

Variation in Payment for Hospital Care in Rhode Island

Prepared for the Rhode Island Office of the Health
Insurance Commissioner and the Rhode Island
Executive Office of Health and Human Services

December 19, 2012



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Letter of Transmittal

December 19, 2012

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RE: Payment for Hospital Care in Rhode Island

Dear Mr. Koller and Ms. Nicolella:

Thank you for the opportunity to assist the Office of the Health Insurance Commissioner (OHIC) and the Executive Office of Health and Human Services (EOHHS) with the Rhode Island hospital payment study.

Over the past 16 months, with extensive cooperation from Rhode Island commercial insurers and hospitals, we've collected and validated a comprehensive set of hospital claims data for calendar year 2010. We have also engaged Rhode Island plan executives, hospital executives and state officials in a series of meetings and communications designed to invite open discussion and consultation. The cooperation we have received has been outstanding. We are very appreciative of the time and effort put forth by all the people who have guided us on questions of data, methodology and interpretation.

This report is presented as a series of findings written for the general reader interested in payment for hospital care in Rhode Island. For the more specialized reader, Appendix A contains additional data while Appendix B describes the methodology we followed in compiling and analyzing the data.

This study was written by Kevin Quinn, Connie Courts, and Mary Day from the Payment Method Development team at Xerox. We received helpful assistance from our colleagues Angela Sims, Andrew Townsend, Kathleen Martin, Dawn Weimar, Wayne Akins and Susan Ryan. Except for Section 1.4 and Chapter 5, all statements and opinions are those of the authors and should not be attributed to OHIC, EOHHS or Xerox. The discussion in Section 1.4 and Chapter 5 is the responsibility of OHIC.

Important results from our analysis could not have been achieved without the assistance of 3M Health Information Systems and the Commonwealth Fund.

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Inpatient data were adjusted for differences in patient casemix using All Patient Refined Diagnosis Related Groups (APR-DRGs) while outpatient data were adjusted for differences in service mix using Enhanced Ambulatory Payment Groups (EAPGs). Both APR-DRGs and EAPGs are products of 3M. The Commonwealth Fund kindly agreed to republication of quality data from its very useful website, www.WhyNotTheBest.org. We emphasize that neither 3M nor the Commonwealth Fund bears any responsibility for our analysis and findings.

In addition to this report, a separate document that comprises two appendices is available at www.ohic.ri.gov.

I would like to thank you and your colleagues, especially Kim Paull, the OHIC Director of Analytics, for your guidance and assistance throughout this project. Anyone with questions may feel free to contact me at 859.317.9731 or connie.courts@xerox.com.

Sincerely,

A handwritten signature in black ink, appearing to read "Connie Courts". The signature is stylized and written in a cursive-like font.

Connie Courts
Project Director

Cc: Rick Jacobsen
Account Manager, Rhode Island
Xerox

1 Executive Summary: Variation is the Norm

1.1 Why This Study Was Done

Though recent healthcare reforms aim to expand healthcare coverage to millions of Americans, stemming the inexorable rise in healthcare costs continues to dominate health policy debates. Since 1999, health insurance premiums nationwide have risen 172 percent – or almost four times faster than wages, which have risen 47 percent.¹ As the amount of money spent on healthcare escalates, the resources left for education, public safety, infrastructure, and other critical public needs dwindle. The Affordable Care Act, whose reforms are estimated to bring coverage to 26 million more Americans by 2016, sharpens the need for serious cost containment solutions.² Demographics and technology further raise the stakes: An aging population and rapidly advancing medical technology mean there is no natural ceiling for rising healthcare costs.

To inform public policies that address rising healthcare costs, this study analyzes patterns in hospital payments, specifically the price of hospital care, in Rhode Island. Research indicates that among the factors that drive spending – such as population health status and the volume and intensity of treatment – the price of care is crucial.³ In Massachusetts, where growth in commercial payer spending between 2007 and 2009 hit 13.4 percent for inpatient care and 14.4 percent for outpatient care, essentially all of the inpatient increase and three-quarters of the outpatient growth reflected pure price growth.⁴ This report focuses on hospital services because hospitals are complex organizations, economic engines, and the largest category (33 percent) of total medical spending.⁵ Understanding payment patterns in hospitals illuminates a vast swath of our healthcare delivery system. This report builds upon previous work on commercial insurance hospital payments in Rhode Island published by the Office of the Health Insurance Commissioner (OHIC) in January 2010.⁶

Though the hospital payment system is complicated and fragmented, there are several realities that provide context for this study. First, public payers such as Medicare and Medicaid pay rates based on transparent, well-established formulas in contrast to confidentially negotiated rates among commercial insurers. Second, the literature shows that different payers routinely pay different prices for the same service, on the same day for the same type of patient. Some variation in payment rates is beneficial if it rewards high-value care. Previous studies, described in Section 3.5, suggest that this is not consistently the case and highlight a third widespread phenomenon – that commercial insurers tend to pay higher rates to larger, more prestigious hospitals, with little obvious connection between payment rates and quality of care.⁷

Finally, healthcare has a combination of characteristics that make it unique among markets:

1. The “product” is not well defined and ranges from an individual medical service, to treatment for a disease, to maintaining health.
2. Public sentiment tends to view the product as a social good, available to all, but does not provide it, pay for it or regulate it like other social goods, such as education and public safety.
3. The consumers (patients) are not the entities that pay for services.
4. Intermediaries (insurance companies) are used extensively to negotiate on behalf of private payers.
5. Several conditions for a well-functioning marketplace are not met. Information on price and quality is generally poor and asymmetric (one-sided); many services are used in emergent situations; and significant service monopolies and barriers to competition exist. Public policy could promote more efficient, equitable allocation of resources.⁸

These conditions are particularly true for hospitals – which are large, trusted community assets, provide complex acute services, and consume 33 cents of every healthcare dollar. The financing of hospital care has relied on an inconsistent public policy of rate setting for public payers and private negotiations for commercial insurers. On the one hand hospitals must compete with one another to thrive, and on the other they are longstanding community assets, functioning as virtual public utilities.

Within this context, OHIC and the Executive Office of Health and Human Services (EOHHS) commissioned this study to address several fundamental questions:

- How do average hospital payments vary among insurers and public payers?
- How do rates vary among hospitals?
- Does the conventional wisdom that private payers subsidize public payers hold true?
- Are there clear reasons why some hospitals are paid more than others for the same set of services?
- How do Rhode Island hospitals compare in the costs of providing care?

Answering these questions will help Rhode Island officials develop public policies for hospital payments that encourage medical care that is high quality and cost efficient.

The areas of study related to, but separate from, hospital payments that are not addressed in this study include: financial performance, future demand for and supply of hospital and other medical services, and the effects of federal health reform. All of these important topics merit their own focus as Rhode Island seeks to promote a high-performing medical care system that meets the needs of all Rhode Islanders.

1.2 How the Study Was Done

To develop a robust study that expands on previous OHIC and EOHHS work and allows for meaningful comparisons across hospitals and payers, we collected 2010 inpatient and outpatient claims-level data from the major public and private payers in Rhode Island. The study refers to five “payers”: Medicare fee-for-service (FFS), Medicare managed care, Medicaid FFS, Medicaid managed care and commercial. Within the managed care and commercial sectors, several individual companies compete with each other, but their payment data have not been broken out separately. Most of the analysis pertains to Rhode Island’s 11 general hospitals; for discussion of psychiatric care, the study also encompassed the two psychiatric hospitals.

The dataset for the study included 73 percent of inpatient stays and more than 62 percent of outpatient visits at the general hospitals, enabling the broadest view yet of Rhode Island’s hospital care market. With data from all payers housed in one dataset, we were able to compare payment levels from different payers across different hospitals – a level of analysis that few studies nationwide have been able to achieve. Comparisons between different payers and different hospitals were adjusted for differences in inpatient casemix and outpatient service mix. To test the robustness of our findings, the authors used different methods to address the same question, placing the greatest emphasis on findings that stood up across different methods.

It should also be noted that in the middle of the study period (July 1, 2010), Medicaid changed its fee-for-service payment method to one based on Diagnosis Related Groups. Subsequent to the study period, the Legislature also put in place limits on Medicaid managed care organization payments to hospitals that took effect immediately following this study period. The effects of those changes will be discussed in the relevant sections.

1.3 Ten Findings

This analysis found significant variation in how much hospitals are paid for a similar set of services. This variation occurred across every dimension – payers, hospitals, inpatient care categories and outpatient visit reasons. We also explored the applicability of factors commonly thought to affect payment levels from commercial payers. Wherever applicable, all findings reflected adjustments for differences between payers and hospitals in inpatient casemix and outpatient service mix to enable meaningful comparisons.

Findings are numbered in order of discussion within Chapters 3 and 4.

Dimensions of Hospital Payment Variation (All Adjusted for Differences in the Complexity of Care)

3.1: Substantial Variation Existed in Payments for Similar Care. Commercial payment levels were highest – 66 percent higher than Medicare FFS levels, which were lowest. Within the commercial market, the highest-paid hospital received twice as much per stay as the lowest-paid hospital.

3.2: Commercial Plans Tended to Pay More than Medicaid, which Tended to Pay More than Medicare. Commercial plans paid the most, as is true nationally. For inpatient care, Medicaid FFS had the second-highest payment level, making Rhode Island above average among states. Medicare FFS had the lowest payment level. Medicare and Medicaid managed care plans tended to pay similarly to Medicare and Medicaid FFS. Rankings were similar for outpatient care, except that Medicaid FFS was the lowest payer for outpatient care. Within a given hospital, average payment per inpatient stay varied considerably, and sometimes two-fold, depending on which insurance a patient had. Across all hospitals, commercial insurers paid 35 percent more than Medicaid managed care and 66 percent more than Medicare fee-for-service for similar services.

3.3: Commercial Plans Tended to Pay More to Lifespan and Care New England than to Other Hospitals. The five highest-paid hospitals belonged to either the Care New England or the Lifespan system. The four unaffiliated hospitals ranked next, followed by the CharterCARE hospitals, St. Joseph and Roger Williams. Rankings for inpatient and outpatient care differed, however.

3.4: Inpatient Specialties Showed Similar Patterns of Variation. Overall patterns of payment described above played out in similar fashion for maternity, mental health, orthopedics and oncology. For mental health – where our analysis was expanded to include stays at the two psychiatric hospitals – payment per day from the commercial plans ranged from \$1,211 at the lowest-paid hospital to \$1,745 at the highest-paid hospital.

3.5: Studies Elsewhere Found Even Wider Payment Variation. In Rhode Island, an earlier and more limited study by OHIC found similarly wide variation in commercial payment levels for inpatient care, with Care New England and Lifespan receiving the highest payment levels. Elsewhere, studies by the Commonwealth of Massachusetts, the Center for Studying Health System Change, the Government Accountability Office and the Medicare Payment Advisory Commission have all used synonyms of “wide” in describing variation in commercial payment levels for hospital care. While direct comparisons between studies are problematic, it appears that variation in Rhode Island may be narrower than elsewhere, reflecting the smaller number of marketplace participants.

Factors Affecting Payment Variation (All Adjusted for Differences in the Complexity of Care)

4.1: Hospitals Varied Considerably in Costliness. Cost was measured in order to analyze possible correlation with payment, not for purposes of analyzing efficiency. For

inpatient care, cost per stay at the most costly hospital, Women & Infants, was 73 percent higher than at the least expensive hospital, Roger Williams. Cost at the next most expensive hospital, St. Joseph, was over 25 percent higher than at the lowest-cost hospitals, Roger Williams, Landmark and Miriam. For outpatient care, Women & Infants was 71 percent more costly than the lowest-cost hospital, St. Joseph. For inpatient and outpatient care combined, the highest cost hospitals were W&I, Kent, Rhode Island, Memorial and Newport. Overall, Rhode Island's cost of care has been reported as similar to national benchmarks.

4.2: Higher Cost Hospitals Tended to Be Paid More, Especially Care New England and Lifespan. The three highest cost hospitals (W&I, RIH and Newport) all ranked in the top five for payment. The CharterCARE hospitals were notable for being both low-cost and low-paid in relative terms.

4.3: The Limited Evidence on Quality Did Not Show a Direct Link with Payment. Well-paid hospitals often say that payments reflect the high quality of care they provide. However, the limited evidence of hospital quality (e.g., patient satisfaction, processes of care, patient safety indicators) did not show a direct link.

4.4: The Evidence Did Not Appear to Support a Consistent “Cost Shift” from Public to Commercial Payers. Although commercial payment levels were higher than Medicaid and (especially) Medicare payment levels, the Rhode Island data did not consistently support the “cost shift” explanation that hospitals with more Medicare and Medicaid business commanded proportionally higher commercial payment levels.

4.5: The Concentrated Marketplace for Hospital Care Probably Affected Variation in Payment. Using a commonly accepted measure of market concentration, the Rhode Island market for inpatient care was “highly concentrated” on both the purchaser side and the provider side. With two major hospital systems negotiating with two major commercial insurers, variation in payment levels appears to be significantly influenced by negotiating leverage.

1.4 Policy Goals and Options for Attaining Them

This section was written by the Rhode Island Office of the Health Insurance Commissioner

Price variation for hospital services is a problem everywhere, and if payments vary less in Rhode Island, it may be because of our smaller, more tightly regulated provider and insurer markets.

Our healthcare delivery system is beset by poor information, misaligned incentives that prevent patients from making value-based choices, and a failing payment system. These

problems require more innovative payment reform solutions that eliminate the incentive to provide unneeded, unhelpful care.⁹

By publishing hospital and payer payment variation and exploring what causes these disparities, this study enhances public accountability and transparency of privately negotiated and state-set hospital payments. The dataset allows the authors, policy makers, and stakeholders to assess publicly the effects of and consider alternatives for these bifurcated hospital payment policies – a public system that relies on transparent formulae and a commercial insurance system that privately negotiates rates. Finally, the study provides concrete data to inform Rhode Island’s hospital service planning efforts and refine the state’s payment reform policies.

This study does not attribute inflationary elements – to the extent they exist in our hospital payment system – to any one entity. It instead provides clear evidence that every spoke in the healthcare payment and delivery system wheel contributes to these disparities and is thus responsible for contributing solutions. Patients, hospitals, insurers, and policy makers all have a stake in creating a fair, consistent and transparent hospital payment system that rewards value.

With these points in mind and given the findings of this study, the Office offers the following policy goals for a hospital payment system that relies on the United States’ current mixed public/private healthcare financing model.

1. **Payment Alignment:** Commercial and public hospital payment methodologies should be aligned to encourage high value (high quality and low cost) services.
2. **Payment Parity:** Commercial and public payments, to the greatest extent possible, should pay similarly (across hospitals and payers) for similar services of similar value.
3. **Payment Accountability:** Payment policies for commercial insurers should promote public accountability for care outcomes and costs, rather than the payment disparities that result from the current system of private negotiation.

The report lists five basic categories of options for policy makers to achieve these goals. In order of increasing comprehensiveness, they are:

1. Promote transparency and public accountability by repeating this study and regularly publishing rates of payment variation. The extent of rates of variation in hospital payments can become a measure of delivery system health.
2. Issue regulation or enact statute to influence the level of variation in private insurer contracts and reduce disparities among hospitals.
3. Enact legislation that sets an explicit benchmark, such as a percent of Medicare, for private insurer payments. Payment methods should closely resemble the public payer reliance on a transparent, consistent formula that is premised on appropriate allowable costs.
4. Enact legislation to require all payers to use a standard payment method, such as risk-based or global payment methods, perhaps with inflation caps but not with explicit rate setting.

5. Implement an all payer ratesetting system that sets payments for all inpatient and outpatient services for each hospital, with adjustments for all acceptable factors of variation such as teaching status, charity care and case/service mix.

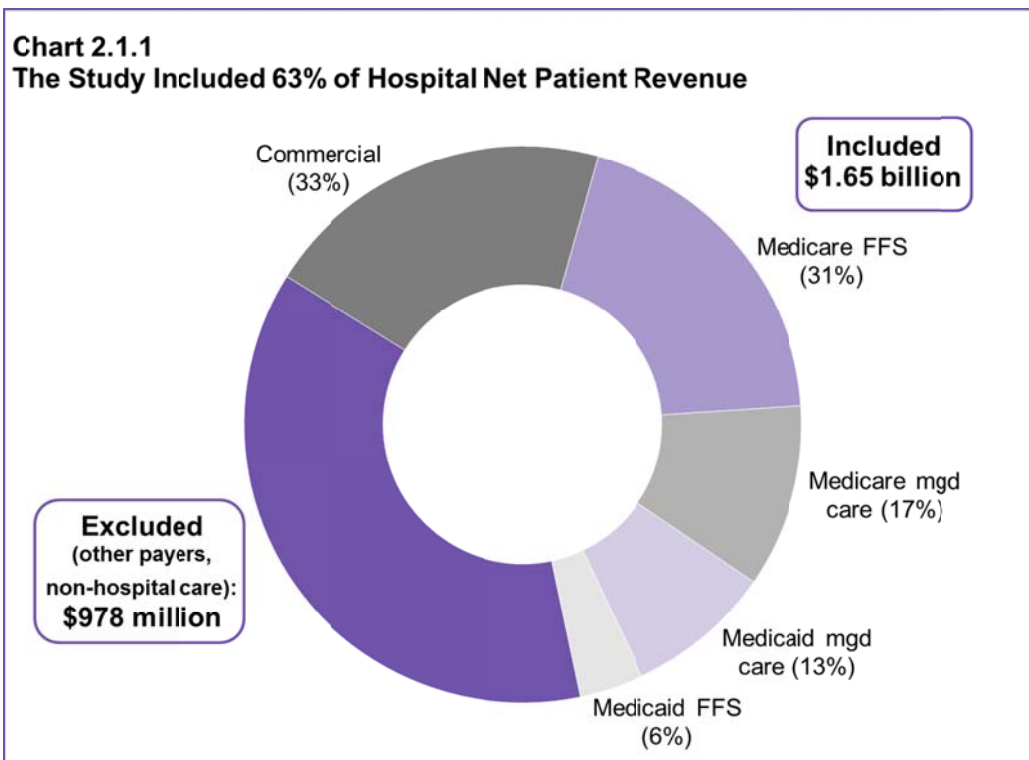
In considering these options, policy makers should also:

- Not inhibit payment reform.
- Note that Medicaid managed care contracts are subject to the same pricing pressures as commercial insurance, absent public intervention.
- Assess payment adequacy by payers by using established Medicare methods to consider costs, including bad debt, charity care and medical education. However,
 - Providers should demonstrate the public benefit of additional indirect costs, such as medical education, if they are to be considered allowable.
 - Policy makers should discourage state-specific cost accounting methodologies in favor of national (i.e. Medicare) standards.
 - Policy makers should note that an allowed cost is not necessarily an acceptable one. Absent some sort of cap, cost-based reimbursement is inherently inflationary.

2 Setting the Stage

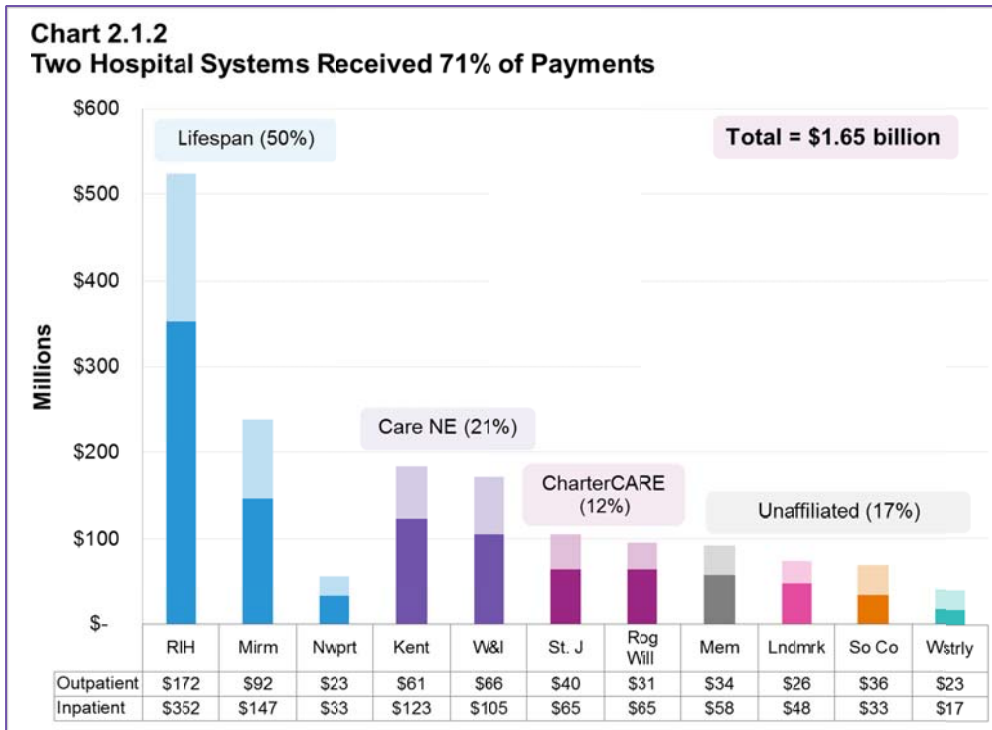
2.1 Payment for Hospital Care in Rhode Island

This study reflects detailed data covering about two-thirds of the net patient revenue of the 11 general hospitals in Rhode Island.¹⁰ As shown in Chart 2.1.1, the study included Medicare fee-for-service (FFS), Medicare managed care, Medicaid FFS, Medicaid managed care, and the commercial insurers Blue Cross Blue Shield of RI, UnitedHealthcare and Tufts Health Plan. Exclusions from the study included people without insurance, military healthcare (TRICARE), workers' compensation, some self-insured group plans, and out-of-state residents. Also excluded were non-hospital services owned by the hospitals (e.g., physician clinics, home health). The study included 73 percent of all inpatient stays reported by the American Hospital Association (AHA) and 62 percent of reported outpatient visits.¹¹ (The AHA visit count included non-hospital services.) Overall, we believe the analysis captures all the payers that play major roles in the marketplace dynamics of determining payment levels.



Because commercial plans typically negotiate payment rates with hospital systems, not individual hospitals, several results are discussed by hospital system. Lifespan is the biggest system, receiving 50 percent of payments that were within the scope of the study (Chart 2.1.2). It comprises Rhode Island Hospital, The Miriam Hospital, Newport Hospital, and Bradley Hospital, a psychiatric hospital that was outside the scope of this study (except for Section 3.4). The Care New England Health System received 21 percent of payments; it comprises Kent Hospital, Women & Infants Hospital, and Butler Hospital, another psychiatric hospital that was included only in Section 3.4. In 2009, St. Joseph Health Services of Rhode Island and Roger Williams Medical Center formed CharterCARE Health Partners and received 12 percent of payments in 2010. Four unaffiliated general hospitals – Memorial Hospital, Landmark Hospital, South County Hospital and Westerly Hospital – received the remaining 17 percent of payments.¹²

About 63 percent of payments in this study were for inpatient care. Despite the continuing growth in outpatient services, inpatient care remains predominant. Table 2.1.1 shows utilization by care category, which can be thought of as the principal reason for the admission. The other 37 percent of payments were for hospital outpatient care. Table 2.1.1 shows utilization by the primary visit reason; note that emergency room visits and same-day procedures accounted for just 22 percent of visits but 54 percent of payments, while lab visits accounted for 45 percent of visits but only 13 percent of payments.



We also analyzed the concentration of expenditures, which are reported separately (see Appendix Section A.2.1). The most expensive 10 percent of patients (excluding Medicare FFS, for which patient-level data were unavailable) accounted for 45 percent of payments. Such a high concentration of spending is commonly seen in healthcare data analyses, reflecting how sick the sickest patients tend to be. The most expensive 10 percent of patients (again excluding Medicare FFS) accounted for 59 percent of payments. In this case, the explanation is not that a few people received a lot of care, but rather that so many people received a little care. A large proportion of the population receives at least one outpatient service in a year; many services are simply lab tests.

For further information: Appendix Section A.2.1; Appendix Section B.5.1 re categorizing inpatient care; Appendix Section B.5.2 re categorizing outpatient care.

Inpatient Services					Outpatient Services				
Care Category	Stays	% of Total	Payment	% of Total	Visit Reason	Visits	% of Total	Payment	% of Total
Adult other medical	37,335	38%	\$344,778,482	33%	Emergency room (1)	194,552	17%	\$130,539,702	28%
Adult cardiac	13,945	14%	\$172,539,336	16%	Same day procedures (2)	60,604	5%	\$122,325,021	26%
Adult other surgical	8,290	8%	\$168,915,238	16%	Lab (10)	500,783	45%	\$58,489,712	13%
Adult orthopedics	8,387	9%	\$127,502,346	12%	Radiation/chemo (4)	16,945	2%	\$39,186,443	8%
Maternity	15,822	16%	\$74,495,982	7%	Standard imaging (8)	134,763	12%	\$34,322,475	7%
Adult oncology	3,388	3%	\$42,075,897	4%	Adv imaging (5)	28,971	3%	\$24,423,121	5%
Adult mental health	5,002	5%	\$39,893,358	4%	Miscellaneous (11)	41,061	4%	\$20,617,330	4%
Pediatric med/surg	3,655	4%	\$34,046,551	3%	Physical therapy etc. (3)	48,398	4%	\$12,226,434	3%
Sick newborn	666	1%	\$29,095,628	3%	Clinic (7)	57,049	5%	\$11,541,798	2%
Rehab	756	1%	\$10,903,958	1%	Other diagnostic (9)	31,087	3%	\$9,984,428	2%
Ped mental health	462	0%	\$2,395,598	0%	Mental health (6)	3,657	0%	\$3,220,019	1%
Total by category	97,708	100%	\$1,046,642,374	100%	Total by visit reason	1,117,870	100%	\$466,876,483	100%
Medicare FFS	Included		Included		Medicare FFS	502,930		\$136,082,521	
11 general hospitals	97,708				11 general hospitals	1,620,800		\$602,959,004	
All stays (AHA)	134,680		N/A		All visits (AHA)	2,622,415		N/A	
Study as a % of all	73%				Study as a % of all	62%			
Other hospitals	9,243				Other hospitals	91,052			

Notes:

- 1) Inpatient care category is a categorization developed by Xerox that is based on APR-DRG and patient age. See Appendix Section B.5.
- 2) Outpatient visit reason is a categorization developed by Xerox. Each visit (all services on one day) is assigned to a single visit reason based on the hierarchy shown in parentheses. For example, an ER visit that included imaging and lab revenue codes would be assigned to the ER reason visit category. "Lab visits" include only laboratory or miscellaneous revenue codes not already captured by the algorithm. See Appendix Section B.6.
- 3) "Other hospitals" include Bradley, Butler, Rehabilitation Hospital of RI, and out-of-state hospitals (except that out-of-state utilization by Rhode Island residents covered by Medicare fee-for-service was not available). See Appendix Section B.2.
- 4) "Maternity" includes obstetrics and well babies. A well baby and his or her mother are counted as two stays. Sick newborn refers to babies who typically require neonatal intensive care.
- 5) AHA data are from American Hospital Association, *Hospital Statistics 2012* (Chicago: AHA, 2012). Stay counts equal discharges as reported by AHA plus births. Outpatient visits include visits for hospital-owned services that are not hospital care, e.g., home health visits.
- 6) Totals may not sum to 100% due to rounding.

2.2 How We Analyzed Variation in Payment

We set out to compile, as completely as possible, a dataset of detailed claims for inpatient and outpatient care at Rhode Island hospitals, then compare payment levels on an “apples to apples” basis.

BCBSRI, United and Tufts provided us with claims data for their commercial large-group, commercial small-group, administrative services only (ASO), individual, Medicare managed care and Medicaid managed care lines of business. Neighborhood Health Plan of RI did the same for its Medicaid managed care business. EOHHS provided Medicaid fee-for-service claims. For Medicare FFS inpatient data, we used stay-level data from the hospital discharge dataset compiled by the Rhode Island Department of Health. That dataset, however, does not include payment figures, so we priced the Medicare FFS stays using publicly available Medicare payment rules. Medicare outpatient data are not available at the claim level; instead, we used aggregate figures from Provider Statistical and Reimbursement System (PS&R) reports provided by hospitals. Acquiring and validating the data occurred over an eight-month period with extensive assistance and cooperation from the plans.

The individual payers and lines of business were combined into five categories: Medicare FFS, Medicaid FFS, Medicare managed care, Medicaid managed care, and the commercial plans. When we refer to “payer,” we are referring to these combined categories. In practice, of course, BCBSRI, United, Tufts and Neighborhood are separate organizations that compete with each other in their various lines of business.

“Payment” and “cost” were defined specifically to refer to direct care for inpatients and outpatients covered by Medicare, Medicaid, BCBSRI, United and Tufts. “Payment” referred to the price for the service (also known as the “allowed amount”). “Cost” was calculated from data in each hospital’s Medicare cost report, which reflects both Medicare and non-Medicare patients. We defined cost to include allowances for bad debt and for charity care. Cost was also defined both including and excluding the cost of medical education. Other payments and costs (for example, patients with other forms of coverage, investment income, hospital-owned providers such as physician clinics and home health) were outside our analysis. Therefore, the financial data shown here will differ from other sources such as hospital financial statements.

Extensive effort was undertaken so that comparisons of payment and cost would be on an “apples to apples” basis, adjusting for the very different characteristics of patients insured by different plans and treated at different hospitals. For inpatient stays, the most appropriate adjustor for differences in patient casemix was All Patient Refined Diagnosis Related Groups (APR-DRGs).¹³ Like Medicare DRGs, APR-DRGs are a well-established methodology for grouping inpatients that are similar both clinically and in terms of typical use of hospital resources. Unlike Medicare DRGs, APR-DRGs were designed for all patients, including obstetric, neonatal and pediatric patients. For outpatient visits, the most appropriate adjustor for differences in service mix was Enhanced Ambulatory

Patient Groups (EAPGs).¹⁴ The EAPG algorithm groups all outpatient services and diagnoses into several hundred EAPGs. It takes into account, for example, differences between hospitals in the severity of emergency room patients seen, in the mix of ambulatory surgeries performed, and in the mix of ancillary services performed. In both cases, results were tested for robustness by using other adjustors, such as Medicare DRGs or Medicare Ambulatory Patient Classification (APC) groups. Table 2.2.1 shows the alternative measures of payment we used. In drawing findings from the data, we emphasized results that were robust across several comparison methodologies.

Measure	Applicability	Advantages	Disadvantages
Casemix-adjusted payment per stay, using APR-DRGs as the casemix measure	<ul style="list-style-type: none"> Inpatient care – all 	<ul style="list-style-type: none"> Best single adjustor for differences in casemix 	<ul style="list-style-type: none"> Not as accurate for mental health stays as for medical, surgical, obstetric, newborn and pediatric stays
Casemix-adjusted payment per stay, using Medicare MS-DRGs as the casemix measure	<ul style="list-style-type: none"> Inpatient care – adult medical and surgical 	<ul style="list-style-type: none"> Widely used 	<ul style="list-style-type: none"> MS-DRG casemix measure is based on Medicare population only
Payment relative to what Medicare would pay	<ul style="list-style-type: none"> Inpatient care (MS-DRGs) Outpatient care (APCs) 	<ul style="list-style-type: none"> Widely used Highly visible and well understood benchmarks 	<ul style="list-style-type: none"> Medicare payment methods, especially for inpatient care, were developed almost exclusively for the Medicare population
Pay-to-cost ratios	<ul style="list-style-type: none"> Inpatient care Outpatient care 	<ul style="list-style-type: none"> Directly addresses adequacy of payment Widely used 	<ul style="list-style-type: none"> Need to untangle impacts of differential costs from impacts of differential payments Analysts differ on whether specific items are appropriately included as “cost”
Pay-to-charge ratios	<ul style="list-style-type: none"> Inpatient care Outpatient care 	<ul style="list-style-type: none"> Allows comparison within a hospital of payment levels relative to the hospital’s charges 	<ul style="list-style-type: none"> Not comparable across hospitals, because of wide differences in hospital charge-setting practices
Payment per specific diagnosis related group (DRG)	<ul style="list-style-type: none"> Inpatient care 	<ul style="list-style-type: none"> Intuitively understandable Reflects relatively homogenous episodes of care 	<ul style="list-style-type: none"> Results only apply to the specific DRG
Payment per Enhanced Ambulatory Payment Group (EAPG)	<ul style="list-style-type: none"> Outpatient care 	<ul style="list-style-type: none"> Enables comparison of costs and payments across hospitals 	<ul style="list-style-type: none"> Adjusts for differences in hospital service mix, not patient casemix
Payment per clinical vignette	<ul style="list-style-type: none"> Outpatient care 	<ul style="list-style-type: none"> Intuitively understandable Reflects relatively homogenous episodes of care 	<ul style="list-style-type: none"> Results only apply to the specific vignette The vignette methodology had to be developed for this study
Payment per service basket	<ul style="list-style-type: none"> Outpatient care 	<ul style="list-style-type: none"> Combines a variety of very similar and common services into a single analytical unit Services are relatively homogenous across hospitals 	<ul style="list-style-type: none"> Results only apply to the specific basket of services Results for specific hospitals or payers can be misleading if their utilization patterns are markedly different from the rest of the industry
Payment per diem	<ul style="list-style-type: none"> Inpatient mental health 	<ul style="list-style-type: none"> Commonly used in analyzing mental health Automatically reflects differences in patient casemix that result in different lengths of stay 	<ul style="list-style-type: none"> Does not correspond to the stay, which is the clinically meaningful unit of analysis Does not reflect differences in patient casemix that result in different resource use per day

Notes:

1) APR-DRGs=All Patient Refined Diagnosis Related Groups; MS-DRGs=Medicare Severity DRGs; APCs=Ambulatory Payment Classification groups

2) The Medicare outpatient payment method is more accurately known as the outpatient prospective payment system. It includes APCs as well as separate fee schedules for lab services, therapy, and miscellaneous services.

The findings in this study reflect the marketplace in 2010. Although we have focused on questions of continuing interest, a 2012 analysis would generate different results. For example, the Medicaid fee-for-service program introduced a new payment method based on APR-DRGs July 1, 2010. As well, BCBSRI exited the Medicaid managed care business during 2010. And payment levels from the Medicaid managed care plans to the hospitals since 2010 have been limited by legislation (known as “Article 20”).

All results involving APR-DRGs and EAPGs were produced using data obtained through the use of proprietary computer software created, owned and licensed by the 3M Company. All copyrights in and to the 3M™ Software are owned by 3M. All rights reserved. 3M bears no responsibility for the use of its software in this study.

For further information: Appendix Section B.1 re construction of the analytical dataset; Appendix Section B.2 re defining payers and hospitals; Appendix Section B.3 re defining payment.

3 Variation in Payment for Hospital Care

In Chapter 3, we describe the variation in payment levels. In Chapter 4, we explore factors that may explain the variation.

3.1 Substantial Variation Existed in Payments for Similar Care

Variation is the norm in payment for hospital services. This is true for inpatient and outpatient care, regardless of how variation is measured, and even after adjusting for differences in patient casemix and services provided.

Chart 3.1.1 shows variation in payment for inpatient stays by hospital; Chart 3.1.2 shows variation for outpatient visits. The height of the bars reflects the variation from the lowest-paid hospital to the highest-paid hospital. The diamonds on the bars represent the average payment per stay or per visit for that payer. In both charts we show panels, reflecting alternative methods to measure payment. Both charts also exclude Medicare direct medical education payment as well as the direct cost of medical education.

Within each chart, the findings are similar across panels. There are also notable similarities across the inpatient and outpatient charts. Table 3.1.1 shows examples of payment variation for some common services.

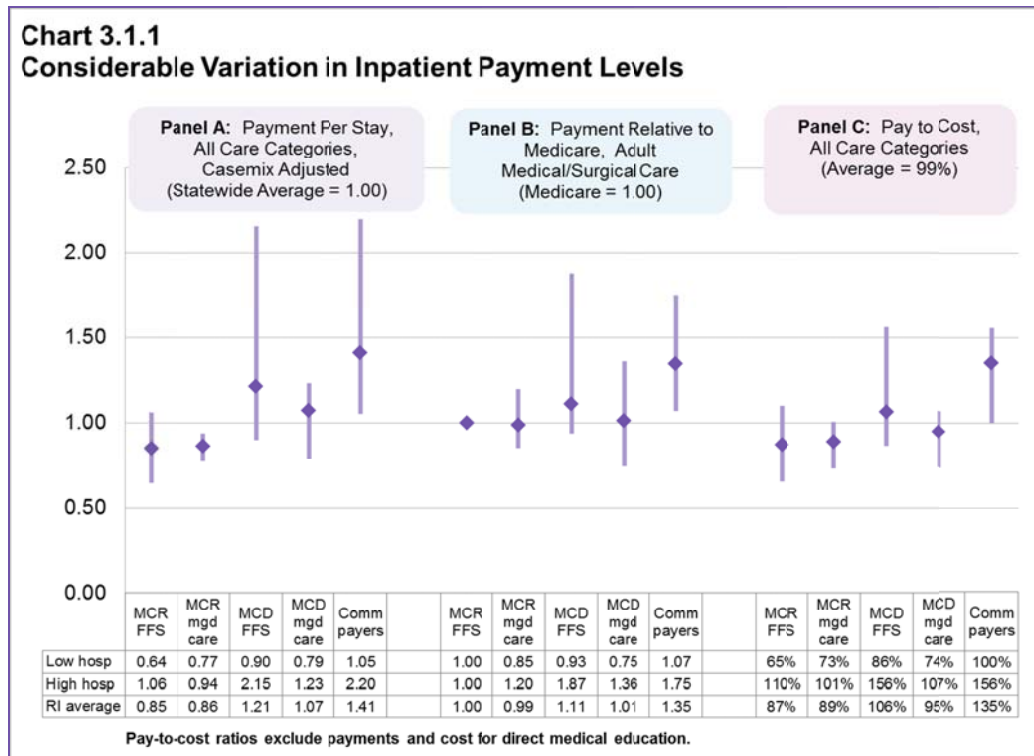
For inpatient care, the three measures were average payment for all stays using APR-DRGs for casemix adjustment, payment relative to Medicare for adult medical/surgical patients using Medicare DRGs for casemix adjustment, and pay-to-cost. For each measure, we found that commercial payers paid the most, followed by (in order) Medicaid fee-for-service, Medicaid managed care, Medicare managed care, and Medicare fee-for-service. In Panel A, for example, the commercial plans paid 66 percent more than Medicare FFS (i.e., $1.41 / 0.85 = 1.66$, where 1.00 was defined as average payment per stay from all payers in the 11-hospital analytical dataset).

For outpatient care, the three measures were average payment per visit using EAPGs to adjust for differences in service mix, payment relative to Medicare for all patients using APCs to adjust for differences in service mix, and pay-to-cost. In this chart, the different measures did not yield rankings that were exactly consistent. What was consistent was that commercial and Medicaid managed care payment levels were noticeably higher than Medicare FFS, Medicare managed care and (especially) Medicaid FFS. In Panel A, for

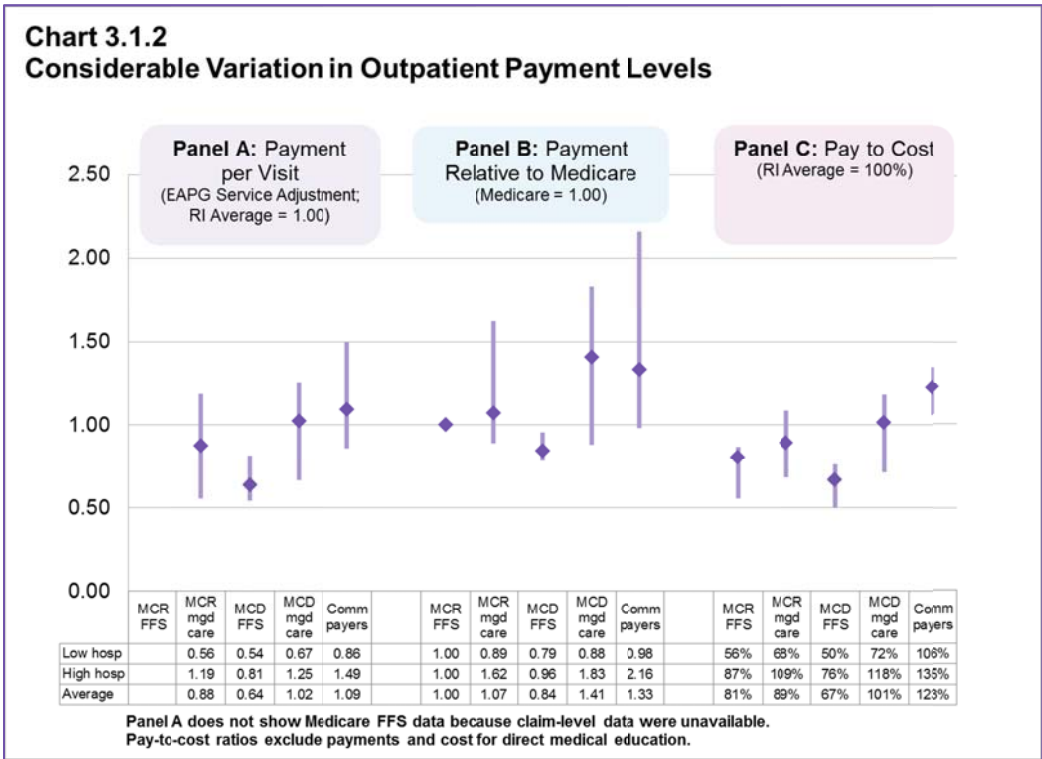
example, the commercial plans paid 70 percent more than Medicare FFS (i.e., $1.09 / 0.64 = 1.70$, where 1.00 was defined as average payment per visit from all payers in the analytical dataset).

The payer rankings were very similar across inpatient and outpatient care, except that Medicaid FFS was a relatively high payer for inpatient care in Chart 3.1.1 and a relatively low payer for outpatient care in Chart 3.1.2.

The commercial payers also showed substantial variation in payment levels to specific hospitals. Even after casemix adjustment using APR-DRGs, the highest-paid hospital was paid more than twice as much on average as the lowest-paid hospital for inpatient care, i.e., $2.20 / 1.05 = 2.10$ (Chart 3.1.1). Variation shown by the other measures was narrower yet still wide: Using Medicare payment levels for adult medical/surgical care as a benchmark, the highest-paid hospital was paid 64 percent more than the lowest-paid hospital. In terms of the pay-to-cost ratio, the highest-paid hospital received 156 percent of cost while the lowest-paid hospital received 100 percent of cost, for example. (The inpatient chart also shows wide variation in payment by Medicaid FFS, but that variation reflected a previous payment method that has since been replaced.)



Similar variation, though not quite as wide, was in outpatient payment (Chart 3.1.2). In terms of average payment per visit (using EAPGs to adjust for service mix differences), the highest-paid hospital was paid 73 percent more than the lowest-paid hospital (i.e., $1.49 / 0.96 = 0.73$). Medicaid managed care plan payments had more variation for outpatient care than for inpatient care.



Variation also manifested itself in payment for specific services (Table 3.1.1). For care of the mother in an uncomplicated vaginal delivery, Medicaid FFS paid \$3,386 on average, Medicaid managed care \$3,716 and commercial plans \$7,043. Within the commercial sector, the highest-paid hospital was paid 42 percent more than lowest-paid hospital (i.e., \$7,663 / \$5,413 = 1.42). For an outpatient colonoscopy (including related services), payment averaged \$745 by Medicare managed care plans, \$954 by Medicaid managed care plans, and \$1,440 by commercial plans. Within the commercial sector, the highest-paid hospital was paid 192 percent more than lowest-paid hospital (i.e., \$2,343 / \$802 = 2.92). For a “typical” emergency room evaluation (measured using an index of procedure codes, excluding related services), Medicaid managed care paid \$188, Medicaid FFS paid \$206, Medicare FFS \$231, Medicare managed care \$365 and commercial plans \$638 (ranging almost threefold by hospital from \$482 to \$1,214).

For further information: Appendix Section A.3.1.

Service	Medicare FFS	Medicare Mgd Care	Medicaid FFS	Medicaid Mgd Care	Commercial Plans		
	Overall	Overall	Overall	Overall	Overall	Lowest-Paid Hospital	Highest-Paid Hospital
Inpatient Care							
Pneumonia, severity 3 (APR-DRG 139-3)	\$8,518	\$9,217	\$10,374	\$11,401	\$12,566	N/A	N/A
COPD, severity 2 (APR-DRG 140-2)	\$6,496	\$6,761	\$5,615	\$9,163	\$12,627	N/A	N/A
Knee joint replacement, severity 1 (APR-DRG 302)	\$15,147	\$13,667	N/A	N/A	\$22,405	\$22,911	\$26,758
Vaginal delivery, severity 1 (APR-DRG 560-1)	N/A	N/A	\$3,386	\$3,716	\$7,043	\$5,413	\$7,663
Outpatient Care							
Colonoscopy, including related services	N/A	\$745	N/A	\$954	\$1,440	\$802	\$2,343
Evaluation of chest pain (note 1)	N/A	\$888	\$813	\$508	\$918	\$480	\$2,035
Typical ER evaluation (note 2)	\$231	\$365	\$206	\$188	\$638	\$482	\$1,214
Typical advanced imaging service (note 2)	\$398	\$413	\$321	\$395	\$486	\$376	\$808
Notes:							
1) Evaluation of chest pain refers to the total payment for a patient seen in the ER for evaluation of chest pain, including related services. Patients who were admitted to inpatient care or who underwent cardiac catheterization were excluded from this definition. See Appendix Section B.6.4.							
2) “Typical” ER evaluation and advanced imaging services refer to a weighted average index of procedure codes, e.g., 99281-99285 for ER evaluation. These figures refer to the specific procedure codes only; related services are excluded. See Appendix Section B.6.5.							
3) Data are shown only for services where the hospital performed at least 50 services for a specific payer in 2010. Other cells are shown as N/A.							
4) Examples shown are for purposes of illustration. Overall analysis of variation in cost and payment was done using all stays and visits, typically using APR-DRGs for casemix adjustment of inpatient care and EAPGs for service mix adjustment of outpatient care.							
5) Detailed Medicare FFS data for outpatient claims were not available, so the cells for colonoscopy and evaluation of chest pain are shown as N/A. Medicare FFS payment figures for the ER evaluation and advanced imaging service indexes were calculated using APC fees applicable in Rhode Island.							

3.2 Commercial Plans Tended to Pay More than Medicaid, which Tended to Pay More than Medicare

This section focuses on payment variation across payers, while the next section focuses on variation in payment by commercial plans to individual hospitals.

- **Commercial plans paid the most, as is true nationally.** Charts 3.1.1 and 3.1.2 showed unambiguously that commercial payments were highest. For inpatient care, commercial payment was 41 percent above the statewide average, using APR-DRGs for casemix adjustment. For outpatient care, it was 9 percent above the average, using EAPGs for service mix adjustment. This finding was expected; nationally, American Hospital Association data show that commercial payment has been well above Medicare and Medicaid payment for many years.¹⁵
- **Medicaid FFS ranked relatively high as a payer.** More surprising was that Medicaid FFS payment levels were relatively high. Casemix-adjusted Medicaid FFS inpatient payment levels were 21 percent more than the statewide average, equivalent to 106 percent of cost. For outpatient care, however, the Medicaid pay-to-cost ratio was 67 percent, for a combined pay-to-cost ratio of 97 percent. Nationally, the Medicaid inpatient/outpatient pay to cost ratio in 2010 was 93 percent, including supplementary payments that were largely excluded from our analysis.¹⁶ Rhode Island clearly ranks above the average state in Medicaid payment levels. We note, however, that FFS represents a smaller and smaller share of total Medicaid stays; in 2010, there were 5,854 Medicaid FFS stays but 18,706 Medicaid managed care stays. We also note that Medicaid FFS changed its payment method on July 1, 2010, so that payment is now calculated per APR-DRG. The result is that payment reflects casemix, not individual hospital charges or cost.
- **Medicare FFS payments ranked relatively low.** Medicare payment levels were lowest. In Chart 3.1.1, Medicare FFS inpatient payment levels (casemix-adjusted using APR-DRGs) were 15 percent below the statewide average, equivalent to 87 percent of cost (excluding direct medical education cost). In Chart 3.1.2, Medicare FFS payment rates amounted to 81 percent of cost, for a combined inpatient/outpatient Medicare FFS pay-to-cost ratio of 85 percent. Although comparisons are necessarily approximate, this ratio was lower than national ratios. According to AHA, the national Medicare pay-to-cost ratio in 2010 was 92 percent, a seven-point difference.¹⁷ According to the Medicare Payment Advisory Commission, in 2010 the national Medicare pay-to-cost ratios were 98 percent for inpatient care, 90 percent for outpatient care and 95 percent overall, a ten-point difference.¹⁸ Though pay-to-cost comparisons are approximate, other evidence corroborates this finding. National Medicare data show average payment per stay to Rhode Island hospitals in 2010 was 12 percent less than the U.S. average, without casemix adjustment. After adjustment for differences in Medicare casemix and local area wages, the gap exceeded 30 percent.¹⁹ It is unclear why the Medicare data show such a gap. The cost of hospital care in Rhode Island, on the other hand, was similar to the U.S. average.²⁰

- Compared with Medicaid FFS, Medicaid managed care payment levels were lower for inpatient care but higher for outpatient care.** For the Medicaid managed care plans, which set their own payment methods and levels within broad constraints, pay-to-cost ratios were more balanced: 95 percent inpatient and 101 percent outpatient, for a combined ratio of 97 percent.
- Medicare and Medicaid managed care payment levels tended to be closer to the corresponding FFS programs than to commercial payments.** For inpatient care, Medicare managed care payment levels were almost identical to Medicare FFS payment (Chart 3.1.1). For outpatient care, Medicare managed care payment was 7 percent more than FFS, but still closer to Medicare FFS than to commercial payment rates (Chart 3.1.2, Panel B). Medicaid managed care rates were near Medicaid fee-for-service rates for inpatient care, but well above fee-for-service rates for outpatient care. (The gap appears to reflect the relatively low FFS rates.) Overall, we find that Medicare and Medicaid managed care rates usually – but not always – are similar to the corresponding FFS programs. The similarity echoes a finding from the Community Tracking Study of 12 nationally representative large metropolitan communities, namely that insurers and hospitals tend to hold separate negotiations over their various lines of business.²¹ For this reason, we consider the “commercial payers” as separate from the Medicare and Medicaid managed care plans, even though both BCBSRI and United Healthcare had commercial, Medicare managed care, and Medicaid managed care lines of business in 2010.

Variation among payers at the statewide level translated into substantial variation for each of the Rhode Island hospitals, again after adjusting for differences in casemix (Table 3.2.1). Roger Williams saw the least variation in inpatient payment levels, but even here the highest payer paid 37 percent more than the lowest payer. Women & Infants, Kent and St. Joseph each experienced more than two-fold variation in payment levels from different payers.

Payer	Lifespan			Care New England		CharterCARE		Unaffiliated				RI
	RIH	Mirm	Nwprt	W&I	Kent	St. J	Rog Will	Mem	Lndmrk	So Co	Wstrly	
Medicare FFS	0.99	0.75	0.64	1.06	0.79	0.82	0.94	0.98	0.75	0.68	0.7	0.85
MCR mgd care	0.94	0.89	0.85	0.89	0.78	0.82	0.83	0.87	0.79	0.78	0.77	0.86
Medicaid FFS	1.03	0.9	1.17	1.57	1.22	2.15	0.99	1.57	0.99	0.99		1.21
MCD mgd care	1.15	0.94	0.85	1.14	1.23	1.02	0.79	1.12	0.8	0.79	0.89	1.07
Commercial	1.36	1.21	1.14	2.2	1.57	1.05	1.08	1.23	1.12	1.21	1.17	1.41
All	1.07	0.89	0.76	1.61	0.96	0.92	0.93	1.05	0.82	0.84	0.81	1.00
Ratio--highest payer to lowest	1.45	1.61	1.81	2.46	2.02	2.64	1.37	1.80	1.5	1.77	1.67	1.66

Notes:

1) This table shows relative payment levels, where 1.00 equals the average payment for all stays in the analytical dataset. For example, 0.99 in the top cell for Rhode Island Hospital means that Medicare FFS paid RIH 1 percent less than the statewide average. Numbers in each cell are comparable to each other because all data have been adjusted for differences in casemix using APR-DRGs.

2) Data are shown only for services where the hospital performed at least 50 services for a specific payer in 2010. Other cells are shown as blank.

For eight hospitals, commercial payment was highest in 2010. For the other three, Medicaid FFS was highest. This would not be true today, however. Medicaid implemented a new payment method July 1, 2010, which had the effect of reducing variation in payment levels by every measure. For all hospitals except Roger Williams, either Medicare FFS or Medicaid managed care was the lowest payer.

For further information: Appendix Section A.3.2.

3.3 Commercial Plans Tended to Pay More to Lifespan and Care New England than to Other Hospitals

This section focuses on variation in payment from the commercial plans to individual hospitals. Section 3.1 showed that the commercial plans had the widest variation for both inpatient and outpatient care.

Although we refer to the commercial payers as a single entity for purposes of comparison to Medicare and Medicaid, in fact BCBSRI, United and Tufts are separate companies that compete directly with each other for both beneficiaries and access to hospital care. Rates and other terms are confidentially negotiated. Nevertheless, the patterns of payment discussed in this section did tend to apply to the plans individually (for which data are not shown) as well as to the “commercial plans” taken together.

Overall, the five highest-paid hospitals all belonged to the two largest hospital systems, Lifespan and Care New England. Chart 3.3.1 shows inpatient comparisons adjusted for casemix using APR-DRGs, Chart 3.3.2 shows outpatient comparisons adjusted for service mix using EAPGs, and Chart 3.3.3 shows a weighted average of inpatient and outpatient payment levels. Overall, Women & Infants was paid the most, followed by Rhode Island Hospital, Kent, Miriam and Newport. (W&I and Kent are Care New England hospitals; RIH, Miriam and Newport are Lifespan.) The four unaffiliated hospitals were next, followed by the two CharterCARE hospitals, St. Joseph and Roger Williams.

Payment to W&I was especially notable. This dominance was not just in the hospital's well-known maternity and neonatal intensive care business; it also extended to its adult medical/surgical inpatient business and to outpatient care. After adjusting for casemix differences, commercial payers paid W&I about twice as much as they paid St. Joseph, Roger Williams and Landmark (Chart 3.1.1). The second-highest paid hospital, Rhode Island, received 20 percent-30 percent more than St. Joseph, Roger Williams or Landmark.

For outpatient care (Chart 3.3.2), Care New England and Lifespan were paid similarly – Care New England 19 percent above the statewide all-payer average and Lifespan 15 percent above. After W&I, the next highest-paid hospitals were RIH, Miriam, Newport (all Lifespan) and Landmark (unaffiliated). St. Joseph and Roger Williams were the two lowest-paid hospitals, as was also seen for inpatient care.

The dominant positions of Care New England and Lifespan were also seen in the earlier OHIC study of payment levels for adult medical and surgical inpatient care.²² Using a different casemix adjustor, that study also found that payments were highest to Care New England, then Lifespan, then the other hospitals.²³

For further information: Appendix Section A.3.3.

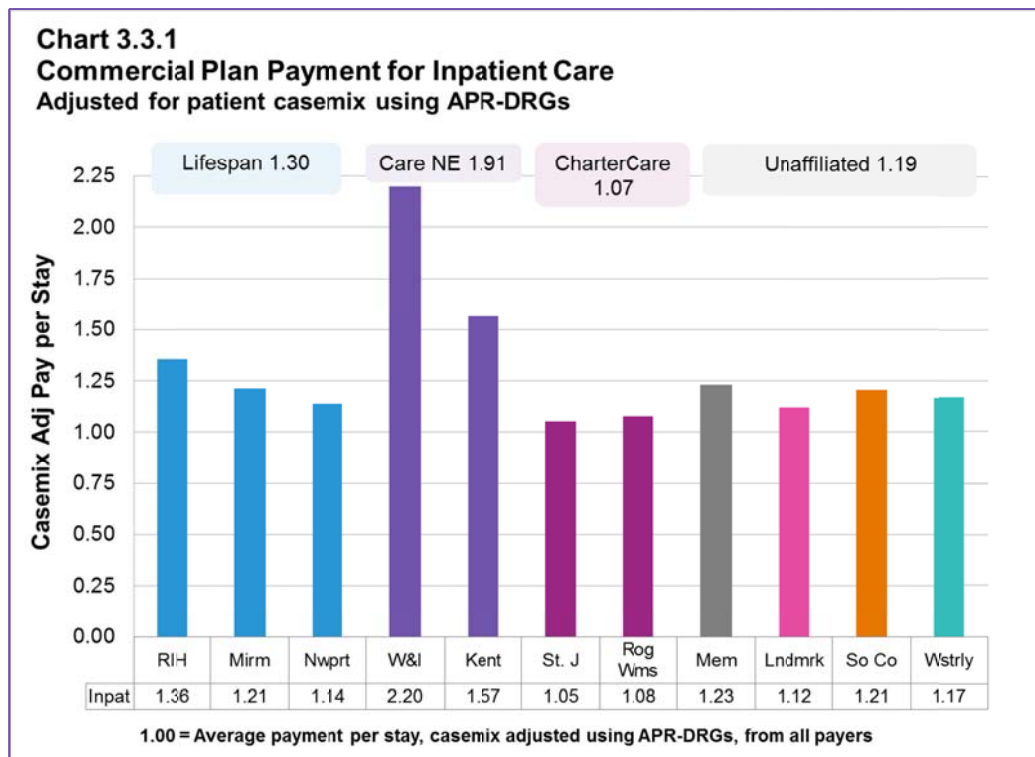


Chart 3.3.2
Commercial Plan Payment for Outpatient Care
 Adjusted for service mix using EAPGs

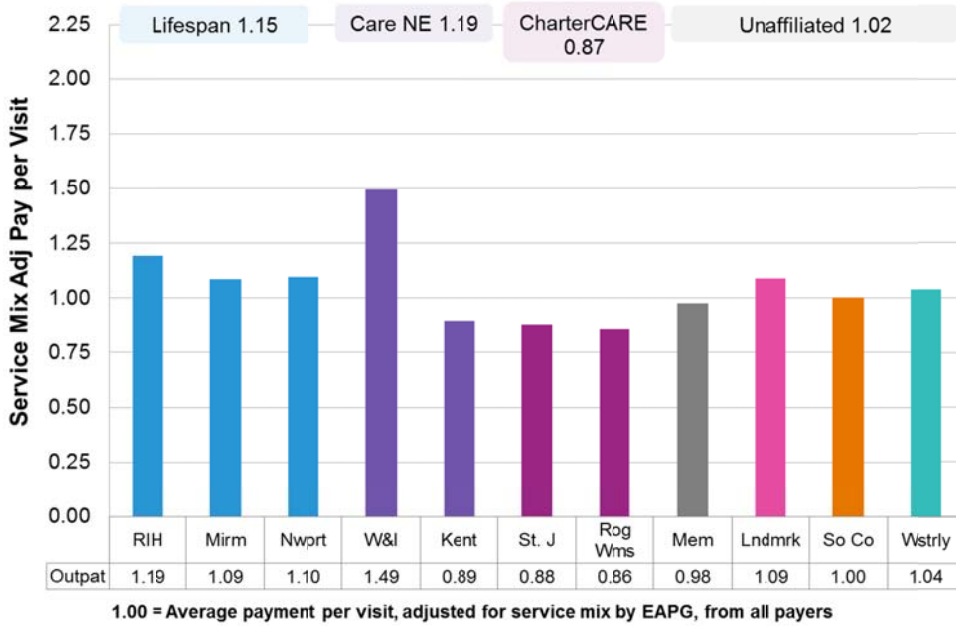
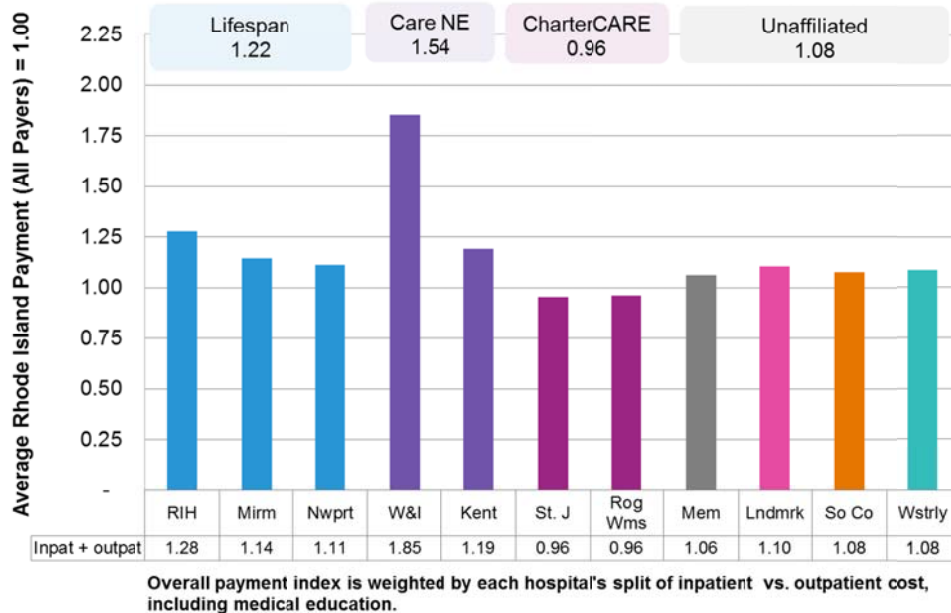


Chart 3.3.3
Commercial Payment Levels
 Inpatient and outpatient care combined



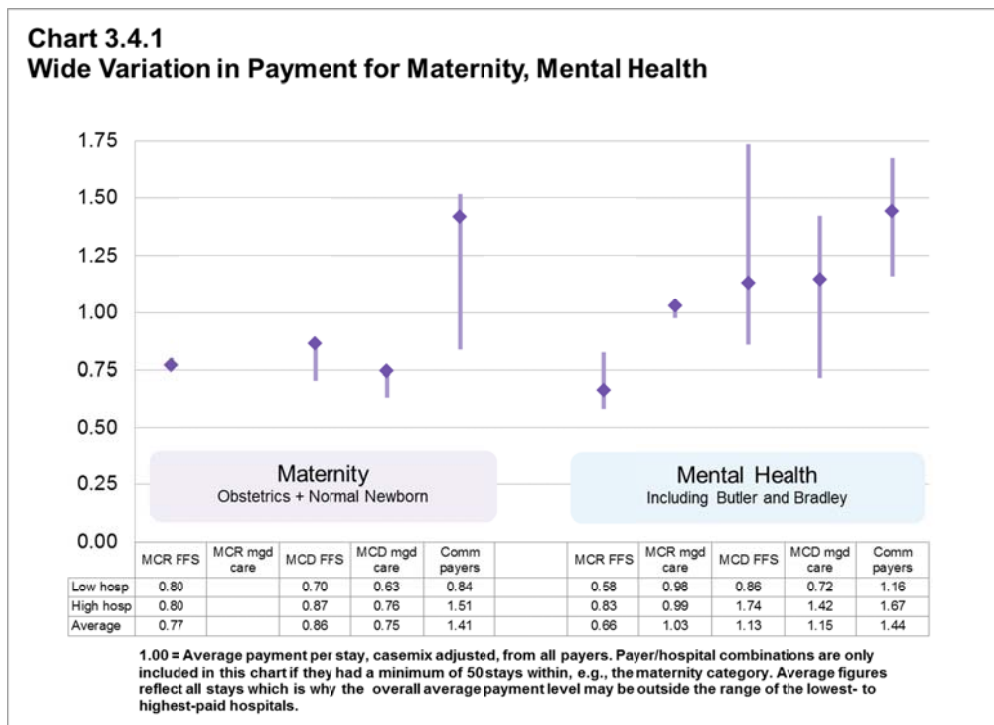
3.4 Inpatient Specialties Showed Similar Patterns of Variation

In this section, we consider variation in payment for maternity, mental health, orthopedics and oncology. We also would have looked at neonatal intensive care and pediatrics however in both cases there were too few instances where there were at least 50 stays at a specific hospital for a specific payer. For neonatal intensive care, 520 stays were at W&I, followed by 54 at Kent. For pediatrics, 3,429 stays were at RIH, followed by Memorial with 83 and Newport with 53.

Maternity

In the analytical dataset, 15,822 stays, or 16 percent, were for maternity, which we defined as obstetric care of the mother plus care of the normal newborn. (Sick newborns were considered a separate care category.) Of all maternity stays, 75 percent were at Women & Infants, followed by Kent with 10 percent. (Both are Care New England hospitals.)

Chart 3.4.1 shows that commercial payers paid nearly twice as much as Medicaid managed care, which was the other main payer for maternity. Commercial payment variation was notably wide, with the highest-paid hospital receiving 80 percent more than the lowest-paid hospital (i.e., $1.51 / 0.84 = 1.80$). Payments from Medicaid FFS and Medicaid managed care, by contrast, were within a much tighter range. This comparison takes into account differences in casemix, e.g., vaginal versus cesarean delivery and care of high-risk mothers.



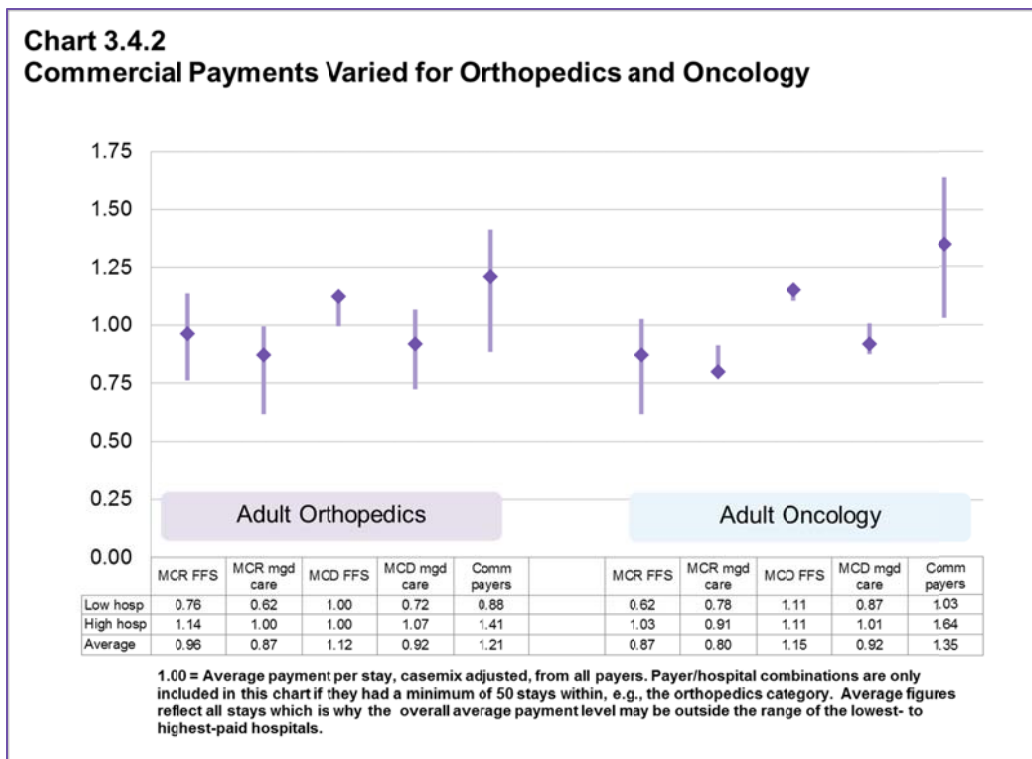
For all payers combined, payment for the typical maternity case (vaginal delivery, severity 1, plus care of the normal newborn), ranged from an average of \$2,545 at the lowest-paid hospital to \$3,400 at the highest-paid hospital.²⁴ Almost all of the volume was at the upper end of the range.

Mental Health

Although this study focused on the state's 11 general hospitals, this section also takes into account its two psychiatric hospitals, Butler and Bradley. In 2010, the general hospitals had 5,464 MH stays within the scope of the study's analytical dataset. Butler and Bradley had an additional 4,313 stays. Of all MH stays taken together, Butler had 34 percent, St. Joseph 16 percent, Rhode Island Hospital 13 percent, Kent 11 percent and Bradley 9 percent.

Payment for MH stays is typically on a per diem basis, although Medicaid FFS and perhaps some other payers calculate payment per stay. For psychiatric patients, differences in patient casemix usually play out in the lengths of stay. Chart 3.4.2 shows payment on a per diem basis, without further casemix adjustment. Results, however, would be similar if the analysis were done on DRG basis.

As was true of inpatient care overall, payments were highest from the commercial payers, followed by Medicaid (both FFS and managed care). The commercial payers, at an average of \$1,504 per day, paid more than twice as much as Medicare FFS. The lowest-paid hospital received an average of \$1,211 a day from commercial plans; the highest-paid, \$1,745.



In contrast to the other three types of care discussed in this section, variation in Medicaid FFS and Medicaid managed care was also quite wide. (Medicaid FFS variation would be lower today because of the new payment method introduced July 1, 2010.)

Orthopedics and Oncology

In our analytical dataset, there were 1,525 adult orthopedic stays and 1,327 adult oncology stays. Of the orthopedics stays, 31 percent were at RIH, followed by 16 percent at Miriam and 14 percent at Kent. Of the oncology stays, 26 percent were at RIH, 17 percent at W&I and 14 percent at Miriam.

Chart 3.4.1 shows that patterns of payment for these specialties were quite similar to those discussed above. Commercial payment levels were highest, followed by Medicaid FFS. Medicare managed care, however, not Medicare FFS, was at the low end. The range in payment by hospital, after casemix adjustment, was widest among the commercial payers, as was true of inpatient care in general.

For further information: Appendix Section A.3.4.

3.5 Studies Elsewhere Found Even Wider Payment Variation

Previous studies have all used some synonym of “wide” in describing variation in hospital payment by commercial payers. In this section, we summarize the previous Rhode Island study as well as studies from across the U.S.

Rhode Island

In 2010, the Office of the Health Insurance Commissioner published a study of payment variation that was limited to adult inpatients in fully-insured commercial plans.²⁵ Findings were quite similar to this study. Payment per stay, after adjustment for casemix using Medicare DRGs, varied widely. The Care New England system was paid the most, followed by the Lifespan system, then Memorial, then the other unaffiliated hospitals. The highest-paid hospital for medical/surgical care (Kent County) was paid 85 percent more than the lowest-paid hospital (South County).

Massachusetts

Several analyses have been published in the last several years, all finding wide variation in payment for hospital care (and physician care).

- **The Office of Attorney General** released studies in 2010 and 2011 that found wide variation in payment rates even after adjustment for differences in inpatient casemix.²⁶ In the 2011 report, for example, three major commercial plans – Blue Cross Blue Shield, Harvard Pilgrim and Tufts – each paid the hospital at the 90th percentile more than twice as much as the hospital at the 10th percentile. This

variation “was not adequately explained by differences in the quality of care,” according to the report. The OAG concluded that payers, providers, businesses and consumers “had not effectively controlled costs, in part, because the prices negotiated between insurers and providers were not designed to encourage or reward provider efficiency.” Instead, “prices reflect the relative market leverage of health insurers and health providers.”

- **The Division of Health Care Finance and Policy (DHCFP)** examined variation in commercial payments for specific services across hospitals, finding differences of at least three-fold for every service and sometimes six-fold or more.²⁷ Table 3.5.1 compares the degree of variation between Rhode Island and Massachusetts for four common inpatient conditions. (Because Massachusetts has seven times as many hospitals as Rhode Island, we were not surprised to see wider variation in Massachusetts.) The Massachusetts study found that payment variation appeared to be unrelated to differences in quality metrics (using the limited metrics available) or to hospitals shifting costs from public to commercial payers.
- **The Center for Health Information and Analysis**, a successor agency to DHCFP, analyzed inpatient and outpatient payments in 2010 from six commercial plans to 65 hospitals.²⁸ All comparisons were adjusted for differences across plans and hospitals and expressed in relative terms within each plan’s book of business. All plans paid substantially more to some hospitals than to others for similar care. The bigger plans had less variation, but even BCBSMA paid the highest-paid hospital almost three times more than the lowest-paid hospital. Hospitals with consistently high payment levels from different plans tended to have high market share, system affiliation, teaching hospital status, and/or be geographically isolated. Status as a hospital that served a disproportionate share of insured and Medicaid patients was a separate factor associated with consistently low payment levels.

Table 3.5.1 Variation in Inpatient Payment by Private Plans for Specific Inpatient Services						
APR-DRG			Median Hospital		Difference from Lowest-paid Hospital to Highest-paid Hospital	
	RI Low Hospital	RI High Hospital	RI	MA	RI	MA
139-3 Pneumonia, severity 3	\$9,330	\$12,538	\$11,967	\$12,420	30%	1350%
140-2 COPD, severity 2	\$7,207	\$21,291	\$10,691	\$7,455	200%	520%
302-1 Knee joint replacement, Sev 1	\$18,041	\$26,758	\$21,882	\$21,241	50%	980%
540-1 Cesarean delivery, Severity 1	\$6,334	\$12,405	\$7,935	\$7,598	100%	490%

Notes:

- 1) The source for the Massachusetts data is Massachusetts Executive Office of Health and Human Services, Division of Healthcare Finance and Policy, *Massachusetts Healthcare Cost Trends: Price Variation in Healthcare Services* (Boston: DHCFP, June 2011), p.9.
- 2) In 2010, Rhode Island had 11 general hospitals while Massachusetts had 79. Rhode Island figures are for hospitals with at least five stays for each DRG, while the Massachusetts figures are for hospitals with at least 30 stays for each DRG. Rhode Island data are for 2010 while Massachusetts data are for 2009.

Commercial Plans in Seven Markets

In a 2010 study, the Center for Studying Health System Change (HSC) studied payment variation in Cleveland, Indianapolis, Los Angeles, South Florida, Milwaukee, Richmond (VA), San Francisco and rural Wisconsin.²⁹ The study was commissioned by Catalyst for Payment Reform, a group of large employers. Aetna, Anthem Blue Cross Blue Shield, Cigna, and UnitedHealth Group provided data on average payment levels to individual hospitals, all relative to Medicare.

HSC found “dramatic” variation in payment levels across the seven markets and especially within each market. For inpatient care, the hospital at the 75th percentile within a market typically received 30 percent to 50 percent more payment than the hospital at the 25th percentile. In California, the gap was closer to 100 percent. For outpatient care, variation was similar (and again more pronounced in California).

“Few would characterize the variation in hospital and physician payment rates found in this study to be consistent with a highly competitive market,” according to the study’s author, Paul Ginsburg. He offered two contrasting options for policy makers: strengthen competitive forces in the marketplace or constrain payment rates through regulation. The study did not seek to explain variation by examining factors such as cost, quality, or cost-shifting.

FEHBP Plans in 232 Markets

Using 2001 data, the Government Accountability Office studied variation in payment for inpatient care across 232 metropolitan hospital markets.³⁰ Data were drawn from several large national preferred provider organizations that served the Federal Employee Health Benefits Program, which insured over eight million people in 2001. Comparisons were adjusted for differences in local area wages and in inpatient casemix (using APR-DRGs).

Although the study did not examine variation within markets, it found wide variation across markets. Rates in the market at the 90th percentile (Cincinnati) were 63 percent higher than in the market at the 10th percentile (Olympia, WA). (The Providence-Fall River-Warwick market ranked at the 83rd percentile, with payment rates much below Boston.)

In analyzing factors affecting variation, GAO found that higher payment rates were associated with less competition among hospitals and with less HMO presence in the local market. (The hypothesis was that a large HMO presence gave payers leverage over hospitals.) GAO found no evidence of hospitals shifting cost to commercial payers from Medicare and Medicaid.

Commercial Payers in 344 Markets

Using 2008 data, the Medicare Payment Advisory Commission (MedPAC) reported preliminary results on variation in hospital payment levels across 344 metropolitan areas, using a database of 1.2 million stays from commercial plans.³¹ Even after adjustment for casemix differences (using Medicare DRGs) and wage area differences, average

payment rates across markets varied six-fold. After excluding extreme values, the variation was still four-fold. Although MedPAC examined variation within markets for physician services, it has not yet done so for hospital care. Nor has it explored reasons for variation in payment levels. The agency said its work on this topic would continue.

4 Factors Affecting Payment Variation

In Chapter 4, we explore common explanations for the variation in commercial payment levels across hospitals. These include differing cost levels by hospitals (Sections 4.1 and 4.2), the quality of hospital care (Section 4.3), “cost shifting” from Medicare and Medicaid, (Section 4.4) and market structure (Section 4.5).

4.1 Hospitals Varied Considerably in Costliness

The data assembled for this study also enabled comparisons of the relative cost of care across hospitals. All cost figures in this section reflect care for all patients within the analytical dataset, including public and commercial plans.

Any such analysis must take into account differences in what the hospitals do. For inpatient care, we adjusted cost per stay by APR-DRG, that is, by the casemix of the patients treated. Casemix was highest at Miriam Hospital, which had unadjusted average cost per stay of \$12,190 (excluding medical education). Casemix was lowest at Women & Infants, whose unadjusted cost of \$6,806 reflected its large numbers of relatively inexpensive obstetric patients and normal newborns. After using casemix adjustment to put these hospitals on the same playing field, W&I actually had higher cost per stay – \$15,533 vs. \$9,467 at Miriam.

For outpatient care, we adjusted cost per visit by EAPG, that is, by the mix of services provided. (An adjustor for patient characteristics, analogous to APR-DRGs, has not been developed.) A hospital that provides a large amount of outpatient surgery and chemotherapy, for example, will have higher costs than a hospital that mostly provides lab and x-ray services. Application of EAPGs enables apples-to-apples measurement of cost levels.

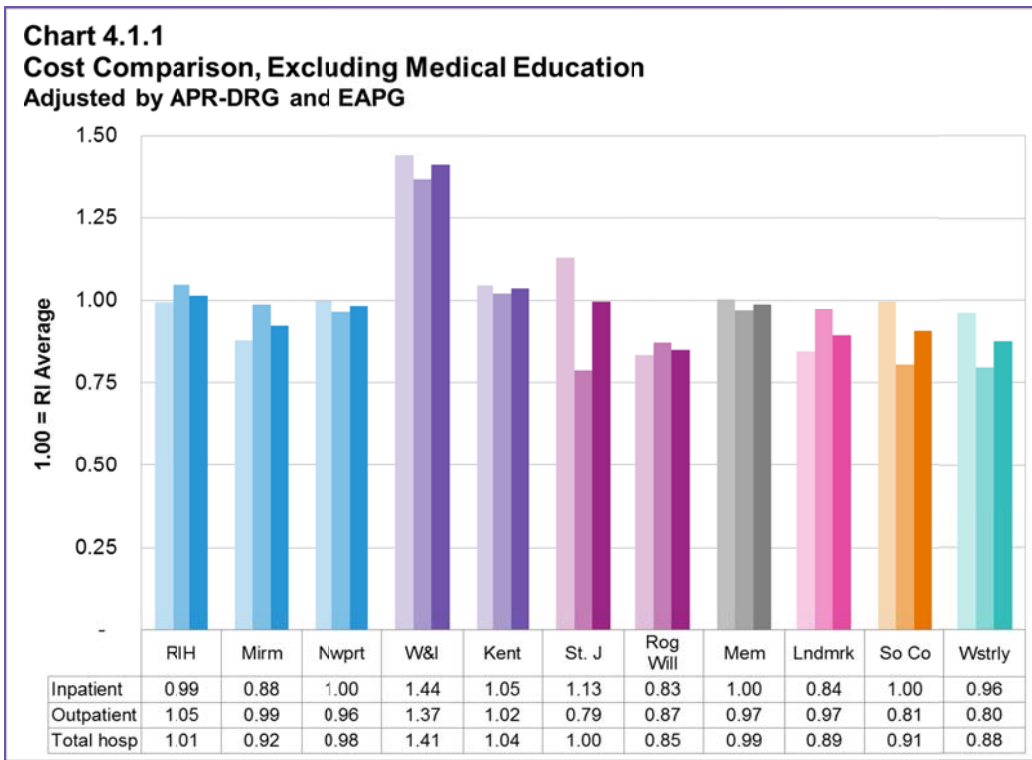
In describing the relative cost positions of the Rhode Island hospitals, we do not use the word “efficiency.” Measuring efficiency requires judgments about value, that is, comparisons of benefit versus cost. Costs by themselves are neither good nor bad. In comparing cost levels across hospitals, adjusting for differences in inpatient casemix and outpatient service mix are minimum requirements. True, a hospital may have high costs simply because it is inefficient. But high costs also may reflect capital improvements, large amounts of charity care, more-than-minimal staffing levels, and other considerations. For purposes of this study, what matters is not why hospitals have

different cost levels but rather the relationship, if any, between variation in cost and variation in payment.

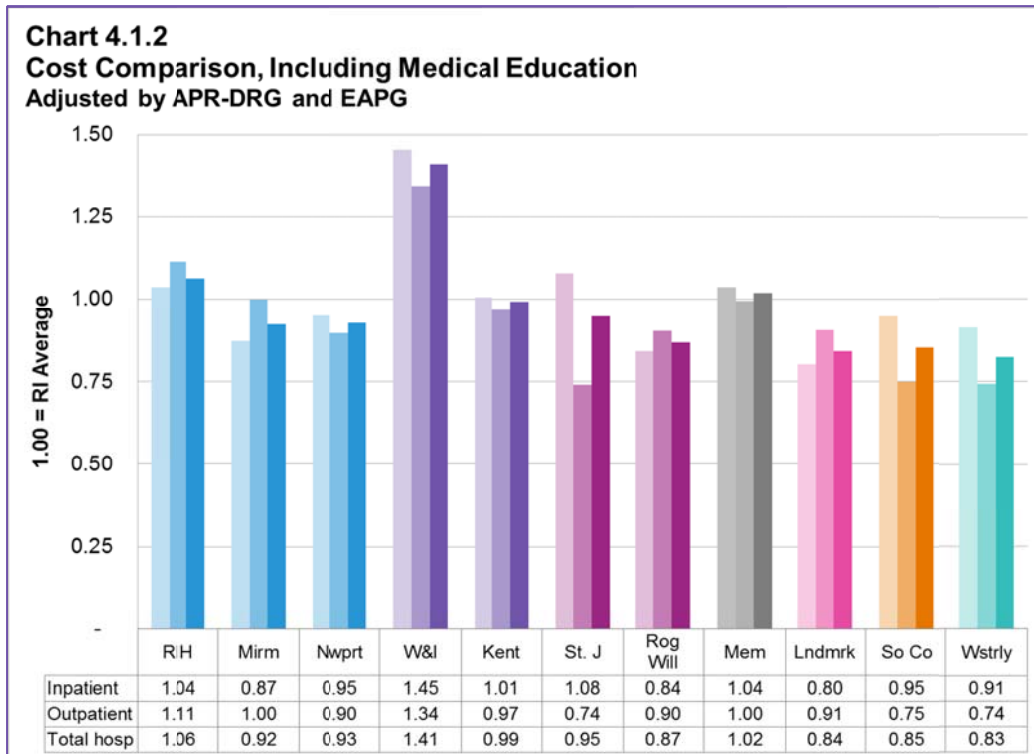
Charts 4.1.1 and 4.1.2 show the results. In each chart, 1.00 is defined as the average cost per unit (i.e., inpatient stay, outpatient visit) in Rhode Island. For each hospital, the inpatient and outpatient index values were combined into a “total hospital” index value weighted by each hospital’s split between inpatient and outpatient cost (typically about 60 percent/40 percent). Chart 4.1.1 excludes the cost of medical education while Chart 4.1.2 includes medical education. (Medical education refers to salaries and other costs directly related to training interns and residents. Indirect costs, such as the tendency of new doctors to order a lot of tests, are included in both charts.) All cost figures included allowances for the cost of charity care and bad debt.

In reviewing the results, we caution against over-emphasizing small differences. It would be inappropriate, for example, to interpret the small difference between Landmark and Miriam in total hospital cost as proof that Landmark had lower cost. It would be better to infer that the two hospitals had similar cost levels and that both had lower costs than, for example, Rhode Island Hospital and Memorial.

The following list of findings refers to Chart 4.1.1, which excluded the direct cost of medical education. (Not all hospitals incur medical education costs.) Findings were very similar when medical education was included; the figures can be calculated from the data in Chart 4.1.2.)



- **Inpatient cost varied widely.** Casemix-adjusted cost per stay at Women & Infants was 73 percent higher than at Roger Williams (i.e., $1.44 / 0.83 = 1.73$). The relatively high cost level at W&I was not due solely to its maternity and neonatal services; W&I also had the highest cost per adult medical/surgical stay. Even excluding W&I, cost at the next highest hospital (St. Joseph) was over 25 percent higher than at the lowest cost hospitals (Roger Williams, Landmark and Miriam.)
- **Outpatient cost also varied widely.** The cost per visit (after service mix adjustment) at W&I was 73 percent higher than at St. Joseph (i.e., $1.37 / 0.79 = 1.73$). Even excluding W&I, cost at the next highest hospital (RIH) was at least 25 percent higher than at the lowest cost hospitals (St. Joseph, Westerly and South County).
- **For most hospitals, inpatient and outpatient costs were similar in relative terms.** As one might expect, the rankings of hospitals by cost tended to be similar in the inpatient and outpatient departments. Examples included RIH, W&I, Kent and Memorial.
- **Other hospitals differed between inpatient and outpatient care.** St. Joseph, South County and Westerly were exceptions. In comparison with other hospitals, the relative cost of inpatient care was noticeably higher than the cost of outpatient care.
- **Total hospital costs varied considerably.** Taking into account both inpatient and outpatient care, Women & Infants was unambiguously the highest-cost hospital. Kent, RIH, St. Joseph, Memorial and Newport also had relatively high costs. The remaining five hospitals were clustered at the low end of relative cost levels.



Differences in cost among hospitals reflect many factors besides inpatient casemix and outpatient service mix. Labor costs, which represent about two-thirds of total cost, depend both on the mix of staff (e.g., RN vs. LPN) and on wage and benefit levels.³² Medicare considers Rhode Island to be a single market for hospital staffing, although it allows most Rhode Island hospitals to be paid as if they competed in the more expensive Boston market.

Other important influences on the costs shown in Charts 4.1.1 and 4.1.2 include capital costs such as depreciation, financing costs such as interest, purchasing practices, and capacity utilization. In 2010, for example, Rhode Island hospitals operated at 69 percent of inpatient capacity, higher than the national average (65 percent) but slightly lower than the New England average (71 percent).³³

Overall, the cost of inpatient care in Rhode Island was almost identical to the U.S. average, after taking into account that wages tend to be higher and patients sicker in Rhode Island (and New England) than the national benchmark.³⁴ With adjustments for casemix and wage areas, the *Almanac of Hospital Operating and Financial Indicators* reported the median Rhode Island hospital's cost per stay in 2009 was less than Vermont, Maine and New Hampshire but 14 percent higher than Massachusetts and 19 percent higher than Connecticut. An earlier study by the Rhode Island Department of Health that used the same source data, but for 2004, also showed that the cost of care in Rhode Island was almost identical to the national average.³⁵ That study, however, reported that care in Rhode Island was less expensive than in Massachusetts or Connecticut.

For further information: Appendix Section A.4.1; Appendix Section B.4 re the cost estimation methodology.

4.2 Higher Cost Hospitals Tended to Be Paid More, Especially Care New England and Lifespan

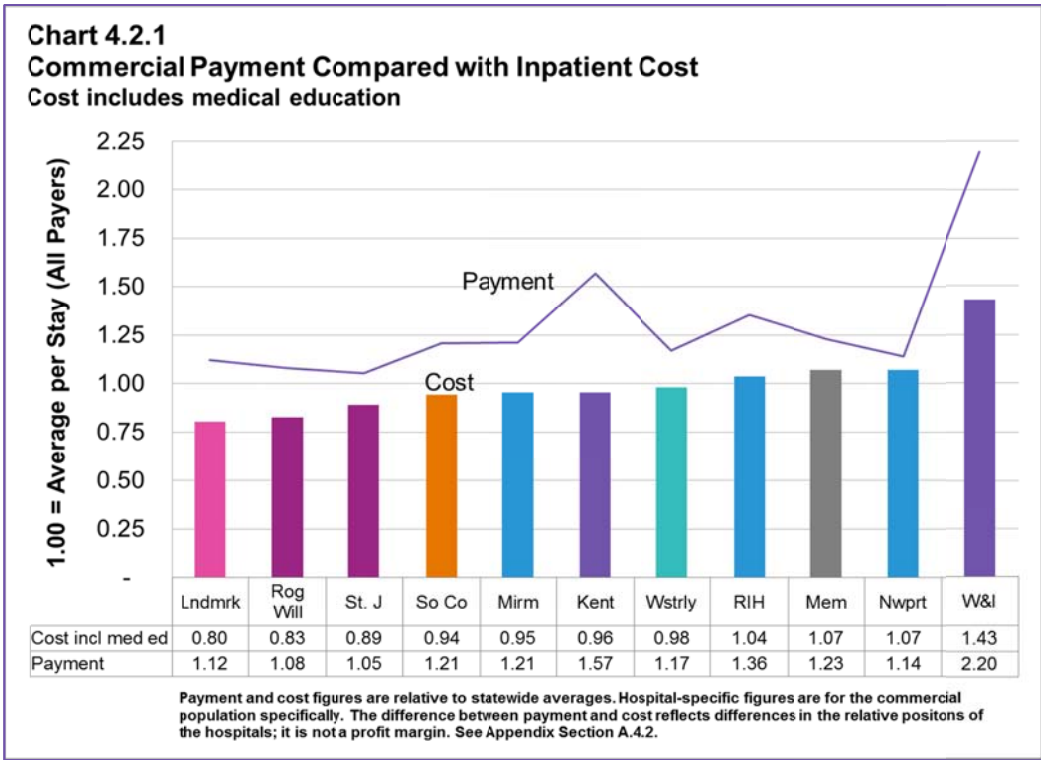
What connection, if any, existed between the payment variation described in Section 3.3 and the cost variation described in Section 4.1? In a well-functioning market, payments and costs do not necessarily track together, unless high-cost providers also produce high-quality products. A payment system based on value would not automatically pay for rising hospital costs. In such a market, casemix-adjusted payments would be similar for all hospitals. The charts below would show a generally flat payment line with low pay-to-cost ratios at higher-cost hospitals.

A second possibility, which is illustrated in this section, is that payments would tend to be higher for higher-cost hospitals, particularly system-affiliated hospitals. Pay-to-cost ratios,

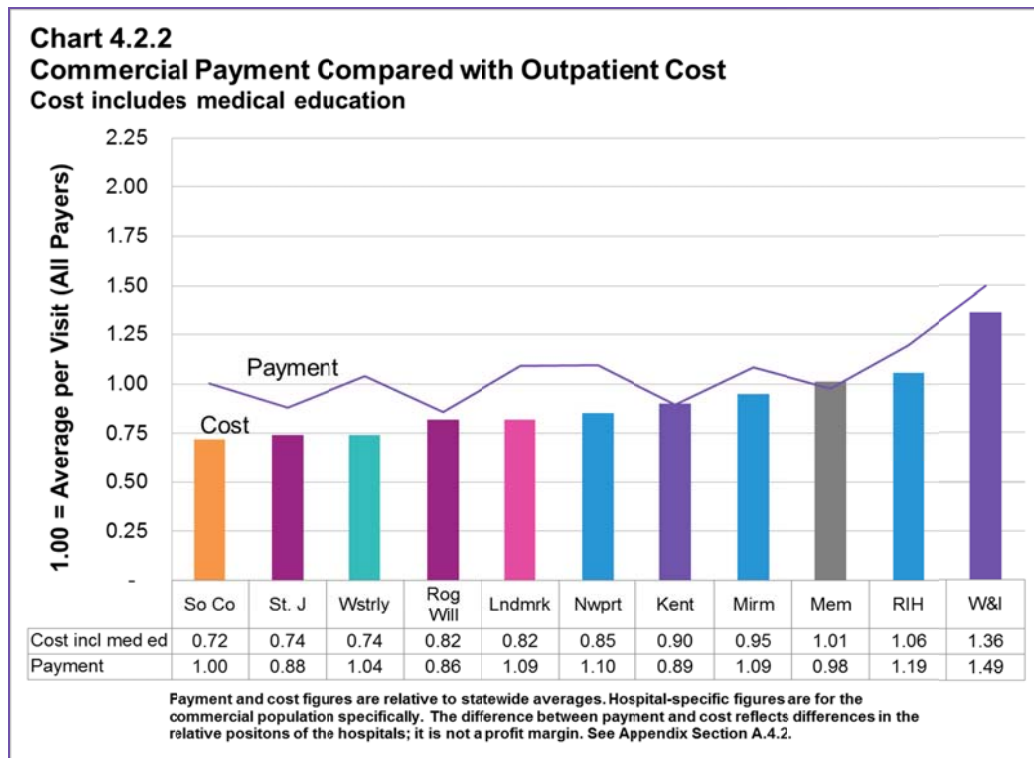
while varying among hospitals, would depend on both the cost the hospital incurred and the payment level it negotiated.

The charts in this section compare commercial payments with hospital cost levels. The hospitals are ranked in increasing order of cost, adjusted for inpatient casemix and outpatient service mix. The charts show a tendency for the higher-cost hospitals to be paid more when inpatient and outpatient results are combined, especially the Lifespan and Care New England hospitals. (The Lifespan hospitals include RIH, Miriam and Newport; the Care New England hospitals include W&I and Kent.)

- **For inpatient care**, Chart 4.2.1 shows that the highest-cost hospital (Women & Infants) had the highest commercial payment level. The next two highest-cost hospitals (Newport and Memorial) received relatively low payment levels, however. The two CharterCARE hospitals (St. Joseph and Roger Williams) were notable for being both low-cost and low-paid relative to the other hospitals.



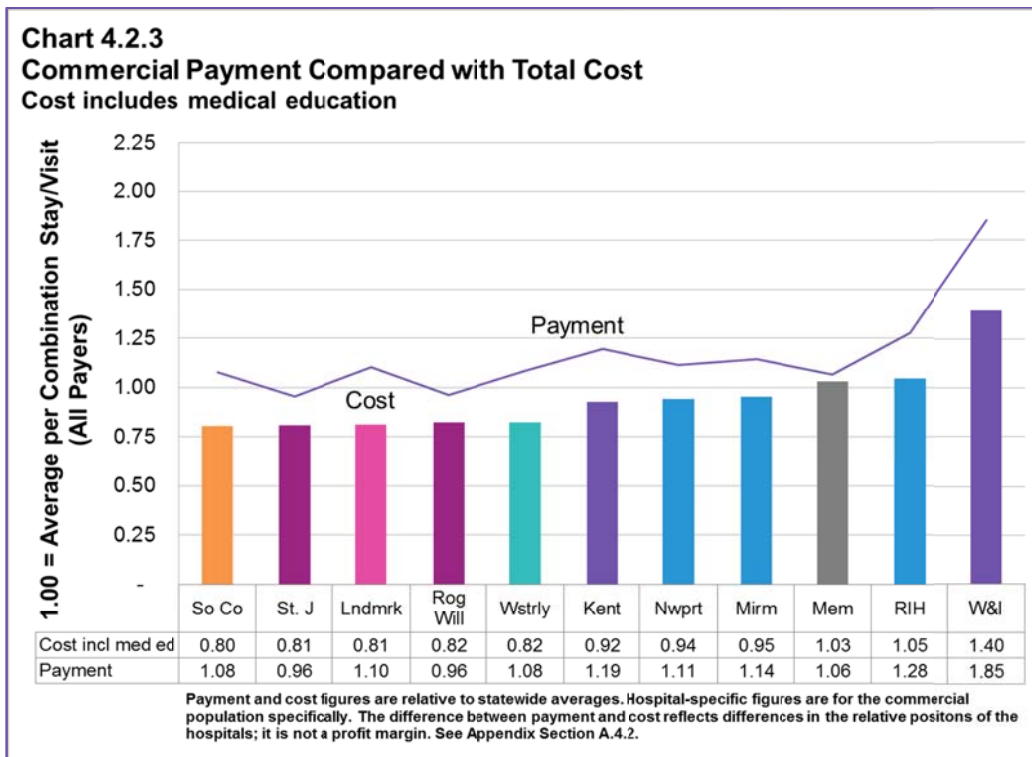
- **For outpatient care**, Chart 4.2.2 shows a clearer tendency for more costly hospitals to receive higher payment. The two highest-cost hospitals (W&I and RIH) were also the highest-paid.



- **For inpatient and outpatient care combined**, there was a tendency for payments to track costs. As shown in Chart 4.2.3, the three highest cost hospitals (W&I, RIH and Newport) all ranked in the top four for payment and are all system-affiliated hospitals. Again, the CharterCARE hospitals were notable for being both low-cost and low-paid in relative terms.

The relationship between hospital cost and payment has been the subject of extensive research and analysis nationwide. Analysts agree that casemix and service mix is essential and that revenue must exceed cost if hospitals are to stay in business. The challenge becomes untangling cause and effect. For example, are costs at the CharterCARE hospitals relatively low because their payments are relatively low? Are payments to W&I and RIH relatively high because payers are willing to cover their higher costs, perhaps because of higher quality, service dominance, a sense of responsibility for the relatively low payment levels from public payers, or because the hospitals hold the upper hand in negotiations? To these questions we now turn.

For further information: Appendix Section A.4.2.



4.3 The Limited Evidence on Quality Did Not Show a Direct Link with Payment

Well-paid hospitals often say that payments reflect the high quality of care they provide. This may well be true. The limited evidence on hospital quality in Rhode Island, however, did not show a direct link between payment and quality.

Methods of measuring the quality of hospital care (and healthcare in general) are not well-developed. To be sure, hospitals usually have distinct reputations that affect their ability to attract patients and negotiate contracts. But quantitative, comparable, publicly available measures of performance – such as those that have been available for many years in other industries – have only been developed within the last decade. Medicare has been a driving force, making many measures most relevant to adults with conditions such as pneumonia, heart failure and heart attack. In comparing these measures with commercial payment levels, we make a widely-shared assumption that a hospital's quality of care is similar for all its patients with, say, heart failure, regardless of their insurance coverage.

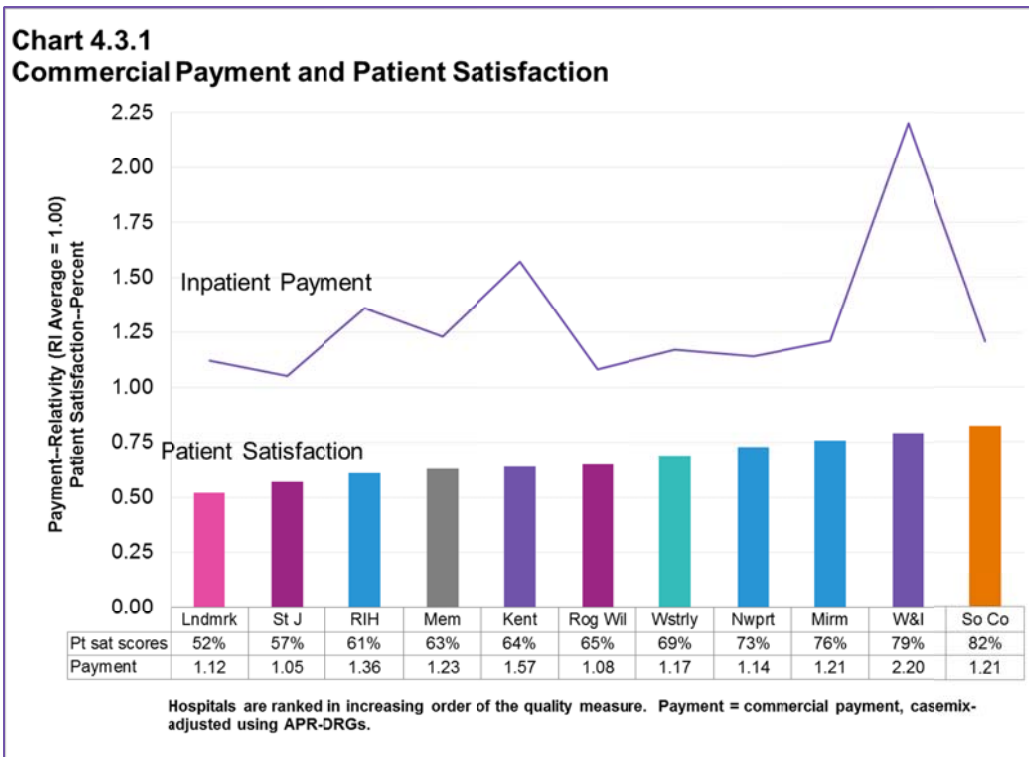
Although quality measurement is still in development, and hospitals and payers are only beginning to tie payments to quality scores, more information is available now than ever before. Most measures reflect millions of dollars in research and have been intensely scrutinized by researchers and hospitals. Almost all measures reflect inpatient care; outpatient measures are few.

We analyzed a range of inpatient measures compiled from various sources by the Commonwealth Fund. Chart 4.3.1 shows a comparison of commercial inpatient payment levels (as always, adjusted for casemix) with patient satisfaction scores. Chart 4.3.2 shows a similar comparison with adherence to recommended processes of care for pneumonia, heart failure, heart attack and surgical anti-infective prophylaxis. Table 4.3.1 shows hospital rankings on these measures and on others, such as the patient safety indicators developed by the Agency for Healthcare Research and Quality. If the source data did not include a particular hospital (typically because of low volumes for the relevant measures), then we show the hospital as blank or N/A.

If there is a correlation between quality and payment, it is neither strong nor obvious. Chart 4.3.1, for example, does show a positive relationship between commercial payment and patient satisfaction (correlation coefficient = 0.54). The highest-paid hospital (W&I) did rank second in patient satisfaction. The heightened payment levels for Rhode Island Hospital, Kent and Women & Infants, however, appear well out of proportion to their patient satisfaction measures. South County, which had the highest patient satisfaction score, ranked sixth in payment. Newport Hospital, which ranked third in satisfaction, ranked eighth in payment. On adherence to well-known care processes, Chart 4.3.2 shows a narrow range of hospital performance but a wide range of payment. Table 4.3.1, which shows rankings of hospitals on nine quality measures, is notable both for how

different the rankings were from hospital to hospital and for the weak link between payment and these measures of quality. The four highest-paid hospitals – Women & Infants, Kent, Rhode Island and Memorial – had quite different rankings on different measures, ranging from first to last.

The lack of a direct link between quality and payment may simply reflect the immature development of quality measurement. Better evidence might show a tighter link. But we conclude that currently available measures do not show a direct relationship between commercial payment levels and the quality of care.



This finding echoes an earlier Massachusetts study. The Massachusetts Division of Health Care Finance and Quality compared commercial payment levels with quality measurements for 14 inpatient services and found, if anything, a slight tendency for payment levels and quality measures to be inversely related. “These results are not surprising since carriers have previously stated that quality measures do not factor heavily in price negotiations,” the study said.³⁶

For further information: Appendix Section A.4.3.

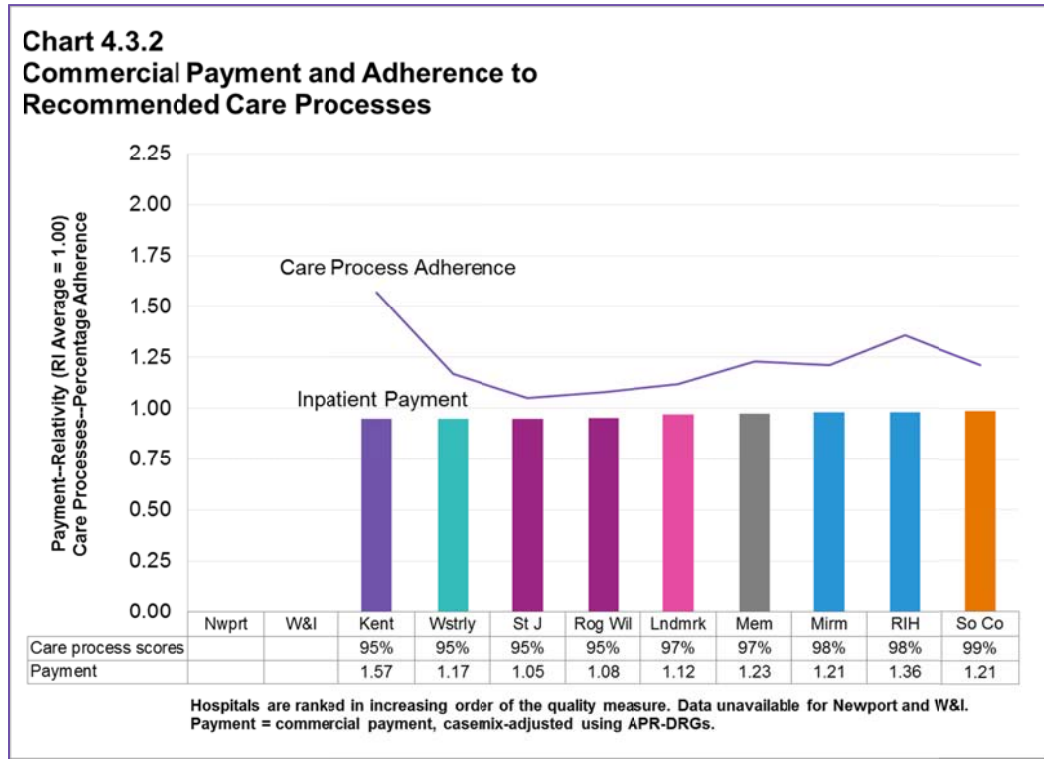


Table 4.3.1

Little Consistency Observed Between Commercial Payment Levels by Hospital and Quality Measures

	St J	Rog Wms	Lndmrk	Nwprt	Wstrly	So Co	Mirm	Mem	RIH	Kent	W&I
Payment Level Rank	11	10	9	8	7	5	5	4	3	2	1
Patient Satisfaction											
Percent highly satisfied	10	6	11	4	5	1	3	8	9	7	2
Would recommend hospital	10	5	11	4	5	2	3	7	8	8	1
Process of Care											
Recommended care	7	6	5	NA	8	1	3	4	2	9	NA
Medicare Measures (PNA, HF, AMI)											
Readmissions	8	2	4	3	1	5	6	10	9	7	NA
Mortality	8	6	9	5	4	10	3	7	2	1	NA
Patient Safety											
Post-op PE/DVT	3	9	10	7	2	*1	6	11	8	4	5
Failure to rescue	4	7	5	11	*1	*1	8	6	10	9	*1
Pressure ulcer	11	9	10	5	8	2	6	3	4	7	*1
Selected infections	5	10	4	1	6	3	7	11	8	9	*1
Post-op sepsis	4	2	11	10	8	5	3	*1	6	7	9

Notes:

- 1) Rankings were calculated by Xerox from data posted at www.WhyNotTheBest.org. The data were compiled from various sources, including CMS as well as Commonwealth Fund tabulations of the Agency for Healthcare Research and Quality patient safety measures. In all quality rankings, No.1 is the best.
- 2) NA = not available (i.e., not shown in the source material.) PNA/HF/AMI = pneumonia/heart failure/acute myocardial infarction (heart attack). PE/VT = pulmonary embolism/deep vein thrombosis
- 3) Rankings with an asterisk reflect indicate that zero patient safety problems were reported. This may reflect actual performance or a data issue in the source data.

4.4 The Evidence Did Not Appear to Support a Consistent “Cost Shift” Hypothesis from Public to Commercial Payers

At the aggregate level, both in Rhode Island and nationwide, commercial plans pay hospitals a higher percentage of their costs than Medicare and Medicaid do. For 2010, AHA data show national pay-to-cost ratios at 92 percent for Medicare, 93 percent for Medicaid and 134 percent for commercial plans.³⁷ A chart famous among hospital data analysts shows national public and commercial pay-to-cost ratios usually moving in opposite directions over a span of almost 30 years.³⁸ Understandably, this has led to descriptions of the public sector persistently “shifting costs” to the private sector. “The concept of the ‘cost-shift’ is remarkably simple; as some pay less, others must pay more,” according to one summary of the vibrant policy literature on this topic.³⁹

But policy makers should view claims of consistent cost-shifting with skepticism, according to a critical review of the evidence by economist Austin Frakt.⁴⁰ One objection is theoretical: Why would commercial payers agree to pay more just because the public payers pay less? Another objection is empirical: Studies have generally found that hospitals tend to respond to tightened Medicare and Medicaid payments by cost-cutting, not cost-shifting. That is, cost is not a fixed amount that needs to be covered one way or another, but rather may depend in part on how much revenue is available.⁴¹

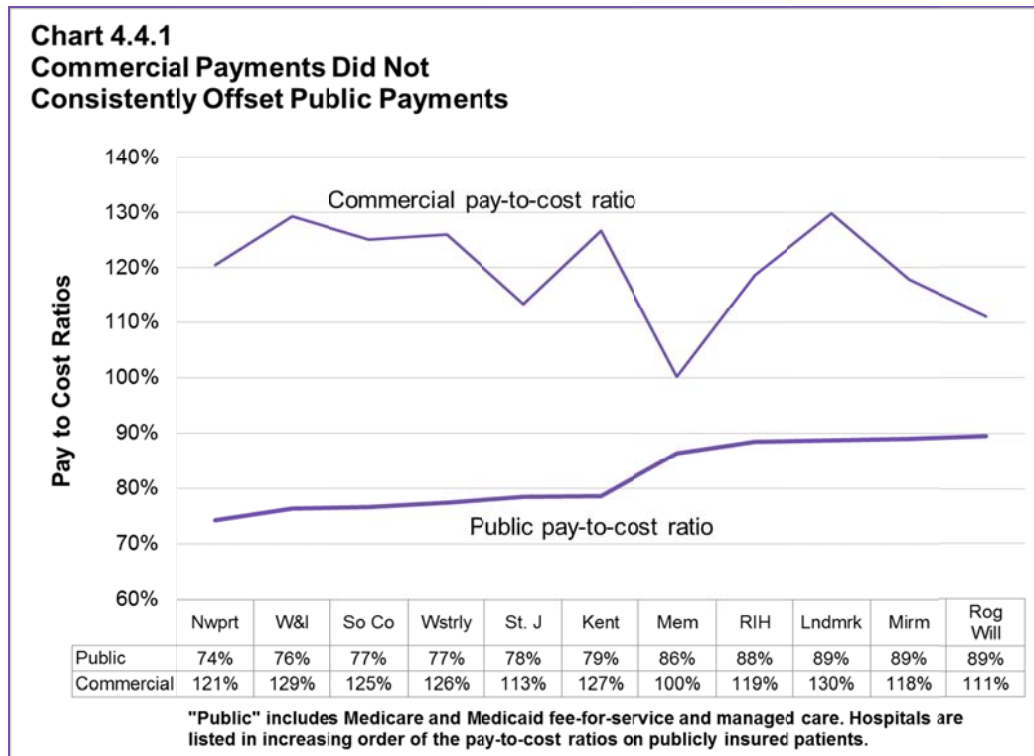
This study, based on just 11 hospitals over a one-year period, will not settle the cost-shifting debate. We do note that one common implication of cost-shifting was not consistently supported by Rhode Island data. The implication is that the hospitals with the lowest pay-to-cost ratios on publicly insured patients would need and receive the highest pay-to-cost ratios from commercial payers. If that were true, the hospitals with the lowest pay-to-cost ratios on publicly insured patients would have the highest ratios for commercially insured patients, with the gap closing as we look from left to right across Chart 4.4.1. The three hospitals with the lowest public pay-to-cost ratios – Newport, W&I and South County – did tend to have relatively high commercial ratios. But for other hospitals – St. Joseph, Kent, Memorial, Landmark – commercial pay-to-cost ratios appeared to be either lower or higher than what the cost-shift hypothesis would predict.

W&I is a special case. Though it has an active teaching program, it receives relatively low Medicare medical education payments, reflecting its small Medicare business. Since W&I was also the highest-cost hospital, there may have been interaction with the hospital's service market dominance to create upward pressure on payments from commercial plans.

In discussing the cost shift hypothesis, we note that Medicare, not Medicaid, is the low payer in Rhode Island. That is an inversion from discussions of the hypothesis at the national level, which presume that Medicaid is the low payer. Section 3.2 noted that

Rhode Island fee-for-service pay-to-cost ratios were 97 percent for Medicaid and 87 percent for Medicare.⁴² If the cost-shift hypothesis did apply in Rhode Island, it would be more likely to apply to Medicare, which had both a lower pay-to-cost ratio and a higher share of the market than Medicaid.

The connection between public and commercial payment levels is complicated, and not consistently explained by any one factor. Hospital costs, service dominance, patient population, teaching programs, system affiliation, and the interaction with payment levels on publicly insured patients all influence commercial rates. The hypothesis that commercial payments are negotiated to balance the losses on the commercial proves to be a weak framework for predicting commercial payment levels.



For further information: Appendix Section A.4.4.

4.5 The Concentrated Marketplace for Hospital Care Probably Affected Variation in Payment

Like much of the U.S., Rhode Island has a concentrated marketplace for both the provision and the purchase of hospital care. This concentration can be expected to have a substantial, and continuing, effect on variation in payment for otherwise similar services.

In measuring market concentration, the definition of the market matters greatly.⁴³ The State of Rhode Island is the obvious definition, used in the past and supported by the *Dartmouth Atlas of Health Care* definition of the Providence hospital referral region as almost entirely contiguous with state lines.⁴⁴ We note, however, that border hospitals in Connecticut and Massachusetts – especially the high-profile Boston hospitals – compete with Rhode Island hospitals for patients, especially for specialized care. In 2010, 9 percent of commercial stays were in out-of-state hospitals; for Medicare and Medicaid, by contrast, the percentage was 3 percent.⁴⁵

Nationwide, high concentration is the norm for both hospitals and commercial insurers. A wave of hospital consolidation in the 1990s resulted in sharply increased levels of concentration in many markets.⁴⁶ On the payer side, the most recent annual report by the American Medical Association says that 83 percent of 368 metropolitan areas would meet federal guidelines as “highly concentrated” markets for insurance.⁴⁷

In Rhode Island, hospitals have regularly sought to consolidate market share over the past 20 years. Lifespan, which now includes four hospitals, was formed in 1994. Care New England, which includes three hospitals, was formed in 1996. In 2007, Lifespan and Care New England proposed a merger of their seven hospitals, but the proposal was withdrawn in 2010. CharterCARE, which includes two hospitals, was formed in 2009. The remaining four general hospitals remain unaffiliated with any in-state hospital.⁴⁸

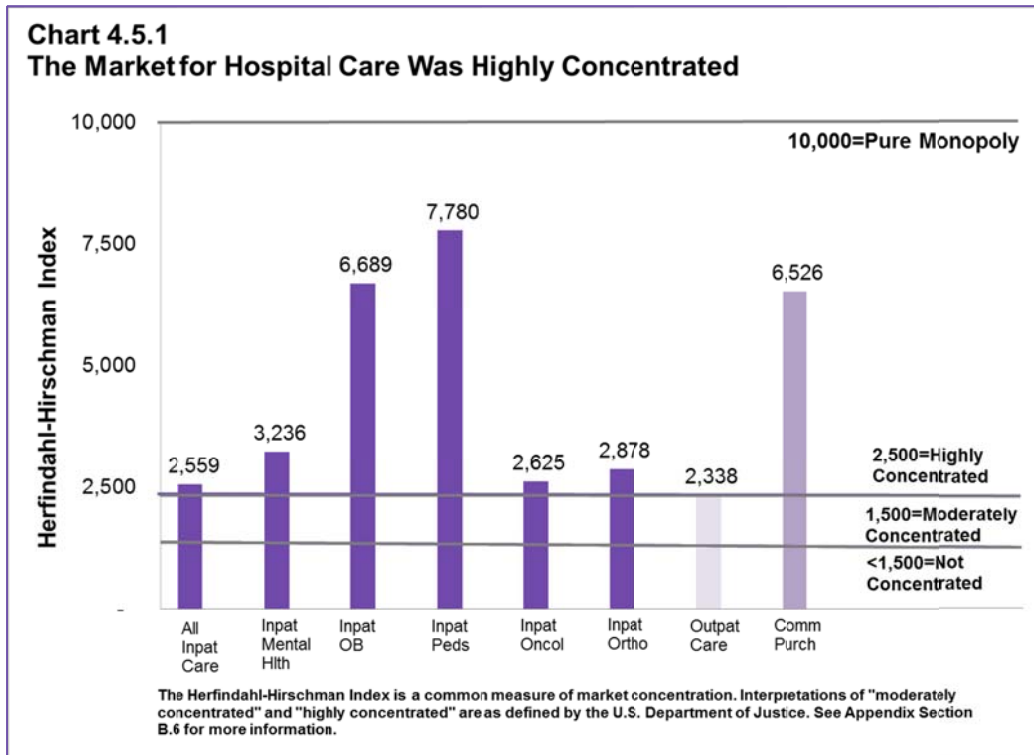
Using a commonly accepted measure of market concentration – the Herfindahl-Hirschman Index – the Rhode Island market for inpatient care in 2010 was “highly concentrated” under U.S. Department of Justice guidelines.⁴⁹ Chart 4.5.1 shows the degree of concentration was even higher in sub-markets such as mental health, obstetrics (where Women & Infants had a 72 percent share) and pediatrics (where RI Hospital’s Hasbro division had a 75 percent market share).⁵⁰ Markets for two other common specialties – oncology and orthopedics – also passed the “highly concentrated” threshold, as did the market for outpatient care. A 2009 study for the Rhode Island Department of Health noted that hospital concentration was higher in Rhode Island than in New England overall.⁵¹

On the purchaser side, the Medicare and Medicaid fee-for-service programs set what are known as administered prices, that is, the same set of payment rates is paid to all hospitals, without negotiation.⁵² The Medicare and Medicaid managed care plans, as

described in Section 3.3, pay similarly to their FFS counterparts. Although rates are negotiated, in practice they seem to end up near FFS benchmarks. That leaves the commercial payers, where negotiated payment is the norm. Of the 20,758 commercial stays at the 11 general hospitals in our analytical dataset, BCBSRI had 78 percent, United Healthcare 21 percent and Tufts 1 percent. Although there were other minor purchasers that were outside the scope of this study, their inclusion would not change our finding that the Rhode Island hospital was also “highly concentrated” with regard to negotiated purchase of hospital care (Chart 4.5.1).

In effect, the market in 2010 was dominated by two large insurers negotiating with two large hospital systems, a situation that health economists refer to as bilateral exercise of market power.⁵³ Other hospitals and insurers played a role but had lesser influence. In such circumstances, the economic theory of competition cannot predict payment levels, because there is neither a single seller nor a single buyer nor a multitude of independent sellers and buyers. This is especially true when the “goods” (hospital services) are differentiated and complex. Instead, negotiating strength becomes paramount.

On the insurer side, a plan has maximum leverage when it is large and when it can easily shift its business from one hospital to another, thereby enabling credible threats of severing a contractual relationship. An insurer’s Medicare or Medicaid managed care line of business presumably adds leverage, although to what extent is difficult to say. With BCBSRI paying for 78 percent of commercial stays within our analytical dataset, it is very hard to imagine a hospital surviving without BCBSRI patients. United, though less than one-third the size of BCBSRI, nevertheless represented a 21 percent share that hospitals would have difficulty turning down.



On the hospital side, three factors affect leverage. Geography – the need for an insurer to cover the market area – is one. Size is the second; hospitals obviously have more leverage when they band together than when they negotiate alone. Lifespan represented 42 percent of all stays in our 2010 analytical dataset, plus one of the two psychiatric hospitals. Care New England represented another 27 percent of stays, plus the second psychiatric hospital. After the merger of CharterCARE in 2009, St. Joseph and Roger Williams represented 13 percent of stays, compared with 7 percent and 6 percent had they remained separate. The proposed (but withdrawn) merger plans of Lifespan and Care New England would have given the new entity 69 percent of stays within our analytical dataset. The nationwide evidence is that hospital consolidations generally lead to significant price increases, especially when the market is already concentrated. Any efficiency increases tend not to translate into lower prices, especially if the hospitals do not merge their operations.⁵⁴ The third factor has been described as “must have” status. As described in one study of California hospitals, this status “comes from providing unique, specialized services, which the hospital uses to demand and win higher rates for all services.”⁵⁵ Examples include neonatal intensive care, trauma care designation, transplants, and specialized cancer care. (Other examples might be pediatrics, cardiac care and orthopedics.) A hospital system can then “use the substantial reputation of the ‘flagship’ hospital to obtain higher payment rates for all hospitals in the system, including those that would not have such status as independent hospitals.” Women & Infants, of course, has a very well-known NICU and a 72 percent share of obstetrics. Rhode Island Hospital is the state’s Level 1 trauma center and has a 75 percent share of pediatrics. Lifespan (RIH, Miriam and Newport) together had 41 percent of oncology stays and 48 percent of orthopedics stays. Care New England (Butler and Kent) together had 45 percent of mental health stays. The CharterCARE and unaffiliated hospitals, by contrast, had much lower market shares.

A market characterized by bilateral market power can be expected to exhibit variation in payment levels. We would expect “must have” hospitals to be paid more, with spillover benefits on other hospitals within the same system. As shown in Chart 3.3.3, each of the five highest-paid hospitals in the state belonged to either Care New England or Lifespan. The variation in payment levels was not obviously explained by variation in casemix, variation in quality of care, variation in cost levels, or by the need for hospitals to shift costs from Medicare and Medicaid patients (Sections 4.2 to 4.4).

Because payers have leverage when they can move patient volumes among hospitals, we would predict that hospitals would defend themselves by building dominant reputations in clinical areas important to a commercially insured population. Chart 4.5.1 shows the high degree of concentration for specialties such as obstetrics, pediatrics, oncology and orthopedics. One national study described hospitals’ growing tendency to market service lines as separate “centers” or “institutes,” especially for cardiac care, cancer and oncology, a switch from previous practice of marketing the hospital as a whole.⁵⁶ In Rhode Island, the results can be seen on billboards along I-95 that emphasize specialty care at the hospitals. If such efforts continue, scarce investment dollars may be directed more toward promoting centers of excellence, not toward shoring up a hospital’s weaker areas.

One aspect of the Affordable Care Act may also affect negotiating positions in the future. By encouraging hospitals and physician groups to combine into accountable care organizations, the Act may have the unintended consequence of strengthening the “must have” positions of some providers in negotiations with commercial payers.⁵⁷

With only a few large players in the market for services, insurers and hospitals almost always must find a way to come terms with one another. That process will sometimes lead to brinkmanship that plays out in public, as occurred in the autumn of 2010 between Care New England and United. Another episode, involving a hospital with relatively little leverage, occurred recently when Steward Health Care System reportedly withdrew its offer to purchase Landmark Hospital in part because of a failure to come to terms with BCBSRI.⁵⁸ Similar episodes of impasse can be expected in the future.

In describing the concentration of both buying and selling power, we caution against inferences of appropriateness or inappropriateness. In a market the size of Rhode Island, it is probably inevitable that there will be a small number of insurers and hospitals. A full analysis would need to take into account both the disadvantages and the advantages of market concentration. Many studies have found, for example, that quality of care tends to be better in hospitals with higher volumes of specific procedures and conditions.⁵⁹ In principle, concentrating care also enables economies of scale that result in lower prices, though how often that occurs in practice is debatable.⁶⁰ In any case, high and increasing levels of concentration in the Rhode Island marketplace for hospital care mean that negotiating leverage will continue to affect payment levels and help explain the variation in payment.

For further information: Appendix Section A.4.5.

5 Hospital Payment Policy Goals and Options

This chapter was written by the Rhode Island Office of the Health Insurance Commissioner.

5.1 Introduction and Context

As these findings show, the current hospital payment methodology does not and cannot consistently reward high-value care. We want to make sure that if we pay more for the same service, it is because the quality is better. Ultimately, higher prices that do not reflect higher value waste money. In Rhode Island and elsewhere, the payments that hospitals receive for providing care reflect market power more than quality or other acceptable factors of variation. Without thoughtful interventions, this market will continue to prevent price-based competition among providers and value-based decision-making among patients.

There is a fundamental schizophrenia in our hospital payment system. Public payers determine allowable costs and pay according to a transparent formula, and private payers negotiate prices during what have been confidential arrangements. The findings in this study are evidence that the private contracting model is not fair to payers, patients, or hospitals and does not promote value.

The findings in this study highlight the prevailing method for determining hospital payment and its effect on healthcare costs. First Medicare and Medicaid set rates based on public, transparent and generally accepted (yet still contested) considerations. These rates directly inform Medicare and Medicaid managed care. These public payments are then the basis for private negotiations between commercial insurers and hospitals.

In the negotiations, those institutions with market power – either service monopolies or significant market share – are better able to negotiate higher payments and withstand lower public payer payments without reducing their costs. Smaller hospitals with little market power must tightly control their costs and services to remain financially viable. In other words, the data show that costs may rise to the level of payment available, which may in turn subsidize the excess inpatient capacity that appears to exist in hospitals today.

If variation in payments is tied to value (measured as quality and cost), these differences are a sign of a healthy, competitive market. Hospitals are rewarded for providing high-value care. But if different payers buy services of similar value for different prices, which appears to be the case in Rhode Island, our healthcare system merely rewards entities with price-setting power at the expense of those without. This policy has deleterious consequences, as it shifts resources to institutions with service monopolies and imposes hidden taxes on payers without ratesetting strength.

Downstream of these private negotiations that reward price-setting hospitals without a demonstrable connection to high-value care is the employer and individual who ultimately pay the higher premium year after year.

A second casualty of commercial pricing patterns based on negotiating leverage is the informed consumer. In theory, motivated and informed consumers would reward high-value hospital outpatient providers and penalize those of low value or with irrational pricing methodologies. In practice, however, consumers do not have the right information or financial responsibility to be aware of price variation in the services they seek, inhibiting patients from making informed choices or motivating the market to rationalize its pricing structure.

Because commercial insurers function in some ways like pass-throughs for healthcare payments and have declining market leverage, they lack adequate incentive and ability to demand lower prices and reduce variation. Anecdotally, payers complain that rate pressure on them is not balanced by similar pressure on providers. Patients, who rarely pay the full price of their care and are often prevented from knowing the final price, lack adequate information to motivate payment reform from the ground up. However, provider partnerships and government involvement can correct this imbalance of information, incentives, and negotiating power and correct the distortions of this fundamentally unfree market.

The following policy goals are presented here in the context of several key factors that define Rhode Island's hospital care delivery market.

- The price of hospital care is not – but should be – part of the public conversation.
- Rhode Island and the nation lack robust quality data. These data would encourage informed patient decisions and spur health benefit innovations that reward the right care in the right setting at the right time.
- With its hospitals at 67 percent capacity, Rhode Island needs a coordinated plan for shaping its healthcare delivery system in light of its evolving demand for healthcare services. We cannot afford to pay for excess capacity.
- Rhode Island has naturally occurring service monopolies for certain inpatient services. The resulting pricing behavior, noted in the report, is entirely consistent with economic theory and not necessarily in the public interest.
- While Rhode Island is not in a position to change the mixed private and public healthcare insurance model in the United States, it can start to address inefficiencies and inequities documented here resulting from the schizophrenic ratesetting/private negotiation model of hospital financing that results.

Indeed, since 2010, several hospitals and hospital systems have undertaken innovative payment reform and quality tracking initiatives. Lifespan began tying payments to quality metrics and has negotiated case rate payments in select commercial payer contracts. Care New England negotiated a global budget for its Medicare Advantage members with a major commercial payer as well as bundled episodes of care, among other initiatives. Medicare also began penalizing hospitals that did not meet certain quality measures, such as readmissions for three major conditions. We must encourage these innovative steps towards ensuing payment tied to value.

5.2 Policy Goals

With these points in mind, the Office offers the following Policy Goals for Rhode Island's hospital payment system

- **Payment Alignment:** Commercial and public hospital payment methodologies should be aligned to encourage high value (high quality and low cost) services.

Payment reinforces behavior. But as this study documents, Medicare, Medicaid and commercial hospital payment methods do not reward value. Particularly in a poorly functioning market that cannot respond to consumer preferences, it is incumbent on those paying the bills for consumers to send consistent signals to hospitals on desirable behaviors. In order to encourage high quality and low costs, payers should not dampen or countervail one another's actions but amplify them, sending clear rather than confusing signals to providers.

- **Payment Parity:** Commercial and public payments, to the greatest extent possible, should pay similarly across hospitals and payers in method and in level for similar services of similar value.

The evidence of this report is that commercial insurance pays more to hospitals than public insurance and that excess is absorbed by those hospitals with service monopolies. This is not fair to those hospitals without service monopolies and constitutes excess "rents" (in the economic sense of the word) paid by commercial insurance customers. While differences in quality, service mix and acceptable costs must be recognized in a payment system and should be documented in a similar method as Medicare, other differences should not.

- **Payment Accountability:** Payment policies for commercial insurers should promote public accountability for care outcomes and costs, rather than the payment disparities that result from the current system of private negotiation.

Hospitals are trusted community assets. As such, their performance and financing—whether from public or private sources—should be subject to public scrutiny and accountability based on commonly accepted operational and financial performance standards. In addition to being an institutional prerequisite, such accountability will allow for more informed treatment decisions and more truly patient-centered care.

5.3 Policy Options

To accomplish these goals, policy makers have two fundamental courses of action: To encourage more competition in areas of service dominance or to enact more price oversight. Since the first option would entail paying for additional excess capacity or breaking up service dominance and threatening service volumes perhaps necessary for clinical quality, only the second course will be considered.

Five basic options for policy makers to have more price oversight and achieve these goals are identified. In order of increasing comprehensiveness, they are:

1. Promote transparency and public accountability by repeating this study and regularly publishing rates of payment variation. Elevate rates of variation to a measure of delivery system health.

By identifying and displaying the disparities in how hospitals are paid and explaining why this variation may be occurring, this study has added valuable information to a payment system that profoundly lacks transparency. Placing these data on a regular basis in the hands of hospitals, insurance companies, employers, the public, and ultimately consumers draws sustained attention to the fact that our healthcare system does not effectively reward payers for the quality and value of their care and will improve accountability on the part of all stakeholders. Such attention may result in accomplishing the desired policy goals.

Greater awareness of wide payment disparities would have a damping effect on variation. Though there are concerns that the market and policy makers would smooth payment variation by raising rates and thus overall costs for lower-paid hospitals, the Office has seen little firm evidence of this pattern presented in public settings. The limits on average payment growth that OHIC's contracting conditions impose on insurer's contracts with hospitals may contribute to this lack of evidence.

2. Issue regulation or enact statute to influence the level of variation in private insurer contracts and reduce disparities among hospitals.

Such a standard, whether in law or in regulation, would reduce variation within commercial payments to hospitals but not necessarily address differences among payers.

3. Enact legislation that sets an explicit benchmark, such as a percent of Medicare, for private insurer payments. Payment methods should closely resemble the public payer reliance on a transparent, consistent formula that is premised on appropriate allowable costs.

This more far-reaching step would go beyond option two and address inter-payer equity. Although administratively simple, it would have significant redistributive effects. Care would be taken to define the process for setting a benchmark and the standards to be used. In areas where Medicare is not a significant payer and thus not a suitable benchmark, such as with maternity care, some alternative benchmark would have to be established.

Medicaid payments should be monitored based on this standard as well. Implicit in this option is an adoption of standards for allowable costs for medical education and charity care, consistent with Medicare, and an overall standard for payment adequacy.

So as not to discourage experimentation, exceptions could be granted for payment innovations that promote population-based care and move away from fee-for-service practices.

4. Enact legislation to require all payers to use a standard payment method, such as risk-based or global payment methods. The legislation would also include standards for payment adequacy and/or system sustainability through inflation rate caps targeting total costs of medical care. This option would be similar to legislation passed in Massachusetts this year⁶¹ and would by nature be comprehensive in scope. The Massachusetts legislation was passed after a multiple year debate and several incremental pieces of legislation that involved an engaged legislature, executive branch, and private sector leadership.
5. Implement an all payer rate setting system that sets payments for all inpatient and outpatient services for each hospital. Payments would vary based on acceptable factors, such as payer mix, teaching status, provision of unique services, and sole community provider status. Maryland has run a similar system for over twenty-five years and Vermont will soon set hospital rates for its commercial payers. As these two states have done, Rhode Island state officials would seek permission from the Federal government to align both Medicare and Medicaid. A single, standard payment system ensures a much greater level of payment consistency, and places significant responsibilities on the state administration to operate, evaluate, and monitor the functions of the entity.

In considering these options, policy makers should also

- Not inhibit payment reform. Much innovation is occurring in Medicare and the private sector around how to pay providers, with a goal of aligning incentives to reduce inappropriate utilization of medical services. The policy goals set forth here, such as payment alignment and the implication that concentration leads to wasteful variance, can conflict with payment reform innovations. Further, the policy options discussed here, which suggests Medicare as a benchmark, may bolster the status quo if not properly adapted to the commercial patient population and payment reform goals. There are lessons to be learned from other innovating states on how to find an appropriate balance between alignment and innovation.
- Note that Medicaid managed care contracts are subject to the same pricing pressures as commercial insurance, absent public intervention. The legislature has acknowledged as much when it passed Budget Article 20 in 2010. Article 20 reduced inpatient payments by Medicaid managed care organizations by 10 percent and set future rates of increase for inpatient and outpatient payments. The effect of this was to move hospital inpatient rate negotiations for Medicaid managed care from the responsibility of the private insurers to the legislature. Like Medicaid fee-for-service, oversight is needed to keep those payments aligned, at parity and publicly accountable. For these reasons, benchmarking them to Medicare is an attractive policy option.

- Assess payment adequacy across payers by using established Medicare methods to consider costs, including bad debt, charity care and medical education. However –

Providers should demonstrate the public and local benefit of additional indirect costs, such as medical education, if they are to be considered allowable.

Policy makers should discourage state-specific cost accounting methodologies in favor of national (i.e., Medicare) standards.

Policy makers should note that an allowed cost is not necessarily an acceptable one. Absent some sort of cap, cost-based reimbursement is inherently inflationary.

Although not without flaws, the Medicare hospital payment methodology employs a clear set of well-understood reimbursement rules, including a consensus that it should pay for a portion of a hospital's uncompensated care and medical education costs. The lack of a similar consensus in Medicaid and commercial insurance creates an unstable operating environment for hospitals, payers and the purchasers of health insurance. While it may be logical that Medicaid and commercial payers should pay for their share of uncompensated care and medical education, the following concerns of the hypothetical system are worth noting:

- The potential to define any cost as legitimate, encourage gaming behavior and discourage value (defined as quality and efficiency). Medicare attempts to address this problem by calculating payments to cover average hospital costs, not those of the individual institution.
- The need to create accountability for hospital-based medical education that this consensus funds. In particular, medical education should directly benefit the community that funds it by producing clinicians who serve Rhode Island and by spurring quantifiable, local economic activity. Hospitals that benefit from higher teaching-based payments should clearly demonstrate the material and community benefit of the services for which they receive enhanced rates.

These policy options are neither exhaustive nor definitive. A set of policies for hospital payment oversight that is appropriate for Rhode Island will emerge from a public dialogue informed by the types of data and analyses in this report and a common vision for a sustainable healthcare system that helps all Rhode Islanders live healthy lives in healthy communities.

Notes

- ¹ Gary Claxton, Matthew Raw, Nirmita Panchal and others, *Employer Health Benefits: 2012 Annual Survey* (Washington, DC: Kaiser Family Foundation and Health Research & Educational Trust, 2012), Chartpack Exhibit 1. (<http://ehbs.kff.org/pdf/2012/8345-Chartpack.pdf>)
- ² U.S. Congressional Budget Office, *Estimates for the Insurance Coverage Provisions of the Affordable Care Act Updated for the Recent Supreme Court Decision* (Washington, DC: CBO, July 2012), Table 3.
- ³ Gerard F. Anderson, Uwe E. Reinhardt, Peter S. Hussey and Varduhi Petrosyan, "It's The Prices, Stupid: Why The United States Is So Different From Other Countries," *Health Affairs* 22:3 (May 2003), pp. 89-105.
- ⁴ Massachusetts Special Commission on Provider Price Reform, *Recommendations of the Special Commission on Provider Price Reform* (Boston, MA: SCPPR, November 2011), p. 9. The figures in the text were calculated by Xerox from Figures 1 and 2.
- ⁵ Sean P. Keehan, Gigi A. Cuckler, Andrea M. Sisko, and others, "National Health Expenditure Projections: Modest Annual Growth Until Coverage Expands and Economic Growth Accelerates," *Health Affairs* 31 (July 2012), p. 1601.
- ⁶ Rhode Island Office of the Health Insurance Commissioner. *2010 Variations in Hospital Payment Rates by Commercial Insurers in Rhode Island* (Cranston, RI: OHIC, January 2010).
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- ⁸ Peter J. Hammer, Deborah Haas-Wilson, Mark A. Peterson and William M. Sage, eds., *Uncertain Times: Kenneth Arrow and the Changing Economics of Health Care* (Durham, NC: Duke University Press, 2003)
- ⁹ Institute of Medicine, *Best Care at Lower Cost: The Path to Continuously Learning Health Care in America* (Washington, DC: IoM, 2012).
- ¹⁰ The Butler and Bradley psychiatric hospitals are included only in the analysis of mental health care in Sections 3.4 and 4.4. The Rehabilitation Hospital of Rhode Island, the Eleanor Slater Hospital and the Providence VA Medical Center were excluded entirely.
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- ¹² The Rehabilitation Hospital of Rhode Island is affiliated with Landmark, but the two hospitals are treated separately in this analysis because of the Rehabilitation Hospital's unique role in the health care system.
- ¹³ 3M Health Information Systems, *3M™ APR DRG Definitions Manual* (Wallingford, CT: 3M HIS, annual).
- ¹⁴ 3M Health Information Systems, *3M™ Enhanced Ambulatory Patient Groups Definitions Manual* (Wallingford, CT: 3M HIS, annual)
- ¹⁵ American Hospital Association, *Trendwatch Chartbook 2012*, Table 4.4. Available at www.aha.org/research/reports/tw/chartbook/2012/table4-4.pdf. The figures of 134 percent nationally and 125 percent in Rhode Island are not strictly comparable, due to differences in the definition of cost. However, the position of commercial payers relative to Medicare and Medicaid is very well established nationally.
- ¹⁶ See Appendix Section b.4 RE treatment of supplementary payments.
- ¹⁷ AHA Trendwatch Chartbook.
- ¹⁸ Medicare Payment Advisory Commission, *Report to the Congress: Medicare Payment Policy* (Washington, DC: MedPAC, March 2012), p. 58. The overall Medicare margin

also reflects margin on other services that represent 8 percent of hospitals' Medicare revenue.

- 19 Centers for Medicare and Medicaid Services, 100 percent MEDPAR Inpatient Hospital Fiscal Year 2010: Short Stay Inpatient by State, www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/MedicareFeeforSvcPartsAB/MEDPAR.html. Average reimbursement per discharge was calculated, and then we divided by the Medicare casemix of the median hospital to calculate approximate casemix-adjusted average payment.
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- 32 CMS wage area.
- 33 Calculated from AHA, *Hospital Statistics*, pp. 13, 33, 129.
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- 35 Bruce Cryan, *Hospital Costs in Rhode Island (2004): A State by State Comparison* (Providence, RI: RI Department of Health, December 2006).
- 36 Massachusetts Division of Health Care Finance and Policy, *Massachusetts Health Care Cost Trends: Price Variation in Health Care Services* (Boston, DHCFP: June 3, 2011), p. 3.
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- 38 Trendwatch Chartbook 2012, Chart 4.6.
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- ⁴³ Frederick M. Scherer, *Industrial Market Structure and Economic Performance*, 2nd edn. (Chicago: Rand McNally, 1980).
- ⁴⁴ Harvey Zimmerman, *Hospital Market Concentration and Market Share in Rhode Island*, Final Report to the Rhode Island Department of Health (Warwick, RI: Spectrum Research Services, June 26, 2009).
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- ⁴⁶ U.S. Department of Justice and U.S. Federal Trade Commission, *Improving Health Care: A Dose of Competition* (Washington, DC: DoJ and FTC, 2004).
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- ⁴⁸ The Rehabilitation Hospital of Rhode Island is affiliated with Landmark, but the Rehabilitation Hospital was excluded from this study because of its unique role in the health care system.
- ⁴⁹ U.S. Department of Justice, Antitrust Division, *Herfindahl-Hirschman Index*, available at www.justice.gov/atr/public/guidelines/hhi.htmlwww.justice.gov/atr/public/guidelines/hhi.html.
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⁶¹ Chapter 224 of the Acts of 2012, Commonwealth of Massachusetts www.malegislature.gov/Laws/SessionLaws/Acts/2012/Chapter224.