approach to care patterns in terms of provider relationships – and that approach likely drove the high volume of services provided. Because the nature of competition in the high-cost regions was entirely different from that present in the low-cost regions, there was little room for collaboration among providers and across settings. This dynamic was likely prevalent in the high-cost regions as a result of the supply of particular physician and payer types as well as a type of system-wide fragmentation that did little to promote physician loyalty to the major hospital systems. The repeated storyline in these HRRs was the insufficient supply of PCPs coupled with the comparatively high rates of specialists – especially those practicing in large, single-specialty groups. The Memphis region was emblematic of this trend, as interviewees described the juxtaposition between the limited PCPs working in solo practices with a single fax and phone line and the mammoth, nationally renowned single-specialty groups with 40 physicians. Naturally, this dynamic lent itself to a procedurally based environment – but more importantly, it fueled supply-driven competition

among providers and highly independent approaches to care. "Everybody has a silo, and what they're doing is trying to maximize their revenue and minimize their expense by saying, 'I've seen this patient as much as I want in my silo, now I'll send them back to the hospital,' " a Tuscaloosa provider said.

Hospitals, in turn, compete for the specialist admissions and, therefore, are less likely to challenge behavior when it is inappropriate, including unreasonable lengths of stay or excessive and duplicative testing. Such specialist-flooded markets yielded a type of competition among providers unseen in the low-cost regions. In markets with a large Medicaid population, the basic revenue formula (Revenue = Price x Quantity) added fuel to the fire, as low Medicaid reimbursement rates further focused attention on the quantity as opposed to quality of services provided. "Competition in health care drives capacity, and capacity drives utilization," a Portland provider said.

In the low-cost HRRs, where the PCP-to-specialist ratio rested at a relative equilibrium – supply was large enough to provide appropriate patient access but limited enough to inhibit overutilization caused by excess – providers had the resources to collaborate and, in some cases, compete in a way that improved the overall quality of care delivery. In essence, providers in these regions had the luxury of resources to act in an "aberrant" way in the context of a system that rewards quantity as opposed to quality of care. Not only can physicians "afford" to focus on quality patient care more so than volume but health systems also have the market power (and enough other physicians eager to work there) that they will fire physicians who do not meet their high standards of care. The high-cost HRRs, on the other hand, exhibited patterns of care delivery that promote overutilization.

Challenges in aligning financial incentives

The study team found that even in the low-cost regions visited, the most integrated delivery systems had yet to find a comprehensive way to align organizational and physician financial incentives that impacted practice patterns.[27] The low-cost HRRs were simply more adept at working around this than the high-cost HRRs appeared to be.

Several payers reported integrating pay-for-performance elements into their procedure-oriented reimbursement approaches, though the degree to which they could hold hospitals accountable for quality measurement and reporting varied significantly depending on the conditions in the local market. One medical director for a health plan reported that changing physician behavior is a time-consuming process, and holding both physicians and patients accountable in these markets is a significant challenge. A hospital executive in Harlingen noted how financial incentives prohibit patient-centered care: "I'd put the diabetics clinics out there, but if I prevent a diabetic admission, I'm giving up revenue. If I prevent this admission, who pays the light bill – we make our money off our sickness… where are financial incentives?"

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[27] Outside of two health systems that operated their own managed care plans, few of the HRRs visited included large providers that operated under risk bearing arrangements for a significant portion of the populations they served. In fact, all but two of the regions had MA penetration rates lower than the national average.

Even in HRRs with dominant, vertically integrated health systems that employed physicians, interviewees reported that they have just begun to change physician compensation packages to reflect performance rather than productivity measures. These systems seemed able to achieve efficiencies in care delivery and a greater degree of collaboration due in part to strong organizational leadership and a culture that supports collaboration and patient-centered care. One administrator at an integrated delivery system in La Crosse, Wisconsin, said: "We've dismissed a lot of doctors for behavioral issues – more for that than quality. We can get good quality out of folks, but we won't tolerate bad behavior."

Interviewees in one low-cost, high-quality HRR reported that after over two years of negotiation, the contracts for salaried physicians still largely included productivity measures. This system is introducing a new compensation model in which approximately 20 percent of physicians' salary will be linked to performance; productivity will still be included but supplemented by access, patient experience, and performance measures, including factors such as infection rates. As one executive said: "We need to wean the people off volume."

One HRR in the high-cost, low-quality quadrant had two dominant, nationally recognized health systems with large numbers of employed physicians but seemed to have greater difficulty influencing physician behavior. That was partly due to the lack of allegiance to the areas hospitals and systems among independent physicians. One system reported having challenges ensuring its employed physicians provided adequate access and coverage for their primary care patients, given other academic duties. These two systems were better able to influence behavior of their employed and affiliated physicians, but the systems also continued to compete to fill beds and recruit or retain remaining non-affiliated high admitters for financial reasons.

Multiple systems in high-cost, low-quality regions have recently begun directly employing more physicians and building stronger contractual affiliations that include Physician Hospital Organizations (PHO) in anticipation of becoming an ACO. They recognize they need to begin to function more like truly integrated delivery systems (IDS). Many payers (including Medicare Advantage plans) and providers in these HRRs alike reported that with the advent of health reform and the introduction of potential penalties for certain behaviors (such as readmissions and failure to meet meaningful use incentives over time), there seemed to be less resistance to change and developing process and quality improvements than even three years ago.

Perhaps more important than financial incentives, some of the leaders of the IDS pointed to an organizational culture that, as described earlier in this report, ignores the productivity incentives of the existing system and instead focuses on mission. For example, one system in La Crosse funds over 24 care managers to support physicians' efforts to better coordinate care for the sickest patients. An executive noted, "Medicare makes out like a bandit because most are Medicare FFS patients. We are spending over $1 million on salaries and benefits and losing millions on hospital care. And we are doing the right thing and what makes sense, but when I'm at meetings with [chief executive officers], CEOs, 75 percent say you're an idiot – why spend money on this?"

In summary, for a number of health systems and payers we interviewed, while desirable, implementing performance-based payment and compensation programs successfully would require more market power than what a given payer or provider has, particularly in the high-cost,

low-quality regions. Other elements within a local market, such as providers' degree of allegiance to any one system or physician group, their dependence on any given payer's patients, and their general attitude and responses toward change seem to be at least as important as current financial incentives in explaining differences in utilization across regions.

Population-focused active care management

Population care management and, by extension, active care management are necessary elements in achieving quality health outcomes. Although the programs we learned about varied in their scope, they all had both an infrastructure and culture conducive to a collaborative and patient-centered approach to care, as well as a vision beyond individual patients and to the needs of the population. In terms of infrastructure, low-cost regions had the requisite staffing, tools, and protocols to manage and coordinate care across settings. Yet the mere presence of this infrastructure alone was likely not enough to guarantee effective care coordination: Its existence in conjunction with a culture that promotes communication and care coordination across settings – regardless of patient "ownership," financial resources, or creative funding mechanisms – as well as strong health care leadership appeared key. The high-cost, low-quality regions did not have the infrastructure to create and promote system-wide care management programs due to a paucity of system and programmatic resources, and they were also plagued by a competitive and fragmented physician culture marked by "siloes." The absence of culture and infrastructure from the high-cost regions and the presence of both in the low-cost regions, suggest that the two tend to go hand-in-hand. In other words, in regions where the culture is one of collaboration and communication, there is more likely an infrastructure for care management across settings; conversely, in regions that are more fragmented and competitive, there is nothing to promote or sustain the type of cross-system infrastructure to deliver effective care management.

While interviewees reported many different efforts to better manage patient care, the low-cost HRRs reported historical investments in the health of the broader population. The most encompassing reports came from the dominant, vertically integrated delivery systems that have care management teams across the system as well as primary care medical homes to identify high-cost or high-risk patients in the population for whom they assume responsibility. Teams and systems reported using various kinds of information sources – including information from their own hospital discharge planners, disease registries built from electronic medical records (EMRs) and/or claims data and health risk assessments, health records provided by patients and families, as well as any other clinical and administrative information available through the various arms of the integrated delivery system. This occurred either on one HIT platform, as in La Crosse, or via closely collaborating clinical and community service providers and teams sharing less comprehensive records electronically, such as in the Asheville HRR.

Designated health system staff or multidisciplinary medical teams functioning as a medical home across the sites we visited generally stratify the patients for whom they are responsible based on need and develop plans of approach depending on the presenting risk. Patients receiving proactive attention from the multidisciplinary care team (sometimes already part of a medical home within the system) generally fall into one or more of the following broad categories:

- Patients with higher costs due to chronic and complex conditions (including patients on more than a certain number of medications or medications requiring careful symptom management),

- Patients experiencing specific services or events (complex surgeries or procedures, frequently missed visits, or unfilled prescriptions),

- Patients requiring high volume of services (ED, number of admissions),

- Patients with specific diseases and/or lab values or clinical indicators out of the recommended range based on adopted clinical protocols, or

- Patients approaching the EOL.

Patients may be brought into an active care management mode based on their identification by a primary care or medical home team member; referrals from health system colleagues; other clinical or community service providers, including behavioral health specialists; family members; or the patients themselves asking for help.

While nearly all of the low-cost regions had some sort of system and process in place to assess and identify patients that would likely benefit from care management, the number of identification and stratification tools varied across providers, even within a given HRR. Common tools facilitating the implementation of such systems and processes in the low-cost, high-quality regions included patient registries and systems for sharing EMRs that have outpatient clinical information from a core set of PCPs and specialists. Interviewees in Asheville, La Crosse, Muskegon, Portland, and Salinas noted that health care providers use disease registries to identify high-cost and chronically ill patients. In Salinas, one dominant hospital has an ED case management program, through which it flags patients who have been to the ED three times in the past three months.

Active care management

Care management typically involves an individual, such as a nurse or social worker, functioning as part of a multidisciplinary team to help patients and their families assess problems, communicate with health care providers, and navigate the health care system (Boult et al., 2009). With few exceptions, care management was reported to occur more frequently and across broader population sets in the low-cost quadrant than in the high-cost quadrant. It is worth noting, however, that care management manifests itself in a wide range of ways: There is great variation with regard to the reach, target populations, and types of settings in which care management occurs. Despite this variation, we observed several factors emblematic of all care management programs we encountered, with some common to low-cost regions and others common to high-cost regions.

Table 3: Prevalence of active care management for chronically ill Medicare beneficiaries

HRR	Active care management for Medicare beneficiaries who are over-65 & chronically ill[28]
Asheville, N.C.	Most beneficiaries
La Crosse, Wisc.	Most beneficiaries
Muskegon, Mich.	Most beneficiaries
Portland, Maine	Most beneficiaries
Salinas, Calif.	Selected subsets of beneficiaries
Detroit, Mich.	Selected subsets of beneficiaries
Harlingen, Texas	Few or no beneficiaries
Jacksonville, Fla.	Few or no beneficiaries
Las Vegas, Nev.	Selected subsets of beneficiaries
Memphis, Tenn.	Few or no beneficiaries
Monroe, La.	Few or no beneficiaries
Tuscaloosa, Ala.	Few or no beneficiaries

Features of care management in the low-cost quadrant

The three key features of care management present in most low-cost HRRs are a system or process for assessing and identifying high-risk patients (described above), the existence of a multi-disciplinary team dedicated to a given set of patients, and the use of standard practices and protocols.

Another feature characteristic of low-cost regions was the presence of a care manager, who was responsible for tracking patients, ensuring they received follow up care, and/or helping them navigate the health care system. These functions can be performed by a variety of personnel, including health coaches, nurses, social workers, case managers, and physician extenders. In Portland, nurses follow up with discharged adults by phone within 24 hours to determine if the patients understand the discharge instructions, reconcile medication, and ensure that the patients have a primary care appointment within a week of the discharge rate. In Salinas, when referrals are made in the FQHC and county clinics for specialist care in the community, case managers at the clinics conduct outreach to patients and providers to ensure patients successfully received scheduled care.

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[28] **Few or no beneficiaries** – Occurs for small groups of beneficiaries, which may include lower than average MA enrollment.
Selected subsets of beneficiaries – Occurs for a number of beneficiaries, not limited to MA enrollees.
Most beneficiaries – Occurs for most populations in the HRR.

Teams of social workers and nurses have been assigned to assist patients as well. In La Crosse, the two large health systems assign a team comprised of a social worker and a nurse to high-cost patients to help manage their care and assist them in navigating the health care system. Interviewees noted this initiative has achieved savings of $18,000 per person over a two-year study period; however, the care coordination program costs over $1 million in salaries and benefits and "lose[s] millions in hospital care" due to lower hospital admission rates. In Salinas, social workers and public health nurses make regular home visits to dual-eligible beneficiaries to assess their needs and ensure that the services arranged on their behalf meet their needs.

In Asheville, the major tertiary care hospital in the region, a post-acute care provider, and a community health network all employ case managers, and a number of programs and practices within the community have case management components as well. In fact, a senior executive at the hospital noted that one challenge is the lack of clarity around roles – not only of care managers within their hospital but also of other organizations doing care management. Although Asheville has a relatively collaborative culture, which offers ample opportunities for providers to meet and exchange information, it is still sometimes unclear who is doing what. This senior executive mentioned that his colleague once remarked, "he's never seen an area where so many folks are trying to fight over these individuals."

Interviewees in Muskegon, La Crosse, and Asheville further noted that there are a high percentage of patients with PCPs, which allows for care monitoring and assessment earlier in the care delivery process and promotes effective use of disease registries and care managers, as chronically ill patients are more likely to be pinpointed for assistance. According to 2006 Dartmouth Atlas data, this seemingly adequate supply of PCPs is generally characteristic of the low-cost HRRs. Among the low-cost regions, all but Salinas had an above-average number of PCPs per 100,000 residents. Compared to the national average of 71.9, Portland had the largest supply, with 94.8, followed by Asheville (87.6), La Crosse (84.9), and Muskegon (73.5). On the other hand, among high-cost regions, just Detroit (79.0) and Jacksonville (72.6) were above average. Harlingen was the lowest with 47.7.[29] One caveat, however, is that the patient-to-PCP ratio may not be consistent within each HRR. One interviewee in the Asheville HRR noted that there are "dangerous levels" of primary care access issues outside of Buncombe County, where Asheville is based. Moreover, even in these higher quality regions, the lack of availability of physician care after regular work hours and on weekends has contributed to an influx of patients into the ED.

The third feature common to care management efforts in low-cost regions is the adoption of standard practices and protocols. In Muskegon, for instance, patients are assessed using a standard instrument, and standard order sets and admission practices are in place. Likewise, in Salinas, the two dominant hospitals have robust discharge planning programs, with steps taken to ensure that each discharged patient schedules an outpatient appointment soon after discharge.

There are standard practices related to patients in the last year of life as well. Since 2004 providers in the Asheville region have been using the state-designed Medical Order for Scope of Treatment (MOST) form, which encourages patients to express their EOL care wishes and

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[29] Dartmouth Atlas (2006). Retrieved March 8, 2011.

enable health care providers to carry out those wishes. The majority of nursing home residents who are hospitalized arrive at the tertiary care center with a completed MOST form and a carefully designed package including medical information about the resident.[30]

Features of care management in the high-cost, low-quality quadrant

Based on interviewees from the majority of the hospital providers and key primary care leaders in the high-cost, low-quality quadrants, patient assessment and care management of Medicare beneficiaries was reported to occur far less frequently outside MA plans. Beyond the limited number of employed PCPs in hospital systems, few PCP practices had the staffing or information necessary to support care management teams. The care management reported in the lower quadrant generally targeted only select subsets of beneficiaries (such as frequent fliers in an ED or inappropriate readmissions targeted by a hospital system) and/or focused on discharge planning. Two features common to the efforts in the high-cost quadrant around care management included: short-sighted discharge planning practices and limited links to community social services and supports.

Some interviewees in high-cost regions admitted that the discharge planning practices in place were inadequate, did not provide for quality patient care, and did not encourage patient follow-up, which, some observed, was nonexistent. In Tuscaloosa, a number of interviewees remarked that the goal of hospitalists is to "get people out of the hospital as quickly as possible," which results in patients often being discharged back into the community where they have inadequate support. Moreover, multiple interviewees indicated that when they see patients on an outpatient basis following a hospitalization or ED discharge, they have no access to information about the patients' in-hospital treatment due to routine delays in physicians submitting hospital discharge summaries.

In addition, in Harlingen, once patients are discharged from the hospitals, there is little coordination or follow up of those patients with providers in the community. Some physician interviewees explained that this lack of care planning and monitoring was due to the fact that many of their patients rarely complied with follow-up visits, making it impossible for the physicians to implement and monitor care plans. One doctor remarked, "There's a breakdown in communication between the hospital and the individual physician. The hospital does not set up follow-up appointments for patients when they're discharged."

In high-cost HRRs, there seems to be either a dearth of community social services and supports, as in Monroe and Tuscaloosa, or the community social services and supports that exist are difficult to navigate. One interviewee estimated the Memphis HRR has about 3,000 nonprofits providing social services relevant to health care – twice the "average" number for an area of Memphis's size. The sheer multitude of these community organizations has yielded a system that is overwhelming for patients and families and challenging for them to navigate.

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[30] The entire practice for one physician group in Asheville centered on caring for patients in nursing homes and working with nursing home staff, residents and families to provide as much care in the homes as possible. The members of the practice visited the majority of the homes at least two to three times a week, which allowed them to establish strong relationships with staff and ensure that they and the families are prepared in terms of advanced care planning.

Factors facilitating care management

Several factors may facilitate care management activities and the general orientation toward active care management in low-cost regions. These include the high degree of coordination that occurs among multiple medical and community providers within the region, which may be correlated, in part, with the level of consolidation of health care delivery in these HRRs, as well as the availability of personnel within the systems or organizations to perform care management activities, including transition management.

A high degree of care coordination was present in low-cost HRRs, where care teams often assisted in ensuring smooth transitions across settings and facilitating linkages for patients and their caretakers with community services and supports. Low-cost HRRs had organized systems of social and community supports that providers, advocates, patients, and families alike were familiar with and able to access as needed. In some cases, these systems were the result of a single effective initiative, such as the Muskegon Community Health Project, which played a large role in forming linkages between the medical providers and community social services and supports and brought together health care and social services stakeholders to focus on access and health challenges for critical populations. In other cases, strong leaders, such as the Aging and Disability Resource Center (ADRC) in La Crosse and Community Care of Western North Carolina provided an infrastructure through which entities could network or served as a point of entry through which consumers could access a range of services, thereby facilitating the care coordination process and ensuring transitions across settings. In La Crosse, the ADRC provides a single point of entry for information and referrals on health, LTSS, and other programs, thus solidifying linkages for patients and providers to community services and supports. The ADRC communicates regularly with discharge planning staff from the two dominant health care systems in the region and formally meets with them once a year to educate them about the agency's role. Likewise, Community Care of Western North Carolina (CCWNC) provides for discussion and information exchange. The program offers provide care management services to Medicaid recipients, and it is led by a number of community partners, including local PCPs, representatives from area hospitals, Public Health Departments, the Local Management Entity for Mental Health, and Department of Social Services. In the Asheville HRR, interviewees described a number of other networks, which convene on a regular basis. These networks meet on a regular basis to share information, exchange best practices and discuss how to address common issues and coordinate activities.

In addition to the collaborations mentioned, interviewees in Salinas and Asheville noted that health care professionals in those regions have a long history of working together, which they suspected increased quality, efficiency, and teamwork in the regions and facilitated care coordination. This longevity seems characteristic of patient-physician relationships as well. In Salinas, interviewees noted that the size of the local communities within the HRR and the length of time both physicians and patients have resided there have fostered relationships that are stronger than the typical patient-provider connections. They truly view themselves as members of the same community, and providers tend to have a vested interest in maintaining their patients' health.

Another factor that may have promoted care coordination in the low-cost regions is the level of consolidation in the health care markets. The markets in low-cost HRRs were for the most part

dominated by one or two large, vertically integrated health systems (with the exception of Salinas), which may have facilitated care coordination across settings and, in turn, care management. In Muskegon, for example, one PHO employs the vast majority of physicians in the HRR, and as a result, most physicians use the same systems. Standard practices and protocols, when developed, can be implemented system-wide with relative ease, and tools can be easily shared. Health system leadership can also mandate compliance with new processes.

It is worth noting that while care coordination was generally prevalent in low-cost regions, it did not always exist across the entire health care continuum, and provider-level coordination between Medicaid-funded LTSS and health services, even in some of the low-cost regions, was reported by interviewees as weak. For areas that had some level of integration of LTSS with primary and acute care services, the links typically occurred via a state Medicaid waiver program or other regional program designed to promote integration – such as PACE – or encouraged patients to stay in the community rather than entering a nursing home. State Medicaid waiver programs have played a positive role in the HRRs and served large numbers of dual eligibles, ensuring they could receive the services they needed at the level of care most appropriate for them; however, they served limited numbers due to state caps on enrollment and often had waiting lists in both the low-cost, high-quality and the high-cost, low-quality regions. Given the limited reach of these programs and the fact that they do not include physician payments for services or care coordination, it is unlikely that they had much influence on service delivery.

As mentioned previously, the low-cost regions appeared to have an adequate supply of PCPs and, in contrast to the few high-cost regions that mentioned the recruitment of qualified staff as a barrier, did not appear to have problems recruiting personnel skilled in care management. These staff were part of multi-disciplinary teams that included nurses, social workers, and other non-clinical staff to leverage support efforts, manage registries, set up follow-up appointments, etc.[31] Programs like the Mountain Area Health Education Center (MAHEC) in Asheville as well as the residency programs run by the two major hospital systems in La Crosse help generate an environment focused on patient-centered health care with a focus on conservative medical management in a primary care setting where PCPs play a primary role and collaborate across all health settings. Moreover, interviewees in both La Crosse and Asheville noted that physicians who come to those regions to do their residencies tend to settle there as well. One interviewee in Asheville noted that at MAHEC, which administers a family practice residency training, "they have a map on the wall and whenever they place a physician, they put a push pin… and for the most part, the docs that are trained here, stay here, and they are trained to not order a test unless you need the test. I think education and training has been an important part of it. And you see the footprint of where these folks are, that makes an impact." Interviewees in Portland commented on the lifestyle afforded by the Portland region, remarking that physicians who come to Maine are looking for a collaborative culture and a high quality of life yet also desire the level of sophistication that a large provider system can offer.

Related to the adequate supply of care management staff is the availability of financial resources to hire care management personnel. Providers in Portland, Muskegon, and Asheville have

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[31] The multi-disciplinary teams generally included PCPs, nurses, and social workers, as well as other non-clinical staff to leverage support efforts, manage registries, set up follow-up appointments, etc.

employed creative funding strategies, such as co-locating and co-funding staff, to achieve care management. And while the hospitals in Salinas do not employ creative funding strategies, they also have financial resources to hire care management personnel due to donations and endowment earnings. Such an approach helps ensure coordination of activities and the most efficient use of staff. In Muskegon, for instance, human services staff from the county is placed in hospitals for the purpose of determining patients' eligibility for Medicaid, Social Security Disability, and other social programs. In Portland, one hospital has implemented a transition program with an independent home health agency, in which the hospital pays half the cost of a care manager located at the home care agency.

Co-location of staff has also been a common approach to care management for patients with mental and physical health needs. In the Asheville HRR, CCWNC works closely with the regional mental health service provider funded through the state to co-locate mental and physical health care managers, with the goal of ensuring careful care coordination for patients with dual diagnoses. In the Portland HRR as well, a rural health center has incorporated mental health and social services into its primary care center. A Ph.D.-level psychologist is available on site for immediate consultation and referral from the PCPs. Co-location has facilitated collaboration among the providers and has increased the likelihood that the patient will act on the referral. Results from a pilot program have indicated decreased use of inpatient and ED services.

Factors inhibiting care management

In high-cost, low-quality regions, several factors seem to have inhibited the rise of care management, including the paucity of PCPs, the low degree of coordination across settings, and the absence of system-wide programs to track patients, in part related to the lack and underutilization of EMRs.

Interviewees in nearly all the high-cost, low-quality regions identified the paucity of PCPs as a barrier to care management. In Memphis, not only is there a shortage of PCPs, but the independent PCPs that exist are struggling to stay afloat, seeing between 20 and 30 patients a day and then following up on an additional 30 to 70 phone calls for prescription refills and other issues. These small practices have no infrastructure, and some are even working with only one phone line for both a fax and telephone, resulting in extremely limited patient access, let alone time for effective care management. Many of these PCPs also do not accept Medicaid and Medicare patients. Interviewees in Tuscaloosa reported that only two of the primary care practices located in the city proper see patients after hours. It is unclear why these regions face such a shortage of PCPs, although interviewees in Monroe and Jacksonville postulated that one reason might be that the recruitment of PCPs to those HRRs is difficult. Another reason might be the fact that having a large Medicaid population may jeopardize the financial sustainability of a primary care practice. Still another reason mentioned in Tuscaloosa was that people were becoming hospitalists instead of PCPs because it affords them an easier lifestyle.

Most interviewees in high-cost regions described a lack of coordination and effective communication among providers and across settings. This low degree of coordination and communication could be attributed to the fragmented, "silo"-ed, competitive nature of the health care market in most high-cost HRRs. The reasons for this fragmentation vary. Health care delivery in Harlingen and Monroe, for example, was fragmented in terms of service delivery but

also geographically. In Harlingen, there are three distinct regions in the HRR, and patients are rarely referred from one region to another, even when a patient's care may be better provided in the other region. Likewise, in Monroe, there was limited coordination between providers in the rural areas and those in the cities of Monroe and West Monroe. Fragmentation in Tuscaloosa, however, appeared to be a result of the large number of two- to three-physician single-specialty groups combined with the lack of multi-specialty groups and limited connections between the main hospital and other resources. Similarly, in Jacksonville, Memphis, and Monroe, most interviewees reported that the high number of single-specialty groups contributed to the fragmentation in those regions. Regardless of the reason for the fragmentation, a common characteristic of these areas seemed to be the high percentage of ED visits by patients with chronic conditions, particularly those who were uninsured, undocumented, or "financially fragile."

In Tuscaloosa, a fairly visible FQHC extends across seven of the region's nine counties, but its relationship with multiple rural hospitals has been described as quite limited or problematic and, at times, in competition with the care delivery of the rural hospitals and local PCPs. One rural hospital administrator said that the county's FQHC often opts to "bypass" that rural hospital in favor of the major hospital located in Tuscaloosa, despite multiple previous efforts on the part of the administrator to coordinate care locally. Interviewees across the board characterized the hospital environment in Memphis as "competitive" as well – particularly price-based between the two systems rather than on outcomes – hampering coordination of care across various health care settings for beneficiaries with serious chronic conditions. Similarly a provider in Las Vegas said: "Las Vegas has traditionally been a safe haven of disintegrated solo practitioners, 'each one sitting in a corner playing with their own toys' kind of model – hospitals did that, doctors did that."

Perhaps the most striking example of fragmentation and poor coordination is Monroe, which uses most post-acute care services at an extremely high rate for a relatively sparsely populated HRR. The two large hospital systems often compete with one another to provide similar services, driven more by competition rather than meeting the need and by the mentality of, in the words of one interviewee, "build it and they shall come."

HIT systems and interoperability

The quantity and quality of HIT available to providers in the 12 HRRs we visited ranged from comprehensive information and technology shared across entire systems beginning with interoperable EMRs, to individual physician providers operating without any technology at all. The dominant providers in low-cost, high-quality regions generally had HIT capabilities that included centralized data repositories and the use of EMRs across both in- and outpatient settings to include, at a minimum, data from physicians employed by the health system. At the same time, while some regions offered multiple individuals (both clinical and administrative) across settings access to not only EMRs but also broader health records,[32] not every low-cost HRR had

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[32] For the purposes of this report, we distinguish between EMRs (which replace traditional hard-copy medical records) and broader data repositories, including information gathered from other sources. The term health records would encompass not only portions of what might be available in an EMR but also information supplied by patients via an electronic portal about their own

comprehensive HIT systems – although large centralized warehouses were typically found in the low-cost HRRs.

Key HIT features in low-cost, high-quality regions

The best functioning information systems the research teams heard about reflect established infrastructure and integrated models of care that facilitate data collection and timely dissemination across the care continuum. These systems were present with far greater frequency in the low-cost regions and built and continually upgraded over the years, integrating data sources from different platforms over time. Information available in these centralized warehouses, usually maintained by integrated delivery systems, could include most if not all of the following sources of data: hospital inpatient and outpatient records; lab, radiology, and pharmacy data; and outpatient clinical and administrative data. More importantly these data are available to different employees of the system and affiliated medical staff, including those working in outpatient settings, to facilitate quality monitoring as well as evaluations and interventions with both individuals and populations.

One integrated delivery system's HIT in La Crosse is a good example of what many providers in both HRR quadrants alike are striving for: It serves the needs of the clinicians, managers, and patients across the health care continuum and functions not only as a repository of medical and health records but also as a system to support each party in aiming for improved health outcomes for individual patients as well as the population as a whole. This system includes an EMR that maintains data from the hospital and clinic sites and conveys organized clinical information via computers to all the system's exam rooms and employed doctors' offices. It also incorporates an immunization registry, preventive screening and disease management functions, radiology and lab reports, and e-prescribing, in addition to traditional EMR functions for the hospital and its employed physicians. The system is available to community nursing homes so they can log in to obtain information about their residents when needed. Further, patients can view their lab results, advanced care plans, make appointments, pay bills, etc., via the equivalent of a patient portal.[33]

A number of other IDS in the low-cost HRR quadrant described HIT systems with similar features. In Salinas and Asheville, HIT use was more limited yet still functioned at a higher level than most reported in the lower quality group. For instance, the Asheville HRR had significant hospital data sharing and collaboration as well as active care management, even though most PCPs could not access other critical information about their patients outside of the hospital records, such as information from visits to non-hospital-based specialists or other providers. The PCPs and other community specialists as well as hospital staff, however, could access hospital discharge summaries and lab and radiology reports, so they could more readily follow their patients' care regardless of where they were hospitalized in the region. While the implementation of outpatient EMRs in the community has not yet occurred in all physicians' offices, the

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health status, perhaps including completion of a health risk assessment or information provided in response to a targeted care management program.

[33] When interviewees were asked whether this portal was easy to use for elderly patients, they responded that age did not seem to be a barrier, especially since patients can call into the Health Information Management department to get assistance, and they also have access to consumer health librarians.

availability of key information about admissions, discharges and test results was reported as invaluable not just to community physicians but also to ED physicians across the region.

The largest hospital and health systems generally reported having their own EMRs, which were often shared with their own employed physicians and across organizations within their system. The health systems in at least three of the higher cost regions also mentioned having central data repositories to assist in efforts around population management. Several of these systems (again, in multiple regions we visited) also reported working more closely with their affiliated physicians to encourage them to adopt compatible EMRs and finding ways to help them take advantage of the meaningful use incentives. Even across the hospitals with HIT systems limited to EMRs and pockets of interoperability, multiple interviewees spoke of a growing interest in developing more formal ties with community physicians in part by collaborating on HIT initiatives and working to develop broader health information exchanges with the advent of health reform.

Ironically, several of the regions with larger, dominant health systems had administrators that reported barriers to introducing a HIT – not only with processes like computerized physician order entry (CPOE) but also in trying to use existing data repositories that turned out to be not widely used or operable as once envisioned. In Tuscaloosa, for example, the major hospital system has been using Meditech software for its EMR for many years. Despite its relative longevity and entrenchment in the hospital system, the impact of the EMR on facilitating regional care delivery across settings is quite limited – not because the system inhibits interoperability among providers and alternative settings, according to several interviews, but because the physicians themselves are reticent, and in many cases resistant, to using HIT in their day-to-day work. One interviewee reported: "A lot of doctors are adamantly opposed to CPOE." In fact, according to another interviewee, a number of physicians flatly threatened to "stop practicing medicine if you require this." According to one interviewee's approximation, only five practices in the Tuscaloosa region access and use Meditech, despite the hospital system's offer to make it available to all.

Implementation Challenges

The Memphis HRR offers some useful examples of the challenges of introducing and using HIT over time, with highly varied results. An executive responsible for quality and information systems support in one of the dominant health systems in Memphis expressed significant frustration with the amount of money that had been invested in building what was supposed to function as a regional health information exchange but instead is used on an extremely limited basis. When one of the key heath care leaders was asked why he had not mentioned the system as a valuable resource, he responded: "the system is not usable. As far as I'm concerned I can't do anything with it. It was built to allow for one doc to manage one patient at a time. All reporting is about what question do you want to answer – the question they should have been thinking about was population health management." Other administrators in Memphis, when asked about the apparent dichotomy between the potential of HIT in the region and the adoption rates of EMRs and other decision supports, attributed the slow adoption rate to the attitudes of a generally older physician population, saying doctors are deeply loyal to the paper-based methods they have always used in their practices and strongly resistant to change. As described in more detail in the quality reporting section, reports of disappointing results from the introduction of

new HIT and data exchange systems were not unusual in the HRRs from the high-cost, low-quality quadrant. The challenges associated with successful implementation of new information systems, technology, and associated reporting efforts are clearly not unique to Memphis.

It is important to note that during the same interview, however, the executive in Memphis described the availability of robust data to clinicians and administrators alike within that dominant system, for patients seen by their employed physicians. He proudly mentioned that CPOE is now occurring across a number of its hospitals and facilities. The information collected partly by CPOE contributed to the dataset that was used as the hospital rolled out a Lean process improvement initiative now in place throughout the entire health system.

Another administrator in a Memphis health system reported progress in decreasing duplication of imaging services due to the introduction of new technology that is now available to the specialists throughout their system "Before we had [this technology] we had a pulmonologist who would order a chest X-ray and the radiologist would read it and send a report. The pulmonologist would still say 'can you leave that up and let me see it?' I don't know if it was [lack of] trust or just having to see it with their own eyes… but now that we have [this technology], they love it. What it has done is to make one view available for multiple people to look at and talk about so you wouldn't have to take additional images to reach agreement."

Other hospital systems and providers, typically in local markets with the highest degree of fragmentation and greater socio-economic challenges, reported having either limited HIT capacity or none at all. While this lack of HIT capacity seemed prevalent across some entire regions, as in Harlingen, Texas, in others, the range of HIT capabilities was equally striking. For instance, in both Memphis and Tuscaloosa, interviewees mentioned that some of the solo practitioners (PCPs) in the inner cities operated without even basic technology such as a computer. These practices were reported as primarily accepting Medicaid and functioning in neighborhoods where computers, if purchased, would simply be stolen. One medical director indicated that some of these practices were the same practices whose phone lines were always busy, since they used the same line for their fax and telephone.

The experiences shared by interviewees with the research team about HIT suggest that it is often the environment in which HIT is introduced – and the methods used in sharing of accurate, complete, timely and actionable information – rather than the technology itself, that has the greatest potential for improving the delivery of care. With the introduction of meaningful use incentives for both hospitals and physician practices, more providers are reporting a readiness to explore new ways of collecting and managing data. It seems that while there are early adopters in each region, the successful adoption of EMRs and the development of central data repositories and other decision support systems are not only dependent on a significant investment of effort and resources to build and improve infrastructure over time but also dependent on competent HIT champions. These champions need not merely embrace technology, but they must also be able to articulate the ever-increasing needs of the clinical and administrative end users across the care continuum for information to better manage patient care and population health.

Quality data sharing and monitoring

Public reporting of quality and cost data enables providers to see benchmarks of and variations in performance measures and assists patients and their families in making informed decisions about care (Rosenthal et al., 2010). Most HRRs located in low-cost quadrants had some degree of quality data sharing and monitoring, while HRRs located in high-cost quadrants did not. With the exception of Asheville, quality improvement initiatives tended to be facility- or health system-specific; the sharing of quality data across providers was not common.

Table 4: Frequency of quality data sharing and monitoring

HRR	Quality data sharing & monitoring[34]
Asheville, N.C.	Occasional
La Crosse, Wisc.	Frequent
Muskegon, Mich.	Frequent
Portland, Maine	Occasional
Salinas, Calif.	Occasional
Detroit, Mich.	Occasional
Harlingen, Texas	Limited or None
Jacksonville, Fla.	Occasional
Las Vegas, Nev.	Limited or None
Memphis, Tenn.	Limited or None
Monroe, La.	Limited or None
Tuscaloosa, Ala.	Limited or None

It is worth noting that while Salinas and Asheville report experiencing "occasional" quality data sharing and monitoring, the "occasional" designation belies the fact that some providers in those HRRs had very sophisticated quality improvement programs in place.

Most interviewees in the low-cost regions were aware of the quality data available in their region and seemed to take action in response to the results, whether by meeting with other health care providers and community organizations to discuss troubling patterns identified in the data and devise strategies to address them (as in Asheville) or by creating a financial incentive to encourage physicians to participate in quality improvement committees and work groups (as in Salinas).

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[34] **Limited or None –** Occurs in few settings, if at all.
Occasional – Occurs in a number of settings.
Frequent – Occurs across most health settings in the HRR.

Features of quality data sharing and monitoring in the low-cost, high-quality quadrant

Two features characterize low-cost regions: (1) participation in quality initiatives, which served as an impetus for quality data sharing and quality improvement; and (2) variation in the use of quality data.

Interviewees in a few low-cost HRRs mentioned quality initiatives that boosted quality improvement and/or data sharing efforts in the region. For example, in Muskegon, area hospitals and physician practices participate in two quality initiatives: Aligning Forces for Quality and the Michigan Health and Hospital Association's Keystone Center. Through these initiatives, the providers in the region routinely share quality and performance data. In addition, in the Asheville HRR, county health departments conduct community health assessments every four years, which are mandated by the state of North Carolina. These assessments are conducted with the active engagement of stakeholders, all of whom review the available data and trends. The assessments result in a review of critical information about the health of the population and the development of plans to address gaps in services. The two La Crosse health systems were founding members of the Wisconsin Coalition for Healthcare Quality in 2003 and share their quality and performance information with more than 20 other health care organizations through this organization. Lastly, in Salinas, regional collaboratives of hospitals, such as the Beacon Collaborative and the California Hospital Assessment and Reporting Taskforce, support hospitals as they lead and implement their own initiatives to improve quality and reduce costs.

HRRs varied in how they used quality data and with whom they shared it. La Crosse was the only HRR where an interviewee reported that financial incentives were in place to reward the achievement of quality benchmarks. One of the health systems bases a portion of physician compensation on meeting quality performance targets. This health system allows all physicians in the system access to the individual physician- and departmental-level performance and quality data. In Salinas, while providers did not seem to link physician compensation to quality performance data, one hospital created a financial incentive to encourage physicians to participate in quality improvement committees and work groups; the hospital reimburses physicians at an hourly rate for their involvement in the process. In Muskegon, a company that owns the majority of the primary and acute care providers – as well as major providers of home health, nursing home, and senior residential care – has a "report card" with quality and performance measures, including measures of effective transition and population health management. The report card holds the providers to the same standards and ensures that they coordinate to achieve the health system's larger goals. The providers in this health system are also expected to coordinate with other independent providers, such as hospice and LTCHs.

Features of quality data sharing and monitoring in the high-cost, low-quality quadrant

Interviewees in HRRs located in high-cost, low-quality quadrants reported less frequent or no quality data sharing and monitoring, and according to interviewees, in places where quality data was being reported, the usefulness of the resulting data is unclear. In Detroit, the Greater Detroit Area Health Council (GDAHC) has launched public reporting initiatives on health care performance for hospitals and physician organizations at www.myCareCompare.org and has collected data since 2006; however, when prompted, several interviewees said they were not aware of whether public reporting impacted practice patterns. In addition, the system in

Memphis collects quality data from all area hospitals, but according to one interviewee, the data provided was not readily useable across broad populations and, rather, focuses on individual patients. Similarly, in Jacksonville, a health planning council collects and reports two types of data: utilization data from the hospital systems and hospital data on a variety of topics, including beds and ED usage and admissions. Nevertheless, interviewees could not speak to the use of the data, and it appeared evident based on these reports that the activity has not led to much action or collaboration beyond the immediate data sharing.

Factors facilitating quality data sharing and monitoring

Several conditions in the low-cost regions seemed to facilitate the sharing and monitoring of quality data, including: opportunities and/or infrastructure for sharing and monitoring quality data; an orientation toward quality improvement; and the existence of a dominant entity that enforces the quality data reporting, which could be correlated, in part, with the level of consolidation of health care delivery in the HRR.

There must be an infrastructure in place through which quality data can be shared and monitored. This infrastructure might take the form of a "report card" as in Muskegon or might be a collaborative, formal or informal. Regardless of its form, consolidating this kind of information and developing a useful infrastructure takes both time and resources. For example, in Asheville, although no formal quality data sharing system was reported, interviewees mentioned that providers, community-based organizations, and governmental entities meet on a regular basis to discuss any troubling patterns identified in the data and devise strategies to address them. For example, one challenge might be reducing ED visits. Each organization would describe its internal tactics for reducing ED visits, discuss how it could collaborate to identify common clients, and brainstorm how to improve coordination. Other data points carefully monitored across settings include: avoidable inpatient admissions, polypharmacy issues (via the Asheville Project[35]), services for people that have both mental diagnoses and physical conditions, and falls.

The low-cost HRRs seemed to share a general culture oriented toward quality improvement and had multiple quality champions throughout the community. Health care providers and community organizations seemed to be proactive – even aggressive – about seeking out and participating in quality initiatives and adapting care management and care transition models (e.g. Stanford Disease Management models), for use in their regions. They participated in national grant programs, such as those from the Robert Wood Johnson Foundation and the Administration on Aging, and seemed conscious of the work being done nationwide to improve health care delivery. In Salinas, one hospital's chief medical officer noted that the goal of the various collaboratives was to "take the ideas Don Berwick had with IHI [Institute for Healthcare Improvement] and bring them down to the local level." Moreover, nearly all the major health

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[35] **The Asheville Project**® began in 1996 in North Carolina when a large self-insured employer began to work with community pharmacists to provide education and personal oversight for employees with chronic health problems such as diabetes, asthma, hypertension, and high cholesterol. Patients were teamed with community pharmacists who made sure they were using their medications correctly after receiving intensive health education about managing their chronic conditions. According to the Project, it "led pharmacists to develop thriving patient care services in their community pharmacies. Employees, retirees, and dependents with diabetes soon began experiencing improved A1C levels, lower total health care costs, fewer sick days, and increased satisfaction with their pharmacist's services."

systems located in the low-cost HRRs were members of the National Quality Forum. In some regions, such as La Crosse, there is also a long history of public reporting of quality data. Hospitals there are not required to publicly report their data, but most do so on a voluntary basis.

As mentioned previously, the state of North Carolina requires that county health departments conduct community health assessments, and in Muskegon, the large, multi-state health care system holds all its providers to the same system-level "report card."

Factors inhibiting quality data sharing and monitoring

The prevailing factor that seems to inhibit quality data sharing and monitoring is the culture of resistance or indifference to quality reporting. In Tuscaloosa, although the major hospital system tracks its own quality indicators and benchmarks against national and state norms, this practice appears limited to the system itself despite its efforts to share data and encourage more monitoring, as physicians in the community generally refrain from accessing the system and taking part in data accumulation or sharing. A number of interviewees described a group of older physicians as particularly resistant to change, which has made it especially difficult to implement new initiatives, such as EMRs and a focus on clinical pathways and evidence-based practice patterns. Hospital administrators in Memphis also described this pattern to characterize a large segment of physicians in their community. In Las Vegas, there has been significant political opposition to quality data reporting, although payers have supported bills in the state legislature to increase transparency. One interviewee remarked, "It is aggravating as all get-out to find out about quality, and it's a mystery, and that goes for hospitals as well as physicians. You're told you want to go to a place where they perform that service a lot, and they have good outcomes, and if you're private Joe citizen, it's impossible to find that out and even if you're a [health] plan, you can't find that out."

Overall impact of quality data sharing and monitoring on care delivery

It is unclear to what extent quality data sharing and monitoring is a driver of quality health outcomes or a feature likely present in low-cost regions where individual integrated delivery systems have already been focusing on continuously improving quality for decades. Our research suggests that for quality data sharing and monitoring to impact care delivery at all, it must be rooted in the goal of quality improvement, however. Of the regions we visited, only those with an orientation toward quality improvement seemed to be using the quality data in any productive way – for example, quality data is shared to influence physician and provider behavior or encourage coordination across settings, especially where poor outcomes are identified. Absent this orientation, quality data sharing and monitoring does not seem to have an impact, either because the information collected is not useful or actionable or because providers have no interest or incentive in using it. The few regions we visited where quality data was collected and not used seemed to lack end goals for the data, be at the early stages of use where the impact was not yet measurable, or oriented primarily toward consumers who were not known to use the data.

Having systems and/or infrastructure in place for sharing and monitoring data certainly seems to facilitate quality data reporting, but the degree of collaboration in a region seems a larger influence in the extent to which quality data reporting occurs and how significant an impact it might have on care delivery. Most high-cost regions lacked the systems and/or infrastructure for

sharing and monitoring quality data across providers and settings, likely due in part to the fragmented nature of those regions and a variety of other local factors. Collaboration not only facilitates the sharing of quality data but also seems to promote the use of the data to achieve improved performance, continually prompting discussions around how to address the new challenges it reveals.

Practices related to beneficiaries in the last year of life

Much of what drove EOL care patterns across the HRRs depended on two variables: the culture and attitudes associated with dying for patients and providers and the level of EOL program acceptance and use in the community. The following table highlights several aspects of EOL care planning and service availability in the HRRs.

Table 5: Prevalence of end-of-life care

HRR[36]	EOL planning[37]	Physician willingness to discuss EOL planning[38]	Availability of palliative care[39]
Asheville, N.C.	Frequent	High	Medium
La Crosse, Wisc.	Frequent	High	High
Muskegon, Mich.	Frequent	High	High
Portland, Maine	Limited or None	Low	Medium
Salinas, Calif.	Occasional	Medium	Medium
Detroit, Mich.	Occasional	Low	Medium
Harlingen, Texas	Limited or None	Low	Low
Jacksonville, Fla.	Occasional	High	Medium
Las Vegas, Nev.	Limited or None	Low	Low
Memphis, Tenn.	Occasional	Low	Low
Monroe, La.	Occasional	Medium	Medium
Tuscaloosa, Ala.	Limited or None	Low	Low

The team observed a large divide between areas with high palliative care use (all low-cost HRRs excluding Portland and including Jacksonville) and areas with low use (all high-cost HRRs excluding Jacksonville and including Portland). Interviewees in the high-use regions described an environment of openness in discussing EOL care options among both patients and providers, physician buy-in to the importance of referring to EOL services, and visibility and longevity of programs/resources associated with EOL decision-making. On the other hand, the low users frequently confronted resistance to discussions of EOL care options by both patients and

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[36] Groupings are based on generalizations from observations made by interviewees and do not represent all individuals in the HRR but rather, reported, trends.

[37] **Limited or None –** There were no reported instances of EOL planning or few instances of planning with families and patients by a limited number of providers were reported. Alternatively, planning appears to occur only when the patient requests EOL services.

Occasional – Planning is more than just a rare occurrence, but it does not appear to be a typical practice across providers in a systematic way.

Frequent – Planning occurs relatively systematically.

[38] **Low –** Physicians, for the most part, are unwilling to discuss care options related to EOL.

Medium – A fair number of physicians are open and willing to discuss issues related to EOL care.

High – Physicians are generally willing to discuss issues related to EOL.

[39] Note: This category is purely based on the resources and not on the success or failure of care delivery related to palliative care.

Low – There is little to no presence of palliative care, and if it exists, it has little impact on the nature of EOL care delivery in the market.

Medium – There is a notable presence of palliative care in the HRR, but its impact on EOL care delivery in the market is not directly felt across the board.

High – There is a strong notable presence of palliative care that has a direct impact on EOL care delivery in the market.

physicians and had either fewer or even sparse resources and programs devoted to such care, often describing themselves as "behind" in providing choices for care at the end of life.

Multi-faceted, community-wide initiatives and culture

Interviewees reported that success and prevalence of programs promoting early and advanced care planning for the end of life depends on multi-faceted efforts throughout the community. Such programs, most evident in the La Crosse and Muskegon HRRs and to a lesser degree in Asheville, all featured substantial efforts to set the stage for and foster discussions about how individuals want care to be provided in their last year of life – this foundation is laid well in advance of terminal illness onset. Efforts promoting discussions among families and within religious communities, as well as programs encouraging individuals to formally specify their preferences for EOL care in writing, aim to foster a culture about death and dying that is oriented toward dignity and comfort rather than intervention. Reported community-wide initiatives often include support from leaders in the social service and religious communities who champion advance care directives and palliative care options and emphasize the importance of having such plans in place well before people are facing EOL decisions.

These three low-cost, high-quality regions also feature characteristics that help set the stage for more thoughtful health care delivery throughout the course of life. Interviewees described the clinical care delivery in these regions to be more data and evidence-based, where providers take a more conservative approach to medicine that emphasizes fewer, appropriately selected, procedures. Providers, with the support of other community leaders, work to deliver patient-centered care, minimize unnecessary medical interventions, encourage the discussion of comparative effectiveness of alternative treatments, promote healthy living and offer comfort care when interventions no longer offer the promise of cure. Palliative care specialists, who include physicians, nurses and social workers, are welcomed in these regions rather than being considered on the fringe of the medical community. Providers, patients and families recognize them as an important part of the care team when a patient is nearing the end of life.

The significant differences in the acceptance levels for advance care planning and EOL discussions was particularly striking when comparing the only two regions visited by the research team in the same state. The two Michigan HRRs highlight how the local delivery system and its corresponding practice patterns can have a stronger impact on health delivery than significant state initiatives. The hospice movement, for example, often associated with EOL planning and care, has been strong in Michigan since the 1970s when it began as a grass-roots movement. A statewide EOL commission was established under the Engler Administration in the 1990s, which evolved into a statewide EOL coalition with funding from the Robert Wood Johnson Foundation. Nonetheless, the attitudes of patients, families and providers in the Detroit area of southeastern Michigan toward EOL care include significant resistance to the widespread introduction of palliative care, unlike in Muskegon. The fragmented system of care in an area that is both over-bedded and often focused on maximizing revenue than quality outcomes, combined with cultural biases against discussing death and dying, trump significant efforts to promote such discussions.

Patient and family attitudes toward and planning for the end of life

Where patient and family attitudes aided EOL planning initiatives in the high-user regions, interviewees described beneficiaries and their families in low-user regions as quite the opposite – resistant and unwilling to enter into a discussion about EOL planning. In many cases, particularly in the African-American communities of Detroit, Memphis, Tuscaloosa, and Monroe, providers described families articulating the concern that EOL care was akin to "killing mom." In other words, signing a family member up for hospice or requesting palliative care (in areas where it was available) was considered shirking one's responsibility as a son or daughter. Furthermore, among these populations, the concept of patient "entitlement" to services impacts EOL decision-making. Many patients and families in the low-use regions interpreted more care to be "better" care and considered the use of hospice or other less procedurally oriented options at the end of life to be in conflict with their right to have everything in the medical world to which wealthier people were also entitled. "This is a population with a history of having been denied access – so the response is overutilization," a provider in Memphis said. "It's the idea that pushing for additional care, particularly at the end of life, is seen as an extension of the civil rights movement."

Such attitudes clearly diverged from the attitudes in the areas where use of EOL services was high. In La Crosse, a region known as a pioneer for its longstanding Respecting Choices program, a recent study (Hammes, Rooney & Gundrum, 2010) showed that the vast majority of decedents in the health care systems had advanced care directives, which their physicians readily accessed. Similarly, interviewees in Muskegon – a region that implemented an EOL initiative in the early 2000s modeled on La Crosse's Respecting Choices – noted high awareness and acceptance of hospice care as a viable option at the end of life. And in Asheville, interviewees emphasized the general respect for and acceptance of the aging process that contributed to early regional adoption of hospice and palliative care.

Of the sites visited, La Crosse perhaps demonstrates the most widespread planning with patients and families. For three decades, the region has been a national (and international) pioneer in the implementation of advance care planning processes through a community-wide model referred to as "Respecting Choices." The program began in the 1980s and became further entrenched when Wisconsin became the second state after Oregon to implement the physician orders for life-sustaining treatment (POLST) form in 1997. Advance care planning is ingrained in the region's medical practice, with providers having been trained in how best to interpret these documents and communicate with patients and their families about their EOL preferences. The longevity and breadth of the system stems from the significant community buy-in, which interviewees attributed to the population's trust in its community leaders, clergy, and health care providers. Medical staff and other members of the community (e.g., clergy) are trained to use advance care directives and conduct ongoing EOL discussions to ensure that patients' care is consistent with their preferences. The advance care planning efforts have been iterative and have required continued review and improvement: "Almost everything we designed didn't work at first, and the only reason we succeeded was we were persistent," one interviewee said.

The use of EMRs facilitates real-time access to advance care-planning documents. Interviewees in La Crosse stressed the process extends beyond merely having the documents available but, additionally, educating providers and other stakeholders to give them the skills to interpret the

documents and have the EOL discussions. As a result, interviewees at one of the health systems in La Crosse said about two-thirds of the people who die in their hospital use some type of palliative care. In all, interviewees estimated the hospital's palliative care department sees about 900 patients a year and provides the full continuum of inpatient and outpatient care, as well as some primary care for people later in life.

In Asheville, in addition to a sole tertiary care hospital having an EMR, the largest physician group working with nursing home residents joined the community-wide effort to improve communications with residents and their families around advanced care planning and the use of a standardized MOST form expressing their EOL wishes in writing. Health care providers at every level of health care and across settings are aware of and encouraged to implement the decisions outlined by patients in a MOST form. The majority of nursing home residents hospitalized at the sole tertiary care center in the region arrive with a completed MOST form and a carefully designed package ("green envelope") including medical information about the resident, allowing the ED staff to make important decisions in directing patient-centered health care.

Interviewees in Muskegon described a high level of awareness and use of palliative care and other EOL support services. Muskegon interviewees mentioned this initiative, and many health care providers spoke of a high level of comfort addressing advance planning and EOL issues in clinical practice. Interviewees described physician practices in western Michigan as conservative and the Muskegon population as thrifty and conscientious about using health care services appropriately. The high comfort level around these discussions in the community may be further fostered by the Dutch culture, described by many interviewees as frugal, and its strong influence in the region.

Physician willingness to discuss care options

As vital to the level of EOL service use as patient and family attitudes, the willingness of physicians to discuss care options and refer to EOL services similarly diverged into two pathways – regions where physicians resisted such discussions and regions where physicians regularly engaged in conversations and viewed referral as a crucial component of the care continuum. According to a provider in Tuscaloosa, which had limited EOL service options and widespread physician resistance: "We have a hospital setting where the physicians feel like their passion is saving people, but you can't ignore the recipient that is saying, 'I don't want any more.' " In some cases, physicians in this region and others were so strongly opposed to referring to EOL services and supports that they ignored the wishes of the patient and family members, interviewees said. In the low-use regions, many interviewees attributed this pattern to physician discomfort discussing death and dying, lack of time to broach such a fragile topic with patients and families, and a general belief that referring to EOL care was akin to "giving up" on a patient.

The entire physician orientation toward EOL services was different in the high-use regions, where palliative care programs were more established and advance directives more pervasive. In these regions, there was a greater acknowledgment that the system must be "responsive to the individual rather than the disease," according to one La Crosse provider. And efforts were made in areas like Salinas to educate staff as to the features and merits of hospice and palliative care. In such regions, providers expressed a greater comfort with discussing care options – and the patients themselves were more primed to have such conversations. For the low-cost regions in La

Crosse, Portland, and Asheville, the presence of one or two dominant, mission-driven health systems that advocate advance care planning and the use of palliative care seemed to further foster provider engagement in such conversations among providers as well as by providers with patients and their families. Still, these regions all emphasized the time and effort that had to be devoted into developing an environment where physicians were expected to discuss EOL care options with their patients. "Dying is a process, so to start with advance care planning and to have the dialogue going is a constant effort," a La Crosse provider said. "If you start with the ground softened for interpretation, you have the foundation."

Available EOL services and resources

In addition to culture, the available resources and programs associated with EOL planning naturally drove the level of service use in a region. As seems logical for the regions where patients and physicians in general resisted discussing alternative care options at the EOL, the associated services related to palliative care teams and programs were quite limited.[40] Low-use regions were less likely to have impactful palliative care programs – or any palliative care programs, for that matter. Because such services were associated with the high-use regions, palliative care may be a proxy for the longevity and vitality of a particular EOL program within an HRR. For example, in an area like Las Vegas, while there has been recent and significant growth in the number of for-profit hospice agencies, there are no palliative care physicians or programs in the area, and there is pervasive resistance to discussing EOL care options on the part of patients, families, and providers: "We celebrate birth, but we don't do well as a society with talking about end-of-life," an interviewee in Las Vegas said. Similarly, the Tuscaloosa region houses one of the oldest hospices in the nation, which opened in 1982 when Medicare first introduced the hospice benefit, but the major hospital system is just this year beginning to form its own palliative care team. "If palliative care isn't part of the culture of the hospital system, that mindset isn't widely available," a Tuscaloosa interviewee said.

Thus, the areas with high use of EOL care have histories of longstanding availability of resources associated with EOL planning as well as program visibility within the community. La Crosse began its foray into EOL benefits in the early 1980s; Muskegon rode the momentum of a hospice movement that started in the 1970s and then launched its La Crosse-modeled initiative in the early 2000s; hospitals in Jacksonville have been partnering with hospice providers in the region for more than a decade; and Asheville built on an entrenched culture of acceptance related to death and dying to form a $10 million collaborative in 2004 aimed at making western North Carolina a high utilizer of advanced care planning initiatives. Many regions also discussed the use of some iteration of the Physician Orders for Life-Sustaining Treatment Options (POLST) form, but because its use and the adoption of other advanced life planning initiatives is not generally something dictated at the HRR level and is the result of significant political and regulatory forces, we were not able to explore it further under the scope of this study. The high use rates of hospice care in the study HRRs did not necessarily correlate with the acceptance levels of EOL planning by providers or families. The research team found that unusually high use of hospice in a region, rather than reflecting a community-wide acceptance of EOL planning,

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[40] Although the supply of hospices in many low-use regions – particularly Detroit, Monroe, and Tuscaloosa – was quite high, this was likely the result of potential system abuse as opposed to actual service demand. Further information regarding potential fraud and abuse of hospice services is discussed in a separate section of this report.

in some instances instead reflected inappropriate or misuse of the hospice benefit. For instance, in Detroit, Harlingen, and Tuscaloosa, where the communities are slower to embrace comprehensive palliative care programs, multiple interviewees reported abuses of the hospice benefit by primarily relatively new, small, for-profit agencies that had identified ways to maximize revenue through cherry-picking patients. These less scrupulous providers alternatively enrolled individuals who were inappropriate for hospice care (such as nursing home residents with long-term dementia but not terminal) into hospice for periods extending across many years or brought patients on their service before their resource needs would increase and then transferred the patients off their service as the patients became critically ill and their benefit has already been used, leaving the community-funded hospice programs to provide the much-needed but then uncompensated hospice services. More information about such fraud and abuse is covered in a separate section of this report.

Overall trends associated with EOL planning and referral

A comparison of the trends associated with high- and low-EOL care users reveals the importance of the interplay between two general factors: culture and infrastructure. The balance between these two variables seems to determine the level of EOL service use and acceptance, although it is unclear whether one always drives the other. Although the division between high- and low-use regions generally followed the division between low-cost, high-quality HRRs and high-cost, low-quality HRRs, Portland and Jacksonville were exceptions. Interviewees in Portland attributed the dearth of EOL services to the conservative provider culture in the region, which, while it resulted in physician discomfort discussing EOL issues, did not translate into higher service use at the end of life as in the case of many of the other low users. They also mentioned a shortage of facility-based hospice in the past (new beds have recently been added). In contrast, the relatively high use of EOL services in Jacksonville was likely a product of the longevity and visibility of a large hospice provider in the area, which has made a conscientious effort to educate and engage regional providers. Both examples, though seemingly out of line with the general EOL utilization trends we witnessed in the low-cost quadrants, underscore just how important education is in cementing community buy-in and frequent EOL service use as a result. In Portland, regional capacity has been expanded recently and is only just beginning to gain a foothold in the provider community, and in Jacksonville, the physicians in the area have come to trust and depend on the large hospice provider and the services it offers. As one Jacksonville provider explained: "I had a guy, 94, ruptured ulcer, all these non-surgical problems. We came in at 2 a.m., and they had four specialty consults scheduled – would have been a tragedy. I came in, canceled consults and called in hospice."

Still, the fact that EOL service use patterns nearly mimic quadrant divisions merits further attention. As all of the low-cost, high-quality regions are more provider and payer resource-rich than the high-cost, low-quality quadrants, it is likely they have greater ability to introduce and experiment with EOL programs and influence cultures around dying than do the high-cost regions. Interviewees in La Crosse described how the current Respecting Choices program is a product of a number of modified attempts of the 1980s and 1990s. EOL care often results in lower reimbursement than would any host of procedures that could be ordered at the end of life – given the finding that the high-cost, low-quality regions tend to focus on revenue maximization rather than outcomes, it follows that provider practice patterns near the end of life, even within large hospital systems, would not be discouraged. In the low-cost, high-quality regions, greater

focus on outcomes-driven care delivery and provider collaboration can lend itself to program implementation and entrenchment, which results in education and, ultimately, acceptance within the community.

Intersection of poverty and systemness

Undoubtedly, the two overarching findings from this study are related – each mediates and moderates the other. Resource challenges can impact the capacity of an HRR to develop robust systemness, and well-functioning systems can help overcome the impact of resource deficits, for example. In many high-cost, low-quality HRRs, the relatively high percentage of people living in poverty proved a significant hurdle for the system as a whole, and the numbers reveal a clear divide between quadrants in this area (see Table 6 below). It is no coincidence, then, that we heard about and witnessed a divide in social and environmental patterns in our visits to the HRRs in the two quadrants. By contrast, in the low-cost quadrant, where poverty and its associated challenges were less frequent, both providers and patients took an overall conservative approach to utilization, revealing a provider awareness for limiting procedure orders and a patient understanding that health care resources are finite and care should only be sought when appropriate. Also notably, physicians in the HRRs composing the low-cost quadrant for the most part exhibited a spirit of collaboration that permeated the system as a whole, allowing for processes that promote integrated and cross-setting care, such as outcomes-focused population health and coordinated care management.

On the other hand, the high-cost, low-quality regions were in many ways polar opposites, marked by liberal utilization of system resources on both the patient and provider side. Some providers described the poorest patients as trying to get as much from the system as possible due to their lack of resources in other sectors of life and also noted that a lack of personal accountability for health maintenance contributed to this phenomenon. It was unclear from the interviews to what extent the history of poverty in an area served to solidify these patterns – a history of using the ED because no other options are available can be difficult to reverse, even when access to other sources of care improves. The result, however, is that providers in the high-cost, low-quality HRRs served a higher proportion of patients that not only had significant health needs but also lacked the tools and resources to adhere to treatment plans and effectively manage their health.

Table 6: Local market factors impacting care delivery

HRR[41]	Percentage of population in lower income strata[42]	Collaboration across providers and community organizations[43]	Acute care hospital beds per 1,000 residents[44]	PCPs per 100,000 residents overall[45]	Competitive market[46]
Asheville, N.C.	15%	Frequent	2.1	87.6	Low
La Crosse, Wisc.	12%	Frequent	2.1	84.9	Medium
Muskegon, Mich.	14%	Frequent	2.1	73.5	Medium
Portland, Maine	11%	Frequent	2.1	94.8	Low
Salinas, Calif.	8%	Limited or None	2.0	68.1	Medium
Detroit, Mich.	17%	Occasional	3.1	79.0	High
Harlingen, Texas	26%	Limited or None	2.7	47.7	High
Jacksonville, Fla.	12%	Occasional	2.4	72.6	Medium
Las Vegas, Nev.	9%	Limited or None	1.9	56.8	High
Memphis, Tenn.	18%	Occasional	3.5	60.0	High
Monroe, La.	22%	Limited or None	4.7	57.1	High
Tuscaloosa, Ala.	22%	Limited or None	3.5	67.7	High

On the provider side, supply-driven competition (notably absent from the low-cost regions) appeared to fuel liberal spending habits and moved focus away from outcomes to the bottom line. In the high-cost, low-quality regions, interviewees spoke of a dearth of PCPs and a plethora of specialists, many of whom practiced in single-specialty groups. This uneven balance perpetuated an environment of "siloes" and hampered collaboration – the specialist-flooded markets forced these providers to focus more on quantity of care as opposed to quality to sustain income; and furthermore, the large number of low-reimbursing Medicaid patients in these regions fueled greater competition for the pool of higher reimbursing beneficiaries.

[41] Results are based on general observations from multiple interviewees within the HRR.

[42] Results reflect the percentage of the population earning $15,000 or less annually. The national average is 12.1 percent. Source: Thomson Reuters (2011). Market Report: Demographics Snapshot.

[43] **Limited or None** – No collaboration occurs across providers and/or community settings or collaboration exists in a minor capacity across few settings. It does not occur systematically and does not impact the overall nature of care delivery in any notable capacity.

Occasional – Collaboration occurs across a number of settings and impacts some populations in a systematic way.

Frequent – Occurs systematically across most health settings and impacts most populations in the HRR.

[44] Dartmouth Atlas (2006). Retrieved March 8, 2011.

[45] Dartmouth Atlas (2006). Retrieved March 8, 2011.

[46] **Low** – Little to no presence of competition, and if it exists, it was not mentioned by interviewees as having any impact on the nature of care delivery in the market.

Medium – Presence of some competition, but its impact on care delivery in the market is minimal.

High – Presence of competition that has a direct and significant impact on care delivery in the market.

The social and environmental trends indicative of high- and low-cost HRRs provide significant insight into why some regions can provide high-quality care at a low cost and why others provide low-quality care at a high cost. Due to the combination of an inappropriate supply balance of providers and a poorer population that tends to strain system resources, high-cost regions appeared to promote quantity over quality. It is possible that because the low-cost regions do not face resource barriers to the same extent, they have the flexibility to go against the grain – to devote resources to areas that might improve overall quality while at the same time reducing overall revenue. According to one of the major hospital systems in La Crosse, it spends over $1 million annually on salaries and benefits associated with its care management program, and it loses millions of dollars in hospital care for those individuals as a result of a program that keeps people out of the hospital by monitoring patients and teaching them health maintenance techniques. And according to an interviewee overseeing the system's administration, the hospital devotes resources to this program because it is "the right thing and what makes sense." Still, in many resource-scarce areas of the country, this approach to care, though admirable, is not feasible within the existing HRR care delivery systems.

CONCLUSION

The findings from these site visits confirm that a large constellation of factors in unique and complex combinations underlie health care quality and cost outcomes. As one HRR interviewee put it: "There are a lot of variables in all of this. It's like trying to predict the weather." This research is only an exploratory step to help CMS broadly understand the factors and practices underlying variations in costs and quality for the Medicare program. Despite this complexity, the results highlighted two interrelated themes: Environment and market context matter as does the ability of a region to function like a system. As findings often lead to additional questions, there are several areas for further inquiry.

Methods and study approach considerations

Ideally, the study design would have permitted HRRs from the two cost-quality groups to be matched on key geographic, demographic, and market characteristics; however, HRRs in these two quadrants hailed from geographically segregated portions of the United States – the low-cost regions were largely in the North, and the high-cost regions were largely in the South, making matching virtually impossible. Though not a selected focus for this study, incorporating low-cost, low-quality HRRs and high-cost, high-quality HRRs would offer an opportunity to isolate how a factor influences cost or quality and which set of factors are necessary and sufficient or simply value added in how a region fares in cost and quality performance. The two quadrants examined in this research revealed that the high-cost, low-quality HRRs generally reflected the opposite set of drivers than did the low-cost, high-quality HRRs. For example, it would be useful to know whether high-quality, high-cost regions reflect similar drivers as their high-quality, low-cost counterparts, thus separating out the quality from the cost drivers. Incorporating all four cost-quality groupings would also help uncover whether there is a threshold in the prevalence of poverty in an HRR beyond which broad-based initiatives will have difficulty taking hold.

In addition to looking at the other HRR groupings, the research process made clear that while HRR designations are a vast improvement over traditional geographic boundaries, rethinking their fit could improve interpretation of findings. Using the same data but stratified by income and education levels, race/ethnicity, or different geographical boundaries within the HRR (rural/urban) utilization figures that at first glance look positive could change the story drastically. For instance, the Asheville HRR covers several very different populations – those located in rural Appalachia, Native Americans, recent wealthy retirees relocating from other parts of the country (including snowbirds), and young people attracted to the area for quality of life reasons. Each of these populations in the region has different levels of access to health care. Interviewees further postulated that several of these population segments may, rather than experiencing quality care, be underutilizing vital services.

The data CMS used to select the HRRs visited – like much of the data used to study variations in cost and quality – are based on Medicare FFS data and are the only source of consistent national claims data that allows for such analyses. Running key comparisons for certain smaller subsets of commercial data could provide valuable comparisons, however. Several analysts have begun to look closely at data from certain Voluntary Employee Beneficiary Associations (such as UAW's Retiree Medical Benefits Trust) to compare the costs of beneficiaries in the last 12 to 18

months before death, for the purposes of an advanced illness management initiative (see the summary report for the Detroit site visit).

Additional topics of inquiry

Though outside of this project's scope, it would be beneficial to incorporate data and regulatory analyses of state, regional and national trends that impact an HRR and also cut across a much wider area outside the control of the HRR stakeholder. Examples include the role of CON regulations, state surveying and other regulatory and monitoring efforts. Larger regional economic, political and social trends are clearly relevant and their weight or impact on the HRRs visited has not been explored as part of this study. They would provide much value added context to these findings. In addition to the impact of national, state or regional regulations and standards on HRR-specific initiatives and practices, it would also be useful to explore state and regional initiatives around quality monitoring and benchmarking, as well as issues around EOL care. These may not originate in the HRR, but they are certainly leveraged by HRR residents.

The role of new and expensive treatments and technology is also a likely contributor to the cost and quality outcomes in a region. How much, for instance, did these impact the utilization in HRRs such as Memphis, which has a large presence of large, single-specialty, nationally recognized group practices? Was the impact different there than in other "comparable" HRRs?

Several HRRs, particularly in the high-cost, low-quality quadrant, hypothesized about the influence of the practice of defensive medicine in their regions. From Harlingen, one interviewee noted: "It's still quite litigious here – even if things are capped, there is still a whole lot of room between nothing and that. And I think there's the 'safer than sorry' mentality." Another interviewee from Jacksonville said: "We have a litigious society. ER [emergency room] people get tagged for lawsuits and want to admit [every patient]."

While fraud, waste, and abuse issues were identified in high-cost, low-quality HRRs, they were not within the scope of this study; however, the reported prevalence of such activities in these HRRs was so symptomatic of the structures and incentives in the local area that they could not be ignored and are worthy of further exploration. For several HRRs in particular, including Harlingen, Memphis, Tuscaloosa, and Detroit, concerns ranged from questionable partnerships and potential kickbacks between hospice service providers and nursing homes to unethical practices of DME companies and visiting physicians. These examples are covered in greater detail in the site visit summary reports included in the Appendix.

The challenges in focusing on providing the appropriate level of care across settings within complex local health delivery systems are something faced across all HRRs, and they are significantly exacerbated by payment silos, as well as the vast divide between physical and behavioral health care delivery. While the ACA has called for a number of reforms to address these challenges, identifying further ways to minimize the impact of these silos to improve care of the whole person and population health are a significant challenge.

Finally, several distortions in payment described by interviewees in multiple HRRs seem to further drive inappropriate utilization and/or fraud and abuse. The best example of this was the current payment structure of the hospice benefit in nursing homes, as described in a number of

high-cost, low-quality HRRs. Rather than providing higher payments when individuals are first admitted to hospice and then later when they die, the structure reimburses handsomely for services that are often easier to provide in a facility (with supports) than in beneficiaries' homes.

While including such additional topic areas for further study would enhance understanding, it is clear from the 12 sites that quality-oriented and cost-conscious care models are not prevalent at the HRR level. Certainly, health plans and integrated delivery systems within HRRs have a long history of these initiatives, but they are generally targeted to their member populations or otherwise restricted to a portion of the residents. In the low-cost, high-quality HRRs, there was widespread support for initiatives that addressed quality and cost, even if the actual initiatives were not universal. Indeed, the high-cost, low-quality interviewees understood the importance of such initiatives, but what few initiatives there were simply could not overcome the poverty- and health care market structure challenges prevalent in each one. With ever-increasing interest in containing costs and a recent focus on state and federal programs to support patient-centered coordinated care, however, the fundamental barriers to these initiatives gaining traction may be mitigated, if not overcome.

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APPENDIX A: DISCUSSION GUIDES

Discussion Guide for Key HRR Informants:
Government and Community Agencies

Introduction

Thank you for participating in the study and having us here today. As you know, the Centers for Medicare & Medicaid Services (CMS) Office of Policy has engaged L&M Policy Research, LLC (L&M), and our partner Thomson Reuters to explore patterns of care and care management provided to those dually eligible for Medicare and Medicaid coverage as well as other Medicare beneficiaries with complex health needs and serious chronic conditions.

We appreciate your taking the time to meet with us and help us better understand the landscape of the health care delivery systems in your hospital referral region (HRR). Before we begin, please be advised that this discussion is being carried out in accordance with requirements put forth in the Paperwork Reduction Act of 1995. The valid OMB control number for this is 0938-1120. For more information, please refer to the information we sent you as part of the pre-interview kit [Note: *If the interviewee did not receive pre-interview information say*: we've included the specifics in this document for your reference. *Hand interviewee document*].

We would like to hear how agencies, organizations, programs, and initiatives serving these special populations have been developed and currently operate in your HRR. We would also like to learn about the challenges and success factors associated with delivering quality and cost-effective care to these populations. We are soliciting input from a range of different types of individuals and appreciate your perspective on these issues. Your honest opinions and comments will be extremely helpful for the purpose of this research. Please be assured that the information you share today will not be linked to you or your agency/office in any identifiable way.

General Background

1. I'd like to start by asking you a few questions about your background and your current role within [insert name of agency/office]. Current position? Responsibilities? How long have you been with [insert name of agency/office]? Can you tell me about your relevant past experience, prior to joining [insert name of agency/office]?

    • Title, years in agency/office
    • Past experience
    • Responsibilities

Agency/Office Background

2. Now I'd like to know more about [insert name of agency/office]. What role does your agency/office play in serving Medicare and Medicaid beneficiaries within the HRR? [Show the interviewee a map of the HRR (note: this will have been sent in the pre-interview packet).]

    • Agency/Office mission

- Major sources of funding
- Population reached (for each relevant initiative, past or current)
- Main programs and services as related to the Medicare and dual-eligible population

Factors Impacting Variations in Cost and Quality

3. As we mentioned, the main focus of this project is to get a sense of some of the driving factors associated with variations in the cost and quality of care among HRRs across the country. Before we delve deeper into the programs and services your agency/office provides, we'd like to hear your observations about potential factors in the Medicare cost and quality outcomes in [HRR]. Thinking about the health care delivery system in [HRR] as a whole, generally, what do you think drives Medicare costs and quality within this region?

   - To what extent are cost and quality being debated in the region? Do certain organizations or individuals stand out as leaders in the debate?
   - Are there community or HRR-wide efforts to address to improve quality as a whole or for particular sub-populations?
   - How does your agency/office impact cost and quality within the HRR?
   - To what extent are you aware of data published related to quality and costs of services in your geographic area or across the country? What, if any, impact does this knowledge have on activities within your agency/office?

Population/Patients Served and Care Delivery

4. What are the population(s) and geographic areas you serve/focus on?

   - Demographics
   - Cultural differences, language, and other potential barriers to care
   - How does this population compare to the HRR population as a whole?
   - Does your agency/office serve most or all of the HRR?

Quality Management

5. Please tell us about any health care quality management strategies your agency/office uses in its programs and services, especially pertaining to Medicare beneficiaries.

   - Quality improvement programs or initiatives
   - Use of internal or external data for quality improvement

Service Delivery, Coordination, and Best Practices

6. Please tell us about major health-related programs and services your agency/office provides to the Medicare population

   - Use of evidence-based practices, or other standardized decision-making processes
   - Efforts to integrate/coordinate care and its barriers
     o Coordination with (other) community organizations, including behavioral health organizations and community service agencies
   - Communication and referrals (within and external to your agency/office)
     o HIT, EMR, PHR
     o Integration with geriatricians, social workers, and other home- and community-based service providers
   - Management of care transitions
   - Involvement of family and community caregivers

7. Describe your agency's programs and services for people who are dually eligible for Medicare and Medicaid services (duals) and the extent to which the processes and programs you just described may differ for duals.

   - Understanding of duals' service use and costs and particular efforts to coordinate/integrate care with Medicaid (Long Term Services and Supports, or LTSS, in particular) and other community supports
   - Palliative care, hospice, other end-of-life services
   - Financial incentives created by dual payers
   - Barriers faced by duals in receiving interventions for improving care
   - Opportunities for duals to better utilize services
   - Successes, challenges, and lessons learned in improving quality/reducing costs
   - Do you have observations to add which relate to the larger HRR service delivery system?

8. Describe your agency's programs and services for Medicare beneficiaries with serious chronic illness and the extent to which the processes and programs you've described thus far may differ for this population.

   - Population of those with serious chronic illness (as proportion of total) served
   - Understanding of the chronically ill Medicare population's service use and costs and particular efforts to coordinate/integrate care
   - Use of assessment, care planning, coordination across professionals, and patient engagement
   - Coordination with (other) community organizations, including behavioral health organizations and community service agencies
   - Palliative care, hospice, other end of life services

- Barriers faced by chronically ill people in receiving interventions for improving care
- Opportunities for chronically ill people to utilize services better
- Successes, challenges, and lessons learned in improving quality/reducing costs
- Do you know of any other initiatives within in your HRR to better coordinate care for beneficiaries with serious chronic illness?
- Do you have observations to add which relate to the larger HRR service delivery system?

Cost-saving Initiatives

9. Please tell us about any major cost-saving initiatives in this HRR that would impact the Medicare population.

Conclusion

10. Finally, do you have any questions for us? Thank you for taking the time to meet with us and share your insights for this important study. Your input is greatly appreciated.

Discussion Guide for Key HRR Informants:
Providers and Purchasers

Introduction

Thank you for participating in the study and having us here today. As you know, the Centers for Medicare & Medicaid Services (CMS) Office of Policy has engaged L&M Policy Research, LLC (L&M), and our partner Thomson Reuters to explore patterns of care and care management provided to those dually eligible for Medicare and Medicaid coverage as well as other Medicare beneficiaries with complex health needs and serious chronic conditions.

We appreciate your taking the time to meet with us and help us better understand the landscape of the health care delivery systems in your hospital referral region (HRR). Before we begin, please be advised that this discussion is being carried out in accordance with requirements put forth in the Paperwork Reduction Act of 1995. The valid OMB control number for this is 0938-1120. For more information, please refer to the information we sent you as part of the pre-interview kit [Note: *If the interviewee did not receive pre-interview information say*: we've included the specifics in this document for your reference. *Hand interviewee document*].

We would like to hear how agencies, organizations, programs, and initiatives serving these special populations have been developed and currently operate in your HRR. We would also like to learn about the challenges and success factors associated with delivering quality and cost-effective care to these populations. We are soliciting input from a range of different types of individuals and appreciate your perspective on these issues. Your honest opinions and comments will be extremely helpful for the purpose of this research. Please be assured that the information you share today will not be linked to you or your agency/office in any identifiable way.

General Background

11. I'd like to start by asking you a few questions about your background and your current role within [insert name of organization].

   • Current position/title
   • History, years in program/organization
   • Current responsibilities
   • Past experience
   • Organizational/program context

Program/Organization Background

12. Now I'd like to know more about [insert name of organization]. What role does your organization play in serving Medicare and Medicaid beneficiaries within the HRR? [Show the interviewee a map of the HRR (note: this will have been sent in the pre-interview packet).]

   • Mission/history/impetus
   • Ownership/affiliation

- Persons and providers involved (doctors, advocates, care givers, health system)
- Structure/Provider Type (e.g., integrated health system, hospital system only, multi-specialty physician practice, etc.)
- Compensation methods (salary, salary plus incentives, fee per unit of service, etc.)
- Operations, major sources of funding, budget, and population reached (for each relevant initiative, past or current)
- Providers, networks, provider contracting arrangements, and provider incentives
- Finance (payment mechanisms, provider incentives, cost structure, pricing, profit margins)
- Specific program design(s) and evaluation

Factors Impacting Variations in Cost and Quality

13. As we mentioned, the main focus of this project is to get a sense of some of the driving factors associated with variations in the cost and quality of care among HRRs across the country. Before we delve deeper into care delivery patterns within your organization and throughout this HRR, generally, what do you think drives Medicare costs and quality within this region?

- To what extent are cost and quality being debated in the region? Do certain organizations or individuals stand out as leaders in the debate?
- Are there community or HRR-wide efforts to improve quality as a whole or for particular sub-populations?
- How does your organization impact cost and quality within the HRR?
- To what extent are you aware of data published related to quality and costs of services in your geographic area or across the country?
    - What, if any, impact does this knowledge have on activities within your organization or on your day-to-day practice?
    - Does this knowledge have any impact on your relations with the other health care providers/ practitioners in your HRR?

Population/Patients Served and Care Delivery

14. What are the population(s) and geographic areas you serve?

- Service area(s)
- Demographics
- Cultural differences, language, and other potential barriers to care
- How does this population compare to the HRR as a whole?
- What is the estimated reach of your service area(s) within the HRR?
    - Approximate area of the HRR you cover
- Recruitment and retention of participants (successes, challenges, lessons learned)
- Do your recruitment and retention processes extend to the entire HRR?
- Provider network (number, types or providers and contractual and financial inter-relationships)

- Extent and nature of information-sharing across system/settings (medical and administrative)

Quality Management

15. Please tell us about your quality management strategy, especially pertaining to Medicare beneficiaries.

- Quality improvement programs or initiatives
- Use of internal or external data for quality improvement

Care Delivery and Best Practices

16. Please tell us about your patient and clinical care processes and coordination across [provider networks/providers] within the HRR as they pertain to Medicare beneficiaries.

- Use of clinical protocols, evidence-based practices, or other standardized decision-making processes
- Medical and utilization management, to include decision-making processes and cost controls
- Service or care coordination
- Disease management
- Communication and referrals (within and external to your organization)
- Use of health information technology (HIT) to include
  o Decision support, data systems reporting and modeling capacity
  o Use of electronic health records (EHRs)
- Use of PHRs in your organization and region.
  o Use in care delivery or interventions for management of chronic diseases
  o Barriers facing individuals with multiple chronic conditions in PHR use
  o Sources of data used to populate PHRs (claims, patient response, electronic medical devices, EHRs, caregivers, providers)
  o Use of chronic condition management messaging and types used (data-generated alerts, data-generated messaging)
  o Receptivity of users (physicians, beneficiaries, caregivers)
  o Technology used to manage Health Insurance Portability and Accountability Act (HIPAA) and other privacy issues
  o Challenges to implementation, successes, lessons learned, emerging best-practice models
  o Impact of public investment in EHRs with PHR use and adoption
  o Evidence of improved outcomes or decreased costs
- Use of HIT to share information across settings throughout the HRR
- Extent to which notes, communications, appointments, and referrals across settings are available to relevant staff as well as timeliness/ease of use
- Management of care transitions

- o Integration of services with social workers, community agencies
- o Availability of home- and community-based service providers
- Availability and quality of palliative care and hospice services
- Acceptance and use of hospice care
- Efforts to ensure that patient preferences are followed
- Involvement of family and community caregivers within network and HRR
- Other work with and referrals to other providers/across settings
- Use of any programs or processes to control readmissions
- Do doctors get rewarded in any way for keeping people out of the emergency rooms?

17. Describe your organization's approach to serving people who are dually eligible for Medicare and Medicaid services (duals) and the extent to which the processes and programs you just described may differ for duals.

- Population of duals (as proportion of total) served
- Extent to which services offered differs for duals
- Understanding of duals' services use and associated costs
- Efforts to integrate/coordinate care and its barriers
    - o Coordination with Medicaid (Long Term Services and Supports, or LTSS, in particular)
    - o Coordination with community organizations, including behavioral health organizations and community service agencies
- Communications and transitions across settings and among providers
    - o Specifically, integration with geriatricians, social workers, and other home- and community-based service providers – and site-specific policies, protocols, and programs associated with patients receiving care from such providers
- Availability and quality of palliative care and hospice services
- Acceptance and use of hospice care
- Efforts to ensure that patient preferences are followed
- Extent to which patient care processes & self-management/education differs for duals
- Recruitment methods, challenges in both recruitment and program participation/retention for duals
- Financial incentives created by dual players
- Billing processes and issues
- Barriers faced by duals in receiving interventions for improving care
- Opportunities for duals to better utilize services
- Efforts to reduce inappropriate inpatient admissions or readmissions, emergency room visits
- Use of HIT, including PHRs/EHRs, telecare, remote monitoring, etc.
- Successes, challenges, and lessons learned in improving quality/reducing costs, best practices
- Do you know of any other initiatives within your HRR to better coordinate care for duals?

8. Describe your organization's approach to serving patients with serious chronic illness and the extent to which the processes and programs you've described thus far may differ for this population.

- Population of those with serious chronic illness (as proportion of total) served
- Understanding of Medicare's chronically ill population's services use and associated costs
- Use of assessment, care planning, coordination across professionals, and patient engagement
- Efforts to integrate/coordinate care and barriers for those with serious chronic illness
  o Coordination with community organizations, including behavioral health organizations and community service agencies
- Extent to which services offered differs for this population
- Communications and transitions across settings and among providers
  o Specifically, integration with geriatricians, social workers, and other home- and community-based service providers – and site-specific policies, protocols, and programs associated with patients receiving care from such providers
- Availability and quality of palliative care and hospice services
- Acceptance and use of hospice care
- Efforts to ensure that patient preferences are followed
- Extent to which patient care processes and self-management/education differs for those with serious chronic illness
- Criteria used to determine eligibility for interventions (e.g. functional status)
  o Patterns of care resulting in patients receiving palliative care and number of patients referred to that type of care
- Recruitment methods, barriers in both recruitment and program participation/retention
- Labor/staffing in care management
- Staff managing and management approach, goals and characteristics of interventions
- Barriers faced by duals with serious chronic illness in receiving interventions for improving care
- Extent to which patient care processes and self-management and education differs for those with serious chronic illness
  o Efforts to ensure that patient preferences are followed with regard to care
- Evaluation of interventions/programs
- Local factors that relate to type of intervention chosen or approach
- Use of HIT, including PHRs/EHRs, telecare, remote monitoring, etc.
- Successes, challenges, and lessons learned in improving quality/reducing costs, best practices
- Do you know of any other initiatives within in your HRR to better coordinate care for beneficiaries with serious chronic illness?
- If HRR has a unique proportion of people with diabetes, heart failure, or heart disease, find out if there are any specific programs for people with these diseases.

Cost-saving Initiatives

9. Please tell us about any major cost-saving initiatives in this HRR that would impact the Medicare population.

   • Are there patterns of care in your own organization or practice that might either positively or negatively impact costs and quality?
   • Are there any initiatives focusing on:
     o Avoidable hospitalizations?
     o Reducing readmissions?
     o Reducing emergency department visits?
   • Other cost-saving initiatives?
     o Inpatient versus ambulatory surgery performed at free-standing centers
     o Settings for post acute care services
   • Availability and quality of palliative care and hospice services
   • Extent to which home and community based services are available

Closing

10. Finally, do you have any questions for us? Thank you for taking the time to meet with us and share your insights for this important study. Your input is greatly appreciated.

APPENDIX B: SITE VISIT SUMMARY REPORTS

Asheville, North Carolina

February 28 – March 4, 2011

Site Visit Summary Report

Overall description

Situated close to the Blue Ridge Mountains, the Asheville hospital referral region consists of an urban area (Buncombe County; population: 229,047[47]) surrounded on all sides by rural counties.[48] Comprised of a string of close-knit communities separated by small geographic boundaries, Asheville is recognized as one of the nation's top retirement locations. Also known as "the Land of Sky," the city has a robust artistic community with well-preserved art deco buildings and over 50 galleries. *Kiplinger's Personal Finance* ranked it seventh in its "50 Smart Places to Live" list, which recognizes cities that offer a reasonable cost of living and a great quality of life.[49] The local population includes a large proportion of senior citizens and people native to the Appalachian region. Educational and health services are the top industries in the area, accounting for 18.5 percent of total employment in 2010.[50] The health care system developed around the area's longstanding tradition of health and healing, with a focus on integrating the physical, social, and behavioral aspects of health across all settings. One large health system and one primary hospital dominate the health care market. The region also includes five critical access hospitals and over 12 small community hospitals scattered across 15 counties. There is low use of ambulatory surgeries, long-term care hospitals, home health, and in-patient rehabilitation facilities in the HRR.

Payer/Provider Characteristics

- **Structure of the health system.** There is one tertiary care hospital for the region, which became the sole provider over 15 years ago upon merging with a smaller rival hospital. This hospital also serves as the only regional trauma center in western North Carolina. Prior to the merger, the smaller rival hospital was operated by a faith-based organization, a long-standing provider in the community, which began with treating tuberculosis patients from all over the state who came to the mountains for healing purposes. Over time, the tertiary care hospital system has purchased a number of the smaller community hospitals in the region and has entered into management services agreements with others. Until recently, the hospital has enjoyed a virtual monopoly on tertiary care services in the western region of North Carolina.

- **Insurance coverage.**
  - The insurance distribution within the HRR is approximately 42 percent privately insured, 13 percent in Medicaid, 18 percent in Medicare, and 16 percent uninsured.

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[47] Source: U.S. Census Bureau, Population Division (2008).

[48] Source: Rural Data Bank (http://www.ncruralcenter.org/databank/rural_county_map.php)

[49] Source: Kiplinger's (http://www.kiplinger.com/features/archives/2006/05/asheville.html) (May 2006).

[50] Source: U.S. Bureau of Labor Statistics (2010).

- o Western North Carolina has low managed care penetration. The primary payer in the market, outside of Medicare and Medicaid, is one large commercial insurer, followed by other smaller commercial insurers and self-insured employer groups. There is also one regional health care provider network (preferred provider organization).

- **Anti-trust mechanism.** The tertiary care hospital continues to operate under an unusual certificate of public advantage (COPA) issued by the Department of Justice. After merging with the smaller rival hospital, it became the first health system in the country to operate a state-approved monopoly. The COPA provided the hospital with a means of avoiding anti-trust challenges from federal regulators in exchange for state supervision. It is designed to protect consumers from anti-competitive actions by returning to the community some of the savings the two systems received from joining forces in the form of community benefits.

- **Centralized specialty groups.** There are few large physician networks in this HRR. Instead, specialists typically belong to a large, single-specialty group, which essentially controls the delivery of that specialty for the entire region. At one point in time, in anticipation of the emergence of managed care organizations and competition that never arrived, a multi-specialty group practice was formed. The specialists in this short-lived multi-specialty group practice eventually were purchased by the tertiary care hospital and became part of the group that now represents over 120 physicians in that hospital system.

Key Initiatives Relevant to Cost and Quality Improvement

- The number of care management initiatives in this HRR is striking. The research team learned about over 15 active initiatives, which are being led by county health departments, physical and mental health providers and provider institutions, and community-based organizations, individually and in collaboration with each other.

- A large non-profit community health organization in North Carolina has built 14 regional community health networks throughout the state that are organized and operated by community physicians, hospitals, health departments, federally qualified health centers, mental health agencies, and departments of social services. In total, these 14 regional networks provide care management to over one million Medicaid recipients. The vast majority of interviewees indicated that the high quality of care in the Asheville HRR was in great part due to the efforts of the two networks operating in the region.

- One county health department in the HRR in a highly populated area, in particular, has been an influential force for the entire region. Up until recently, it operated a primary care center. These functions have now been transferred to a local federally qualified community health center. Although the department no longer operates a primary care clinic, it invests significant resources into health care and regularly convenes safety net providers and other entities to address gaps in health care delivery, discuss how to improve case management and care transitions, and integrate

physical care with mental health and social service supports for a high risk population.

- Since 2001, a group of physicians has provided primary medical care to older adults in nursing homes, assisted living facilities, and retirement communities. The majority of interviewees indicated that this group has played a significant role in promoting effective post-acute care, increasing the frequency of physician visits to nursing homes, working with staff and families to avoid unnecessary hospitalizations, and striving to ensure that every resident has an advance directive.

- Since 2004, the state-designed Medical Orders for Scope of Treatment (MOST) form has been in the region. It aims to encourage patients to express their end-of-life care wishes and enable health care providers to carry out those wishes. Health care providers at every level of health care and across settings can implement the decisions outlined in a MOST. The majority of nursing home residents who are hospitalized arrive at the tertiary care center with a completed MOST form and a carefully designed package ("green envelope") including medical information about the resident, allowing the emergency room staff to make important decisions in directing patient-centered health care. One interviewee noted that the biggest barriers to the use of advance directives are nursing homes and mentioned that one nursing home in the region refused to use the MOST form, feeling that it placed too great a burden on their staff. This interviewee, however, acknowledged that this resistance was the exception rather than the rule.

- Several interviewees indicated that the local managed mental health entity has played a major role in improving care coordination in the region. One interviewee from the entity mentioned that in the past six years, the entity has helped a local hospital reduce hospitalizations from an average of 80 to 100 per month to 25 hospitalizations per month. The entity has achieved this result by analyzing and identifying flaws in the care delivery system and working with the hospital to improve treatment and discharge plans.

Summary findings

Cost and quality drivers

- **Systematic and comprehensive patient assessment, care planning, and monitoring.** In the Asheville region, care planning and coordination takes place throughout the health care continuum and by over ten provider institutions and community-based organizations. Representatives from these organizations reported conducting patient assessments, identifying high cost and high risk patients, implementing transitions in care programs, conducting chronic disease management pilots, and providing patients with case managers to help them navigate the health care system. One care management program that several interviewees cited as being particularly effective assigns a care manager to high-risk (i.e., living alone, poly-pharmacy, lack of identified caregiver, cognitive impairment, fall history, and frequent hospital use) individuals age 75 and older who are in a hospital or rehabilitation facility. The care manager provides ongoing care management services post-discharge, including establishing a case review schedule and a mechanism for

rapid response when problems arise and providing a comprehensive assessment of client and caregiver needs, with the ultimate goal of facilitating transitions across the continuum of care. A seven-month assessment of the program revealed that 92 percent of the clients served had received a supportive intervention that helped them remain at home.

- **Effective coordination across settings including medical, mental and social service organizations influencing population health.** Interviewees noted that representatives from the 14 networks comprising the large state community health organization, hospitals, the Area Agencies on Aging, Department of Social Services, the state designated local managed mental health entity, the Aging and Disability Resource Center, Councils on Aging, and different service providers meet internally and with each other on a regular basis to share information, exchange best practices, and discuss how to address common issues and coordinate their activities. These forums are supported by strong relationships among physicians and chief executive officers and supplemented by other collaborations around specific issues. One physician noted that he has maintained relationships with other physicians that date back over thirty years. Co-locating and co-funding staff is also a common practice among organizations. For example, one regional community health network mentioned co-locating staff with the tertiary care hospital to ensure coordination of activities and the most efficient use of staff. The same network works closely with the regional mental health service provider funded through the state. These two organizations co-locate mental and physical health care managers to ensure careful care coordination for patients with dual diagnoses.

- **High level of health information technology (HIT) capabilities and interoperability.** While there have been some challenges, such as providers using different electronic medical records (EMR) programs and not having the same access to all the data, EMRs and Data Link, in particular, have been regarded as having significant impacts on cost because they avoid duplicate ordering of tests and procedures. Established in the Asheville region in 2006, Data Link allows hospitals to share and review their patients' records from other hospitals. As a result, the tertiary care hospital can view the tests and procedures ordered at other facilities, the number of previous hospitalizations in the region, and the resulting discharge summaries before developing a patient's treatment plan. The community health networks also utilize health information technology; they have the ability to access claims data for their patients online.

- **Widespread quality data sharing and monitoring.** Data sharing and monitoring is a common practice in the Asheville HRR, and interviewees mentioned that providers, community-based organizations, and governmental entities meet on a regular basis to discuss any troubling patterns identified in the data and devise strategies to address them. For example, one interviewee noted that several agencies and organizations convened to discuss how to reduce emergency room visits. They each described their internal tactics for reducing ED visits, discussed how they could collaborate to identify common clients, and brainstormed how to improve coordination. Other data points that are carefully monitored across settings include avoidable inpatient admissions, polypharmacy issues (via the Asheville Project), and falls. The state also

requires that county health departments conduct community health assessments every four years, which results in a review of critical information about the health of the population and the development of plans to address gaps in services.

- **Cultural drivers that positively impact the nature of care delivery.** According to interviewees, Asheville has a long history of health and healing, dating back to the early days of the Cherokee nation. Today, it is a major hub for practitioners of complementary and alternative medicine. This orientation towards population health seems to be perpetuated by the population it attracts. Interviewees noted that the region typically draws people who are in good health, enjoy the outdoors, and educated health consumers, and suggested that the quality data in Asheville might be skewed by the fact that the region inherently has a healthier population than other HRRs.

  Another striking aspect of the community is the emphasis on person-centered and community values and collaboration. Interviewees indicated that among physicians, there is little tolerance for poor clinical practice or profit-driven behavior. They seem to feel personally accountable to their local communities and are willing to do whatever necessary to serve them, whether it be sharing surgical kits with another hospital, driving a patient home, or collaborating with hospital social workers to ensure that patients are connected to the appropriate community resources. This focus on the community and willingness to serve transcends the health care sector. One hospital administrator noted that his hospital prepares meals for the local Meals on Wheels, while a county health department official mentioned that local non-profit organizations, such as the Manna food bank, use a Medicaid eligibility tool to enroll people into Medicaid. The COPA, along with the lack of competition for payer contracts, also seem to have contributed to a market where collaboration rather than competition among health and community service providers is the norm.

  Health care leaders in the Asheville region have developed their own unique culture. They approach their work with innovative and problem solving attitudes and have an orientation towards decisive action, continuous learning, improved efficiency, and evidence-based medicine. The specialty practices, in particular, have been seen as a force; one interviewee likened them to independent centers of excellence, each with its own champions and change agents. Interviewees also acknowledged a number of individuals whose enterprising vision, strong leadership, and support for their employees have contributed to the progress in the region. Interviewees mentioned the use of management tools and strategies, such as Lean and Six Sigma, in various organizations.

  Data-driven and evidence-based clinical practices are stressed in the region. Several interviewees recounted instances when clinical practices were changed as a result of new research. One provider, for example, remarked that when studies showed that putting gastric feeding tubes into dementia patients did not impact quality or longevity of life, a new protocol was developed, which resulted in a drop in the number of tubes being inserted.

Among physicians in the Asheville region, there is an orientation away from procedure-based medicine. Interviewees felt that this conservative approach is at least in part the influence of the area health education center, which is a pipeline for health care training. The center administers a family practice residency program, the majority of whose graduates remain in the Asheville region. The center emphasizes cost-effective care and systems-oriented approaches, and most interviewees noted that it has had a significant impact on the quality of health care delivery in the region. Interviewees also noted that there was a disproportionate number of primary care providers in the city and that primary care providers tend to specialize in family practice rather than in internal medicine, which further dampens procedurally oriented practice. Dartmouth Atlas data show that the number of primary care physicians per 100,000 population in the Asheville HRR was 87.6, compared to the national median of 71.9.[51]

- **Non-competitive market.** As the sole provider in the Asheville HRR, the tertiary care hospital maintains a high patient volume, which reinforces its ability to provide quality care. There are also a limited number of physician specialty groups. Since they do not face competition, they do not face pressure to recommend procedures or interventions for fear that they will lose patients to other practices. Interviewees noted, however, that competition in the region has been increasing in recent years.

- **High caliber of physicians in the region.** In addition to the large number of health education center graduates in the region, who are regarded as highly trained, interviewees noted that the region and the quality of life that it offers attract top physicians from all over the country. Moreover, although the Asheville region does not have an academic medical center, interviewees emphasized that hospitals have a teaching orientation and promote continuous learning, noting that two hospitals in the region are Institute for Healthcare Improvement (IHI) mentor hospitals.

- **Wealth of resources.** The Asheville HRR appears to be a well-resourced region with funding from the local governments and the tertiary care health system, and grants from private foundations and non-profit organizations, which are allocated for health care initiatives and chronic disease management programs. The research team suspects that this abundance of resources is due to several factors, namely the community's value on health care and willingness to prioritize it over other issues, the proactivity and persistence of health care leaders in seeking grants, and the economic prosperity that the region has experienced during the past decade.

Practices related to beneficiaries with serious chronic illness

- **Structurally integrated networks across health care settings.** There is a high degree of collaboration within and across all settings having an impact on health and wellness within the Asheville HRR. This collaboration is facilitated by the large number of care management programs in the region, the existence of Data Link, and the numerous and wide variety of community and health organizations that regularly convene and exchange information about the populations they serve.

[51] Source: Dartmouth Atlas (2006). Retrieved March 8, 2011.

- **Strong alignment of financial incentives to coordinate care.** As mentioned previously, physicians in the Asheville region seem to adopt a conservative approach to procedures and interventions. A few interviewees attributed this orientation to the fact that physicians do not own their equipment and thus do not earn more money for recommending procedures. Others referenced instead the preponderance of primary care physicians in the area surrounding the only tertiary care center, and the fact that they are primarily family practitioners rather than internists.

- **Formalized links to community services and supports.** There are a number of programs that provide patients with navigators and case managers to enable them to access resources within the community. One program, which operates in four counties, assists hospitals with transitioning patients into the community and connects individuals who are aging or disabled to long-term services and supports. Another example is the Asheville Project, which began in 1996 and teaches Asheville city employees how to effectively manage their chronic health conditions, such as diabetes, asthma, hypertension, and high cholesterol. The project pairs patients with community pharmacists, who help ensure that the patients are complying with their medication regimen and, ultimately, go on to develop patient care services in their pharmacies. The project has been linked to improved A1C levels, lower total health care costs, and fewer sick days.

Practices related to dual eligibles

In this HRR, there were no initiatives or programs that specifically targeted only the dually eligible population until the very recent introduction of the 646 Waiver program. However, a number of interviewees indicated serving a large proportion of dual eligibles through their existing care management programs.

- **Integrated long-term services and supports (LTSS), primary, and acute services.** There is a group of physicians that provides primary care to residents in nursing homes, assisted living, facilities, and retirement communities and helps ensure that care is coordinated and effective communication takes place between hospitals and nursing homes. By visiting nursing home residents frequently, they gain a keen understanding of residents' needs and are able to provide detect problems early and avoid unnecessary hospitalizations. While their reach is limited, interviewees noted that they have played a significant role in enhancing the quality of care in the region.

- **Effective Medicare and Medicaid financial and regulatory alignment.** In the Asheville region, care management services are provided to all beneficiaries regardless of their payer source. When asked how they are able to do this from a financial standpoint, one service provider remarked, "It's part of our mission. We have very thin margins because of that. We try to case manage all of our departments." The regional community health networks provide care management to Medicaid recipients, but their practices have spilled over into the non-Medicaid population. For example, interviewees noted that when the networks give providers the cost of medications or information on diabetes or asthma, the providers utilize that information for all their patients. The networks have also helped providers understand the services and resources available in the community, including the health

departments, and how to access them. In addition, there is a federally qualified health center (FQHC) that in the past several years began providing primary care, dental care, and behavioral health services to the uninsured, Medicaid beneficiaries, Medicare beneficiaries, and dual eligibles.

- Another notable characteristic of the Asheville HRR is the collaboration between primary care and mental health providers to address the needs of quadrant four consumers (i.e., people with high behavioral health and high physical needs), many of whom are dual eligibles. One example of this collaboration is the ICARE (Integrated, Collaborative, Accessible, Respectful, and Evidence-based) initiative, which was a three-year demonstration project that began in 2006 to improve outcomes for patients suffering from mental illness and co-occurring mental illness and substance abuse disorders. The initiative involved four practices, which together served over 38,000 patients, in two counties in the Asheville HRR. Two care managers served as a link between the four primary care practices and specialty mental health providers and provided case management for quadrant four patients. ICARE patients had a statistically significant 4 percent decrease in Medicaid-reimbursable outpatient mental health service use and a 3 percent decrease in ED use relative to patients in practices that did not participate in ICARE.[52]

Practices related to beneficiaries in the last year of life

- **Widespread planning with patients and families.** Numerous community-based organizations and provider institutions conduct advance care planning with patients and families in the Asheville region. In general, there seems to be openness to discussing advance care planning within the community. A few interviewees noted that there is a respect for and honoring of the aging and dying process in the Asheville region and that the region was an early adopter of hospice and palliative care. This culture is reinforced by an interdisciplinary, inter-institutional collaborative that was established in 2004 through a $10 million dollar appropriation from the North Carolina General Assembly. The collaborative aims to make western North Carolina a high utilizer of advance care planning initiatives. It works with professors, faith-based organizations, and legal services to disseminate ideas around advance care planning throughout the community.

- **High level of coordination with and referral to palliative care, hospice care, and other end-of-life supports.** In 1996 a provider institution was established to solidify the continuum of post-acute care through its own health system. As a freestanding entity, it has been able to focus all its resources and all its efforts in reducing costs and improving quality on post-acute care. The institution serves over 2,000 individuals on a daily basis and over 10,000 individuals annually. While its reach is limited, the majority of interviewees praised it for providing quality care and noted that it has been a major player in the region.

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[52] Source: UNC Cecil G Sheps Center for Health Services Research (http://www.thenationalcouncil.org/galleries/business-practice%20files/Evaluation%20Report%20on%20ICARE.pdf) (2009).

Other interesting notes

- Interviewees noted that a significant proportion of the seniors living in the Asheville region have migrated to western North Carolina to retire or to spend time in a second home. These seniors tend to be well-informed health care consumers, and they have traditionally been adequately insured. Providers also observed that there are a number of seniors that live in the region for only six months out of the year, yet choose to receive the majority of their medical care in the HRR. These interviewees suggest that the low utilization data in the Asheville HRR may be an artifact of this "snow bird" effect because the utilization of these beneficiaries would be reflected in the data of the HRRs in which they have their primary homes as opposed to the Asheville HRR, where services were rendered.

- Interviewees mentioned that natives to the Appalachian Mountain region, particularly those residing in rural parts of western North Carolina, have limited access to any health care and a tendency to avoid medical care unless they have serious medical conditions. Interviewees cited several reasons for this phenomenon: primary care providers are scarce in rural areas and natives residing in rural areas would rather avoid medical care than drive over a mountain range to see their nearest provider; this population tends to be un- or under-insured and thus might be unwilling to seek medical care; and Appalachian culture was described as one that avoids medical care. Interviewees mentioned that the native Appalachian population tends to use home remedies rather than seek care from a health care facility.

- Asheville has a large concentration of complementary and alternative medicine (CAM) providers, and it was reported that people tend to go to the CAM providers before utilizing traditional health care services.

- A few interviewees suggested that the establishment of the hospitalist program at the tertiary care hospital in 1998 may have helped reduce the length of stay for patients, while others indicated that the introduction of hospitalists had decreased communication between the tertiary care center and primary care physicians.

- There are several initiatives focused on improving the health and wellness of the elderly. The initiatives offer education on stress management and nutrition, personal fitness assessments and exercise classes, and access to community supported agriculture shares. Although data on the impact of these initiatives is not available, interviewees have suggested that these projects may have contributed to the overall wellness of the elderly population.

La Crosse, Wisconsin

February 28 - March 3, 2011

Site Visit Summary Report

Overall description

Located along the Mississippi River and overlooking the bluffs of southeastern Minnesota, the City of La Crosse has a small-town industry feel that harkens back to its days as a hub for the state's lumber industry in the 19th century. Much of life in the area is tied to the two major health systems, which are together the leading two employers in the region. Although mostly rural, the region is known for housing three regional colleges and universities – University of Wisconsin-La Crosse, Western Technical College, and Viterbo University – which, along with the two health systems and county health department, participate in the Health Science Consortium, bridging the gap between the institutes of higher learning and the health care community. Residents are quick to tell visitors about the famous local pubs (brewing is another major industry in the region), most of which are located on several blocks of the city's downtown area.

Payer/provider characteristics

- **Structure of the health system.** Two large, vertically integrated, physician-led health systems dominate the market. One comprises two-thirds of the market share, and the other represents the remaining third. Both systems have hospitals, clinics, health plans, home care, and hospice care. The larger of the two systems is also affiliated with a company that owns a nursing home, memory care centers (catering to adults with Alzheimer's disease and dementia), assisted living facilities, and independent living facilities. Both systems' health plans have commercial and Medicaid products. One of the systems has a Medicare Advantage (MA) plan that boasts about 11,000 members in the HRR.

- **Insurance coverage.**

  o The insurance distribution of the market is approximately 57 percent privately insured, 16 percent Medicaid, 16 percent Medicare, and 10 percent uninsured. Over 75 percent of those privately insured are in preferred provider organizations (PPOs), point of service (POS) plans, and a range of other types – and there are few health maintenance organizations (HMOs) available in the area.

  o The regional branch of Family Care, the state's Medicaid managed long-term care (MLTC) program, administers long-term services and supports (LTSS) and some additional state plan Medicaid services (e.g., outpatient mental health, drugs) for dual eligibles in the HRR. The branch is a non-profit managed care organization (MCO) formed by a consortium of eight counties in Western Wisconsin. Eligibility requirements include a need for assistance with activities of daily living (ADLs) and instrumental activities of daily living (IADLs), and while enrollees are not required to need nursing home-level care, most do.

  o In the Minnesota counties of the HRR, those 65 and older can enroll in the state's integrated Medicare/Medicaid acute and LTSS program (voluntary enrollment).

Iowa, the third state encompassed in the La Crosse HRR, does not have a Medicaid managed LTSS program for dual eligibles.

Key initiatives relevant to cost and quality improvement

- The two large health systems are participating members of the statewide Wisconsin Coalition for Healthcare Quality (WCHQ), a voluntary organization of 20-plus health providers, hospitals, and plans that work together to improve community health and share quality reporting.

- La Crosse County Medical Health Sciences Consortium is a voluntary coalition of the three higher education institutions in the La Crosse area, the health department, and the two major health systems, which seeks to improve population health and match workforce training with the area's needs.

- The La Crosse area is internationally recognized for its advance care planning, implemented through a community-wide process beginning in the 1980s.

- La Crosse has the country's first Aging and Disability Resource Center (ADRC), started in 2000, which provides a single point of entry for information and referral on health, LTSS, and other support programs in addition to conducting the functional assessment for the Family Care program.

- Family Care manages LTSS and some Medicaid state plan services for duals and coordinates with the local health care providers.

Summary findings

Cost and quality drivers

- **Systematic and comprehensive patient assessment, care planning and monitoring.** The large health systems have care coordination programs for people with high use of hospital and clinic services. They use all-payer registries of people with chronic conditions to identify those in need of care coordination and use social workers and nurses to manage the care and help patients navigate the system. For example, one of the systems uses registries to identify patients with congestive heart failure (CHF), and a nurse practitioner manages their care; it has also invested in telemedicine equipment. The other system identifies the costliest one percent of its patient population (1,453 patients as of February 23, 2011), regardless of payer, and assigns a nurse/social worker team to manage patient care. Interviewees noted this initiative has achieved system savings of $18,000 per person over a two-year study period; however, it also outlays over $1 million in salaries and benefits for the care coordination program and "lose[s] millions in hospital care" due to lower hospital admission rates.

- **Effective coordination across settings.** Both health systems have significant care coordination efforts – informed by disease registries – for high-need patients, that have yielded results in terms of cost and quality, as noted above. Interviewees also noted that most patients in the area have primary care doctors, although for those with serious chronic illnesses, this may be a specialist. When one of the health systems

started its MA plan, it first focused on ensuring members had a primary care doctor. Dartmouth Atlas data show the number of primary care physicians (PCPs) per 100,000 population was 84.9 in the La Crosse HRR, compared to a national average of 71.9.[53] One interviewee suggested this comparatively high rate of PCPs is due to the strong family and internal residency programs the two major hospital systems operate coupled with the fact that many of those who complete their residencies in the La Crosse region tend to settle there.

- **High level of health information technology (HIT) capabilities and interoperability.** Wisconsin hospitals and health systems are, on average, relatively advanced in their use of information technology compared to other parts of the country. One of the systems in particular is a leader in HIT utilization and recently implemented a system-wide electronic medical record (EMR) with a personal health record (PHR) portal. Approximately 23,000 patients access the portal, which accounts for about 20 to 30 percent of the hospital's patient population, interviewees estimated.

- **Widespread quality data sharing and monitoring.** There is a long history of public reporting of quality data in Wisconsin. Hospitals are not required to publicly report their data; most do so on a voluntary basis. As noted above, the two La Crosse health systems were founding members of the WCHQ in 2003 and, with 20-plus other health care organizations, share their quality and performance information through this organization. One of the systems bases a portion of physician compensation on meeting quality performance targets based on patient satisfaction surveys and publicly reported clinical data. "When you're part of a large organization, you get held accountable if you're providing bad care," one provider said. "If you're on your own, who would know if you're providing too many of a certain procedure?" All physicians in the system have access to individual physician- and departmental-level performance and quality data and are expected to use the data to manage their practices.

- **Cultural drivers that positively impact the nature of care delivery.** Many interviewees identified certain homogenous cultural characteristics they believe contribute to the overall low Medicare costs and high quality: a conscientiousness about appropriate service use coupled with an acceptance of life's limitations; frugality of the dominant ethnic groups (e.g., Norwegians); a high percentage of church-going patients; and the population's orientation toward, and investment in, the community due to long-standing ties to the area and trust in providers. Interviewees reported that the community is oriented toward helping its residents, and members with financial means are generous when a need arises. Interviewees said the two health systems have no problem raising funds through their foundations for capital and other projects. Interviewees cited support from the two area bishops of the Lutheran and Catholic churches as instrumental in the success of the advance care planning initiative.

There is also a strong focus in the area on serving the poor and disadvantaged, and providers are not "in it for the money." This applies to the health systems and the

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[53] Source: Dartmouth Atlas (2006). Retrieved March 8, 2011.

post-acute care providers – there is only one for-profit nursing home and one for-profit home health agency in the HRR – as well as community-based organizations. One of the health systems noted that it was much more common to fire physicians for disrespectful behavior as opposed to subpar quality of clinical care, as it requires physicians to uphold the mission.

- **Low use of Medicare home health services.** There are only four Medicare-certified home care providers in the area: the two health systems, the La Crosse County Health Department, and a private, for-profit organization. The county has decreased its home care provision considerably due to what interviewees attributed to low reimbursement levels. Interviewees noted that because of the travel required in rural areas, providing Medicare home health has not made economic sense. Other factors cited were the deterrent effect of Medicare fraud cases a number of years ago (the level of services provided in the area never returned after that), the relative difficulty in meeting eligibility criteria for home health compared to Medicare skilled nursing care and the high capacity and penetration rate of assisted living and other residential care settings, which effectively act as a substitute for home health. An analysis of the assisted living market conducted by Stevenson and Grabowski (2010) confirms that La Crosse has a relatively high assisted living penetration rate (per 1,000 elderly).[54] In general, the providers suggested they tend to use skilled nursing facility (SNF) care for "staging" after a hospital stay, and then the person returns home to informal supports in a relatively healthier state, reducing the need for hands-on nursing care.

Practices related to beneficiaries with serious chronic illness

- **Structurally integrated networks across health care settings.** Interviewees uniformly characterized the La Crosse health care system as collaborative, mission-driven, person-centered, and high quality. The two large health systems form a duopoly that spans the system, and they compete with each other, improving the total quality of health care in the area across settings. Both systems communicate and collaborate with the aging agency, the ADRC, and the regional eight-county-operated MCO around discharge planning.

- **Strong alignment of financial incentives to coordinate care.** Since both health systems have health plans, they are accustomed to managing the risk of their populations with an explicit eye toward cost-effectiveness, and they carry over these practices into managing the broader health system – even if it results in reduced revenue on the hospital side from better management of admissions.

  There is no incentive for physicians to provide extra services in this HRR, as their compensation is not tied to the quantity of services provided. Physicians in the area are on salary for the most part with one or the other of the two health systems and practice in a large team environment.

- **Formalized links to community social services and supports.** Interviewees noted a high level of coordination and collaboration between the social and LTSS agencies and the health care providers, particularly related to discharge planning. Health care

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[54] D.G. Stevenson and D.C. Grabowski. *Sizing Up the Assisted Living Market*. Health Affairs 29, No. 1 (2010).

providers are well aware of the social component to health care costs and use social work/nurse teams to manage high-cost patients. The ADRC communicates regularly with the two health care systems' discharge planning staff and formally meets with them once a year to educate them about the agency's role. And, in turn, when the discharge planners encounter patients who would benefit from the ADRC supports, they make a referral, reaching out to ADRC staff through an electronic call center. In turn, one or a combination of the nine social workers and two disability specialists will meet with the patients and their families. Numerous interviewees stated their goal is to ensure people are in the least costly and least restrictive setting. As noted above, in the Minnesota counties, duals can enroll on a voluntary basis in the state's integrated Medicare/Medicaid acute and LTSS program, which are accountable for acute and primary care, and LTSS and are capitated for both Medicaid and Medicare services.

The area's health care and social supports providers noted they have well-functioning communication and referral systems. For example, one of the health systems notifies the Family Care MCO's care managers when one of their members is admitted to or discharged from the hospital within 24 hours (by fax) and is working on extending this to outpatient visits. Further, both health systems described the communication among their hospitals, clinics and other settings as effective – aided by EMRs and a patient-centered approach to care, in which physicians are expected to collaborate across settings. "In the medical community, although there's competition, I think it's a friendly competition – there's truly a desire for everyone to do well," one provider said. "I think there's a lot of sharing of information that goes on. There's where that integration really takes place."

Practices related to dual eligibles

- **Integrated LTSS, primary and acute services.** An interviewee that provides SNF, assisted living, independent living, and other residential services noted that practices are in place to bring urgent care to residents rather than having them go to the ED. An ED visit will likely result in a hospital admission, which is disruptive to the individual and creates significant administrative burden for the hospital and residential setting. The interviewee's organization utilizes associate staff, such as nurse practitioners and physician assistants, to provide urgent care within the residential setting.

- **Effective Medicare and Medicaid financial and regulatory alignment**. The regional MCO provides care coordination for roughly 1,000 elderly duals – most are nursing home level of care (LOC) but some are not. The plan is capitated for LTSS and some health care services, such as outpatient mental health and pharmacy management. The MCO works closely with the discharge planners at both major systems to handle care transitions and use the services of a pharmacy management vendor who makes home visits to review and provide recommendations on more effective and safe use of medications. The state's managed care program is voluntary; thus, not all elderly duals are enrolled in the program. Dual eligibles comprise three percent of enrollment in the major health system's MA plan. In the Minnesota counties, the state's integrated Medicare/Medicaid acute and LTSS program provides

voluntary managed care for duals at the nursing home LOC and non-nursing home LOC. The plans are capitated for Medicare (as special needs plans) and Medicaid.

Wisconsin's Medicaid managed care program allows Medicaid reimbursement to certain types of residential settings (e.g., residential care apartment complexes), which are required to cover up to 28 hours per week of nursing services. This flexible funding allows many of the 3,400 regional beneficiaries to live in the least restrictive setting, but some interviewees were critical of the plan's ability to truly manage some of their members because of its limited role – due to the absence of the primary and acute piece – and expertise. One provider asserted that the regional branch was "dumping" difficult patients in the hospital or SNF, mainly for behavioral issues and non-compliance with care plans.

Practices related to beneficiaries in the last year of life

- **Widespread planning with patients and families.** For three decades, the region has been a national (and international) pioneer in the implementation of advance care planning processes through a community-wide model referred to as "Respecting Choices." The program began in the 1980s and became further entrenched when Wisconsin became the second state after Oregon to implement the physician orders for life-sustaining treatment (POLST) form in 1997. Advance care planning is ingrained in the region's medical practice, with providers having been trained in how best to interpret these documents and communicate with patients and their families about their end-of-life preferences. The longevity and breadth of the system stems from the significant community buy-in, which interviewees attributed to the population's trust in its community leaders, clergy, and health care providers. Medical staff and other members of the community (e.g., clergy) are trained to use advance care directives and conduct ongoing end-of-life (EOL) discussions to ensure that patients' care is consistent with their preferences. The advance care planning efforts have been iterative and have required continued review and quality improvement: "Almost everything we designed didn't work at first, and the only reason we succeeded was we were persistent," one interviewee said.

- **High level of coordination with and referral to palliative care, hospice care, and other end-of-life supports.** A study published in 2010[55] showed the vast majority of decedents in the health care systems had advance care directives and their physicians readily accessed these documents. The use of EMRs permits real-time access to advance care-planning documents. Interviewees stressed the process extends beyond merely having the documents available but, additionally, educating providers and other stakeholders to give them the skills to interpret the documents and have the EOL discussions. As a result of this system, interviewees at one of the health systems said about two-thirds of the people who die in their hospital use some type of palliative care. In all, interviewees estimated the hospital's palliative care department sees about 900 patients a year and provides the full continuum of inpatient and

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[55] B.J. Hammes, B.L. Rooney, J.D. Gundrum. *A Comparative, Retrospective, Observational Study of the Prevalence, Availability and Specificity of Advance Care Plans in a County That Implemented an Advanced Care Planning Microsystem.* July 2010. Journal of the American Geriatric Society.

outpatient care, as well as some primary care for people later in life. Still, the HRR has a low rate of Medicare hospice utilization, which for the most part perplexed interviewees; some attributed this to the system's offering multiple care options for people nearing the end of life.

Other interesting notes

- One of the health systems, in conjunction with a major LTSS provider in the area, is submitting a proposal to form an accountable care organization (ACO) to the Center for Medicare and Medicaid Innovation (CMMI) when the ACO funding opportunity arises.

- Wisconsin has a pharmaceutical assistance program that allows many beneficiaries in the La Crosse area to afford a high-quality MA plan, as they can select the low-premium product with no drug coverage.

- One of the health systems is participating in a CMS demonstration related to advance disease coordination during the last two years of life.

Muskegon, Michigan

March 14 - 16, 2011

Site Visit Summary Report

Overall description

Located on the shores of Lake Michigan, the Muskegon hospital referral region covers several counties in western Michigan. Muskegon is the largest city in the HRR, which includes popular beach resort areas north and south of the city. The local economy, historically based on lumber and industry, was hit hard by the recession in the early 1980s and has not recovered. Many of the manufacturing jobs now are machine parts suppliers to the automotive industry. Many interviewees we spoke with described Muskegon as an economically depressed, aging community. Younger generations are leaving the area because of a lack of jobs. Up until mid-2008, the HRR's health system was dominated by two large, not-for-profit hospital systems. In June of 2008, the parent company of the larger system acquired the smaller hospital system. This consolidated system also owns a majority share of a physician hospital organization (PHO), which employs the vast majority of physicians in the area. The HRR is influenced by its proximity to Grand Rapids, the second largest city in Michigan. Some beneficiaries in the Muskegon HRR receive tertiary care at hospitals within a large, vertically integrated health system based in Grand Rapids.

Payer/provider characteristics

- **Structure of the health system.** As noted above, the health care market changed in mid-2008, when the two major hospital systems merged. The consolidated system, owned by a large, faith-based, not-for-profit health system, has roughly two-thirds of the Medicare market share. The remaining Medicare market share is split between two independent community hospitals in more rural parts of the HRR and a large health system in Grand Rapids (outside the HRR). Nearly all physicians in the area are members of a large PHO, which is majority owned by the dominant health system.

- **Insurance coverage.**

  o About half of the people in the HRR are privately insured, 20 percent have Medicaid, 17 percent have Medicare and 14 percent are uninsured. Most people with private insurance are in "non-risk" plans such as preferred provider organizations, point of service plans, and other types.

  o Interviewees noted that fully capitated health insurance plans, such as health maintenance organizations, have not taken hold in the area because of the influence of the automobile and other manufacturing unions.

  o A Muskegon-based health insurance plan provides affordable, basic health coverage for moderate-income, working, uninsured employees in the Muskegon area, including the Medicaid "childless adult" population (a state requirement), but excluding dual eligibles. The plan provides a full range of benefits to include prescription coverage for a premium of $88 per month, which is split between the

employer, employee and major providers. The benefit structure is designed such that primary care has a copay of $7 per visit, whereas specialty care includes coinsurance with a cap of $300. In order to keep costs down (premiums have increased on average only 0.5 percent annually), the plan focuses on improving health and wellness through use of health coaches (physicians and nurses), staff trained in the Stanford Disease Self Management Program, targeted member education (such as smoking cessation), and collaboration with existing community resources such as employer groups, faith-based organizations, and the Muskegon Health Project (described below). It also uses financial levers to influence member compliance – smokers, for example, can face higher premiums if they refuse to attend smoking cessation classes (which affects both their own share and their employer's). The plan has been replicated in other communities across the nation. Some interviewees believe the plan may contribute to the area's low Medicare costs, as they feel it provides high-quality health coverage to people who would otherwise have no insurance and be less healthy when they age-in to Medicare.

o Dual eligibles are excluded from Michigan's Medicaid managed care programs. Duals who require a nursing home level of care can receive comprehensive long-term services and supports (LTSS) through a home and community-based services (HCBS) waiver, MI Choice. However, there is a one to two year waiting list, with faster access to those at risk of immediate nursing home placement. Individuals with lower intensity needs can receive home care services through the state's home health state plan benefit (Michigan Home Help). Muskegon now has a very popular PACE site; however, it was not in existence in 2008 and would not have affected CMS's HRR data.

Key initiatives relevant to cost and quality improvement

• Michigan has the greatest number of patient-centered medical homes of any state (one interviewee placed the number at 477). Roughly 80 percent of the large Muskegon PHO's physician practices are accredited as medical homes and 45 percent are NCQA-certified. The PHO indicated Blue Cross Blue Shield of Michigan's physician care incentive program provided critical funding for implementation of the infrastructure needed to operate a medical home model.

• Muskegon area hospitals have participated in major quality initiatives through a regional quality collaborative, Aligning Forces for Quality, and the Michigan Health and Hospital Association's Keystone Center, which focuses on patient safety and quality. The Keystone Center, started by Michigan hospitals in 2003 and modeled on a program at Johns Hopkins, has developed interventions to improve care for persons with stroke, reduce infections in the intensive care unit and reduce overall hospital-acquired infections. One of the community hospitals noted it had not had a ventilator-associated pneumonia in four years.

• Hospital readmissions have also been a large focus of the Muskegon-area hospitals and the PHO. There are many factors which contribute to the low readmission rates in this area: 1) a high percentage of patients with primary care physicians, including nursing home residents, 2) use of nurses and other physician extenders in nursing

home settings to assess and treat symptoms of common infections before they require more urgent care, 3) use of post-acute services such as long-term care hospitals (LTCH), home health and hospice and 4) use of standard order sets and admission practices in the hospitals. One interviewee suggested a possible side effect of changing admission practices could be an increase in use of EDs. In addition, the fact that the area's two large hospitals (pre-merger) built new EDs in the 2000s, with one heavily advertising its ED, contributed to high ED utilization in the Muskegon HRR. Since the consolidation of the hospitals, the marketing practice has stopped, but habits remain.

Summary findings

Cost and quality drivers

- **Prevalent medical home model, yielding standard practices of patient assessment, care planning and monitoring.** There is a high level of these activities in the PHO HRR physician practices and the hospitals. As most of the physician practices are based on the medical home model, patients are assessed using a standard instrument. Persons with chronic conditions can be identified at the physician office level using all-payer registries. PHO practices have designated staff who review quality and outcomes data. PHO care management practices include the use of health coaches who teach self-management of conditions in the home. Health coaches also coordinate with other providers and community-based organizations and are informed by ongoing review of registry data by other designated staff in the physician practice. The PHO physician practices put considerable effort into patient education and collaboration with community resources such as the area's 2-1-1 information and referral service. In fact, the PHO administrators are on the board of the local 2-1-1 organization.

  The dominant hospital utilizes evidence-based standardized order sets for every major diagnostic category and has utilized hospitalists for over 18 years.

- **High level of coordination across settings.** Interviewees reported considerable coordination among health care providers including hospitals, physician practices, LTCHs, hospice, home health, and community-based providers and organizations. The company which owns the majority of the primary and acute care providers as well as major providers of home health, nursing home, and senior residential settings has its own "report card" with quality and performance measures. Thus, these providers are held to the same standards and must coordinate to achieve the health system's larger goals. The providers in this health system also coordinate with other independent providers, such as hospice and LTCHs.

- **Strong health information technology (HIT) capabilities and interoperability.** Use and interoperability of HIT at the physician practice level is strong given that the vast majority of physicians are employed by the PHO and use the same systems. The larger of the two hospital systems implemented a system-wide electronic medical record and standard order sets in 2004; the second hospital had its own system. Post-acquisition, the hospitals now share information technology, though this was not fully

implemented until recently. Interviewees noted Blue Cross Blue Shield of Michigan's physician care incentive program as providing significant funding for HIT.

- **Extensive sharing and monitoring of quality data.** Through their participation in the two major quality initiatives described above, the area hospitals and physician practices routinely share quality and performance data with all providers owned by the large, multi-state health care system and are held to the same system-level "report card."

- **High level of cultural drivers impacting the nature of care delivery.** Interviewees in the Muskegon HRR described the population as thrifty and conscientious about using health care services appropriately. Physician practices in western Michigan were described as conservative. The Dutch culture, described as frugal, has had a strong influence in this region.

Practices related to beneficiaries with serious chronic illness

- **Structurally integrated networks across health care settings.** The PHO based its practice on the chronic care model, which has now evolved into the patient-centered medical home model. There is considerable integration between the PHO and the hospitals (now owned by the same health system). However, there is no formal integration with providers outside of the larger health system.

- **Limited financial incentives to coordinate care.** Most of the care provided to beneficiaries with serious chronic illness in the HRR is provided by physicians on a fee-for-service basis. This offers little incentive to coordinate care. Interviewees reported that providers do so because "it is the right thing to do." However, many physicians are employed by the PHO. Hospitals did mention some financial incentive in discharging beneficiaries with serious chronic illness to LTCHs and home health agencies because it keeps the hospitals' length of stay down (thus maximizing the DRG payment) and provides revenues to these post-acute providers. This lack of alignment between payment and care coordination is something the state is trying to address through its application to the Center for Medicare and Medicaid Integration (CMMI) to be a demonstration program.

- **Formalized links to community social services and supports.** Muskegon is very strong in the area of linkage between health care and LTSS and other social services. There are several ways in which health care providers are linked to community social services and supports. One is through the placement of county human services staff in the hospitals to help determine eligibility for Medicaid, Social Security Disability, and other social programs. For participants in the MI Choice waiver, the waiver case manager is required to coordinate with health care providers and other social supports.

The Muskegon Community Health Project plays a very important role in forming linkages between community health and social services and supports. Founded in 1993 through funding from the Kellogg Foundation, this organization has brought together health care and social service stakeholders to focus on many critical population access and health challenges such as the area's high rate of diabetes. The dominant health care system bought the Muskegon Community Health Project

(MCHP) in 2008 to form its community benefits department. This has enhanced the MCHP's ability to target initiatives as staff now have access to individuals' medical records and contact information. The MCHP believes it adds a critical component to the area's efforts to coordinate care for people with serious chronic conditions through its use of health workers who live in the communities they serve, thereby engendering a higher level of trust with individuals who might otherwise not feel comfortable talking honestly about their behaviors and socioeconomic conditions with nurses or social workers.

Practices related to dual eligibles

- **Little formal integration of LTSS with primary and acute services.** The area does not have formalized integration of primary and acute services with LTSS for dual eligibles, with the exception of participants in the MI Choice HCBS waiver. The two agencies that provide waiver case management coordinate with hospital discharge planners and social workers and nurses at physician practices. The state has submitted an application to the CMMI for an integrated Medicare/Medicaid program and plans to implement one regardless of whether the state is chosen for the demonstration.

- **No or minimal efforts related to Medicare and Medicaid financial and regulatory alignment.** Other than its PACE programs, Michigan has not aligned Medicare and Medicaid finances or regulations. They are seeking to do so through their application for an integrated care program under the CMMI demonstration.

Practices related to beneficiaries in the last year of life

- **Widespread planning with patients and families.** Muskegon conducted an end of life initiative in the early 2000s modeled on the La Crosse Respecting Choices program (though not as comprehensive as that program). A survey fielded to assess the impact of the initiative showed a relatively high awareness of hospice as a resource for questions on end-of-life care.

- **Strong coordination with and referral to palliative care, hospice care, and other end-of-life supports.** Interviewees described a high level of awareness and use of these services. As noted, Muskegon implemented an educational effort around end of life planning and health care providers spoke of a high level of comfort addressing these issues in clinical practice.

- **Longstanding acceptance of hospice.** The hospice movement has been strong in Michigan since the 1970s, when it began as a grass-roots movement in the southeastern part of the state. A statewide end of life commission was established under the Engler Administration (1990s). This evolved into a statewide end-of-life coalition with funding from the Robert Wood Johnson Foundation. The Muskegon area has a strong supply of hospice providers, including two hospice residences.

Other interesting notes

- The Muskegon area has a unique "one-stop shopping" location for senior services. In 2008, the Area Agency on Aging (AAA) and other aging organizations sought to develop a large shopping center that had fallen into disrepair. The resulting space houses the AAA, PACE program, state health insurance counseling organization,

senior-oriented wellness and nutrition organizations, and a café and has already outgrown its space. Being co-located in one physical location has strengthened the collaboration among these agencies and services. For example, the PACE site and the AAA share a County Human Services Medicaid eligibility worker who is physically located in the complex. The co-location has also reduced costs for the respective participating organizations as they share in resources such as Internet service and other commonly used services.

Portland, Maine

March 21 - 24, 2011

Site Visit Summary Report

Overall description

The Portland hospital referral region is geographically large, encompassing 11 Maine counties in the southern third of the state and reaching into 3 New Hampshire counties. About 900,000 of Maine's 1.3 million people live in the HRR. Portland is the state's largest city and the region's tertiary care center. It also serves as the financial, legal, and insurance services center of the state, and benefits from significant shipping, fishing, and tourism industries. The state's second largest city, Lewiston, is also in the HRR, and is about 30 miles northwest of Portland. Lewiston is a working class city that was dominated by textile and shoe factories in the last century, and has struggled to regain its economic vitality as those industries have steadily dwindled. The region's coastal towns have become popular retirement destinations in recent decades, supporting the growth of retirement condominiums, private assisted living facilities, and continuing care communities, some of which have been developed by health systems.

Payer/provider characteristics

- **Structure of the health system.** A nonprofit health system that grew out of the region's tertiary care center and the state's only teaching hospital dominates regional care delivery. Created in 1997, the system owns eight member hospitals, which all together account for approximately 55 percent of the market share in the region. The system also has strategic contractual relationships with three affiliated hospitals, bolstering its market share to about 80 percent. Through the members and affiliates, the system has access to hospitals ranging from a regional medical center to small critical access hospitals. Through its members, the system also owns physician practices, ambulatory care centers, skilled nursing facilities (SNFs), labs, home health and hospice agencies. Outside the major system, the region's second-largest hospital is based in Lewiston. Also unaffiliated with the dominant system are two small Catholic hospitals in Portland and Lewiston.

  All hospitals in the region are nonprofit, and nearly all the key interviewees described provider relationships as highly collaborative. Though some in the region expressed concern about putting too much market power in the hands of a single health system, the prevailing sentiment is that the region's dominant system has used its scale to maintain high-quality services and promote a positive public health agenda in the region.

  There are few physician-owned facilities in the region (e.g., ambulatory surgery centers or imaging centers), which interviewees attributed to the state's relatively stringent certificate-of-need (CON) process, which extends to ambulatory services.

  The major system and its members have acquired a majority of physician practices in the past decade and project the trend toward system-owned practices to continue. Two large independent practices remain, each having about 70 doctors.

SNFs are less likely than other providers to be part of a health system, though one SNF operator reported increasing interest on the part of hospitals in owning SNFs as they look ahead to becoming accountable care organizations (ACOs).

- **Insurance coverage.**

  o Fifty-seven percent of the region's population is covered by private insurance, approximately 15 percent by Medicaid, about 13 percent by Medicare, and 15 percent with no insurance. Anthem dominates the commercial market, having entered the Maine market about a decade ago as part of the conversion of the former Blue Cross and Blue Shield of Maine.

  o The region has relatively little risk-based managed care on the commercial side, no risk-based Medicaid managed care, and relatively low Medicare Advantage (MA) penetration, though MA has grown significantly in recent years. A relatively high number of Medicare beneficiaries maintain private supplemental policies.

  o Interviewees of all types consistently reported that commercial payment rates are significantly higher than Medicare rates in the region.

- **Purchaser Coalition.** The region has an active purchaser collaborative, the Maine Health Management Coalition (MHMC), comprised of the state's largest private and public employers, including Bath Iron Works, Hannaford, L.L. Bean, the State Employee Health Plan, and the State University System. In addition to supporting its members, MHMC disseminates cost and quality data to the public through its Web site.

Key initiatives relevant to cost and quality improvement

- For the past eight years, the dominant system has adhered to self-imposed margin and cost caps. It limits its operating margins to three percent per year, and cost per adjusted discharge (CPAD) to the Medicare market basket plus 10 percent.

- Hospitals in the region have instituted several models of hospital transitions in efforts to reduce readmissions.

- One of the system's affiliated medical centers has embraced Dartmouth's Clinical Microsystems as an approach for improving small, discreet components of the center (http://clinicalmicrosystem.org/).

Summary findings

Cost and quality drivers

- **Provider consolidation and non-profit ethos.** Interviewees reported that the significant consolidation of the market through the dominant and the informal collaboration seen in the Portland HRR is perceived to be more cost effective than a competitive health care market. One interviewee discussed that "competition leads to expanded supply, and expanded supply leads to overuse." Many physician interviewees believe the collaborative culture is reinforced by self-selection into the market. For example, they reported that doctors who come to Maine are looking for a

collaborative culture and a high quality of life, yet they also want the level of sophistication that a large provider system can offer.

- **Thoughtful regulation of supply.** Interviewees believe the state's CON process helps prevent excessive supply and overutilization. Some observers believe that physician ownership of ambulatory service centers is rare in the region because these facilities are subject to CON.

- **The "Wennberg Effect."** Executives and physician interviewees believe provider behavior in the region is more conservative than other parts of the country and attribute this in part to the region's early attention to John Wennberg's pioneering work in small-area variation that was promoted through the Maine Medical Association and to area medical center residents. One internist described how his "snow bird" patients return from Florida having had far more aggressive treatment over the winter than what he normally recommends.

- **Low Medicare rates.** Executives noted that to some extent, Medicare spending is relatively low in the region simply because it has not enjoyed the same political advocacy as some areas – a region of Vermont, for example, is defined in federal statute as part of the Boston market for purposes of establishing Medicare rates. Interviewees also noted that the low Medicare rates often result in providers charging higher commercial rates to help offset the cost of providing care to beneficiaries.

- **Public reporting may impact large purchasers behavior**. There is anecdotal evidence that the efforts of the MHMC to promote public reporting of outcomes are having an effect on large purchasers. The example given was that when MHMC reported poor hospital outcomes in the state's capital, the State Employee Health Plan used the data to initiate an ACO pilot project that ties the hospital's payments to performance. Like many other initiatives, however, this one is relatively recent and would not explain past performance of the region.

Practices related to beneficiaries with serious chronic illness

- **Integrated care in rural area.** A rural health center has incorporated mental health and social services into its primary care center. A Ph.D.-level psychologist is available on site for immediate consultation and referral from the primary care physicians. Co-location facilitates collaboration among the providers and increases the likelihood that the patient will act on the referral. Results from a pilot program show decreased inpatient and ED use.

- **Responding to Medicare policy: Care transitions.** Hospitals in the region are implementing various care transition models. This is relatively new to the region and was widely reported to be a direct response to new Medicare payment policy on readmissions.

  o Eric Coleman's care transition model is being implemented within parts of the dominant health system with patients identified through registry data. The system reported internal data showed, "a significant drop in the 30-day readmit rate."

o The main area medical center is implementing a modified Coleman model through its physician hospital organization (PHO) by eliminating the home visits. Nurses follow up with discharged adults by phone within 24 hours to determine if the patient understands the discharge instructions, to reconcile medication, and to ensure that the patient has a primary care appointment within a week of the discharge date.

- **PHO registry to help identify patients for specific interventions**. The largest PHO in the region has operated a registry for several years. It began with diabetes and asthma and has recently added cardiovascular disease, depression, and chronic obstructive pulmonary disease (COPD). The registry is integrated with the electronic medical record used within the system, and it is used to help identify patients for targeted health interventions.

- **Hospital/home health collaboration to reduce readmissions**. As an incentive to help reduce readmissions, one hospital initiated a transition program with an independent home health agency, in which the hospital pays half the cost of a care manager located at the home care agency. This is an example of health care organizations finding entrepreneurial ways of aligning their incentives around a desired beneficiary outcome, which is becoming more common in this area according to some of the interviewees.

Practices related to dual eligibles

- **No notable population-specific initiatives.** The region lacks initiatives that focus on dually eligible beneficiaries. For the most part, providers view dual eligibles as having challenges associated with poverty (low education, low health literacy, poor nutrition, and transportation problems) but do not otherwise see the duals as a distinct population.

- **Poor health-LTSS linkage.** The state's Medicaid long-term services and supports (LTSS) are delivered through a separate, freestanding system that has no formal links to any part of the health delivery system Many physician interviewees did not know about the Medicaid home- and community-based system. Care managers in the LTSS system reported having great difficulty getting the attention of physicians.

- **Limited home health and home care coordination.** Interviewees in both the Medicare home health and Medicaid home care sectors were highly sensitized to issues related to duplication of services. This was reported as a difficult regulatory issue that has had a negative impact on coordination, even when having both Medicare and Medicaid home services is appropriate. For example, a Medicaid-funded personal care attendant cannot provide wound care, which requires skilled nursing, covered by Medicare; however, the default position of most Medicare home health agencies is to discontinue nursing services when they become aware that Medicaid LTSS are being provided to one of their Medicare patients.

Practices related to beneficiaries in the last year of life

- **Low hospice use recognized.** Whenever end-of-life (EOL) care came up in interviews, interviewees acknowledged that the region is a low user of hospice. Several reasons were given:

  o For beneficiaries receiving home care or care in nursing homes, referrals to hospice almost always means changing the staffed providers of care, which is a great disincentive to use hospice for both the patient and the existing care provider.

  o Based on discussions with providers across the continuum of care, many doctors are not comfortable discussing EOL issues with their patients, and even if they were, it is not a topic doctors feel they can approach well in a 15-minute office visit.

  o Until recently, there was a lack of inpatient hospice beds in the region. New beds have come on line recently, and there is hope that referrals will increase.

- **Incentives to refer to hospice**. In the Lewiston area, the medical center supported the development of a hospice suite by a community home care and hospice agency as part of a strategy to decrease readmissions and deaths in the hospital. The hospital is the largest referral source, and the center maintains an occupancy rate of over 90 percent.

- **Conservative practice culture.** The explanation offered as to why the region has relatively low costs in the last year of life, despite low use of hospice, was the conservative health care practice culture described earlier. Doctors are not apt to hospitalize beneficiaries or order high-cost procedures when they believe it will have no beneficial effect.

Other interesting notes

- **Observers expressed the feeling that high-value regions are penalized for already achieving low costs.** Health care executives in the region expressed strong concerns that future Medicare policy will penalize high-value regions like Portland. Two examples were given:

  o The across-the-board productivity cuts envisioned in the Affordable Care Act (ACA) will treat high and low productivity regions the same. An across-the-board cut will be much more difficult to absorb in a region that has been efficient than in one that has not.

  o Medicare savings opportunities are smaller in highly efficient markets than less efficient markets. To reward the highly efficient markets going forward, the savings formula should allow providers in efficient markets to keep a greater share of savings than providers in less efficient markets.

- **ED use.** Maine has studied this issue from a Medicaid perspective, and interviewees believe similar dynamics may be affecting Medicare beneficiaries:

  o Access to primary care. After-hours access to non-urgent care is limited in the region.

- o The most frequent presenting problem in the ED is dental pain. Maine has no adult dental benefit in Medicaid.

- **Relationship between skilled nursing facility and home health use.** Relatively high SNF use and low home health use was attributed to hospital ownership of SNFs, so the hospitals are more inclined to refer to SNFs than to home health. Interviewees also suggested that a SNF stay might be more effective than home health services in preventing readmissions.

- **Low LTCH usage.** There are no long-term care hospitals in the region; a need recently assessed by the regional system and the conclusion was that the demand would not support development of a LTCH for the region. Some long-term acute patients are served by a rehabilitation hospital in the region, and others are referred out of state.

- **Physician compensation is in transition.** Until recently, physician compensation was based almost entirely on productivity; however, several organizations described recent efforts to build quality of care and patient experience measures into compensation. The amount of pay based on quality metrics ranged from 10 to 50 percent.

- **"Telehealth" for Intensive Care Units.** The dominant health provider has developed an "electronic ICU" staffed by an intensivist team located in Portland that electronically monitors 120 ICU beds in multiple hospitals from one location.

- **Program initiatives not credited for high-value rankings.** Although the region has undertaken a number of cost and quality initiatives in recent years, most observers did not believe that programmatic initiatives explain the region's high-value ranking, in part because many initiatives are relatively new and remain small.

- **HIT key to future but does not explain the past.** Interviewees noted that most of their program initiatives (registries, transition programs, etc.) would not be feasible without electronic medical records and other technology supports, but health information technology has come slowly to the region and does not explain past successes. As one interviewee put it, "the conservative practice culture extends to technology – we are not early adopters."

Salinas, California

May 3 - 5, 2011

Site Visit Summary Report

Overall description

The Salinas hospital referral region (HRR) is comprised of only one county in California, Monterey, located South of the major central coast cities of San Francisco and San Jose. Within Monterey County, the health care market is split into two geographic areas with distinct characteristics and divided by, depending on whom you ask, "the lettuce line" or "lettuce curtain." Coastal Monterey in the West has a higher cost of living, a strong tourism industry, and a sizeable population of retirees. Inland to the East lies the Salinas Valley, the inspiration for John Steinbeck's *Grapes of Wrath* and home to an agricultural economy driven by Dole, Del Monte, and the thousands of farm workers such organizations employ eight months per year. Each area has one dominant hospital, while a robust network of safety-net providers, including a county hospital and several clinics, operates across the county. Managed care organizations have a small presence in the commercial and Medicare markets, which interviewees attributed to high prices charged by the dominant hospitals. Almost all of the HRR's Medicaid (locally, Medi-Cal) enrollees are covered under a regional managed care plan.

Payer/provider characteristics

- **Structure of the health system.** Two dominant, independent, nonprofit hospitals essentially function as monopolies in their respective areas, one in coastal Monterey and one in the Salinas Valley. There is also a county hospital that serves as the safety net provider for people throughout the county. The two main hospitals do not employ any physicians; according to interviewees, hospitals are not allowed to employ physicians under California law, with the exception of county and university hospitals. A few groups of PCPs exist in the county, including a large 23-member physician group, primarily serving the Salinas Valley; there is also a federally qualified health center (FQHC) consisting of nine clinics and a system of seven county public health clinics described as FQHC look-alikes. The FQHCs and public health clinics provide care to the greater community, including dual eligibles. Other smaller primary care groups exist, with practice sizes ranging from six physicians to a number of single physician practices. Specialty practices often reflect the local hospital monopolies with separate groups of specialists, such as urologists or orthopedists, for each hospital. Some specialty practices, including small groups of neurologists and cardiologists, work across both hospitals. In the rural, less populated South end of the county, a small community hospital and a few clinics (some of which are part of the FQHC network) provide a basic level of care to the population residing there. While home health agencies and hospice organizations will serve residents throughout the county, other providers, such as skilled nursing and inpatient rehabilitation facilities, tend to serve the residents in the geographic areas where they are located. There are no long-term care hospitals (LTCHs) in the county. Interviewees indicated residents requiring this level of care will stay in the HRR when possible and receive services in a skilled nursing facility. However, residents

with certain needs that cannot be met within the HRR, such as patients on ventilators, are transferred to LTCHs outside the HRR, typically in San Jose or the San Francisco area.

- **Insurance coverage.** Approximately 56 percent of the population in the Salinas HRR has private health care coverage, with nine percent of that direct private pay; 18 percent has Medicaid; 16 percent is uninsured; nine percent has Medicare; and two percent is dual eligible. Compared to both the rest of the country and the rest of California, the region has an extremely low Medicare Advantage penetration rate, with approximately three percent of Medicare beneficiaries enrolled in a plan, far lower than the 36 percent enrollment rate statewide.[56] In contrast, all of the HRR's Medi-Cal clients are enrolled under a mandatory, regional managed care coverage plan operated under a 1915(b) waiver. In addition to Medicare cost-sharing for acute services, the plan is responsible for the Medicaid nursing facility benefit,[57] which primarily serves dual eligibles and typically is not included in Medicaid managed care plans. The plan is innovative in its use of patient monitoring, quality reporting, and incentive programs and is well regarded in the HRR for assisting in care coordination. Because the plan is only responsible for Medicare cost-sharing for most services, some of these initiatives do not specifically apply to dual eligible; however, they have the potential to affect Medicare beneficiaries to the degree that providers change practices in response to the plan's incentives. Additionally, the state's Medically Indigent Adult (MIA) program provides some reimbursement for treatment of low-income, uninsured Monterey County residents with no other funding source.

- **Restriction of Medicare access.** Due to low reimbursement rates and complexities of regulation, some physician practices in the HRR are beginning to restrict and even exclude Medicare and Medi-Cal patients from their practices. Several interviewees noted that the Medicare fee schedule for physicians in the county is based on a large, mostly rural area called "Area 99," despite proximity and similar cost of living to the major cities in the Bay Area. Providers in Salinas Valley noted that this was more of an issue for physicians practicing along the coast, where the cost of living is higher.

Key initiatives relevant to cost and quality improvement

- **STEMI Initiative.** In May 2010, the 9-1-1 heart campaign was launched in the Salinas HRR. The two dominant hospitals collaborated with the county's emergency medical services (EMS) unit to establish protocols to ensure rapid treatment of ST-elevation myocardial infarction (STEMI) heart attack patients; once diagnosed, the goal is to get the patient from the hospital door to the catheterization (cath) lab in 90 minutes or less. Under the initiative, an electrocardiogram (EKG) machine is deployed in the ambulance when EMS respond to calls for a potential heart attack, allowing paramedics to identify STEMI heart attacks and notify the hospital while in the field. The hospital will then activate its cardiologist response team while patients are en route to the hospital; in certain instances, the emergency department (ED) is

[56]Thomson Reuters (2011). Market Report: Current Insurance Coverage Estimate.
[57] Kasten, J; Eiken, S; and Burwell B *Medicaid Managed Long-Term Services and Supports Expenditures* Thomson Reuters: April 6, 2011

bypassed entirely. As of February 2011, the average time between patients entering the hospital door and arriving in the cath lab has shrunk to 57 minutes. By comparison, patients who do not arrive by ambulance by calling 9-1-1 average 88 minutes.[58]

- **Hospital-specific initiatives.** Despite Salinas's categorization as a high quality, low cost HRR, the only HRR-wide initiative is the STEMI initiative; however, there are efforts to improve quality and reduce costs in the community. Each dominant hospital leads initiatives to improve quality and reduce costs, but they are facility-specific and do not extend beyond the hospital itself. The hospitals both belong to one or more regional collaboratives of hospitals that work together to report quality, including the Beacon Collaborative out of the Bay Area and the California Hospital Assessment and Reporting Taskforce (CHART); these organizations offer support to the hospitals as they implement various initiatives. Providers are conscious of work being done to improve health care delivery, with one hospital's chief medical officer (CMO) noting the goal of the various collaboratives was to "take the ideas Don Berwick had with IHI and bring them down to the local level."

Summary findings

Cost and quality drivers

- **Moderate level of patient assessment, care planning and monitoring.** The dominant hospitals each have robust discharge planning programs to decrease length of stay and improve quality ratings by reducing readmissions, with steps made to ensure that each discharged patient is scheduled an outpatient appointment soon after discharge. At one hospital, registered nurses (RNs) serve as the primary discharge planners. Both dominant hospitals provide ED case management, directing patients to urgent care as appropriate and managing "frequent fliers." County health clinics deploy teams of public health nurses into the community to follow up with care for at-risk patients. When referrals are made in the FQHCs and county clinics for specialty care in the community, case managers at the clinics conduct outreach to patients and providers to ensure that patients successfully receive scheduled care. Additionally, basic patient registries have been implemented at the provider level, tracking patients with chronic conditions including diabetes and stroke.

- **Limited level of coordination across settings.** Beyond the work of diligent hospital discharge planners, there is a minimal level of collaboration and coordination among providers in the HRR, with two notable exceptions. Monterey Regional Health Coalition (More Health) is a high-level leadership forum composed of executives from the area hospitals and the Medi-Cal managed care plan, county officials, and patient advocates. The group serves as an informal mechanism for recognizing problems and coordinating responses in the HRR but has not led or coordinated HRR-wide initiatives. While the hospitals do not coordinate quality improvement,

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[58] Salinas Valley Memorial Healthcare System. (2011, February 2). Stemi Award [Video File]. Retrieved from http://www.youtube.com/watch?v=5LNfs-v4zN4

education, or community outreach initiatives among themselves or with other providers outside of those they own, they rallied together in an effort to keep the county hospital open. In the mid 2000s, the county hospital was reportedly poorly managed, losing $12 to $14 million per year and headed toward closure. The two dominant hospitals within the HRR were informed of the situation and jointly decided it was not in their or the community's interests for the public safety-net hospital to close. Each contributed millions of dollars to hire a consultancy group to revise the billing and care processes, with the condition that the county would establish a board of trustees to oversee the hospital in the long term. Today, the county hospital is profitable and has expanded its workforce by 50 percent over the last few years.

- **Moderate health information technology (HIT) capabilities and interoperability.** Although the major providers have implemented or attempted to implement electronic medical records (EMRs) in recent years, many physicians and other providers do not have access to these systems outside of their respective facilities.

- **Moderate quality data sharing and monitoring.** Each hospital described what it considered effective quality monitoring and improvement programs. Providers are aware of their data and scores that are publicly reported and often collect additional information around quality of care and patient safety; however, there is minimal data sharing across providers in the HRR. Currently, the hospitals are in the beginning stages of implementing quality initiatives focused on readmissions, in anticipation of Medicare's upcoming financial incentives to reduce readmission rates: As noted above, however, the initiatives are provider-specific. For example, one chief medical officer and a few staff at one of the hospitals completed chart reviews for many readmissions, coded them as either preventable or non-preventable and provided learnings to the rest of the staff; they viewed this as the first step in the development of an initiative focused on reducing the hospital's readmission rate.

- **Significant cultural drivers impacting the nature of care delivery.** Two dramatically different cultures impact the utilization and delivery of health care on the Monterey coast and Salinas Valley respectively. Along the coast, seniors are more likely to be well educated, healthy, and with good sources of private insurance (e.g., Medigap policies) or the ability to pay out-of-pocket for care. In the Salinas Valley, the primarily Hispanic population has an active lifestyle with low tobacco and alcohol use, which may contribute to lower rates of chronic illness such as chronic obstructive pulmonary disease (COPD) and congestive heart failure (CHF). Interviewees mentioned these patients often had asthma – potentially related to use of agricultural pesticides – are poor and generally have low health literacy. It was noted that residents have a strong sense of family, leading to potential underutilization of post-acute care services due to a preference for family-delivered home care. Both patient populations were described as pleasant to care for and compliant. Multiple providers stressed the necessity of providing linguistically and culturally competent care delivery to Hispanic residents and noted they make a concerted effort to provide such care.

- **Characteristics of provider community impacting nature of care delivery.** Several factors were identified that contribute to improved quality of care throughout

the HRR. First, the moderate number of providers operating on either the Monterey Coast or in Salinas Valley is large enough to provide available access and resources while small enough not to cause trends in overutilization due to excess supply. Stakeholders commented that providers and physicians knew what their colleagues were doing in the community and how they were providing care and would keep one another in check. Second, several providers spoke to the long tenures of their staff as a boon to increased quality, efficiency, and teamwork within facilities. Several medical staff noted that they and other key staff members had worked together for a decade or more. Third, it was noted that the size of the local communities within the HRR and the length of time both physicians and patients have resided there has contributed to a relationship stronger than the typical provider-patient connection. They truly view themselves as members of the same community, and providers tend to have a vested interest in maintaining their patients' health (i.e., they take care of their own). Finally, the team was repeatedly told that providers in the HRR are forward thinking, proactive, and open to change. For example, each of the hospitals noted a long-standing anticipation of value-based purchasing and shared concerns of how it would apply to their hospital.

- **Potential supply shortage.** Some stakeholders noted a potential undersupply of certain medical services in Monterey County. For example, multiple interviewees mentioned that sometimes there is limited access to home health therapists for all populations, due to limited supply in the area. When interviewees were asked if they have difficulty securing care for certain populations, several providers noted that patients with dementia and mental health issues are more costly and more difficult to place into post-acute care and viewed behavioral and mental health as a cost multiplier and impediment to placement. It was unclear whether the HRR has an unusually high incidence of mental health issues or if, because HRR residents have better-than-average physical health, providers are better able and more likely to make a mental health diagnosis. Regardless, few facilities in the area are able to meet these patients' needs, sometimes resulting in an increased length of hospital stay.

- **Physician-owned services.** Physician owned ambulatory surgery centers (ASCs) may be a contributing factor to the high utilization of ASC services in the area - the Salinas HRR provides 276 ASC services per 1,000 beneficiaries compared to a national average of 187; however, interviewees noted that some community physicians own imaging centers. Despite this relationship, utilization of imaging services for the Medicare fee-for-service population is below the national norm.

Practices related to beneficiaries with serious chronic illness

- **Lack of structurally integrated networks across health care settings.** Although there are informal networks among the providers in the Monterey coastal area and the Salinas Valley, there is minimal vertical integration across the various health care settings.

- **Limited alignment of financial incentives to coordinate care.** There is minimal alignment of financial incentives within the HRR. However, several years ago, one of the hospitals created a financial incentive to get physicians to participate in quality

improvement committees and work groups by paying physicians an hourly rate for their involvement in the process.

- **Minimal links to community social services and supports.** Several interviewees showed an awareness of social services and supports in the HRR, such as the Medi-Cal In-Home Supportive Services program (IHSS, a personal care service covered by the state plan), home and community-based services (HCBS) waiver programs, adult protective services, and local senior services organizations. Hospital discharge planners were the only providers to refer patients to the Area Agency on Aging (AAA) or county Medi-Cal office to access these services, however.

Practices related to dual eligibles

- **Limited integration of long-term services and supports (LTSS) with primary and acute services.** There is minimal integration of LTSS with primary and acute services. The Multipurpose Senior Services Program (MSSP) provides enrollees with case management services that are typical for a home- and community-based services (HCBS) waiver program; however, the MSSP program is being phased out of Monterey County and all recipients will be transitioned from the program by June 2011. IHSS is the state's largest Medi-Cal community long-term support program; typically, one of the enrollee's family members provides the services. There are 3,700 beneficiaries currently enrolled in Monterey County; enrollment typically takes 30-60 days, and there is no waiting list. Although primary and acute providers may refer beneficiaries to the program, there is no coordination or collaboration in care delivery between the providers.

- **No Medicare and Medicaid financial and regulatory alignment.** We were not able to find any examples of programs or initiatives that worked to align incentives or regulations across Medicare and Medicaid.

- **Alliance's efforts.** The only practices in the HRR that include a focus on the dual-eligible population stem from the Medi-Cal managed care provider, Central California Alliance for Health. The Alliance provides care coordination and case management services to its members, including duals, and will work with discharge planners to find placement in a post acute setting, when needed. They also recently began offering participating providers incentives for delivering quality care. Measures considered and reported back to providers include those for ambulatory care sensitive inpatient admissions, ED use, as well as HEDIS measures for geriatrics, pediatrics, and family medicine. The program sends a report card back to each provider, and the plan noted that physicians are as interested in how they rank and the "competition" as they are in the additional reimbursement. While this initiative may not directly apply to dual eligibles, it has the potential to impact care provided to Medicare beneficiaries to the extent that providers begin to employ the practices with all of their patients.

Practices related to beneficiaries in the last year of life

- **Infrequent planning with patients and families.** Although hospice and palliative care resources exist in the community, interviewees reported these services are not well utilized or promoted to patients and families. One hospital founded a hospice

facility in the HRR but had to transition it to a nursing facility due to limited inpatient hospice demand.

- **Moderate coordination with and referral to palliative care, hospice care, and other end-of-life supports.** Providers are aware and in general supportive of palliative care. In the last year or two, both of the dominant hospitals in the HRR have identified and designated palliative care teams to provide patient consults as well as care. They have also implemented activities to educate staff on the features of palliative and hospice care, eradicate the negative stigma associated with hospice, and promote referrals for palliative care consultations; one hospital has even instituted a weekly open door forum on end-of-life issues.

- **Geriatric care education course.** One local organization provides geriatric care education classes to local medical staff aimed at improving care for the elderly and those in the last year of life. The course contains classes on several topics, including palliative care and caring for seniors with mental disabilities.

- **Cultural barriers to hospice and palliative care.** Those interviewed noted two divergent outlooks that decrease utilization of palliative care services and often result in patients dying at the hospital. There are some patients and family members that completely dismiss the concept of hospice and palliative care at the onset and instead request every possible treatment to extend life. Conversely, and particularly among the Hispanic population, some families take end of life patients home to be comforted and cared for by family members; however, some family members panic in the final hours of their loved one's life, and because they have not been receiving support from palliative care or hospice staff, they take the patient to the hospital and request life-saving services. Staff at both the FQHC and county clinics commented that the concept of hospice actually fits well with Hispanic culture, but the population needs education on the goals and practices of palliative care.

Other interesting notes

- **Forward-thinking providers.** The team was told repeatedly that providers in the HRR are forward-thinking, proactive, and open to change. For example, interviews at each of the hospitals noted a long-standing anticipation of value-based purchasing and shared concerns of how it would apply to their hospital. Providers are also aware of impending cuts to both Medicare and Medi-Cal rates and are actively exploring additional initiatives to reduce costs. As one hospital CMO noted, "a great exercise is whether we can survive on Medicare alone." When asked if the hospital could, he responded "not yet, but that is where we'll need to be."

- **Small sample issues with quality reporting.** Each hospital provider separately mentioned the unfairness of reported quality measures. For small facilities such as theirs and with the national averages for some measures near 100 percent, single missteps cause below-average reports. One provider cited the example of a single physician forgetting to code the provision of aspirin as having had a significant effect.

- **Significant uninsured population.** The HRR has a sizeable population of undocumented residents ineligible for health insurance. Although both clinic systems attempt to treat such patients as best they can, access to certain types of care are

particularly difficult for the uninsured population. These patients are predominantly Hispanic and reside in the Salinas Valley. One county official noted the anticipation of health reform decreasing the number of uninsured, with estimates that 26,000 would be newly enrolled on Medi-Cal and 46,000 would joining the health care exchanges. Still, she noted estimates that roughly 20,000 residents, mainly undocumented, would remain uninsured.

Detroit, Michigan

May 9 – 13, 2011

Site Visit Summary Report

Overall description

The city of Detroit has been linked with the American motor vehicle industry for more than a century and its history of development has reflected the rollercoaster of wealth and employment that the industry has inspired. Championed as the "Paris of the West" for its 19th and early 20th century architecture, and dubbed the "great arsenal of democracy" by President Franklin Delano Roosevelt, the city is now a mere shell of its former self – a reminder of how much has changed since the city was glorified as a bastion of wealth and innovation driven by Henry J. Ford and his Model T. The juxtaposition of the elegance of the Model T and the early 20th century wealth it represents with today's boarded-up high-rise buildings and abandoned lots emphasizes just how stark the decline has been for the area. The extensive expressway system is a reminder of the 1950s and 1960s, when the highways were constructed to serve the nearly 2 million people who lived in the city, which now has a population less than half that size and with extremely limited public transportation to its remaining residents.

The city's remaining population is now older, sicker, and poorer, with more limited access to providers, as physicians and others have relocated to the more affluent suburbs. Thirty-nine percent of Detroit seniors report having three or more chronic illnesses, and a disability rate of 29.6 percent for those with two or more chronic illnesses compared to 20.9 percent for the state as a whole.[59] The Detroit hospital referral region encompasses four counties and includes both rural farmland and sprawling suburbs, which are home to a diverse immigrant population. The city center in the east serves as its focal point, where there has been a sixty percent decline in its primary care physician capacity and a 40 percent increase in Medicaid enrollment over the past decade. The three primary hospital systems are some of the largest remaining employers in the region, followed by the government; General Motors, Chrysler and Wayne State University trail behind in terms of total number of employees.

Payer/provider characteristics

- **Structure of the health system.** The Detroit HRR continues to have an oversupply of providers and hospital beds in particular, with one of the highest ratios of full-time hospital employees per 1,000 residents of any HRR in the country.[60] This results in a highly competitive environment with duplication of services across systems and limited coordination across settings. Three major health systems with academic teaching hospitals make up the Detroit HRR hospital market. Star hospitals within each of the systems have been recognized nationally for excellence. The largest local

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[59] Disabilities include physical, sensory, mental, self-care and mobility limitations. From *Dying Before Their Time: The Startling Truth About Mortality and Detroit Area Seniors.* A compilation of Research Findings through Wayne State University, Commissioned by the Detroit Area Agency on Aging and The Detroit Senior Citizen's Department, 2003.

[60] Source: Dartmouth Atlas. As retrieved June 2011.

system owns a 500,000+ member HMO and includes seven hospitals, 1,000+ physicians in its employed medical group, several nursing homes, a home health agency, hospice organization, 23 ambulatory centers and other health-related services to include infusion located throughout southeastern Michigan. The second health system is part of a larger regional chain and includes seven hospitals spanning six counties, two of which are in the Detroit HRR and represent 20 percent of the HRR's market share. This system also operates its own home health and hospice agencies, has 200 employed physicians, and offers other ancillary services. The third largest system is comprised of three primary hospitals including the first Level 1 Trauma Center in the state, and a large academic medical group with the largest presence in the city of Detroit and a corresponding larger burden of uncompensated care. This system was recently purchased by a for-profit hospital chain as it faced near bankruptcy.

Detroit's Federally Qualified Community Health Centers (FQHCs) network includes four organizations operating in 23 locations,[61] with no county or city hospital to support them. In addition to having an oversupply of hospital beds, the Detroit HRR has a large number of physicians, well beyond those employed by the three primary hospital systems, to include more clinically active specialists and primary care physicians than most parts of the country. The large presence of these independent physicians and groups whose financial incentives are not aligned with those of the health systems results in hospitals having limited leverage to control independent physician practice patterns. Health systems have turned significant attention to expanding their proportion of employed physicians and making other efforts to realign incentives in order to function more like accountable care entities.

- **Insurance coverage.** Almost half of the Detroit HRR's population is privately insured, with Blue Cross Blue Shield of Michigan retaining 70 percent of this market share. Twenty-four percent of the population is covered by Medicaid, 14 percent have Medicare, and 17 percent are uninsured. Multiple interviewees noted instances of lack of awareness among the Detroit elderly of their Medicare status and their potential eligibility for Medicaid. For example, one interviewee noted that some Medicare beneficiaries are unaware that they have been enrolled in Part A, and accordingly, haven't elected to pay Part B premiums or selected a part D plan. This could be due to in part to the high rate of illiteracy in the city. Most people with private insurance are in "non-risk" plans with only a little over 10 percent in risk sharing arrangements such as health maintenance organizations (HMOs). Until recently, first dollar coverage was the norm due in large part to the influence of powerful automobile and other manufacturing unions.[62]

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[61] For purposes of comparison, one interviewee volunteered Chicago, which has 75 FQHCs with 183 locations.
[62] According to an AARP Insight Report from their Public Policy Institute, beginning in 2010, Ford, General Motors, and Chrysler will no longer provide health benefits to union retirees and their dependents but instead contribute billions to retiree health care trusts (so-called voluntary employees' beneficiary associations, or VEBAs), and will turn over the responsibility for managing the trusts and providing retiree health care benefits to a board of union- and court-appointed trustees. UAW retirees have not lost their retiree health coverage, but real questions remain about how secure the funding is and how long it will last. The data available from these VEBAs has been analyzed by Thomson Reuters for Hospice of Michigan to derive cost

- **Limited availability of long-term services and support (LTSS).** State funded LTSS per capita for Michigan was well below the national average at $18 compared to $29,[63] despite a high need for such services, particularly in the Detroit area. According to a report by Wayne State University, <u>Dying Before Their Time</u>, approximately 1,700 Detroit seniors die each year because they do not have access to quality long-term care that would extend their lives.[64] There is a perception of substandard care in Detroit nursing homes that has created one of the most racially segregated long-term care systems in the country. In 2008 alone, approximately 3,000 Detroit residents sought long-term care services in facilities outside Detroit "because long-term care facilities in the city are not effective in meeting the needs of individuals seeking long-term care services". There has not been a new nursing home facility built in Detroit since 1968 and Medicaid-dependent nursing homes in the city face an atypical and more difficult resident population, to include the poorest of the poor and Medicaid eligible adults who do not fit the traditional elderly nursing home resident profile.[65,66] Placement of nursing home residents in other parts of the Detroit HRR is also especially challenging since few nursing homes outside the city have dually certified beds, accepting only a limited number or no patients who are or will need to be covered by Medicaid.

- **State regulatory environment.** Dual eligibles are excluded from Michigan's Medicaid managed care programs. Those who require a nursing home level of care can receive comprehensive LTSS through a home and community-based services (HCBS) waiver, MI Choice. However, there is a one to two year waiting list for HCBS waiver services in the city of Detroit, due to limited agency resources and the difficulty in recruiting nursing and social workers to work in the inner city and help process the over 600 eligible people already on the list. Individuals with lower intensity needs can receive home care services through the state's home health state plan benefit (Michigan Home Help); however, access to such services is limited due to the impediments of an under-resourced administrative system within Medicaid, resulting in significant delays in eligibility determinations. Detroit currently has one PACE site which hopes to expand beyond its current cap of 230 participants, well under the number of PACE-eligible people in the HRR, which one interviewee reported to be at least 20 times that number.

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comparisons between Medicare and this population. These data were used to develop an initiative in advanced illness management to address the needs of the chronically ill in the year to 18 months prior to hospice.

[63] These averages were part of the Thomson Reuters analysis of Table 2. State-Funded HCBS Programs for Older People, in Robert L. Mollica and Kristin Simms-Kastelein, National Academy for State Health Policy, and Enid Kassner, AARP Public Policy Institute, *State-Funded Home and Community-Based Services Programs for Older Adults*, AARP Public Policy Institute, June 2009.

[64] *Dying Before Their Time: The Startling Truth About Mortality and Detroit Area Seniors.* A compilation of Research Findings through Wayne State University, Commissioned by the Detroit Area Agency on Aging and The Detroit Senior Citizen's Department, 2003.

[65] These atypical residents include individuals who have a mental illness, are developmentally disabled or are younger chronically ill adults.

[66] Transforming Long Term Care in Detroit: A Synopsis of Findings from the Detroit Long Term Care System Change Task Force. Detroit Area Agency on Aging, 2009.

Key initiatives relevant to cost and quality improvement

- **Patient-Centered Medical Home Program.** Blue Cross Blue Shield of Michigan (BCM) and several Detroit hospital systems began focusing on developing and supporting the certification of patient-centered medical homes (PCMH) in 2006, resulting in the Detroit area having over 110 BCM-designated PCMHs, and Michigan having one of the highest numbers of PCMHs in the country (one interviewee estimated the number at 477). These PCMHs are primarily affiliated and/or employed by the primary health systems and generally serve the commercially insured population. Interviewees reported that only a small portion, if any, of the payer mix for many PCMHs includes Medicaid or the dually eligible. These medical homes, while managing care for the populations they serve, are not targeted to serve the especially vulnerable elderly with multiple chronic illnesses who may be driving the utilization and cost data for the period of study. Care management for that population takes place primarily for those enrolled in Medicare Advantage (MA) plans.

- **Greater Detroit Area Health Council (GDAHC).** GDAHC was cited by the vast majority of stakeholders as leading many important efforts to improve quality, cost and access of health care and related services in the region. GDAHC has launched public reporting initiatives on health care performance for hospitals and physician organizations at www.myCareCompare.org, in addition to quality improvement, several pilot cost saving and health promotion projects. Several interviewees, when asked, indicated they were not aware of a direct impact of public reporting on practice patterns. A number of the other initiatives were relatively new and findings had not been made public at the time of this report.

- **Voices of Detroit Initiative (VODI).** This initiative, while focusing on providing coverage and improving health services to safety net families, ran a successful program from 1999 to 2009 to address global challenges in the patchwork "system" that was experiencing escalating costs and significantly higher rates of chronic illness but with decreased access to primary care. The $5 million Kellogg Foundation funded program began during a time when Detroit reported one of the highest preventable hospitalization rates in the state as well as excessive ED (ED) utilization. The program targeted the working poor - a select proportion of the un- and underinsured in the area. Enrollment was more or less a convenience sample, consisting of those who presented for service at designated partner provider locations, including emergency rooms, and met enrollment criteria. They were then offered primary care access and coverage, and, if through the risk appraisal were identified as having certain conditions, were also referred to the disease management program. Enrollment over the initial years of the project exceeded 70,000 Detroiters. VODI reports having transitioned a total of 55 percent of its active enrollees out of the ED into primary care settings, resulting in an estimated $168 million in overall expenditure reduction for Detroit providers, including the three main hospital system partners. Much of these avoided expenditures would otherwise have been provided as uncompensated care. Along with these successes, the program found that the complete transition to primary care from emergency room care can take longer for the chronically ill than for others, since despite the increased use of primary care after they are initially

assigned a medical home, those with chronic conditions still use the ED as they get their health under control.

- The major hospitals in the Detroit HRR were some of the first in the state to develop their own initiatives as part of the State Action on Avoidable Rehospitalizations initiative beginning in 2009. Detroit area hospitals have placed social workers and/or care coordinators in the emergency room to assist in ED-diversion and connect patients with primary care physicians including those at the FQHCs for ongoing follow-up care. While it is too early to produce definitive findings, each health system independently reported success in diverting patients from the emergency room following investing significant resources into setting up follow-up appointments with primary care physicians and addressing any issues around patient no-shows whenever possible to get patients connected to primary care. In addition, one health system has implemented financial incentives for doctors within their system to reduce hospitalizations and high tech imaging rates.

Summary findings

Cost and quality drivers

- **Limited patient assessment, care planning and monitoring initiatives.** Prior to 2008, little assessment or care management of Medicare beneficiaries occurred outside of MA plans and limited care management was provided in area hospitals to "frequent fliers" in their EDs. Although one of the larger MA plans described very comprehensive assessment and care management programs for enrollees with multiple chronic conditions and those with end-stage medical conditions, these programs were implemented within the past few years and would not have impacted our study period. One of the large hospital systems described an evolving approach to care management over the years that has fluctuated based on availability of funding (as this is an unreimbursed service). Given that most physicians in the Detroit HRR practice independently, there has been limited diffusion of care management through physician practices.

- **Poor coordination across settings, even within health systems that have a continuum of care.** One large health system with a continuum of care including primary, acute, post-acute and some long-term care characterized its coordination as "bad care practices, bad hand offs, poor home health and SNF admitting processes." Interviewees noted a number of factors that undermine coordination across settings. Most Medicare beneficiaries in the HRR are in traditional Medicare and receive their care from independent physicians who have no incentive or requirements to coordinate with hospitals and other settings. The independent physicians outnumber the employed or affiliated physicians. Since hospitals do not employ the majority of physicians who treat patients using their inpatient and EDs, and are competing for physicians to fill empty beds, they have little leverage over physician behavior related to coordination and service delivery.

- **Health information technology (HIT) capabilities and interoperability are undermined by market fragmentation.** While the three primary hospital systems in the HRR have electronic medical records (EMRs) and some have effective e-

prescribing programs, the degree of sophistication varies, as does the ability to assist clinicians in conducting population management activities. While employed physicians have access to those EMRs, only recently have hospitals started spreading EMR access to independent physicians. As one health system's chief medical officer put it: "What happens in the hospital stays in the hospital. There is no communication." Little, if any, information is shared across hospital systems outside of public reporting efforts, which are not useful for care coordination purposes. Aside from the vertically integrated portion of a given health system, information systems among providers and across settings do not "talk" to one another. Furthermore, as noted above, most independent physicians do not have access to hospital electronic medical records.

- **Quality data sharing and monitoring across health systems is limited.** Provider interviewees did not describe routine sharing and monitoring of quality data pertaining to the Medicare population across health systems or settings outside of the information that is publicly reported through GDAHC.

- **Cultural drivers significantly impact the nature of care delivery.** Interviewees described several cultural factors that they believe impact care delivery and service utilization. The first, and most often mentioned, is the legacy of "first dollar" health coverage provided to unionized workers in the automobile and manufacturing industries and the associated behavior of entitlement to unlimited health services, including specialty, emergency room and hospital care. Many older residents of the Detroit area were hourly workers and members of the United Auto Workers (UAW) union, which negotiated with automobile companies over decades for very generous health coverage. Historically, this coverage has been fee-for-service with no copayments for emergency room visits and very little to no other out-of-pocket costs. Copayments were recently introduced and are sometimes higher for physician office visits than for emergency room care. For those with Medicare, the UAW retiree health coverage has provided a comprehensive wrap-around benefit - in recent years, given the tremendous financial problems faced by the auto industry, the UAW has agreed to some increase in retiree cost-sharing. Many interviewees noted that individuals with health coverage through the UAW are accustomed to receiving health care where and when they want it and continue this behavior when they become Medicare-eligible. Furthermore, interviewees reported that few physicians make any effort to collect any balance due from beneficiaries, given the limited success rate of such efforts with a population accustomed to first dollar coverage.

A second cultural factor is the considerable vulnerability of elderly Medicare beneficiaries in Detroit due to the high poverty and illiteracy rates, and prevalence of chronic health conditions to include significant mental health and substance abuse issues. Many interviewees provided examples of situations in which the elderly have been taken advantage of by health care providers who view a Medicare card as a "Gold Card" -- a means of generating revenue for provider owned businesses. Poor, sick, elderly individuals who may live alone and lack family or informal support are particularly vulnerable to this predatory behavior. (See the Other interesting notes section for more discussion on health care fraud and abuse in the HRR.)

A third factor is that diverse populations in the region, primarily blue collar, which include not only a large portion of African Americans, but a substantial Arab community (the largest outside of the Middle East) and southeast Asian population (Hmong). A number of these cultures do not place a high priority on health and wellness or obtaining health care services until symptoms are severe and disease has progressed. Many interviewees suggested it is also likely that as individuals in the Detroit region "age-in" to Medicare, they come in need of significant treatment for multiple, sometimes long ignored chronic conditions.

Finally, with regards to utilization of end-of-life (EOL) care, the cultural norm reported among the African American population is to do anything and everything to keep a family member alive. Some interviewees described this population as particularly disinterested in hospice because they perceive it to be a sign that they and the doctors were not doing all they could for their loved one. Mixed in with that, interviewees reported, is a suspicion of the health care industry based on historical prejudice against African Americans.

- **Nursing homes reputed to perpetuate avoidable hospital readmissions.** When asked about the drivers behind the high readmission rates in the region, the vast majority of interviewees indicated a significant portion of avoidable readmissions are due to the frequent after hour transfers of residents from nursing homes to EDs, whom nearly inevitably are admitted once assessed by hospital staff. Apparently nursing home staffing after hours is particularly lean and medical directors or attending physicians have a tendency to refer patients to the ED, especially if they are covering for a patient they do not know. The three primary health systems reported working diligently with facilities to address this problem in recent years, with limited success.

Practices related to beneficiaries with serious chronic illness

- **Large structurally integrated networks across health care settings.** Two of the health systems have some structural integration across settings (e.g., hospital, physician practices and clinics, home health, hospice, nursing home). However, there has also been some movement by hospital systems within the HRR to divest themselves of service lines such as home health and skilled nursing facilities. The primary reason offered was a desire to focus on core business and what they did well.

- **Limited financial incentives to coordinate care outside of the managed care plans.** Coordination for this population seems to be more prevalent in primary care outpatient clinics affiliated with hospital systems that utilize employed physicians and mid-level staff to coordinate care. However, even in these settings, care coordination for the chronically ill fee-for-service Medicare beneficiary is extremely difficult in part because of patients' poor health conditions, lack of health literacy and resources, frequent hospitalizations (in multiple hospitals) and nursing home stays. Primary care physicians lose track of beneficiaries and often find their treatment, including medication regimens, have been changed when and if the patients return to them.

Ultimately, the lack of care coordination seems to be driven by the fact that, other than the recent focus on reducing readmission rates and potential penalties associated with readmissions, there has been no financial incentive for hospitals or physicians to coordinate transitions in care or perform population management. Neither providers nor patients are typically oriented toward thinking about providing or obtaining care in the least costly setting.

- **Links to community social services and supports are constrained by the paucity of these resources.** While hospitals and primary care clinics employ social workers who attempt to make linkages with community supports, interviewees uniformly agreed that the services in the Detroit area just aren't adequate given the demand. There are long waiting lists for services such as meals on wheels (up to six years) and an insufficient supply of publicly funded mental health and substance abuse services for a population with a high level of dual diagnoses. In addition, many of the most needy in the population are unaware of the services that are available to help them navigate an underfunded patchwork of resources.

Practices related to dual eligibles

- **Integration of LTSS with primary and acute services is extremely limited.** Michigan has only two programs which link these services: PACE and, to a lesser extent, the MI Choice home and community-based services waiver (although waiver services are limited to LTSS, waiver care managers are required to coordinate with health care providers). In the Detroit HRR, there is one PACE program serving 230 individuals, although their 2009 feasibility study reported over 30,000 clinically and financially eligible for participation in the targeted tri-county area. While the PACE program operators recognize there is a much greater need, they deliberately do not market their services given the current state cap on participants which they have lobbied to have raised. The MI Choice waiver, in addition to having an extensive waiting list, serves a small proportion of those who are potentially eligible. It is not viewed as a viable resource by providers seeking to link patients to support in the home given the time required to help families enroll in the program that frequently yield no results. In fact, most interviewees we met with had never heard of the MI Choice waiver or the Medicaid State Plan home health benefit. The latter provides personal care, chore and homemaker and other services to persons with functional needs who are not at a nursing home level of care (it is not duplicative with the Medicare home health benefit).

- **Medicare and Medicaid financial and regulatory alignment is also extremely limited.** The PACE program is the only example of formal alignment of Medicare and Medicaid financing and regulations.

Practices related to beneficiaries in the last year of life

- **Planning with patients and families occurs but is not widespread.** While health systems and plans are making efforts to engage patients and families in planning, there have not been community-wide efforts. There is a general level of resistance to EOL discussion and planning, even among some employed physicians.

- **Coordination with and referral to palliative care, hospice care, and other EOL supports is attempted but these services are underutilized.** Awareness and use of these services are evolving, but there is still significant resistance to these services on the part of physicians and families. This resistance remains despite the three primary health systems having instituted palliative care teams. (See the discussion above under *Cultural Drivers*.) Furthermore, according to the largest Detroit hospice provider, the average length of stay in hospice in the Detroit area is one of the shortest in the country, with most referrals to hospice occurring only during the last few days of life; the median length of stay for that provider is close to seven days.

Other interesting notes

- **Potentially unethical provider and home health agency practices.** Multiple interviewees across settings expressed concern about unethical behavior of primary care physicians, performing services both as visiting physicians in patient homes and as well as hospitalists engaged by physicians who no longer admit or follow their patients when hospitalized. Reports included physicians going door to door to recruit patients in poor urban areas, and then providing unnecessary services such performing mobile x-rays or sonograms. Many interviewees mentioned the large number of home health agencies (over 400 home health and 54 hospice agencies in the state, many serving this HRR), some operating out of basements from cell phones, which generally lack adequate oversight. Several hospital executives indicated their primary admitters were independent physicians whose primary source of revenue was from payments for each day they kept patients in the hospital, sometimes in combination with their other lines of business such as functioning as medical directors for home health agencies, hospices, or nursing homes. Some of these independent hospitalists build their practices by recruiting primary care physician practices to use their hospitalist services, offering to monitor admitted patients so the primary care physicians can focus on delivering care to patients in their offices.

- **Presence of Medicare Fraud Strike Force.** Many stakeholders mentioned that the FBI and OIG have made Detroit a permanent home with "bricks and mortar," and referred to the recent publicity about Detroit-area schemes involving over $23 million in fraudulent claims submitted to Medicare. The schemes occurred in a variety of settings on an outpatient basis to include services fraudulently reported as being provided in beneficiary homes, with several involving kick-backs and money laundering. The 21 defendants in these successful government prosecutions included owners and operators of companies, doctors, physical and occupational therapists, office employees, and patient recruiters.

Harlingen, Texas

March 22 - 24, 2011

Site Visit Summary Report

Overall description

The Harlingen hospital referral region is located in the heart of the Rio Grande Valley, an area along the northern bank of the Rio Grande, which separates Mexico from the United States. The HRR covers three counties – Cameron, Willacy and Hidalgo – with Harlingen the principal city. As the most southern point in Texas, the valley forms a vital cultural and economic link between the United States and Mexico. Health services make up the largest sector in the economy, followed by government, retail trade, and leisure and hospitality – a product of the tourist destination, South Padre Island. The local population includes a large number of dual-eligible beneficiaries and a high number of individuals who are uninsured. A significant part of the valley's transient population – and a significant contributor to its economy – are "Winter Texans," or retirees who come to escape the northern winter weather between November and March. There are five main hospitals in the HRR, numerous individual physician practices, and one of the largest federally qualified health centers (FQHCs) in the state. The population faces a high prevalence of chronic disease, with a diabetes rate of almost twice that of the national average. And the region has low use of hospice and of skilled nursing facilities, which contrasts with exceptionally high use of other post-acute care services, including in-patient rehabilitation facilities, long-term care hospitals (LTCH), and home health services.

Payer/provider characteristics

- **Structure of the health system.** There are three distinct regions in the Harlingen HRR – Harlingen, Brownsville, and Weslaco – and each has its own dominant medical facility serving the population in the immediate geographic area, with little coordination or referrals across the three regions. In Harlingen, there is one dominant nonprofit health system, one smaller for-profit medical center, and one LTCH; Brownsville has one nonprofit hospital, one for-profit medical center, one inpatient rehabilitation facility, and one LTCH; Weslaco has one non-profit medical center and one inpatient rehabilitation facility. There are no major physician health organizations; the majority of physicians and specialists are part of individual or small group practices.

- **Insurance coverage.**
  - Approximately 13 percent of the population in the HRR is privately insured, 23 percent have Medicaid, seven percent have Medicare, four percent have both Medicaid and Medicare, and 50 percent are uninsured.
  - There is relatively low penetration of Medicare managed care in the HRR, with a total of two Medicare Advantage plans covering approximately 10 percent of the eligible population.

Key initiatives relevant to cost and quality improvement

- Interviewees mentioned only one initiative relevant to quality improvement in the Harlingen HRR, led by TMF Health Quality Institute, the Texas Quality Improvement Organization (QIO). This initiative, Care Transitions, is a community-wide project focusing on improving patients' transitions across care settings to reduce avoidable rehospitalizations by at least two percent. One hospital interviewee whose hospital participated in this initiative indicated that while they had been able to reduce their readmission rates as a result of the QIO's efforts, they did not consider these results to be sustainable. To reduce their readmission rates, a couple of the participating hospitals enhanced their discharge process, particularly around the coordination of services and follow-up, and one hospital began to provide congestive heart failure patients with scales upon discharge and had staff call the patients to obtain their weight on a regular basis. Interviewees noted it was unlikely the hospitals could continue to incur the costs associated with these additional activities.

- One of the FQHCs conducts its own initiatives to improve quality and contain costs. The clinic recently implemented patient panels for physicians (approximately 1,200 patients per full-time physician) to improve care continuity and physician efficiency, resulting in more scheduled appointments and fewer walk-ins, as well as decreased wait times for appointments. The most recent data revealed that continuity was at 75 percent and wait time for the third-next available appointment (the measure for primary care physician (PCP) availability) had been reduced from 45 to seven days. Currently, the clinic is focusing on pharmacy-related initiatives, including poly-pharmacy for the geriatric community.

- Interviewees reported slow acceptance of managed care in the region. The two MA plans each have their own quality improvement initiatives, tracking quality metrics and patients who have been discharged from the hospital to ensure they see their PCP within three to seven days. The MA plans also focus on encouraging patients to be more proactive in their care through comprehensive disease management.

Summary findings

Cost and quality drivers

- **Minimal level of patient assessment, care planning and monitoring.** Few of the interviewees mentioned any formal processes for patient assessment, care planning or monitoring. Once patients are discharged from the hospitals, there is little coordination or follow-up of those patients on the part of providers in the community. Some of the physician interviewees explained that this lack of care planning and monitoring was due to the fact that many of their patients rarely complied with follow-up visits, making it impossible for the physicians to implement and monitor care plans. The community clinics, however, are more actively involved in monitoring their patients, by partnering with the "Promotora" program; through this program, community health workers visit non-adherent patients in their homes to check their status and encourage them to follow up with their care. Also, the MA plans have more formal processes for care planning and management, including the

use of care coordinators who work with the hospitals and complex care nurses who make home visits to monitor the care of their members.

- **Lack of coordination across settings.** In general, health care delivery in the HRR is extremely fragmented, both geographically and in terms of service delivery. Patients are rarely referred from one region to another, even when a patient's care may be better provided in the other region. Interviewees reported few occasions when providers in the region communicate or coordinate around the key health issues for the larger community. Some described the health care environment as "territorial" and "isolated."

- **Low level of HIT capabilities and interoperability.** Few interviewees reported use of electronic medical records (EMRs) or other forms of health information technology (HIT). Those who did mention use of HIT indicated they were still in the early stages of implementation.

- **Absent quality data sharing and silo-based monitoring.** None of the interviewees mentioned any systems or processes to share quality data across settings or providers. Monitoring of quality efforts exists on a vertical basis, within each medical center or clinic, but the information is not shared with other providers.

- **Unique cultural drivers that negatively impact the nature of care delivery.** Several interviewees spoke of an "entrepreneurial" culture in the HRR, suggesting both providers and patients/families often find ways to "game the system" in efforts to supplement their income. Examples included: individuals becoming home health aides or providers of home care services so that they could be paid to take care of their family members; or securing additional Medicare- or Medicaid-covered medical supplies that could be sold back to the community clinics or other providers for a profit. Interviewees also spoke of instances where family-member caretakers made health care decisions based on their family member's benefits, such as choosing to keep patients hospitalized or at home versus being discharged to nursing homes or skilled nursing facilities (SNFs) to prevent losing the patient's Social Security payments or in order for the family member to continue receiving payment for providing non-skilled services.

  Provider interviewees spoke of several patient behaviors impacting their ability to provide quality care, including patients' seemingly "fatalistic" attitude about their health; low compliance with preventive health behaviors, prescription medications, and follow-up appointments; and a general sense of entitlement to all available benefits, leading to the demand for and use of services and medical supplies beyond what is necessary. Another important cultural driver is the lack of awareness and use of preventive care; interviewees noted the pattern of treating the symptom, rather than the disease.

- **Extremely high utilization of home health care.** There is extremely high use of home health services in the HRR; 31 percent of Medicare fee-for-service beneficiaries are using home health, compared to the national average of 10 percent, and the number of home health visits is over 23,581 per 1,000 beneficiaries, compared to an average 3,822 nationally. This high utilization may be explained by the high level of fraud and abuse in home health care in the state of Texas.

Interviewees also described patients being well-versed and educated in how to access the home health benefit.

Practices related to beneficiaries with serious chronic illness

- **Lack of structurally integrated networks across health care settings.** As mentioned earlier, there is a notable lack of integration across health care providers in the HRR. Interviewees noted this has had a negative impact on health and wellness within the Harlingen HRR and resulted in a population with multiple chronic conditions that are often left untreated until patients require acute intervention.

- **Limited alignment of financial incentives to coordinate care.** As most of the care provided to beneficiaries with serious chronic illness in the HRR is provided by physicians on a fee-for-service basis, there is little incentive to coordinate care. One hospital mentioned it would be able to provide preventive care but was unwilling to do so unless the hospital could get reimbursed. Hospital interviewees mentioned the financial incentive to discharge beneficiaries with serious chronic illness to LTCHs and home health agencies to decrease the length of stay but often had trouble placing patients because of the limited availability of post-acute care facilities. This appears to be a particularly challenging issue for extremely sick patients, such as those on ventilators, those who require dialysis, or those who have tracheostomies.

- **Few links to community social services and supports.** There are a few programs that provide patients with support to navigate and access resources within the community. One program covered by Medicaid waivers is the community-based alternatives (CBA) option. While interviewees were generally positive about this option, there is a three-year waiting list, though nursing home residents interested in CBA bypass the waiting list.

  Another program that provides a community-based alternative to nursing home placement is the Community Attendant Services (CAS) program. The Department of Aging and Disability also provides a Primary Home Care (PHC) program, which provides non-technical, medically related personal care services to adults whose health problems cause them to be functionally limited in performing activities of daily living.

- **Lack of provider- or community-based activities around chronic disease prevention and management.** Despite the high prevalence of diabetes in the HRR, there is a significant lack of focus and attention on prevention and management of diabetes and its complications. The limited presence of PCPs and care coordination, combined with the non-compliant and fatalistic mentality of the population as well as patterns of treating symptoms rather than the disease, has resulted in a population with a level of care that can only be provided in acute- and post-acute care facilities.

Practices related to dual eligibles

- **No formal integration of LTSS with primary and acute services.** There are no initiatives or programs that specifically target only the dually eligible population in the HRR. STAR+PLUS, the Texas Medicaid managed care program designed to

provide health care, acute and long-term services and supports through a managed care system, is not available in the HRR at this time.

- **Strong network of community health centers.** The HRR is home to the largest FQHC in the state of Texas, which has three sites and throughout its 30-year history has developed strong ties to the community. Its goal is to promote a healthier community by providing access to comprehensive medical care and health education and support services.

- **No Medicare and Medicaid financial and regulatory alignment.** The HRR has not aligned Medicare and Medicaid finances or regulations.

Practices related to beneficiaries in the last year of life

- **Limited level of planning with patients and families.** The concepts of palliative care, hospice and other end-of-life (EOL) supports are unfamiliar and have not been well accepted in the HRR. Interviewees cited cultural values that conflict with holding discussions around EOL and hospice philosophy – and this is a primary reason they lack of awareness of hospice services.

- **Limited coordination with and referral to palliative care, hospice care, and other end-of-life supports.** Interviewees reported limited success with regard to coordination and referral of these services, driven in large part by the reluctance on the part of family members to discuss and utilize appropriate types of care. Examples included cultural barriers preventing family members from being referred to SNFs or hospice services, at times resulting in the use of LTCHs as a replacement for hospice.

- **Limited options for hospice care.** There are no inpatient hospice facilities in the HRR. Interviewees reported that family members often do not want their loved ones to receive hospice at home due to the cultural barriers mentioned above. In order to fill this void, though not ideal, some of the hospitals allow patients to receive hospice services in their facilities.

Potential fraud/abuse activities

- **Potential fraud and/or abuse in home health services.** In general, interviewees suggested the high utilization of home health services in the Harlingen HRR can be explained in part by a perceived oversupply of home health agencies, resulting in aggressive marketing practices and inappropriate referral and ordering patterns. Several interviewees reported that home health agency marketing representatives will often contact patients directly to market their services and offer assistance in securing a doctor's order for services. For example, one interviewee suggested that some agencies have developed relationships with hospital staff and uses those relationships to secure the names and contact information of patients being discharged from the hospital. The agencies will then contact patients after their release to market their services and, if needed, facilitate ordering home health services. Another interviewee reported that agencies aggressively market their services in adult day care centers and even provide patients with forms they can bring to their doctor for his/her signature to order services. Interviewees also reported that home health services appear to be

utilized as more of a long-term benefit rather than to provide intermittent care, and many patients have long-term and ongoing relationships with home health agencies. These patients often get orders for services that may typically fall outside of Medicare's definition of skilled care or get referrals for multiple episodes of care, even after skilled care may no longer be necessary. As one interviewee suggested: "It's easy to get home health services in this area." Finally, a couple of interviewees suggested that the relationships some physicians have with home health agencies, such as serving as a medical director or board member, may also contribute to the high utilization of home health services.

Jacksonville, Florida

April 11 – 15, 2011

Site Visit Summary Report

Overall description

The Jacksonville hospital referral region includes several counties covering both northeast Florida and southeast Georgia. The city of Jacksonville is in Florida's First Coast, which is situated in the northeastern part of the state and is centered on the banks of the St. Johns River, 25 miles south of the Georgia border and 340 miles north of Miami. It is the largest city in the state of Florida in terms of both population and land area, and is the largest city by area in the continental U.S. By contrast, the southeast Georgia portion of the HRR is rural and more sparsely populated, representing approximately 20 percent of the total population in the HRR. The largest communities in the Georgia portion of the region are Brunswick, Saint Mary's, and Waycross. The Jacksonville HRR is predominately white non-Hispanic (just over 65 percent) and black non-Hispanic (approximately 20 percent of the population). The population in the HRR is on average younger than the population of the state of Florida, with approximately 12 percent of the HRR population (which includes the 20 percent in Georgia) being 65 years old or older, while approximately 18 percent of the entire state of Florida's population is 65 year old or older. There is a wide range of industries represented in Jacksonville with no one dominant employer. It is home to three Fortune 500 companies: CSX Corporation, Winn-Dixie, and Fidelity National Financial.

Payer/provider characteristics

- **Structure of the health system.** No single hospital system dominates the Jacksonville HRR. The four largest systems, all located in Jacksonville, comprise one half of the market and include two faith-based, non-profit systems, a for-profit system and a teaching hospital affiliated with the University of Florida Health Science Center. The teaching hospital is also the area's safety net hospital. All systems offer a range of services. Large, single-specialty physician groups provide the majority of specialty care in the region. According to interviewees, there is a shortage of primary care physicians (PCPs) throughout the entire HRR, and most operate in small private practices. Interviewees noted that many physicians deny or limit available appointment slots to Medicaid patients or new Medicare beneficiaries, due to reimbursement level concerns.

- **Insurance coverage.** Approximately 60 percent of the population in the Jacksonville HRR is privately insured; 11 percent have Medicaid; 20 percent are uninsured; 12 percent have Medicare; and 2 percent are dually eligible. Comparatively, the region has a relatively low rate of Medicare Advantage (MA) penetration, with 12 percent of Medicare beneficiaries enrolled in this kind of managed plan, as compared to the 25 percent nationwide.

Key initiatives relevant to cost and quality improvement

Interviewees mentioned a limited number of collaborative efforts in the HRR that primarily focused on the northeast Florida portion of the HRR, with one operating in southeast Georgia.

- The CEOs of the four largest health systems meet monthly to discuss opportunities for coordination and collaboration. The resulting initiatives have been limited in scope, such as sharing neurologists across the four hospitals to ensure appropriate neurology ED coverage, and collaborating on the Life: Act 2 initiative described below.

- In April of 2002, the United Way of Northeast Florida launched a community initiative to focus on independent living and quality of life for seniors, called "Life: Act 2". The initiative aims to help seniors remain independent and engaged by addressing integrative medical admission and discharge processes with the community's social service system, creating a culture shift in the way the Northeast Florida community views and values seniors, and strengthening the continuum of services available to seniors. At the outset, the Robert Wood Johnson Foundation (RWJF) provided funding and included several key partners from the health and aging community. The program was so well received that once the RWJF funding lapsed, two of the major hospital systems decided to financially support the program.[67] The initiative has been expanded to include Eldercare Advocates, primarily social workers, who help secure access to home and community-based services necessary for a patient to stabilize in the first few months after discharge. In some cases, the Eldercare Advocates can help fund these initial services from a small budget dedicated to the program.

- The NE Florida Health Informatics Consortium (NEFHIC), initiated by the largest county health department in the region, is comprised of the local county (Duval County) medical society, local universities, various non-profit organizations, and others interested in exchange of health care information. The consortium has been tracking opportunities to promote the use of electronic health records, information exchange, and training for use of health information networks since 2007. NEFHIC's mission is to convene community stakeholders committed to electronic health information systems, promote the adoption and utilization of electronic health records (EHR) among health care professionals and consumers, facilitate the sharing of electronic health information and records to improve health care delivery and health outcomes, increase efficiency, improve quality, and reduce redundancy and fragmentation of hospital and ambulatory care through increased use of electronic health information, and provide a mechanism for the community to collectively and effectively pursue electronic health information related funding, project and advocacy opportunities.

  o NEFHIC initiated the development of the Jacksonville Health Information Network (JHIN) in 2007. The network is a repository for uninsured and Medicaid patient level data. The repository contains patient demographics,

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[67] One hospital considered the program effective in reducing length of stays by ensuring a smooth transition for patients with particular needs, such as those with no family members or available caregiver upon discharge from the hospital. United Way had also conducted an evaluation of the initiative by surveying patients who had received services as part of the initiative; responses to the survey indicated very favorable feedback.

patient allergies, patient provider information, outpatient and inpatient diagnoses, and pharmacy and laboratory claims collected from the major area hospitals, ambulatory care providers, and case management providers. Currently the predominant use of the repository is in case management by the county health department's nurse and disease case managers.

- A family practice in southeast Georgia with a number of primary care and specialty physicians plays was one of the few group practices in the region that made an effort to integrate care across settings. That physician group serves patients in multiple settings, seeing patients in the nearby hospital, providing home visits, and completing rounds for area nursing homes (and serving as medical directors for the area nursing home). This family practice also coordinates closely with the Georgia Department of Community Health's Medicaid primary care case management program, SOURCE, which provides case management and follow up to frail elderly and disabled Medicaid beneficiaries. This family practice uses an electronic medical record system in nearly all the settings in which the physicians practice.

Summary findings

Cost and quality drivers

In the Jacksonville HRR, there are some patterns of use around physician evaluation and management services and procedures, imaging and diagnostic tests, use of durable medical equipment (DME) and Part B drugs that are high when compared to the national averages. Cost and quality drivers include:

- **Higher incidence of certain conditions.** Certain chronic conditions, including chronic obstructive pulmonary disease (COPD), diabetes, heart disease and cancer occur at higher rates in the HRR. Many interviewees mentioned a high smoking rate and a history of air pollution associated with industries in the area.

- **Lack of patient assessment, care planning and monitoring.** Care management and coordination is limited in the HRR. Interviewees mentioned two factors influencing the limited care planning:

  o Limited number of PCPs. Several interviewees mentioned the challenge in attracting PCPs to the HRR. Some also suggested that there are two kinds of PCPs practicing in the area: those who treat their patients, providing more comprehensive care, and those who merely triage their patients to specialists. According to one interviewee, "if you are a PCP and paid $25 for 15 minutes, a referral is all you have time to do... there is no incentive to manage well (versus triaging to specialists), other than it is the right thing to do."

  o Lack of incentives to focus on disease management or care management. Similar to other areas in the U.S., most physicians are paid based on productivity, with limited to no emphasis on performance or population health management. Interviewees reported that paying based on productivity limits the physician's ability to spend the time necessary to fully explain a person's

treatment options and help patients make informed choices regarding their care.

- **Lack of coordination across settings.** Many of the interviewees mentioned the negative effect that misaligned incentives have on care coordination. Most interviewees characterized the Jacksonville HRR as fragmented. A few interviewees referred to the pattern of high referrals to numerous specialists with limited follow up or coordination from one provider to the next as an example of how the care is fragmented. Interviewees commented that the lack of coordinated care, coupled with the high number of single-specialty groups in the region, have resulted in a system where physicians operate in silos and often order numerous, and many times duplicative, procedures and tests. One exception to the fragmented care that was reported by interviewees is the high level of coordination in end-of-life (EOL) care, including both palliative and hospice care (discussed more extensively later in the report).

    o An extreme example of poor coordination within the system is a 25-bed hospital in the southern part of the HRR (on the Florida side). Interviewees reported that the hospital does not participate in any health plans, resulting in many patients being transferred to other facilities directly from its ED.

- **Limited health information technology (HIT) capabilities and interoperability.** Currently, there are limited efforts around HIT and data interoperability in this HRR. The largest hospital systems have their own electronic medical records (EMR) systems, but there is limited sharing or coordination of medical information across settings. Interviewees indicated, however, that there is growing interest in developing health information exchanges. As mentioned above, the NEFHIC is leading efforts to convene community stakeholders who are committed to electronic health information systems. Interviewees also mentioned the expansion of the JHIN mentioned earlier, which currently collects claims data for the uninsured and Medicaid population, and there are growing efforts through the statewide Florida Health Information Network (FHIN) to include more claims and clinical data to facilitate disease and case management across settings.

- **Cultural drivers negatively impacting the nature of care delivery.** Interviewees described the Jacksonville HRR as a relatively poor area with an aging population suffering from multiple chronic diseases and related complications. In addition, the patient population is perceived by some in the provider community to be complacent in their health care, leading relatively unhealthy lifestyles (e.g. lack of exercise, eating the "southern diet"), and accessing the health system only when needing more acute or high levels of care. Interviewees indicated patients' attitudes reflected a sense that "the hospital will take care of me." Interviewees also mentioned that there is a sense of "entitlement" to services, including diagnostic testing and DME, contributing to the high use of these services. Finally, the low numbers of PCPs reportedly contributes to a general lack of preventive care and behavior.

- **Limited placements for treating and/or discharging complex patients.** Several interviewees mentioned the challenges they face in addressing the needs of certain high need patients, including dialysis patients with tracheotomies, patients with multiple wounds and on intravenous (IV) therapy, patients requiring IV therapy, and patients with

a history of challenging behaviors as a result of certain mental health issues, including Alzheimer's Disease or other forms of dementia.

Practices related to beneficiaries with serious chronic illness

- **Lack of structurally integrated networks across health care settings.** In general interviewees described the hospital environment in Jacksonville as "competitive," but "somewhat more collaborative here than in a lot of markets." However, the market place consisted of more than four hospital systems as well as a proliferation of large, single specialty group practices not owned or affiliated by only one system. In practice, it appears that the provider relationships result in limited coordination of care across various health care settings for those with serious chronic conditions.

- **Limited alignment of financial incentives to coordinate care.** Most of the care delivered to beneficiaries with serious chronic illnesses in the HRR is on a fee-for-service basis, providing little incentive to coordinate care. Interestingly, the Jacksonville HRR has a relatively high MA penetration, but provider interviewees did not report any associated disease management, care coordination or cost savings initiatives.

- **Effective community supports, but access is becoming more difficult.** Older Floridians in the HRR can choose among three Medicaid home and community-based services (HCBS) waiver programs: a fee-for-service waiver for in-home services, a fee-for-service waiver for assisted living, and a managed care program (described in the following section). Georgia operates two HCBS programs, a Medicaid fee-for-service waiver and SOURCE, a Medicaid primary care case management program that also provides home and community-based services. Except for the Georgia fee-for-service waiver, these programs did not have a waiting list in the past. However, in recent years interviewees have noted that these programs have all begun to experience wait lists. Some hospital discharge planners indicated they were able to facilitate hospital-to-home discharges with the help of these programs. Other interviewees characterized these waivers as "weak" and "not very robust", however, both in terms of the limited services as well as long waiting lists. As of 2011, all programs except SOURCE have waiting lists. SOURCE is only available for people with income at the Supplemental Security Income Federal Benefit Rate, so many dual eligible individuals are not eligible.

- **Rural partners collaborate to develop a diabetes management program.** One of the federally qualified health centers in the Jacksonville HRR has recently implemented a diabetes care management program (focused on providing diabetes specific care and supplies), with the help of a few local partners, including the county health department, and a few of the DME companies that have donated some diabetes care supplies. Through the program, patients may attend a free training class focused on improving nutrition, and insulin management, including reducing their dependence on insulin. The program is relatively new, and its impact is not yet clear; however, it does highlight a rural center's effort to meet the growing needs of their chronically ill patients.

Practices related to dual eligibles

- **Medicare and Medicaid financial and regulatory alignment program.** Florida's Medicaid agency established a managed care program that includes the full Medicaid benefit, including nursing facility care and a home and community-based services waiver. Health plans that participate in the Long-Term Care Diversion Program must also have a MA Plan, so enrollees have the option to integrate Medicare and Medicaid services within a single plan. This is a voluntary program available in most of the Florida portion of the HRR for people age 65 or older who meet Florida Medicaid's nursing home level of care criteria. The program has multiple health plans in the Jacksonville area. This program, along with fee-for-service HCBS waivers, was generally considered a good support resource once people are enrolled. Interviewees indicated there was no waiting list as of 2008, but a waiting list was started in 2009 or 2010.

- **Few initiatives focusing on dual eligibles.** Other than the state Long-Term Care Diversion Program, there are no initiatives focusing specifically on dually eligible beneficiaries. For the most part, providers view dual eligibles as having challenges associated with socio-economic issues, such as poverty, low education, poor diet, and transportation problems, which result in more complex health issues and a greater need for care coordination. However, interviewees did not otherwise report seeing the duals as a distinct population requiring different care practices.

- **Lack of structurally integrated networks across health care settings.** As stated previously, there is a lack of integrated systems in the Jacksonville HRR, resulting in limited coordination of care for dual eligibles.

Practices related to beneficiaries in the last year of life

- **Moderate level of planning with patients and families.** The concepts of palliative care, hospice, and other EOL supports are fairly well accepted and respected in the HRR. Interviewees cited some cultural barriers to these concepts among African Americans, but indicated acceptance of hospice and palliative care was improving. A number of interviewees mentioned that the majority of physicians and other health care providers initiate discussions around planning for EOL care on a regular basis, and the patients and family members are, for the most part, receptive.

- **High level of coordination with and referral to palliative care, hospice care, and other EOL supports.** There are two main hospice organizations in the HRR, one for profit and one not for profit. Interviewees mentioned that these providers are well respected and able to meet the needs of patients in the HRR. Interviewees suggest that the high level of awareness and acceptance of these services in the community is attributed to the extensive level of outreach by the hospice providers to other health care providers and to the community, which increases the hospice providers' visibility. One hospice provider discussed the relationship with the hospitals as a partnership in EOL care, and noted that these relationships have been ongoing for over 10 years. This provider also noted that the major hospital CEOs sit on their board of directors so there is a tight link between the providers.

Other interesting notes

- **Potential reasons for higher use of diagnostic tests and DME.** Interviewees provided various potential explanations of the higher use of certain diagnostic testing and DME use in the HRR. Reasons cited include supply-driven demand, resulting from a saturation of diagnostic facilities and DME providers throughout the region; fragmentation in types and number of providers coupled with limited coordination across settings resulting in duplication of procedures; potential patterns of "defensive medicine" because of the litigious climate (interviewees referred more often to the litigious climate in Florida, but it was also mentioned in Georgia); and an implied possibility of inappropriate relationships between physicians and diagnostic facilities and/or DME providers.

Las Vegas, Nevada

April 26 - 28, 2011

Site Visit Summary Report

Overall description

Located in Clark County in the Mojave Desert basin, Las Vegas is the largest city in Nevada (population: 606,846[68]) and dominated by the gambling and related entertainment industries - the city hosts an estimated 250,000 visitors a day, giving it a transient feeling. Established as a railroad town in the early 20th century, the city experienced unprecedented growth in 1931 when the state of Nevada legalized casino gambling and construction began on the Hoover Dam. The casino-hotels, for which Las Vegas is now famous, proliferated, and remain the city's largest employers. Dubbed "Sin City" for its tolerance of vices, Las Vegas is characterized by high rates of smoking, obesity, and alcohol use. Despite these behaviors, however, disease prevalence does not depart significantly from the national norm. Until 2008, Las Vegas was one of the fastest growing cities in the country, and had experienced a huge housing boom. When the recession hit and the housing bubble burst, the area was hit particularly hard, and currently has the highest foreclosure rate in the country (1 out of every 97 units).[69] In addition to three counties in southern Nevada, the Las Vegas hospital referral region spans two counties in southeastern California and one in northern Arizona.

Payer/provider characteristics

- **Structure of the health system.** In the Las Vegas HRR, nearly every major provider is located within 20 to 30 miles of each other, and three competitive health systems dominate the health care market. The largest health system, a for-profit, national chain that owns 33.8 percent of the Medicare market share, is comprised of five hospitals, one of which is located in the urban core. The second-largest health system, which is also a for-profit, national chain, owns 20 percent of the Medicare market share and includes three hospitals, one of which is considered an urban core hospital. The third-largest health system is a non-profit, regional chain, which owns 15.1 percent of Medicare market share and includes three hospitals based in the Las Vegas HRR and several hospitals in California and Arizona. There is also a county hospital, which is located in the urban core and has 530 beds. According to interviewees, this hospital serves a disproportionately high number of uninsured and underinsured patients, including a high number of undocumented individuals. It is also the only level one trauma facility, the only public facility, and the only safety-net hospital in the region.

  During the late 1990s and into the 2000s, hospitals experienced a construction boom that mirrored the housing boom in the suburban communities surrounding the city. Dubbed by one interviewee as "boutique Barbie doll hospitals," these facilities were built to serve a younger, healthier, and more affluent population and were not built

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[68] Source: City of Las Vegas (2010) (http://www.lasvegasnevada.gov/files/CLV_Facts_Sheet_2010.pdf)
[69] Bloomberg Businessweek, May 12, 2010. http://www.businessweek.com/ap/financialnews/D9N61EFO0.htm

with chronic disease management in mind. The more rural areas outside the suburban ring are served by small critical access hospitals and rural health centers.

Physicians remain largely separate and independent from hospitals, with most working in small practices. A private market exists for "concierge" medicine, in which a physician caps his practice at 600 to 1,000 patients who are willing to pay cash. Two large primary care physician (PCP) groups have been vying for position in the market, actively buying small practices and seeking full-risk payment arrangements with payers. One of these groups was established in the early 2000s and controls about 40 percent of the primary care market. The other group is a more recent entrant; it set up business in the Las Vegas HRR in 2008.

Hospice providers have grown dramatically from a few nonprofit providers to 26 primarily for-profit providers in the past decade. Skilled nursing facilities (SNFs) are largely separate from hospitals, owned by local independents or long-term care (LTC) chains. Hospitals have in-patient rehabilitation units. National chains operate long-term care hospitals (LTCHs).

Noticeably absent in the market is any integrated provider system. Each type of provider (primary, acute, post-acute, ambulatory) tends to be organizationally separate from the other types. Several interviewees characterized the market as the "wild West" of medicine, in which each provider goes its own way, seeking market niches, with little collaborative planning or coordination across settings of care.

- **Insurance coverage.** Approximately 61 percent of the population in the Las Vegas HRR has commercial health care coverage; seven percent has Medicaid; 20 percent is uninsured; 10 percent have Medicare; and one percent is dually eligible. Comparatively, the region has a high rate of Medicare Advantage plans – there are two dominant plans – which account for 38 percent of Medicare beneficiaries.[70] There are also a high number of self-funded plans, primarily provided through large employers and unions in the entertainment industry. For example, the Culinary Health Fund covers 55,000 food workers and their 70,000 dependents. Several of the self-insured funds belong to the Health Services Coalition, a purchasing group that has focused primarily on negotiating hospital contracts.

- **State regulatory environment.** There is no certificate-of-need (CON) process in Nevada, but the state legislature is currently considering legislation to ensure that existing programs (for example, open-heart programs) are doing a minimum number of procedures in accordance with national standards before any provider's license is modified to add that service.

In 2008, the U.S. Department of Justice and the Nevada Attorney General settled allegations that a health care company's acquisition of another company would decrease competition among MA plans in the Las Vegas area, potentially leading to higher prices and reduction in quality or breadth of benefits available to MA enrollees. Under the settlement, the health care company agreed to divest all assets

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[70] Thomson Reuters (2011). Market Report: Current Insurance Coverage Estimate.

dedicated to the administration and selling of its MA plans for individuals in Clark and Nye Counties.

Key initiatives relevant to cost and quality improvement

- The two large physician groups in the HRR have been using information technology to facilitate chronic disease and case management and track quality metrics and patient satisfaction. Both groups have sought risk contracts with payers to give them the flexibility to provide chronic care management and because they believe significant savings can be achieved in reduced hospital use. One group coordinates and manages care for high-risk patients using a patient-centered medical home model, assigning a team of physicians, case managers, care coordinators, and social workers to work with the patient. The other group has adopted an alternative approach to care management; it keeps a low nurse-to-patient ratio (1:3) and requires that the physicians themselves directly manage their sickest patients. This group also owns its own lab services, whose reports flow into its system of electronic medical records (EMRs), ensuring that primary and specialty care happen in the same place.

- Clark County, which includes the city of Las Vegas, has played a key role in providing care to and facilitating discharge planning for indigent patients. It has a registered nurse who provides a level of care and functional assessment for patients, helps them gain access to a PCP, and reviews any needs for equipment and physicians' orders. The county also employs eight to 10 brokers in its outreach unit, who visit area hospitals and assist discharge planners by helping patients acquire equipment and obtain hospital referrals and follow-up medical care.

- The state of Nevada Division of Health Care Financing and Policy used a Money Follows the Person grant from the Centers for Medicare & Medicaid Services (CMS) to establish the Facility Outreach and Community Integration Services (FOCIS) program in Las Vegas. Through the program, a community-based organization works with discharge planners and individuals at hospitals and nursing facilities to establish a plan for community-based care and help transition individuals from nursing facilities to less restrictive settings. In 2007, the program transitioned 163 people from nursing facility placement to community-based placements and diverted 218 people from initial placement in a nursing facility.[8]

- Health Insight, Nevada's Medicare Quality Improvement Organization (QIO), will soon be leading an initiative in care transitions involving the major health care players in the community, including hospice, managed care organizations, hospitals, long-term care facilities, and a rehabilitation facility.

Summary findings

Cost and quality drivers

- **Minimal patient assessment, care planning and monitoring.** The majority of interviewees described the health care system in the HRR as episodic, "siloed," and fragmented and acknowledged that there was an absence of care management. Interviewees recounted numerous situations in which physicians authorized tests or prescribed medicines without realizing that their patients already had the tests or were

on other medications. Patients are also often bounced from health care facility to facility or discharged home, only to be readmitted into the emergency room (ER) within 24 hours. The head of one community-based organization felt that the pattern of intermittent care in the Las Vegas HRR has resulted in the ER becoming the physician of choice. The provider culture seems to perpetuate the episodic nature of the health care system. One interviewee noted, "Doctors see themselves as point-of-service providers. They don't think of themselves as being responsible for that person over a period of time."

- **Lack of coordination across settings.** There appears to be little collaboration in the HRR. Communication among community-based organizations, government entities, federally qualified health centers (FQHCs), and the provider community is limited, and while the leaders from area hospitals meet on a regular basis, allowing for networking opportunities, interviewees described the relationships among providers – and hospitals in particular – as highly competitive. One interviewee noted that there was a competitive relationship even among hospitals in the same chain. Another interviewee explained, "Las Vegas has traditionally been a safe haven of disintegrated solo practitioners, 'each one sitting in a corner playing with their own toys' kind of model – hospitals did that, doctors did that." Multiple interviewees also noted that hospitals were reluctant to partner with outside organizations. Hospitals typically notify PCPs when their patients are being discharged, although sometimes patients do not always provide the names of their PCP. There are also no health information systems in place to facilitate information sharing across organizations. We were not able to identify any formal care transition programs, though the QIO is leading efforts to bring attention to transitions. A few interviewees recognized the value of and need for case management but noted that maintaining their census and staying afloat is their current priority.

- **Moderate health information technology (HIT) capabilities and interoperability.** Although several of the large providers in the region currently use or are in the process of implementing EMRs, they did not seem to be shared across any provider settings. According to interviewees, the multiple systems operated by providers do not interface with each other.

- **Minimal quality data sharing and monitoring.** Quality data is not made public, though payers have begun demanding it and have supported bills in the legislature to increase transparency. One interviewee remarked, "It is aggravating as all get-out to find out about quality, and it's a mystery, and that goes for hospitals as well as physicians. You're told you want to go to a place where they perform that service a lot, and they have good outcomes, and if you're private Joe citizen, it's impossible to find that out, and even if you're a plan, you can't find that out."

- **Several cultural drivers negatively impacting the nature of care delivery.** The profit-driven nature of the health care market appears to be a significant factor in care delivery. The majority of interviewees reported that area hospitals and health care facilities are more business-minded than patient-centered and would not invest in infrastructure or initiatives unless they resulted in increased profits. Rather than identifying the needs of the community and setting up service lines to meet them,

facilities in the Las Vegas HRR tend to focus on profits and enter service lines that provide the greatest boost to their bottom line. (None of the for-profit hospitals in the region would agree to interviews and have not provided their perspective on the dominance of for-profit providers in the region.)

Interviewees also observed that the region has a highly transient population and suspected that the profit-driven culture, combined with the fact that many physicians are transplants to the region, may have resulted in detached physician-patient relationships.

In addition to being profit-driven, the culture of the health care market in the Las Vegas HRR was described as being "morally bankrupt," "libertarian," and like the "wild West."

- **Significant health plan churning.** There has been significant churning in the health plan market through mergers, new plan entry and exit from the market. As plans have come and gone, doctors and other providers have changed their participation in networks, making it difficult to foster longstanding patient-provider relationships.

- **Lack of robust teaching and research institutions.** Several interviewees mentioned that the state of Nevada lacks robust academic and research programs for health care professionals and felt that this deficiency could be linked to the shortage of well-trained physicians, nurses, and pharmacists in the health care market. The state medical school does not appear to produce a high enough volume of residents to meet the needs of the population, and while the county hospital has a residency program, interviewees did not feel it was robust. Without a large teaching hospital in the market, there is little leadership or modeling to advocate for practice guidelines and other evidence-based approaches to medicine.

- **High number of uninsured, undocumented, and "financially fragile" individuals.** The large number of uninsured individuals and undocumented citizens living in the Las Vegas HRR has placed a burden on all the region's hospitals but particularly on the county hospital, which serves as the safety-net provider for the region. At the time of our visit, a public county budget meeting was being held to discuss an uncompensated care deficit of more than $70 million in the current fiscal year. Some interviewees report a pattern of patient dumping to the county hospital; for instance, discharge instructions from a private hospital include directions to visit the county hospital ER in case of complications.

- **Shortage of mental health services.** Interviewees reported that as a result of the state's cuts in mental health services, serving mental health patients has been challenging. A representative from one hospital noted that ERs typically shoulder the burden of caring for these patients; they hold patients because there is no place for them to go.

Practices related to beneficiaries with serious chronic illness

- **Lack of structurally integrated networks across health care settings.** Likely a result of the highly competitive provider culture, there are no vertically integrated

health systems – and little coordination of care across various health care settings for those with serious chronic conditions.

- **Fragmented links to community social services and supports.** The state health insurance program and Aging and Disabilities Services Division appear to be well connected in the community and familiar with community-based social services and supports, but it is unclear to what extent the government and health providers collaborate. Interviewees from community-based organizations reported partnering with hospitals and rehab centers in the past, but these collaborations appear to have been episodic events that have not resulted in long-term, productive relationships.

Practices related to dual eligibles

- **Limited level of integration of long-term services and supports (LTSS) with primary and acute services.** In the Las Vegas HRR, Medicaid operates three home- and community-based waiver programs that target the dually eligible aging population. Two programs offer waiver services as an alternative to nursing facility care, while the third program offers people at risk of nursing home placement the option of a more integrated environment with supervised care in a residential facility. While all three programs provide participants with case management services and care coordinators, their reach is limited – 2,405 people were served in fiscal year 2007[71] – and reportedly, few people qualify for them. There is an average wait of three months for the services.[8]

  There is little connection between long-term care and primary care. The research team did not hear of any instances of PCPs following patients admitted into SNFs or other long-term care settings.

- **No Medicare and Medicaid financial and regulatory alignment.** We did not hear any examples of programs or initiatives that worked to align incentives or regulations across Medicare and Medicaid.

- **Limited number of providers that accept Medicare and Medicaid.** Most interviewees mentioned that finding providers who will accept Medicare or Medicaid is a significant challenge. Among sub-acute providers, having Medicaid is a plus. Once Medicare SNF days are exhausted, a nursing home can then continue to serve the beneficiary as a long-term patient with Medicaid reimbursement.

Practices related to beneficiaries in the last year of life

- **Few instances of planning with patients and families.** Interviewees reported broad resistance from patients, families, and physicians to discussing advance care directives and end-of-life (EOL) care. One interviewee noted, "We celebrate birth, but we don't do well as a society with talking about end-of-life." A representative from a FQHC also noted that convincing patients to discuss EOL planning is a challenge. A local hospice organization has begun establishing interdisciplinary teams, comprised of physicians, a chaplain, and nurses, and assigns them to patients

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[71] State of Nevada – Division of Health Care Financing and Policy (2009). State Profile Tool.
(http://dhcfp.state.nv.us/pdf%20forms/FactSheets/SPT-NEVADA%20FINAL%203-31-09.pdf)

and their families to talk about EOL decision-making. Still, the hospice admitted that engaging patients and their families in these discussions has remained a challenge.

- **Limited coordination with and referral to palliative care, hospice care, and other end-of-life supports.** Within the HRR, there has been an absence of palliative care physicians and programs, but recently, a hospice organization partnered with a local hospital to establish a program to help change the culture of resistance to palliative care. The program will involve co-funding a palliative care nurse who would be based at the hospital and would go on rounds with the medical director and work with him or her on meeting the needs of patients and moving them to a lower level of care.

- **Strong partnerships between SNFs and hospice.** Interviewees reported that strong partnerships exist between SNFs and hospice and could pose an ethical dilemma to facilities; the facility would have a financial incentive to steer its nursing home patients to its own hospice, but in the process, it would be limiting the patients' freedom of choice.

- **Recent and significant growth in hospice agencies.** In recent years, more than 20 for-profit hospice providers have opened in Las Vegas. It is unclear what stimulated this market development or whether their entrance into the market is expanding the use of hospice across the region.

Other interesting notes

- CMS data indicates low use of SNFs in the Las Vegas HRR compared to the national average (51 admissions per 1,000 beneficiaries versus the national average of 92 admissions per 1,000 beneficiaries). A few interviewees mentioned that there is a low supply of SNFs and the market has used in-patient rehabilitation and LTCH services instead.

Memphis, Tennessee

March 28 – April 1

Site Visit Summary Report

Overall description

The largest city in the state of Tennessee, Memphis is located at the crossroads of Mississippi and Arkansas, serving as the metropolitan hub for many of the adjacent rural communities that line the Mississippi Delta. Beyond Memphis, the larger hospital referral region is composed of 35 counties across Tennessee, Arkansas, Mississippi, and Missouri. Famous for its barbeque, blues, and civil rights movement history – Martin Luther King, Jr., was assassinated at the Lorraine Motel in 1968 – as well as Elvis Presley's estate, Graceland, the city of Memphis has been a focal point of cultural innovation for decades. But the neon signs and live music that envelope the famous blocks of Beale Street in the downtown area belie a region rife with socioeconomic disparities that trace their foundation back to before the Civil War. A quick drive around the outskirts of the western part of the city reveals an entrenched poverty that, juxtaposed with the sprawling mansions in the east, seems from a different world. The outer bounds of the city itself spread far beyond the metropolitan downtown – from the suburbs of the East to vast expanses of open land in the west that lead to rural Mississippi and Arkansas.

Payer/provider characteristics

- **Structure of the health system.** Two competitive, faith-based, nonprofit hospital systems dominate the market in the Memphis HRR and are among the largest hospital systems in the country.[72] Until the late 1990s, one of the systems owned a 2,000-bed hospital in downtown Memphis. It closed that facility and soon opened a much smaller facility in a more affluent part of the city. Both hospital systems offer a range of services in their facilities, including long-term acute care, skilled nursing, inpatient rehabilitation, hospice, and home health. One of the two health systems is headquartered in the eastern part of the city, while the other is centrally located in the downtown region and serves more of the underserved population as a result. The City of Memphis also has a struggling county hospital affiliated with the University of Tennessee Health Science Center. This hospital operates the only regional trauma center for 200 miles, which serves parts of five states. Large single-specialty physician groups provide the bulk of specialty care – some are nationally recognized leaders composed of more than 40 physicians – and the two hospital systems compete for physician business. Multiple key interviewees indicated the region is experiencing a shortage of primary care physicians (PCPs). Active PCPs are reported to operate in small private practices and struggle to stay afloat. Key interviewees indicated that many physicians will not accept, or may limit available appointment slots for, Medicaid patients or new Medicare beneficiaries.

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[72] Methodist Healthcare (2011). Retrieved from: http://www.methodisthealth.org/methodist/About+Us; Jamie, O. (2010). "50 Largest Hospitals in America," *Becker's Hospital Review*. Retrieved from: http://www.beckershospitalreview.com/lists-and-statistics/50-largest-hospitals-in-america.html.

- **Insurance coverage.** Approximately 43.8 percent of the population in the Memphis HRR has commercial health care coverage; 22.9 percent have Medicaid; 19.1 percent are uninsured; 10.3 percent have Medicare; and 3.9 percent are dually eligible. Comparatively, the region has an extremely low rate of Medicare Advantage (MA) plans, with just 3.5 percent of Medicare beneficiaries enrolling in this kind of managed plan, far lower than the 24.6 percent take-up rate statewide in Tennessee.[73]

Key initiatives relevant to cost and quality improvement

- Since 2000, the Healthy Memphis Common Table has been working with community organizations to improve health outcomes in the Memphis region. The organization is an amalgamation of community agencies that have worked together to participate in a handful of projects: Aligning Forces for Quality, Chartered Value Exchange, Diabetes for Life, Lift Every Voice, Memphis Quality Initiative, and Let's Change Initiative.[74] The organization has just begun publicly reporting quality data, although it is based on the voluntary participation of local providers and is limited in scope. Due to the relative newness of these initiatives, it is hard to determine their level of impact.

- The Congregational Health Network (CHN) is a program started by one of the two main hospital systems to work with religious communities in supporting and educating congregants in appropriately accessing health care and becoming educated consumers. Each clergy member signs a covenant agreeing to set an example of healthy living and identify congregants to function as liaisons, who, in turn, with assistance from hospital system staff, help participants navigate the health system. The program also conducts educational training programs for the clergy to touch on various issues, such as end-of–life (EOL) care and mental health. According to the founders, it has worked with about 50 percent of the 2,000 congregations (representing 40,000 individuals) in the area in its three years of existence.

- The Mid-South Comfort Care Coalition is a nonprofit community organization dedicated to educating and advocating for patients nearing the end of life. The coalition conducts outreach through lectures, symposia, workshops, and literature.

- One of the two major health systems has a program that offers not only home care and hospice but also palliative care services. The system employs both palliative care physicians and nurse practitioners certified in palliative care that work with physician staff at all the hospitals and offer physicians an alternative in addressing issues related to pain management and EOL education with patients and their family members.

Summary findings

Cost and quality drivers

- **Minimal patient assessment, care planning and monitoring.** Memphis has an above average ED utilization rate, which in part can be attributed to the lack of patient assessment, care planning, and care monitoring. Many patients – particularly

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[73] Thomson Reuters (2011). Market Report: Current Insurance Coverage Estimate.
[74] Healthy Memphis Common Table (2010). Retrieved from: http://www.healthymemphis.org/about_us.php?s=our_work.

those with Medicaid or Medicare and the uninsured – do not access the health care system until they are severely ill, in part the result of a paucity of PCPs accepting Medicaid and Medicare patients, which, in turn, perpetuates ED usage. Multiple key interviewees indicated that PCPs do not build slots into their appointment schedules to see patients requiring urgent care. Further, the major health systems have begun advertising ED availability on billboards and publicizing wait times, as it is often quicker to be seen there than in a primary care practice.

- **Lack of coordination across settings.** When asked about the driving factors associated with cost and quality data in the region, the majority of interviewees emphasized the impact misaligned incentives have had on care coordination. Most said the fragmentation of care and lack of managed care pressures in the market, coupled with the high number of single-specialty groups in the region, have created a "perfect storm" in Memphis – physicians are incentivized to operate in silos and order more procedures than are perhaps necessary to procure revenue. Additionally, interviewees across the board described the two hospital systems as "highly competitive" in fighting for physician allegiance.

- **Niche health information technology (HIT) capabilities and interoperability.** With $12 million in grant money from the Agency for Healthcare Research and Quality (AHQR) and the state of Tennessee, the region created its MidSouth eHealth Alliance, the area regional health information organization (RHIO). Since 2004, the RHIO has worked on promoting data sharing and interoperability, exchanging information among nine hospitals, 15 ambulatory clinics, and the medical school affiliated and largest group practice in the region. Although the system houses all-hospital data, it is primarily used to refer to patient-level records – not the population as a whole – and is ineffective in terms of population management and disease registry development, interviewees said. Interviewees indicated while the system offers great potential in terms of an information exchange, this potential has not been realized for a multitude of reasons, including the physician culture. Additionally, at the individual practice level, even if offered the technology, many PCPs in the area would not have the means to link into the system, as a number operate practices with a single phone line and no computer at all (due in part to fear of theft or lack of financial resources).

- **Limited quality data sharing and monitoring across settings and systems.** Although there is some additional data sharing in the Memphis region as a result of the Healthy Memphis Common Table initiatives, it is only available at the county level, which is too aggregated for providers to associate with or be influenced by it.

- **Several cultural drivers negatively impacting the nature of care delivery.** There is a huge divide in Memphis between the "haves," who mostly inhabit the eastern part of the city, and the "have nots," who reside in the outer western rim of the city and line the banks of the Mississippi Delta. As one interviewee noted, "Memphis isn't racist, but Memphis still has a plantation mentality." This divide has perpetuated what interviewees dubbed a generations-old "culture of distrust" that has strained the patient-physician relationship in the region. For physicians serving Medicare and Medicaid beneficiaries in some of the lower income areas, there is an assumption that

patients will miss appointments and be noncompliant; and in a similar vein, patients are less likely to seek care from physicians with this attitude and expected to wait longer for care – which has resulted in higher ED utilization rates and late presentation for care. Furthermore, a common perception among patients is that the hospital provides the best care, and for a population of individuals who have been historically underserved, there is a sense of what interviewees termed "entitlement" to the best care possible. This sentiment, coupled with the large number of single-specialty groups, has led to a procedurally oriented culture.

The high rate of poverty in the region directly correlates with the high rates of chronic disease, which result from inhospitable living conditions, reduced access to PCPs – due to low numbers of PCPs and traditional poverty-driven barriers to care – and living in what one interviewee termed "food deserts," areas entirely lacking in healthy food options.

A number of interviewees described the physicians practicing in the region as "late adopters," who are at least two decades behind the times in terms of their attitudes toward change and "siloed" approach to care. This could be exacerbated by the lack of cross-specialty communication and coordination due to the presence of large single-specialty groups.

- **Geographically misplaced, limited, and fragmented resources.** Over the last decade, the City of Memphis has witnessed a shift of health care resources toward the east of the city: one of the two major hospital systems moved its central offices from the downtown area in the west to the wealthier eastern suburbs, where the majority of physician practices are also located – the poorest and sickest people, however, live in the West.

Practices related to beneficiaries with serious chronic illness

- **Lack of structurally integrated networks across health care settings.** Interviewees across the board characterized the hospital environment in Memphis as "competitive" on price between the two systems rather than outcomes, which has hampered coordination of care across various health care settings for those with serious chronic conditions. Combined with the near monopoly that key specialty groups have on the market (and the ambulatory surgery and laboratory centers they have in-house), this phenomenon has resulted in hospital and ancillary services becoming commodities.

- **Limited alignment of financial incentives to coordinate care.** During the mid-90s, TennCare (the state Medicaid program) emerged in the regional marketplace, bringing with it a risk-bearing approach to care. Within several years, about 50 percent of the TennCare plans had gone bankrupt, forcing TennCare to end its risk-bearing approach. Prudential also briefly introduced an HMO model with equally unsuccessful results. Risk-bearing contracts have only been reintroduced to the market in the last couple of years, but the residual effects from the TennCare debacle in the mid-90s has left people wary of managed care. Many of the largest specialty groups and hospitals have refused to contract with managed care organizations except on a non-risk basis, and the region has few managed care plans operating in the region with any significant enrollment. With the absence of financial penalties for

overutilization of services, providers have few incentives to change lucrative practice patterns, which include encouraging use of EDs and hospitals.

Furthermore, employers in the Memphis area have not played a strong role in trying to contain health care costs. For example, Federal Express, the largest area employer, has a significant number of employees and health care expenditures in other parts of the country, which has distracted focus from pressing for efficiencies in the Memphis marketplace.

- **Fragmented links to and among community social services and supports.** According to the estimates of one interviewee, the region has about 3,000 nonprofits providing social services relevant to health care, twice the "average" number for an area of Memphis's size. As a result, the organizations are in competition with each other for a finite pool of available funds, rendering their impact on a large beneficiary group limited. This has yielded a system that is challenging for the patients and families to navigate. Interviewees did not offer cohesive hypotheses as to the genesis of all of these nonprofits or how they could all stay afloat in the same market.

- **Lack of prevention programs.** Interviewees felt that the CMS-provided data did not include some of the sickest patients in the region – the younger Medicaid population and the dually eligible. Memphis, they all asserted, has one of the sickest populations in the country. Despite this, the region does not have any comprehensive prevention programs focusing on healthy lifestyle promotion. Instead, the region is focused on "disease-specific treatment," one interviewee said.

Practices related to dual eligibles

- **Some integration of LTSS with primary and acute services.** The state's Medicaid waiver program, CHOICES, provides an alternative to nursing home care for adults who meet the financial and medical eligibility for Medicaid long-term care. The program currently has 11,000 slots and does not have a waiting list. Options for Community Living, a state-funded program available through the local Area Agencies on Aging and Disability, provides home- and community-based services options for the elderly and adults with disabilities; the program currently has an 1,800-person waiting list.

- **No Medicare and Medicaid financial and regulatory alignment.** The HRR has not aligned Medicare and Medicaid finances or regulations to support the dually eligible.

- **Strong Community Health Center**. Memphis is home to a faith-based federally qualified health center (FQHC) that works with a network of 100 congregations that represent about 50,000 members to provide primary care to low-income individuals. Last year, the FQHC served approximately 45,000 individuals through 120,000 visits. The FQHC's estimated payer mix is 40 percent Medicaid, 40 percent uninsured, 10 percent Medicare (virtually all of whom are duals), and 10 percent commercial. The FQHC continues to turn patients away on a daily basis for urgent primary care despite expanding its service area and hiring additional PCPs and physician extenders. It has yet to implement patient registries or an electronic medical records system.

Practices related to beneficiaries in the last year of life

- **Few instances of planning with patients and families.** A number of interviewees discussed an across-the-board physician aversion to broaching the subject of EOL decision-making with patients and families. For their part, some patients are uninterested in considering EOL supports because they consider it to be a lack of care, which ties back to the cultural notion of "entitlement" to all available health care services. "This is a population with a history of having been denied access – so the response is overutilization," one interviewee said. "It's the idea that pushing for additional care, particularly at end of life, is seen as an extension of the civil rights movement." Still, in recent years, groups like the Mid-South Comfort Care Coalition – dedicated to educating residents about EOL issues – and the Congregational Health Network, are working with community religious leaders to discuss the merits of utilizing palliative, hospice, and other EOL supports.

- **Limited coordination with and referral to palliative care, hospice care, and other end-of-life supports.** Although hospice admission rates in the Memphis HRR are close to the national norm, the rates do not account for the average length of stay. Interviewees said patients are often not referred to the hospice until the last 10 days of life (one of the two major health systems said its average length of stay in the hospice is 12 days; in 2008 the average national length of stay in the hospice for those diagnosed with at least one of the top 20 terminal illnesses was 71 days).[75] Interviewees speculated that this extremely late referral to hospice results in significantly more futile testing and treatment occurring prior to the hospice referrals. In most cases, the hospital is still considered the default setting for care delivery.

  Additionally, use of and referral to palliative and hospice care is limited due to available resources. Between the large hospital systems, one employs palliative nurses, with a contracted palliative care physician available only for consultations, and just recently opened the first freestanding inpatient hospice facility in the region. The other system has a more robust program that employs a number of palliative care physicians and nurses (and bills for consultation services), and has hospice beds located within its skilled nursing facilities.

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[75] CMS (2008). Top 20 Terminal Diagnoses by Number of Patients, 2003 to 2008 Calendar Year Data. Retrieved from: https://www.cms.gov/Hospice/.

Monroe, Louisiana

April 26 – 29, 2011

Site Visit Summary Report

Overall description

Situated on the Ouachita River, Monroe is the eighth largest city in Louisiana. The Monroe hospital referral region includes ten counties, called "parishes" in Louisiana, in the northeastern part of the state, which is culturally and economically attached to southeast Arkansas and northwest Mississippi. In general, the HRR is poor (22 percent of the population lives in poverty), very rural, and sparsely populated. The Monroe HRR is predominately white non-Hispanic (just over 61 percent) and black non-Hispanic (approximately 35 percent of the population) and has a fairly high number of dual eligible beneficiaries (individuals eligible for both Medicare and Medicaid) and a large number of uninsured (25 percent of the total population). The school board and largest hospital system are the main employers in the HRR.

Payer/provider characteristics

- **Structure of the health system.** Two competitive hospital systems, one for-profit and one non-profit, comprise roughly half of the Medicare market in the HRR and offer a range of services, including long-term care, inpatient rehabilitation, skilled nursing, and hospice. Several single-specialty physician groups provide the majority of specialty care in the region. According to interviewees, there is a shortage of primary care physicians (PCPs) throughout the entire HRR, and most operate in small private practices. Interviewees noted that many physicians deny or limit available appointment slots to new Medicare beneficiaries, due to reimbursement level concerns.

- **Insurance coverage.** Approximately 31 percent of the population in the Monroe HRR is privately insured; 27.5 percent has Medicaid; 25 percent is uninsured; 11.9 percent has Medicare; and 4.3 percent is dual eligible. The region has a low Medicare Advantage (MA) penetration rate, with only 4.2 percent of Medicare beneficiaries enrolled in this kind of managed plan, as compared to the 25.3 percent nationwide.[4] There are two MA Special Needs Plans for dual eligibles in the HRR, comprising a small share of the market with less than 300 enrollees. Approximately 15 percent of people age 65 or older (2.2 percent of the total population) are persons over the age of 65 who are not enrolled in Medicare because they did not pay enough Medicare taxes while working.[76]

Key initiatives relevant to cost and quality improvement

Interviewees mentioned a limited number of initiatives in the HRR. Most of the initiatives described, however, were more vertical rather than collaborative across multiple organizations. Interviewees described the major hospital systems' competitive and "secretive" relationship as a main factor resulting in a non-collaborative environment; the need to compete often outweighs

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[76] Thomson Reuters (2011). Market Report: Demographics Snapshot.

the desire to "do the right thing" in terms of providing coordinated and quality care. The few collaborative initiatives mentioned include:

- The Franklin-Tensas HealthCare Coalition is a recent initiative focused on assessing the health care needs of the population in Franklin and Tensas Parishes, a rural and poor area that is mostly within the Monroe HRR. The Coalition includes representatives from local hospitals, home health agencies, nursing homes, the local health unit, and the Louisiana State University (LSU) Agriculture Extension Center. The overall goal of the initiative is to address the health needs of the community by targeting the appropriate resources and services that the respective members can provide. The initiative is in the early stages of development so it is not able to report any significant results or findings. The first step is a needs assessment for the area based on a survey of residents, which has been delayed due to inaccurate address and telephone numbers. Stakeholders involved in the initiative will be meeting later this spring to discuss the findings from the needs assessment and determine next steps.

- The medical center in Franklin Parish is leading an initiative to reduce congestive heart failure (CHF) related hospital readmission rates. The initiative includes representatives from the home health and skilled nursing facilities in the parish. As part of this initiative, all of the hospital's CHF patients are contacted after being discharged from the hospital to determine their particular needs in managing their CHF. Based on the identified needs, the patients are then provided education and assistance to treat and manage their symptoms. For example, patients are provided a scale to monitor their weight over time and are instructed to contact a nurse if they gain three or more pounds. The overall goal of the initiative is to improve coordination of care for CHF patients as well as improve patient self-care and compliance. Interviewees considered the initiative to be successful in both developing community partnerships and beginning to address the prevalence of CHF in the area, but it is still early in the stages of development.

Summary findings

Cost and quality drivers

The Monroe HRR has exceptionally high cost and utilization of long-term care hospital services and home health services. It also has high cost and utilization of hospice and ED services and high rates of certain chronic conditions such as CHF and chronic obstructive pulmonary disease (COPD). Other notable patterns include high rates of hospital admissions due to dehydration, hypertension and urinary tract infections. Cost and quality drivers include:

- **Lack of patient assessment, care planning and monitoring.** Care management and coordination is very limited in the HRR. Interviewees mentioned several factors influencing the lack of care planning, including a limited supply of primary care physicians (PCPs). Interviewees described the challenge in attracting PCPs to the HRR, due to its rural location. Other factors include limited coordination across health care settings and providers, resulting in a more "hand-off" approach to patients rather than coordination and monitoring of care, and lack of financial incentives to focus on disease management or care management. One MA plan mentioned a particular emphasis on addressing and managing appropriate utilization of certain services, including home

health services, above and beyond the required comprehensive patient assessments, care planning and monitoring of its Medicare members. For example, to help control and manage what the plan perceived to be a general overuse of home health services in the area, the plan began sending a nurse to patients' homes to monitor home health visits provided by the plan's contracted home health agencies. The plan maintains this practice of overseeing all home health services and terminates contracts with those agencies deemed by the plan to order or provide unnecessary services. The plan also maintains the only large physician network in the area. All of the physicians in the network have access to the plan's medical records that, according to the plan, enables more coordinated care for their members by managing referral processes and utilization of services.

- **Lack of coordination across settings.** In general, health care delivery in the HRR is fragmented both geographically – due to limited access to primary care and limited coordination between providers in the rural areas and those in the cities of Monroe and West Monroe – and in terms of service delivery. The high number of single-specialty groups and individual physician practices, many of whom only work part time in the rural areas, coupled with the limited use of health information sharing, has resulted in a system characterized by limited coordination and lack of effective communication across settings. As mentioned previously, interviewees described the major hospital systems as "competitive" and "secretive", resulting in limited coordination of care.

  o An example of poor coordination within the system is the excess supply of post-acute care services and facilities; there is an abundance of home health, in-patient rehabilitation, long-term care hospital, and hospice services for a relatively sparsely populated HRR. The two large hospital systems often compete with one another to provide similar services, driven more by competition rather then meeting the need, described by one interviewee as a mentality of "build it and they shall come." Similarly, one of the smallest, rural hospitals actually has two separate inpatient rehabilitation facilities, each owned by a different provider group.

  o Interviewees also indicated that several of the ambulatory surgical centers in the area have converted to inpatient surgical hospitals, which have a tendency to provide services for more of the private insurance patients, rather than the Medicare or dual eligible population.

  o Others described the lack of sharing and of access to electronic medical records as having direct impact on the ability to coordinate patient care. For example, a group of nurse practitioners who provide care in community based outpatient clinics mentioned that, because they do not have electronic access to patient records, they often do not see the hospital's physician notes and patient information until after they have already seen the patient in the clinic. One nurse practitioner noted "it is not a priority to get the information to the other providers – we have to go by what the patient says in order to know what the colonoscopy or mammogram says. We don't even know if their medicine has changed when they come to the clinic. So we have them bring their medicine in the bag each time."

- o Several interviewees also noted that the nursing homes in the HRR frequently send patients to the hospital EDs for care that could, or should, be provided in the nursing facilities.

- **Lack of health information technology (HIT) capabilities and interoperability.** Currently, there are minimal efforts around HIT and data interoperability in this HRR. The largest hospital systems have their own electronic medical records (EMR) systems, but there is no sharing or coordination of medical information across settings. In general, there seems to be reluctance on behalf of the providers to engage in HIT efforts or initiatives.

- **Absent quality data sharing and silo-based monitoring.** None of the interviewees mentioned any systems or processes to share quality data across settings or providers. Monitoring of quality efforts exists on a vertical basis, within each system or organization, but the information is not shared with other providers.

- **Cultural drivers negatively impacting the nature of care delivery.** Interviewees described the Monroe HRR as very poor, primarily rural, and with a population that suffers from low education and literacy rates. The patients were also described as having low health literacy, often not understanding their own health care status or needs. Providers gave examples of patients not knowing why they had been hospitalized; not being able to read or write and, thus, understand discharge orders; or not understanding why they were taking certain medications. One provider described how he once needed to explain to a patient that "the little white pill is going to make your heart beat better." Interviewees also spoke of instances where family member caretakers made health care decisions based on religious or cultural values of "not wanting to kill mama" or "keeping mama at home," resulting in prolonged use of post-acute services. Others mentioned instances when decisions are financially driven because the patient's Social Security payments supported an entire household, driving requests to do everything possible to extend the person's life and requests for care at home instead of a nursing home. In addition, the patient population is perceived, on behalf of many in the provider community, to be non-compliant in their health care, leading to relatively unhealthy lifestyles and accessing the health system only when needing more acute or high levels of care. Other than the one initiative focusing on providing targeted outreach and education for CHF patients, interviewees did not mention any comprehensive programs dedicated to promotion of population wellness and prevention activities. Finally, the low numbers of PCPs reportedly contributes to a general lack of preventive care and behavior.

- **High utilization of post-acute care.**

  - o *Home health.* There is exceptionally high use of home health services in the HRR; 18 percent of Medicare fee-for-service beneficiaries are using home health, compared to the national average of 10 percent, and the number of home health visits is over 13,000 per 1,000 beneficiaries, compared to 3,822 for the national average. Home health services appear to be utilized as more of a long-term benefit, rather than to provide intermittent care. Interviewees mentioned that patients often get orders for multiple episodes of care, even after skilled care may no longer be necessary or when they may no longer be homebound. This high utilization may be explained by three driving factors:

1) a general belief that home health is a much needed service to provide care for this type of rural population, 2) a perceived oversupply of agencies and 3) a perception, among some interviewees, that there is a fairly high level of abuse in ordering home health services in the HRR. Several interviewees described inappropriate relationships between physicians and home health agencies - such as physicians serving on medical boards, having part ownership or other affiliations with agencies - and that those physicians often "steer people to the agency where they have a relationship."

o *Long-term care hospital.* There is exceptionally high use of long-term care hospital services compared to the national average; 2.2 percent of Medicare fee-for-service beneficiaries in the HRR are using LTCH services, compared to the national average of 0.3 percent, and the number of LTCH admissions per 1,000 beneficiaries is 27, compared to 4 for the national average. Interviewees provided two, somewhat contradictory, explanations for this high utilization: 1) there is potentially an oversupply of LTCH services for a rural, dispersed population and 2) the supply is meeting a need to provide specialized acute care for certain patients. There are three long-term care hospitals: one freestanding facility and one at each of the two major hospitals in the HRR. There is a general perception that the services are meeting a need to treat patients with unique conditions, such as dialysis patients with tracheotomies, ventilated patients with multiple wounds and on intravenous (IV) therapy, and patients requiring IV antibiotics. One interviewee also suggested the HRR's relatively high use of long-term care hospitals reflected national undersupply of these facilities, because some states do not have these facilities.

o *Hospice.* Similar to home health services, interviewees described the HRR as having a large supply of hospice providers for a rural area. Interviewees also suggested there is potential abuse in ordering hospice services in the HRR. Some stated that physicians have part ownership in or serve as medical directors for several hospice agencies in the HRR and that this affiliation often influences both how and when referrals to hospice services are made.

Practices related to beneficiaries with serious chronic illness

- **Lack of structurally integrated networks across health care settings.** In general, interviewees described the hospital environment in Monroe as "competitive." Overall, the HRR is dominated by single specialty group practices and individual physician practices, resulting in limited coordination of care across various health care settings for those with serious chronic conditions. The one exception to this lack of integration is provided by one of the MA plans. The MA plan has established processes for providing outreach, education and care for patients with high medical and pharmaceutical costs, including a "case management clinic." This clinic provides coordinated care for high-cost individuals with staff that include nurses with training in wound care and nutritionists, in addition to the typical clinic staffing of physicians and nurses. To encourage patients to seek preventive care, there are no copayments at the case management clinic. The plan is also starting to provide transportation, to better enable patients to access the clinic. Although

the clinic is only available for the MA plan members, interviewees from that plan consider the case management approach to be successful in providing coordinated care for their patients.

- **Limited alignment of financial incentives to coordinate care.** Most of the care delivered to beneficiaries with serious chronic illnesses in the HRR is on a fee-for-service basis, providing little incentive to coordinate care. Again, the one exception to this lack of financial incentives to coordinate care is provided by the MA plan described above, whose physicians are employed on a salary basis. As mentioned previously, interviewees described the major hospital systems' competitive relationship as a main factor resulting in a non-collaborative environment; the need to compete with each other creates "the wrong" financial incentives to provide more care rather coordinate and manage care.

- **Lack of awareness and use of community services and supports.** There are limited social services and supports in the HRR. Louisiana offers a few Medicaid Home and Community-Based Services (HCBS) Waivers, including the Elderly and Disabled Adult waiver, and the Adult Day Health Care waiver, but these programs were described as limited and with long waiting lists. Louisiana also offers a Medicaid State Plan personal care service that does not have a waiting list, but few interviewees were aware of this program. In addition to limited social services and supports, transportation proves particularly troubling in the area.

Practices related to dual eligibles

- **No Medicare and Medicaid financial and regulatory alignment.** Interviewees did not mention any efforts within the HRR to align Medicare and Medicaid finances or programs to support the dual eligible.

- **No initiatives focusing on dual eligibles.** There are no initiatives focusing specifically on dual eligible beneficiaries. Interviewees did not report seeing the duals as a distinct population requiring different care practices.

Practices related to beneficiaries in the last year of life

- **Moderate, and increasing, level of planning with patients and families.** Interviewees suggested that the concepts of palliative care, hospice, and other end-of-life (EOL) supports are becoming more accepted in the HRR. The increasing level of awareness of these services may, in part, be attributed to the high level of marketing by the hospice providers to other health care providers and to the community. Also, a number of interviewees mentioned that many of the physicians and other health care providers in the HRR initiate discussions around planning for EOL care on a regular basis. Interviewees cited some cultural barriers to these discussions among African Americans who may be resistant to discussing issues related to death and who may view hospice as an "angel of death."

- **Moderate, but at times inappropriate, level of coordination with and referral to palliative care, hospice care, and other EOL supports.** There is a widespread perception in the HRR that there are more hospice providers than necessary to meet the need, resulting in competition, aggressive marketing, and, at times, inappropriate patterns of use. Interviewees perceived two patterns: 1) patients whose doctors are affiliated with

a hospice provider tend receive hospice services whether needed or not and 2) patients whose doctors are not affiliated with a provider are less likely to receive hospice services or get them very late. Interviewees also mentioned that patients are often discharged from hospice and then reenrolled later, and that there is a fair amount of "crossover between hospice and home health services and patients go back and forth between the two." Others described instances of patients receiving hospice care but not having an advanced directive or "Do Not Resuscitate" form. Interviewees mentioned several reasons for these patterns including reluctance on behalf of family members to "give up" on the patients or to accept that the patient is dying, patients who otherwise would not be able to afford their Part D prescription drugs being able to get those drugs while in hospice and living longer, hospice providers "promoting" hospice not only for EOL care but also for "failure to thrive," and hospice providers not providing the appropriate level of EOL discussions and planning.

Other interesting notes

- **High admission rates for dehydration and urinary tract infections.** The HRR has high rates of hospital admission due to dehydration (475 per 100,000 individuals versus 236 per 100,000 for the national average) and urinary tract infections (679 per 100,000 individuals versus 368 per 100,000). Most interviewees asked about these rates attributed these admissions to poor care provided in the nursing homes, often due to low staffing levels.

- **Potential fraud and abuse in home health and hospice services.** Interviewees suggested that the high utilization of home health and hospice services can be explained in part by inappropriate referral and ordering patterns. Some stated that physicians have part ownership in or serve as medical directors for several home health and/or hospice agencies in the HRR and that this affiliation often influences both how and when referrals to these services are made.

Tuscaloosa, Alabama

April 11 - 15, 2011

Site Visit Summary Report

Overall description

A city of nearly 100,000 that houses the University of Alabama, Tuscaloosa serves as the metropolitan hub for some of the poorest communities in the country. Apart from Tuscaloosa – a city with sprawling strip malls emanating from the majestic athletic stadiums on the university campus – the surrounding areas in the nine-county hospital referral region (HRR) are as rural as they come: farms, trailer homes, and shacks dotting a sea of greenery.

Payer/provider characteristics

- **Structure of the health system.** For more than 85 years, a single hospital system has dominated health care in West Alabama. What was once a 12-bed city infirmary in 1916 expanded to become the first hospital of the system in 1923, which now includes four main facilities: two in urban settings (in Tuscaloosa and Northport) and two in rural counties (in Fayette and Pickens).[77] Combined, the four hospitals account for 81.5 percent of the Medicare market share in the region.[78] Housing 583 beds and offering the gamut of specialty services, the hospital in Tuscaloosa serves as the focal point of the system, admitting patients from the notoriously poor and underserved neighboring rural counties for tertiary care. Despite its size and influence on care patterns in the region, the system employs few physicians, who are primarily part of small- to medium-sized independent single-specialty groups (the largest, according to the estimates of one interviewee, is 12 physicians). Although there is no shortage of specialty care physicians in Tuscaloosa, interviewees noted a paucity of primary care physicians (PCPs), a fact that has, in part, resulted in reliance on urgent care centers – there are five in the City of Tuscaloosa – some of which are owned and operated by a group of emergency room physicians.

  A large federally qualified health center (FQHC) has influenced community care since 1977 and since its founding has expanded to include 13 satellite centers in seven of the nine counties incorporated in the HRR (it does not have a center in Perry County or Fayette County).[79] Additionally, Tuscaloosa houses the state's oldest and largest inpatient psychiatric facility, which, when it opened in 1861, was called the Alabama State Hospital for the Insane.[80] The hospital currently has 318 beds.[81]

- **Insurance coverage.** Approximately 49.6 percent of the population in the Tuscaloosa HRR has commercial health care coverage; 16.0 percent have Medicaid; 17.5 percent

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[77] DCH Health System (2011). Retrieved from: http://www.dchsystem.com/body.cfm?id=36922.

[78] Thomson Reuters (2011). Market Report: 2009 Medicare Market Share Chart.

[79] Whatley Health Services (2011). Retrieved from: http://www.whatleyhealth.org/content.asp?id=330575.

[80] Alabama Department of Mental Health (2011). Retrieved from:
http://www.mh.alabama.gov/BryceHospitalProject/history.html.

[81] Alabama Department of Mental Health (2011). Retrieved from:
http://www.mh.alabama.gov/ADHR/medicalprofessions/OurLocations.aspx#bryce

are uninsured; 12.9 percent have Medicare; and 4.0 percent are dually eligible. Comparatively, the region has an extremely low rate of Medicare Advantage peneration, with just 1.8 percent of Medicare beneficiaries enrolling in this kind of managed plan, far lower than the 21.5 percent take-up rate statewide.[82]

Key initiatives relevant to cost and quality improvement

- Started in 1996 at the University of Alabama, the Rural Medical Scholars Program is a five-year medical school track for residents of rural Alabama interested in becoming PCPs in underserved regions in the state. Since its founding, the program has seen 153 students from 52 of Alabama's 67 counties go through the program, with 132 entering medical school between 1997 and 2010. The program is designed to link the primary care shortage (particularly in rural areas) with medical education, equipping students from rural counties with the skills to go back to their hometowns to provide care. According to the program, the 34 rural scholars currently practicing in the state have contributed $141 million of rural economic development since 2004.

- The Tuscaloosa HRR has engaged in a program called Post Acute Transitions in Healthcare (PATH) through its quality improvement organization (QIO), the Alabama Quality Assurance Foundation (AQAF). The program is designed to promote effective transitions, thereby reducing unnecessary hospital readmissions.[83] Several interviewees mentioned their efforts to reduce readmissions, having witnessed improved collaboration across settings during their voluntary participation in this program. One interviewee particularly involved in the project estimated that since the PATH program was implemented in late 2008, it has prevented about 255 readmissions.

Summary findings

Cost and quality drivers

- **Minimal patient assessment, care planning and monitoring.** Due to what interviewees across the board described as a paucity of PCPs and medical homes in the region – and sparse coordination across settings – there is a lack of patient assessment, care planning, and care monitoring. The combination of a particularly poor population with multiple chronic conditions and a shortage of PCPs results in patients often accessing the health care system though the emergency department (ED) for the first time when they are in particularly dire conditions health-wise. Furthermore, the physician culture is such that practices neither leave space for walk-in appointments nor remain open late or on weekends. With a patient population that is often quite sick and non-compliant, when they get to the ER, they "just get admitted," said one PCP. "Stuff we see in the office and treat in the office and at home, they're going to admit." According to the estimates of one interviewee, there are only two primary care practices in the city proper that see patients after hours.

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[82] Thomson Reuters (2011). Market Report: Current Insurance Coverage Estimate.
[83] Alabama Quality Assurance Foundation (2011). Retrieved from:
http://www.aqaf.com/index.php?option=com_content&task=view&id=448&Itemid=824.

- **Lack of coordination across settings.** Due to the large number of two- to three-physician single-specialty groups, the lack of multi-specialty groups, and the limited connection between the hospital and other resources outside basic discharge planning activities, there is little coordination or effective communication across settings. Interviewees described providers as working within their confined "silos," focusing on their own revenue stream and, when that is threatened, shifting the patient to another silo.

- **Underutilized HIT capabilities and interoperability.** For more than a decade, the major hospital system in the Tuscaloosa HRR has been using Meditech software for its electronic medical records (EMR).[84] Despite its relative longevity and entrenchment in the hospital system, in the context of regional care delivery across settings, the EMR is quite limited – not because the system inhibits interoperability among providers and alternative settings, according to several interviewees, but because the physicians themselves are reticent, and in many cases resistant, to using HIT in their day-to-day work. "A lot of doctors are adamantly opposed to CPOE [Computerized Physician Order Entry]," one interviewee said. In fact, interviewees said a number of physicians flatly threatened to quit if the hospital forced them to use CPOE. Some attributed this widespread attitude to a generally older physician population, saying doctors are deeply loyal to the paper-based methods they have always used in their practices and strongly resistant to change. According to one interviewee's approximation, only five practices in the Tuscaloosa region access and use Meditech, despite its availability for use in all physician practices.

- **Limited quality data sharing and monitoring.** Although the major hospital system tracks its own quality indicators and benchmarks against national and state norms, this practice appears to be limited, as physicians in the community for the most part refrain from accessing the system and taking part in data accumulation or sharing. A number of interviewees described a group of older physicians particularly resistant to change, which has made it especially difficult to implement new initiatives, such as EMRs as well as focusing on clinical pathways and evidence-based practice patterns.

- **Several cultural drivers negatively impacting the nature of care delivery.** The health care delivery system in the Tuscaloosa HRR is, at least in part, a product of its history. The entrenched poverty in the surrounding counties has created several cultural dynamics that impact the delivery of care. First, there is a prevalent, though unstated, culture of distrust and tension between the patients and medical community. As one provider explained, this dynamic tends to become prominent when making end-of-life (EOL) decisions: "If they come to the hospital and have a rich white guy as their doctor, they don't know if they can trust me. If I say, 'I don't know if Mom's going to get better,' they know right now that they can have anything in the world of medicine for free. Because they don't know me or whether they can trust me, they initially say 'do anything [you can].' "

  Second, due to the extreme poverty in the region, some residents – particularly in the rural settings – view the hospital as a "vacation," or a venue that will provide needed

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[84] Meditech. Retrieved from: http://www.meditech.com/AboutMeditech/pages/dch.htm.

food, air conditioning, or sometimes even cable television, which trumps their living conditions at home. "We got people who met … [the ambulance] at the door with their suitcase and say, 'I'm going to the hospital to stay,' " one interviewee said. "We had one guy who chronically called [the ED] at lunchtime. He'd go to the hospital, get lunch, and go home."

Third, there is a discernable divide between care delivery in rural and urban settings – both from the physician and patient perspective. According to one rural provider, "there's a perception that the care you will receive in a rural facility is substandard" and the rural facilities are "Band-Aid hospital[s]." On the part of physicians, such perceptions result in duplicative testing, especially once patients arrive in Tuscaloosa. According to the same rural provider, "we send the report and the study on a CD [along with the patient in the ambulance]," and a resident at the large urban facility admitted, " 'we don't look at anything that comes from you.' " Similarly, patients are also biased against the rural facilities, believing they will receive better care at the metropolitan hospital, often showing up in the rural hospital's ER and requesting to be immediately transferred to the other hospital since they do not have a means of transportation to the city.

- **Particularly litigious environment and pressures from family members.** Several interviewees attributed many of the practice patterns in the region to a particularly litigious environment still feeling the residual effects from what was termed "tort hell" in the 1980s. In 1987, the Alabama legislature enacted general tort reform measures as well as those specifically geared toward medical malpractice by setting a cap of $400,000 in noneconomic damages and a $1 million cap on punitive damages in wrongful death actions; but the state supreme court subsequently ruled them unconstitutional.[85] And as one interviewee said, "out of all that there came this really defensive medicine approach… It becomes a matter of [physicians] covering their rear ends." Another interviewee said among physicians in the region, there is a "mentality of 'I need to be safe – I need to practice defensive medicine.' " Several interviewees also mentioned the added pressure on top of potential litigation in terms of family expectation and pressure. One interviewee said: "as far as aggressive care, I think it's that the family will be displeased with them, and they're worried about reputation." Still, others indicated that defensive medicine is practiced to a similar extent throughout the country.

- **Aggressive and potentially unethical marketing.** Among interviewees, 29 out of 45 interviewees noted the existence of particularly aggressive marketing practices related to Medicare Advantage plans, hospice services, and/or durable medical equipment. Although the research team only heard about these activities third hand, the comments came from a number of interviewees representing most segments of the health care delivery system, including both rural and urban areas. The sheer number of independent examples and details provided suggest the presence of potential abuse.

With regard to aggressive MA plan marketing, several interviewees said they had heard of or personally encountered scenarios in which seniors were unknowingly

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[85] Nelson, L.J.; Morrisey, M.A.; Kilgore, M.L. (2007). Damages Caps in Medical Malpractice Cases. *Milbank Quarterly. 85*(2).

enrolled in MA plans in such venues as the local pharmacy or Walmart, when they understood they were receiving "free" prescriptions or health services. In these cases, the enrollees either were entirely unaware that they had opted out of their Original Medicare plan in preference for an MA one, or they believed they were receiving a better benefit package, which, according to interviewees describing the scenario, was certainly not the case. One interviewee explained: "That happened to my mother. She went to the drug store, and they said, 'hey, you can sign up for this'… we were admitted to the hospital here and they said, 'she doesn't have Medicare anymore.' She did not realize she had let go of her [Original] Medicare."

In the case of hospice services, although interviewees across the board said the culture in the region is such that both patients and providers are generally averse to hospice and palliative care, according to the CMS-generated data, hospice utilization per 1,000 beneficiaries is well above national norms. Interviewees said a large number of for-profit hospices have sprung up in the region, serving, in particular, counties that have higher reimbursement rates, such as Jefferson and Hale. Examples of suspect activities as described by interviewees included keeping dementia patients on hospice care for seven to 10 years (with intermittent discharges), signing people up for an elusive "palliative benefit" that can pay for drugs without telling them they are enrolled in hospice, promising around-the-clock bedside care in the last days of life and billing for continuous care (which is supposed to be used only in extreme cases, such as seizures) and leveraging the relative ease with which hospice care can be provided in nursing homes to bill for mundane tasks, such as feeding a patient lunch and sitting by his or her bedside during a nap. Furthermore, interviewees working within hospitals recalled having witnessed hospices discharging patients from agency care and bringing them to the ED when symptoms became particularly severe. Such tactics are apparently not new for a region that recently witnessed the largest Medicare hospice fraud case in U.S. history, when a company called SouthernCare, Inc., was convicted during the spring of 2009 and required to pay the federal government $24.7 million in a settlement deal.[86] Interviewees noted, however, that some of these tactics will likely be remedied by the new face-to-face requirement that went into effect April 1, 2011, under provisions in the Affordable Care Act.

Similarly, multiple interviewees said they had witnessed abuses related to durable medical equipment (DME), as companies have attempted to inappropriately register elderly residents for equipment their doctor did not order. Interviewees said the companies often sell the equipment by telling people they can get the supplies for "free," and once the patients agree to it, the companies fax an "urgent request" to the physician asking for a signature. According to one physician group, it receives "hundreds of faxes" to that effect a day, and "until you fill that form out, they're going to fax it to you every day," a physician said. While that physician indicated that he and colleagues take a lot of time out of their day to explain to patients why such services are inappropriate and unnecessary and return the forms indicating, "patient denies service," they also maintained that some physicians "are signing it

[86] Sims, B. (2009). Birmingham Hospice Company to Pay $24.7 million Medicare Fraud Settlement. Al.com. Retrieved from: http://blog.al.com/spotnews/2009/01/birmingham_hospice_company_to.html

[because]…it's a whole lot easier to sign it than to sit down and talk to all the patients." Several interviewees also had witnessed DME company representatives coming into private practices with patients for their appointments and requesting to see the physician with the patient to "advocate" for use of unnecessary equipment, such as motorized scooters.

Practices related to beneficiaries with serious chronic illness

- **Lack of structurally integrated networks across health care settings.** Interviewees across the board noted the "silos" in which providers in the community operate and the resulting general lack of coordination. For those with chronic conditions – especially the more impoverished patients – the ED is the most viable option through which to access the health care system. In part due to the lack of PCPs and in part due to the pervasive poverty in the Tuscaloosa region, even those with chronic conditions often do not access the system until their symptoms have become so dire that they require emergent care. As several interviewees noted, even after these patients have accessed the system, they are often discharged quickly back into the community where they have inadequate support. A number of interviewees attributed this phenomenon to the hospitalists, whose "goal is to get people out of the hospital as quickly as possible." As one interviewee admitted, "the discharge planning is terrible … that could contribute to the utilization here." Furthermore, multiple providers indicated when they see patients following a hospitalization or ER discharge on an outpatient basis, they have no access to information about the patient's in-hospital treatment due to routine delays in physicians submitting hospital discharge summaries.

  Limited alignment of financial incentives to coordinate care. Although the PATH program introduced by the QIO sought to promote seamless transitions across settings, overall, interviewees described providers operating in a system that is effectively fragmented. Regional providers practice what some interviewees called "Medicare maximization," or using Medicare as the primary payer source due to the comparatively poor reimbursement rates for both Medicaid and commercial payers. "Everyone has a silo, and what they're trying to do is maximize their revenue and minimize their expense by saying, 'I've seen this patient as much as I want to in my silo, now I'll send them back to the hospital,' " one provider said.

- **Few links to community social services and supports.** One interviewee particularly aware of social supports in the community called them "limited" and said the social service departments are "not a lot of help." Several interviewees suggested that the high use of home care services was partly a result of aggressive case management from hospital discharge planners and the propensity of the physicians to be more comfortable with discharging extremely ill patients – who have little support in the home – to a home health agency. In addition to limited social services and supports, transportation proves particularly troubling in the area, as the bus system in the city is confined to the Tuscaloosa side of the river that divides it from neighboring Northport (which houses the HRR's other major urban hospital). Interestingly, the surrounding rural areas rely on what is, according to a couple of rural providers, a potentially

"better" system, the West Alabama Transportation Bus. Still, patients must call two days in advance of an appointment to access the service.

- **Lack of prevention programs.** The research team did not learn about any comprehensive programs dedicated to promotion of population wellness and prevention activities. One interviewee said: "I stand out like a sore thumb when I talk about prevention." The team also did not hear about any significant shift toward population-based health care delivery.

Practices related to dual eligibles

- **Some integration of LTSS with primary and acute services.** Since 1982, Alabama has had an Elderly & Disabled (E&D) Medicaid waiver that allows for the delivery of home- and community-based services to elderly and disabled persons meeting the nursing facility level of care. The waiver allows for case management, homemaker services, personal care, adult day health, respite care (both skilled and unskilled), adult companion services, and home-delivered meals.[87] Although the program has more than 9,000 slots, according to interviewees who work directly with the waiver, people average about two years on the program's waiting list.

- **No Medicare and Medicaid financial and regulatory alignment.** The research team did not hear of efforts within the HRR to align Medicare and Medicaid finances or programs to support the dually eligible.

- **Active yet satellite- rather than community-oriented FQHC physicians.** Although the HRR has a fairly visible FQHC that extends across seven of the region's nine counties, its relationship with multiple rural hospitals was described as either quite limited or problematic and at times in competition with the care delivery of the rural hospitals and local PCPs. One rural hospital administrator said the county's FQHC often opts to "bypass" that rural hospital in favor of the major hospital located in Tuscaloosa, despite multiple previous efforts on the part of the administrator to coordinate care locally.

Practices related to beneficiaries in the last year of life

- **Few instances of planning with patients and families.** Interviewees for the most part tied the lack of EOL planning with patients and families to a culture that is resistant to discussing issues related to death. In the context of a culture focusing on "taking care of your own," sending a family member to a hospice is considered "defeat" and an overall lack of caring for the future health of a family member. As one interviewee explained, "If you don't have a culture of some level of acceptance and education of palliative care, people don't understand. It's foreign … That's a big issue here."

- **Limited coordination with and referral to palliative care, hospice care, hospice, and other end-of-life supports.** Despite housing one of the oldest hospices in the

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[87] Alabama Medicaid Agency (2010). Retrieved from:
http://www.medicaid.alabama.gov/documents/4.0_Programs/4.3_LTC_Services/4.3.1_HCBS_Waivers/4.3.1.1_E_and_D_Waiver/4.3.1.1_E&D_Waiver_Fact_Sheet_5-10.pdf.

nation, which dates back to 1982 when Medicare first began reimbursing for a hospice benefit, the Tuscaloosa HRR experiences limited referrals to EOL supports and services. Part of that trend results from patient and family perceptions of hospices "killing Mom," as well as strong local physician attitudes against palliative care. A number of interviewees described some physicians providing particularly "aggressive" care, whose "passion is saving people." In some cases, interviewees told anecdotes of families and patients declining biopsies and instead requesting hospice care and yet encountering physicians refusing to abide by the wishes of the family.

The region's large hospital system does not have any hospice beds, although it works with the largest local hospice to set up patient visits when requested. That system is just this year beginning to form its own palliative care team. As one interviewee explained, "If palliative care isn't part of the culture of the hospital system, that mindset isn't widely accepted … We're behind." Even the local cancer center does not readily offer patients nearing the end of life the option of ceasing treatment, interviewees said.