Commonwealth of Massachusetts

Center for Health Information and Analysis

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Annual Report on the Massachusetts Health Care Market

Technical Appendix

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Center for Health Information and Analysis

Center for Health Information and Analysis

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Chapter One

Funding the Massachusetts Health Care System
Premiums: Health plan purchasers typically pay a monthly or annual premium for a health plan. Most under-65 individuals nationally are enrolled in employer-sponsored insurance,[1] where both an employer and employee make premium contributions to a commercial payer for the employee's health plan.[2] Individuals may also purchase health insurance independently through a commercial insurer or a health insurance exchange.
Patient Cost-Sharing: In addition to paying a premium, a health plan enrollee contributes to payment for covered provider services through deductibles, co-pays, and co-insurance and pays directly for non-covered services.
Employer Payments for Administrative Services: Self-insured employers may hire insurers or third-party administrators to design and manage health care plans for their employees, while the employer continues to bear the risk.
Taxpayer-Subsidized Coverage: Massachusetts taxpayers contribute to state- and federally-subsidized programs, such as MassHealth (i.e. Massachusetts' Medicaid program), Commonwealth Care (state subsidized health insurance program purchased through the Health Insurance Connector), and Medicare, which provide health insurance coverage for eligible residents.
"Self-Pay" Individuals: Individuals who do not have health insurance coverage that pay out-of-pocket to providers for health care services.
Self-Funded Employers: Firms that provide health insurance coverage to its employees using its own funds. Self-funded employers are different from fully-insured firms, which contract with a health insurance company to cover its employees.

Actuarial value is the anticipated covered medical spending for Essential Health Benefit coverage paid by a health plan for a standard population, in accordance with the plan's cost-sharing, and divided by the total anticipated allowed charges for plan coverage provided to a standard population. In this study, the actuarial value is calculated by Oliver Wyman Actuarial Consultants as a ratio between a given plan, as compared to the "richest" plan in the study. "Richness" is defined by member cost-sharing and the breadth of covered services.

The Affordable Care Act (ACA) defines "actuarial value" for purposes of determining benefit level categories (e.g. bronze, silver and gold), and an actuarial value calculator (AV Calculator) was

[1] http://www.epi.org/publication/bp353-employer-sponsored-health-insurance-coverage/
[2] This category also includes employers who "self-insure." In such circumstances, employers take on payer risk by paying directly for their employees' provider services. Employers may still choose to procure stop-gap coverage and/or contract with third-party administrators to manage these programs.

developed by The Center for Consumer Information & Insurance Oversight (CCIIO) for this purpose. When reported values are calculated from use of the AV Calculator they are labeled as such.

Premiums

Findings related to premium trend are based primarily on premium, claims, membership, and non-medical expense data provided by the largest health insurance payers in the Commonwealth from 2009 to 2011.[3] Preliminary analysis on quoted 2012 premium rate increases is also provided for small, mid-size, and large groups.[4] The premium trend findings focus mainly on the fully-insured market; however, some self-insured enrollment data are reported. The findings related to premiums are based on Massachusetts residents and out-of-state residents that are covered under Massachusetts contracts.

Oliver Wyman developed a data request that was reviewed by the Center for Information and Analysis (the Center) and forwarded to the participating payers. This request specified the content for premium, claims, membership, and pricing data including non-medical expenses. For this study, the Center requested that payers provide data on their commercial medical products for all group sizes including individuals. Products that are specifically excluded from this study are: Medicare Advantage, Commonwealth Care, Medicaid, Medicare supplement, FEHBP, and non-medical (e.g., dental) lines of business.

The Center requested detailed membership data from the payers for their fully-insured business. The reported members may reside inside or outside of Massachusetts; out-of-state members are most often covered by an employer that is located in Massachusetts. These out-of-state members have been included in all sections of this report related to premium trend for consistency with the premium data which also includes out-of-state members. For self-funded business, annual member months and average employer size were requested.

Payers that responded to the data request included:

- Blue Cross and Blue Shield of Massachusetts, Inc.
- Blue Cross and Blue Shield of Massachusetts HMO Blue, Inc.
- Fallon Community Health Plan, Inc.
- Fallon Health & Life Assurance Co.
- Harvard Pilgrim Health Care, Inc.
- Harvard Pilgrim Insurance Company, Inc.
- Health New England, Inc.
- Neighborhood Health Plan, Inc.
- Tufts Associated Health Maintenance Organization, Inc. (d/b/a/ Tufts Health Plan)
- Tufts Insurance Co.
- United HealthCare of New England, Inc.

[3] The analysis in this report relies on premium, claims, and membership data submitted by major Massachusetts health plans. These data were reviewed for reasonableness, but they were not audited. When reported data was not consistent, some payers were eliminated from the analysis. To the extent the remaining data are incomplete or inaccurate, the findings are compromised.

[4] Data was not requested for individuals and jumbo groups.

Oliver Wyman analyzed the data for each company separately. Data was included from ten of the eleven products. Data from one payer was excluded due to concerns related to data quality.

Payer-provided data was supplemented with reported financial statement data. In 2008, Oliver Wyman produced a report for the Division of Insurance entitled Analysis of Administrative Expenses for Health Insurance Companies in Massachusetts. The analysis was performed using published annual financial statements. That analysis has been updated in this report with data through the 2012 annual statutory financial statements of the applicable companies. Similar analyses were performed related to loss ratios and claims expenditures for the comprehensive major medical line of business.

Payers provided their annual premiums by market sector for 2009 through 2011. Payers also provided their rating factors in use in second quarter 2012, as well as member months by age, gender, area, and group size. Using the annual premiums and aggregate annual member months, the Center calculated unadjusted premiums per member per month. It is possible that using the second quarter 2012 factors for all periods in the study has a slight impact on the resulting premium trends. However, it was determined that it was not feasible to request factors for each quarter. Furthermore, the factors are actually applied based upon effective date of issue or renewal which was not feasible to model in this analysis. It is not anticipated to materially skew the results.

The annual premiums were adjusted by age, gender, area, group size, and benefits. Adjustments were performed by first adjusting the rating factors to make each carrier's factors relative to a common demographic. Age/gender factors were relative to a 45 year old male and area factors were relative to Boston.[5] A weighted average adjusted factor was calculated for each calendar quarter and then for each calendar year. Finally, the unadjusted premiums were divided by the average rating factors to develop expected premiums per member per month (PMPM), adjusted to the demographics represented by the 1.0 factors.

Note that for this analysis, rating factors applied to mid-size, large, and jumbo groups reflected a premium based on a manual rate and not on the group's own experience. In the market, actual premiums would be based on a combination of the manual rate and an experience rate with the proportion of each depending on the group's size. The largest groups are typically rated based entirely on their own experience. Therefore, this analysis makes the assumption that actual experience will follow the claim pattern assumed in the manual rating factors. Actual premiums may differ. This approach is not anticipated to have a material impact on the results. Rather, it is anticipated that the manual rate would be determined consistent with the overall average experience of the covered groups.

Finally, the individual market was excluded from the adjusted premium analyses. Since individuals are rated as one pool with small employers, we would anticipate the adjusted premium trends for

[5] Gender is not a permissible rating factor in the small group market. A gender-specific age factor for a 45 year old male was approximated for the small group market for the purposes of calculating age/gender adjusted premiums that are comparable across market segments.

individuals in the merged market to be similar to the small employer premium trends.[6] Individuals are included in the total market calculations.

Adjusting the premiums for benefits required a separate analysis from the rating factor adjustments. In the small group market the analysis was similar to other rating factors except that only products that represented at least 5% of the small group market were included in the analysis. Over the three-year period of the study, members in products with at least 5% of the small group market represented 70% to 80% of the total small group market. In the mid-size, large, and jumbo group market sectors, payers generally allow groups to customize their benefit designs. This leads to a volume of unique benefit designs that is not feasible to analyze in the manner that was done for the small group sector.

Oliver Wyman's proprietary pricing model was used in the analysis of mid-size, large, and jumbo group benefits. First, the small group products that were provided were modeled and the results were compared to the benefit relativities provided by the payers. The model was calibrated using this comparison. Then, for each payer and each calendar year the ratio of paid claims to allowed claims was calculated based on data provided by the payers. The calibrated pricing model was then used to estimate the actuarial value of mid-size and large group benefits based on a given paid to allowed claims ratio. The unadjusted premiums were divided by the estimated actuarial values to determine the premiums adjusted for benefits. An actuarial value of 1.0 represents the value of the richest benefit plan with at least 5% of individual or small group enrollment during the course of the study. The richest benefit plan was determined from the calibrated pricing model as the plan with the highest per member per month anticipated claim costs. Given the limitations of the data available, this analysis did not include limited network impact in the actuarial value.

[6] Massachusetts General Laws Part I, Title XXII, Chapter 176J, Section 3 (Available at: http://www.malegislature.gov/Laws/GeneralLaws/PartI/TitleXXII/Chapter176J/Section3, Accessed August 9, 2013.)

Chapter Two

Definitions for Retention and MLR Categories

Center for Consumer Information & Insurance Oversight (CCIIO) Data Definitions

From the "Centers for Medicare & Medicaid Services (CMS) Medical Loss Ratio (MLR) Annual Reporting Form for the 2012 MLR Reporting Year Filing Instructions for All Parts," "Section 5 Non Claim Costs"[7] – direct line definitions:

Line 5.1 – Cost containment expenses not included in quality improvement expenses

> Include: Expenses that serve to actually reduce the number of health services provided or the cost of such services.
>
> This category can include costs only if they result in reduced costs or services such as:
>
> - Post- and concurrent- claim case management activities associated with past or ongoing care;
> - Pre-Service Utilization review;
> - Detection and prevention of payment for fraudulent requests for reimbursement (including amounts reported in Part 2 Line 2.17a);
> - Expenses for internal and external appeals;
> - Network access fees to preferred provider organizations and other network-based health plans (including prescription drug networks) and allocated internal salaries and related costs associated with network development and/or provider contracting.
>
> Exclude: Cost-containment expenses that improve the quality of health care and are reported in Part 1 Section 4.

Line 5.2 – All other claims adjustment expenses:

> Include any expenses for administrative services that do not constitute adjustments to premium revenue, reimbursement for clinical services to enrollees or expenditures on quality improvement activities or cost containment expenses.
>
> This category can include such costs as:
>
> - Estimating the amount of losses and disbursing loss payments;
> - Maintaining records, general clerical and secretarial costs;
> - Office maintenance, occupancy costs, utilities and computer maintenance;
> - Supervisory and executive duties; and
> - Supplies and postage.

Line 5.3 – Direct sales salaries and benefits

> Include compensation (including but not limited to salary and benefits) to employees engaged in soliciting and generating sales to policyholders for the issuer.

Line 5.4 – Agents and brokers fees and commissions

[7] http://www.cms.gov/CCIIO/Resources/Files/Downloads/mlr_annual_form_instructions_2012.pdf

All expenses incurred by the issuer payable to a licensed agent, broker, or producer who is not an employee of the issuer in relation to the sale and solicitation of policies for the company.

Line 5.5 – Other taxes

Line 5.5a –Taxes (other than Federal income taxes) and assessments not excluded from premium under 45 CFR §158.162(a)(2) and (b)(2). (Do not include amounts reported in Lines 3.1a, 3.1b, 3.2a, or 3.2b.)

Include:

- Taxes (other than Federal income taxes) and assessments not deducted from Premium in Section 3;
- State sales taxes if the issuer does not exercise the option of including such taxes with the cost of goods sold and services purchased;
- Any portion of commissions or allowances on reinsurance assumed that represent specific reimbursement of premium taxes;
- Any portion of commissions or allowances on reinsurance ceded that represents specific reimbursement of premium taxes;

Line 5.5b – Report fines and penalties of regulatory authorities, and fees for examinations by any State or Federal departments other than those included in Line 3.3, above. 24

Line 5.6 – Other general and administrative expenses

Include: General and Administrative Expenses not previously reported in Part 1 sections 3, 4 or 5 above.

These expenses include such examples as:

- salaries,
- outsource services,
- EDP equipment, other equipment,
- accreditation and certification fees,
- reimbursement by uninsured plans and fiscal intermediaries,
- ICD-10 maintenance costs and implementation expenses in excess of 0.3% of earned premium,
- community benefit expenditures - report only the amount in excess of what is already reported in Part 1 line 3.2c;
- other additional expenses not included in another category such as rent, legal fees and expenses, medical examination expenses, inspection reports, professional consulting fees, travel, advertising, postage, utilities, etc.

Exclude:

- Any elements already reported on lines 5.1, 5.2, 5.3, 5.4 and 5.5;
- Services provided by affiliates under management agreements;
- Rating agencies and other similar organizations.

Line 5.7 – Community benefit expenditures (informational only; already included in lines 3.2c and 5.6)

Line 5.8 – ICD-10 Total Implementation expenses (informational only; already included in lines 4.6 and 5.6)

Division of Insurance "Financial Summary" Data Definitions

"Total Administrative Expenses," as defined by the Division of Insurance, sums the following expenses: Financial Administrative Expenses, Marketing and Sales Expenses, Distribution Expenses, Claims Operations Expenses, Medical Administration Expenses, Network Operational Expenses, Charitable Expenses, Taxes, Assessments & Fines, General Administration Expenses, Miscellaneous Expenses, and Capital Expenses and Depreciation.

Explanations for Division of Insurance "Financial Summary" Expenses, per "211 CMR 149.00: Annual Comprehensive Financial Statements Pursuant to M.G.L.C. 176O § 21", "149.06: Form and Content of Annual Comprehensive Financial Statement":[8]

(2) The Annual Comprehensive Financial Statement shall also include the following information:

(a) Enrollment Information…

(b) Income Statement Information.

1. Premiums, including earned premiums (Premium earned during the calendar year) and net earned premiums (Direct premiums earned plus premium assumed and less reinsurance ceded).

2. Incurred claims, including direct claims paid during the calendar year on services rendered during the calendar year, unpaid claims reserves on service rendered or claims incurred during the calendar year, changes in contract reserves, the claims-related portion of reserves for contingent benefits and lawsuits, and experience rating refunds paid or received and reserves for experience rating refunds with negative adjustment for healthcare receivables and for reinsurance recoverables.

3. Medical Loss Ratio (MLR), as defined in accordance with 211 CMR 147.00.

4. Investment Gains and Losses:

a. Investment income, including that part of a Carrier's income that stems from the interest and dividends earned on the stocks and bonds it owns or the return on any other invested funds; and

b. Net Realized capital gains and losses, including the difference between the amount received from the sale or disposal of an asset and its carrying value.

5. Financial administration expenses, including all costs associated with underwriting, auditing, actuarial, financial analysis, investment-related expenses (not included elsewhere), treasury, reinsurance and outside benefit consultants.

6. Marketing and Sales Expenses:

[8] www.mass.gov/ocabr/docs/doi/legal-hearings/211-149.pdf

a. Billing and member enrollment, including all costs associated with group and individual billing, member enrollment, premium collection and reconciliation functions;

b. Customer services and member relations, including all costs associated with individual, group or provider support relating to membership, enrollment, grievance resolution, specialized phone services and equipment, consumer services and consumer information;

c. Product management, marketing and sales, including all costs associated with the management and marketing of current products, including product promotion and advertising, marketing materials, changes or additions to current products, sales, pricing and enrollee education regarding coverage prior to the sale; and

d. Product Development, including all costs associated with product design and development for new products not currently offered, major systems development associated with the new products and integrated system network development.

7. Distribution expenses, including all costs associated with the distribution and sale of products, including commissions, insurance producer and benefit consultant fees, intermediary fees, commission processing and account reporting to insurance producers.

8. Claims operations expenses, including all costs associated with claims adjudication and adjustment of claims, appeals, claims settlement, coordination of benefits processing, maintenance of the claims system, printing of claims forms, claim audit function, electronic data interchange expenses associated with claims processing and fraud investigation.

9. Medical Administration Expenses:

a. Quality assurance and cost containment, including all costs associated with health and disease management and wellness initiatives (other than for education), health care quality assurance, appeals, case management, network access fees, fraud detection and prevention, utilization review, practice protocol development, peer review, outcomes analysis related to existing products, nurse triage, medical management and other medical care evaluation activities;

b. Wellness and health education, including all costs associated with wellness and health promotion, disease prevention, member education and materials, provide education and outreach services; and

c. Medical research, including all costs associated with outcomes research, medical research programs and development of new medical management programs not currently offered, major systems development and integrated system network development.

10. Network operational expenses, including all costs associated with provider contracting negotiation and preparation, monitoring of provider compliance, field training with providers, provider communication materials and bulletins, administration of provider capitation and settlements, medical policy procedures, hospital and physician relations, medical policy procedures, network access fees, and credentialing.

11. Charitable expenses, including all costs associated with contributions to tax exempt foundations, charities, not related to the company business enterprises and community benefits.

12. Taxes, Assessments and Fines Paid to Federal, State or Local Government:

a. Taxes (premium, real estate, other non-payroll) paid, including all costs associated with state premium taxes, state and local insurance taxes, federal taxes, except taxes on capital gains, state income tax, state sales tax and other sales taxes not included with the cost of goods purchased;

b. Assessments, fees and other amounts paid to government agencies, including all assessments, fees or other amounts paid to state or local government and does not include any taxes or fines or penalties paid to any government agency; and

c. Fines and penalties paid to government agencies, including all costs associated with penalties and fines paid to government agencies.

13. General Administration:

a. Payroll administration expenses and payroll taxes, including all costs associated with salaries, benefits and payroll taxes (not allocated elsewhere);

b. Real estate expenses, including all costs associated with company building and other taxes and expenses of owned real estate, excluding home office employee expenses and rent (not allocated elsewhere) and insurance on real estate;

c. Regulatory compliance and government relations, including all costs associated with Federal and State reporting, rate filing, state and federal audits, tax accounting, lobbying, licensing and filing fees, preparation and filing of financial, utilization, statistical and quality reports and administration of government programs;

d. Board, bureau or association fees, including all board of directors, bureau and association fees paid or expensed during the calendar year;

e. Other administration, including all cost associated with information technology, senior management, outsourcing (not allocated elsewhere), insurance except on real estate, equipment rental, travel (not allocated elsewhere), certification and accreditation fees, legal fees and expenses before administrative and legal bodies, and other general administrative expenses;

f. Reimbursement from uninsured plans, representing a negative adjustment that would include all revenue receipts from uninsured plans (including excess pharmaceutical rebates and administrative fees net of expenses) and reimbursements from fiscal intermediaries (including administrative fees net of expenses from the government); and

g. Number of employees on the Carrier's payroll on December 31 of the preceding year, including the number of full-time employees whose normal work week is 30 or more hours, but not including any employee who works on a part-time, temporary or substitute basis.

14. Detailed miscellaneous expenses, including, but not limited to, all collection and bank service charges, printing and office supplies not allocated elsewhere, postage and telephone not allocated elsewhere.

15. Capital Expenses and Depreciation:

a. Depreciation, including all costs associated with depreciation for electronic data processing, equipment, software, and occupancy;

b. Capital acquisitions, including all expenditures for the acquisition of capital assets, including lease payments that were paid or incurred during the calendar year;

c. Capital costs on behalf of a hospital or clinic, including all expenditures for capital and lease payments incurred or paid during the calendar year on behalf of a hospital or clinic (or part of a partnership, joint venture, integration or affiliation agreement); and

d. Other capital costs, including expenditures for other costs that are directly associated with the incurring of capital costs, such as legal or administrative costs, incurred or paid during the calendar year.

16. Net income, which equals direct premiums earned less direct claims incurred less expenses plus investment gains and losses.

(c) Balance Sheet.

1. Accumulated surplus, including common stock, preferred stock, gross paid in and contributed surplus, surplus notes, unassigned funds and other capital or surplus items.

2. Accumulated reserves, including all reserves, including claim reserves, premium reserves and contract reserves.

3. Risk based capital ratio, as derived in accordance with 211 CMR 25.00.

(d) Any other information requested by the Commissioner.

Total Medical Expenses

Findings related to Total Medical Expenses (TME) are based on payers' annual filings to the Center for Health Information and Analysis (Center) for calendar years 2010, 2011, and 2012. These filings include enrollment and health status data as well as claims payments and non-claims payments by type of service. The data are reported separately by zip code for Massachusetts residents, and by managing physician group for members whose plans requires that they select a primary care physician.

DEFINITIONS:

Member zip code TME measures the total per member per month health care spending of each Massachusetts zip code, based on member residence, rather than where members received services. Zip codes are self-reported by members, which may lead to certain inaccuracies, particularly in areas with high student or other transient populations.

TME can be measured on an unadjusted basis, which reflects actual spending but does not consider differences among member populations. TME may also be adjusted to reflect differences in member demographics and health status such as age, gender, and clinical profile. This report presents both unadjusted and health status adjusted TME data.

Managing physician group TME measures the total per member per month health care spending of members whose plans require the selection of a primary care physician associated with a physician group. Thus, physician group TME reported by each payer contains exclusively managed care member information. The data reported for each physician group include TME for these members, even when care was provided outside of the physician group. Data related to pediatric physician groups were excluded from the physician group TME analyses.[9]

Unadjusted TME is presented for aggregated analyses across payers, such as statewide and regional analyses. Unadjusted TME was used for such purposes since payers in these analyses utilized different methods in adjusting for health status, and health status adjusted TME results calculated from different health status adjustment methods cannot be directly compared.

Health status adjusted TME is analyzed in order to compare health care expenditures of different member populations within a payer's membership. TME is presented on a health status adjusted basis for managed and non-managed populations,[10] and patients managed by physician groups within a payer's network. All reported health status adjusted TME values use "normalized" health status scores, meaning the scores have been normalized such that the statewide average health status score for a given payer, insurance category, and calendar year is equal to 1.0. There are two reasons for using normalized health status scores. First, it allows the reader to compare a health status adjusted TME value to the statewide average TME to easily understand whether the reported measure is greater or less than the average on a comparable basis. Second, since payers do not use a common health status adjuster, the 1.0 risk score inherent in the reported scores may also differ across payers, preventing comparison across payers and rendering the raw scores meaningless on their own.

DATA:

The TME analyses in this report and its appendix are based on data submitted for members with commercial insurance for calendar years 2010-2012. The list of commercial payers reporting TME data included in this report can be found in Table TA 2. The commercial insurance categories for which the Center required reporting are defined below.

Commercial full claims data include both self- and fully-insured commercial business for which claims for all medical services were available to the reporting payer. The data capture complete medical spending and was used to calculate commercial TME.

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[9] As defined in 957 CMR 2.00, pediatric physician practice is a physician group practice in which at least 75% of its patients are children up to the age of 18.

[10] The managed populations of a payer's member populations are those whose are enrolled in the insurance products (e.g. HMO plans) that require the members to select a primary care physician (PCP) to manage their care. The non-managed populations are members whose plans do not require them to select a PCP (e.g. PPO plans).

Commercial partial claims data include self- and fully-insured commercial business where the employer separately contracts for one or more specialized services, such as pharmacy or behavioral health service management. In these cases, the reporting payer does not have access to the claims for the separately contracted services. As the full range of medical expenses is not included in the data reported by the payers, these partial claims are not included in the TME analyses contained in this report.

At the time of this report's development, the Center had received 2010-2012 commercial TME data from ten payers. The TME data for UniCare is not included in the analysis because the only insurance category the payer reported was commercial partial claims. The TME data for United Healthcare Insurance Company (United Commercial) is excluded from this report due to data quality concerns.

The 2010 and 2011 data are final TME data with at least 12 months of the claims run-out period. The reported 2012 TME data includes paid claims available to the payers at the time they ran their datasets for the May 2013 submission. However, claims continued to be paid throughout 2013 for services rendered in 2012. In order to report 2012 TME that are complete and comparable to final 2010 and 2011 TME, the payers provided completion factors, which include payer estimates for incurred but not reimbursed (IBNR) ratios, by type of service that were then applied to the preliminary 2012 data to develop better estimates of 2012 data.

The reported payment data, especially the non-claims payments, provided by payers in the preliminary 2012 TME submission could differ materially from the final results. For certain payers taking into account quality and financial performance of providers, much of the measured quality scores and financial/risk performance for calendar year 2012 were not available at the time of TME submission deadline, which was May 1st 2013). Payers included estimates for the final settlements, as such, the final 2012 TME reported by certain payers could differ from their preliminary 2012 TME.

Alternative Payment Methods

DEFINITIONS:

Global Budget/Payment: Global budgets/payments are payment arrangements made between payers and providers to cover all of the expected costs for health care services to be delivered to a specified population during a stated time period. Global budget/payment arrangements may shift some financial risk from payers to providers. In these cases, if costs exceed the budgeted amounts, providers must absorb those costs, subject to negotiated risk sharing agreements.[11] On the other hand, providers may share in, or retain, the savings if costs are lower than the budgeted amounts and health care quality performance targets are met.

It is important to note that within the framework of a global budget/payment arrangement with a physician group or hospital, payments to service providers are generally made on a FFS basis. Also, global budgets/ payments methods as defined here do not consider the extent of risk, if any, borne

[11] Payers and providers may negotiate risk corridors or other types of risk limitation mechanisms

by the managing physician group. It is difficult to capture levels of risk, as there is currently no standardized approach to risk classification or reporting.[12]

Limited Budget: Limited budgets, like global budgets, represent a move away from FFS-based payments. Limited budgets are payment arrangements where payers and providers, either prospectively or retrospectively, agree to pay for a specific set of services to be delivered by a single provider. This could include, for instance, capitated primary care or oncology services. Limited budgets also shift some financial risk from payers to providers.

Bundled Payments: Bundled payments are a method of reimbursing providers, or a group of providers, for providing multiple health care services associated with defined "episodes of care" (i.e. colonoscopy, pregnancy and delivery, pneumonia treatments, etc.) for a patient or set of patients. These payments may include services developed based upon clinical guidelines, severity adjustments to account for the general health status of a patient and comorbidities (other related ailments), and even designated "profit" margins and allowances for potential complications.[13]

Other, non-FFS-based: This category includes all other payment arrangements that are not based on a FFS model, but that also do not easily fit into any of the other categories. This category includes supplemental payments for the Patient Center Medical Home Initiative (PCHMI), for instance.

Fee-for-service (FFS): Under this model, health care providers are reimbursed by payers at negotiated rates for individual services delivered to patients. A variety of FFS methods exist, including some that incorporate financial performance incentives for providers.[14]

DATA: In May 2013, the Center started to collect the data on alternative payment methods from the ten largest commercial payers for calendar year 2012 (Table TA 2). The information was collected at the member zip code level and the managing physician group level, similar to the TME data. In this report, only the member zip code level information was analyzed and presented. The reported payment information, especially the non-claims payments, could differ from the final payment amounts since quality and financial performance is normally part of the features of alternative payment methods. And these final settlements for quality and financial performance have not been completed at the time of APM data submission deadline, which was May 15th, 2013.

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[12] Risk sharing arrangements can vary significantly complicating classification of risk parameters. For more detail information on risk sharing arrangement, please see the report from the Massachusetts Office of Attorney General: the 2013 Examination of Health Care Cost Trends and Cost Drivers in the Massachusetts Health Care Market. Available at http://www.mass.gov/ago/docs/healthcare/2013-hcctd.pdf (accessed August 1, 2013)

[13] Bundled payments have been highlighted by the Commonwealth for their cost saving potential. Section 64 of Chapter 288 of the Acts of 2010 directed the Center's predecessor agency, the Division of Health Care Finance and Policy (Division), to undertake activities intended to foster the adoption of bundled payments among health care payers and providers in Massachusetts. The Division released a report on bundled payments, outlining their potential cost savings. Available at: http://www.mass.gov/chia/docs/r/pubs/11/bundled-payments-report-02-2011.pdf (accessed August 1, 2013)

[14] FFS arrangements may include: Diagnoses Related Group (DRG) payments; per-diem payments; fixed procedure code-based fee schedules; claims-based payments adjusted for performance measures; discounted charges-based payments; and Pay for Performance incentives that accompany FFS payments.

Chapter Three

Please see Technical Appendix: Chapter Two for more information on TME Methodology.

Relative Prices

DEFINITIONS:

Relative Price: Relative price is a calculated measure that compares different provider prices within a payer's network for a standard mix of insurance products (e.g. HMO, PPO, and Indemnity) to the average of all providers' prices in that network. The relative price method standardizes the calculation of provider prices and neutralizes the effect of differences in the volume and types of services providers deliver to patients, and the different product types that payers offer to their members.

- **Network Average:** The average of all prices for a particular provider type in a particular payer's network. Each payer's network average relative price is represented by a "1.0" value.

- **Blended Relative Price:** A hospital's blended relative price is derived by weighting each hospital's inpatient and outpatient relative prices by the network distribution of all hospital's inpatient and outpatient payments within a given payer.[15]

- **Hospital Composite Relative Price Percentile:** Derived by taking the simple average of each provider's relative price percentiles across all payers. The composite percentile gives a sense of the rank of a provider's relative price compared to its peers across all payers.

- **System Composite Relative Price Percentile:** In order to analyze relative prices across each hospital system, a "system composite relative price percentile" was developed for each system by taking the simple average of each constituent hospital within the healthcare system's relative price percentile.

- **Group Composite Relative Price Percentile:** In order to examine relative price levels by hospital characteristics, each hospital was first assigned to a characteristic group.[16] Within a given payer's network, a "group average relative price percentile" was developed for each

[15] Blended hospital inpatient and outpatient results are reported only for those hospitals with payments that exceeded both the inpatient and outpatient reporting thresholds. Detailed information on the methodologies can be found in the Center's previous provider price variation report: http://www.mass.gov/chia/docs/r/pubs/13/relative-price-variation-technical-appendix-2013-02-28.pdf (accessed 7/31/2013)

[16] An assignment hierarchy was employed to ensure that no hospital was counted twice. Hospitals that were academic medical centers were first identified. Among the remaining hospitals, specialty hospitals were the second characteristic group to be designated. The remaining hospitals were then assigned to the appropriate characteristic groups in the order of teaching status, geographical isolation status, and DSH status. Lastly, the remaining unclassified hospitals were grouped as community hospitals.

characteristic group by taking the simple average of the relative price percentile of each hospital within the characteristic group.

Market Share: For acute hospitals, market share is defined here as a hospital's total payments (inpatient and outpatient payments combined) from all reporting payers compared to the total commercial payments to acute hospitals in the Commonwealth. For physician groups where a standard utilization measure is not reported in the data, market share is defined by the amount of commercial payments a physician group receives compared to the amount of total commercial physician group payments by payers included in this report. For commercial payers, market share is defined as the number of member months in a payer's network compared to the total commercially insured population of the Commonwealth reported in the TME data (the full and partial claims populations combined).

DATA:

This report examines price relativities of acute hospitals and physician groups for commercial insurance. The Center collected and reported the 2012 acute hospital and 2011 physician group[17] data from the ten largest commercial payers in the Massachusetts commercial health insurance market (Table TA 2).

METHODS:

Each payer's network average is represented by a "1.0" relative price value. Each provider within a payer's network is assigned a relative price that represents how much the provider's price deviates from that "1.0". Because each provider's relative price value is tied to the network average within a given network, it is not possible to directly compare a provider's relative price value across payer networks.[18] .

In order to compare provider relative price levels across payers' networks, a relative price percentile was used in this report. Each provider's relative price in a given payer's network was first converted into a percentile. Then, a composite relative price percentile was derived by taking the simple average of each provider's relative price percentile across all payers. A higher percentile (e.g. the 80th percentile) indicates that a provider's relative price on average was higher than 80% of the providers across all payers; a lower average percentile (e.g. the 10th percentile) indicates that a provider's relative price was lower than 90% of the providers across all payers. The 50th percentile represents the network median relative price. As the percentile method used the same ordered scale for all payers, the relative position of the provider may be compared across all payers. The composite percentile gives a sense of what, on average, is the relative order of a provider's relative price compared to its peers in the commercial market.

[17] Calendar year 2011 data is used for physician groups because payers require at least 12 months for claims run out. Additional time is needed for non-claims payments, as these types of payments are reconciled at the end of the calendar year based on a provider's quality and financial performance measures used to determine the final settlement amount.

[18] As network average prices represent different dollar values across networks, it is important to note that a lower relative price in payer X's network (for example .90) could represent a higher actual price than a higher relative price in payer Y's network (for example 1.10).

Physician Group System Affiliation

TABLE TA 1: SELECTED PHYSICIAN GROUP SYSTEM AFFILIATION, 2012

Health System	Physician Group
Partners Community HealthCare, Inc. (Partners)	Partners Community HealthCare, Inc. (PHO)
	Brigham and Women's Physicians Organization
	Burlington Medical Associates
	Cambridge Health Alliance Physician Organization
	Cape Ann Medical Center Physician Group
	Charles River Medical Associates, P.C.
	Emerson Hospital PHO
	Hallmark Health System (HHS)
	Massachusetts General Physicians Organization, Inc.
	Newton-Wellesley Physician Hospital Organization (NWPHO)
	North Shore Health System / North Shore Physicians Group
	Pentucket Medical Associates (PMA)
	PMG Physician Associates, P.C.
	Prima CARE, P.C.
	Tri-County Medical Associates, Inc. (PHO)
Atrius Health	Fallon Clinic Inc.
	Atrius Health
	Dedham Medical Associates
	Granite Medical
	Harvard Vanguard Medical Associates, Medford / Atrius Health
	South Shore Medical Center
	Southboro Medical Group
CareGroup	Beth Israel Deaconess PHO
	Affiliated Physicians Inc., Groups
	Harvard Medical Faculty Physicians at Beth Israel Deaconess Medical Center
	Mount Auburn Cambridge IPA
	New England Baptist Health Services, Inc.
NEQCA/Tufts	New England Quality Care Alliance (NEQCA)
	Alliance for Quality Care, LLC
	Highland Healthcare Associates IPA Inc.
	Southcoast Physicians Network Inc.
	The Physicians of Tufts-New England Medical Center, Inc. (PT-NEMC)
Steward Health Care	Steward Network Services, Inc.
	Cape Cod Preferred Physicians
	Carney IPA

	Compass Medical, P.C.
	Greater Boston Primary Care Associates
	Hawthorn Medical Associates
	Merrimack Valley Physicians Inc.
	Nashoba Physicians, Inc.
	St Anne's IPA
	Steward Good Samaritan IPA
	Steward Norwood Southwood IPA
	Steward St. Elizabeth's Health Professionals
UMass Memorial Health Care	UMass Memorial Health Care
	Health Alliance with Physicians, Inc.
	UMass Memorial Medical Center - Based Practices
	UMass Memorial Medical Group
Baystate Health	Baycare Health Partners, Inc.
	Baystate Medical Practice PHO

Commercial Payers Reporting Total Medical Expense and Relative Price Data

TABLE TA 2: LIST OF COMMERCIAL PAYERS REPORTING TOTAL MEDICAL EXPENSES AND RELATIVE PRICES DATA

Payer	Data Type
Aetna Health Insurance Company (Aetna)	TME member zip code (full and partial claims) TME physician group Relative Prices Alternative Payment Methods
Blue Cross Blue Shield of Massachusetts (BCBS)	TME member zip code (full and partial claims) TME physician group Relative Prices Alternative Payment Methods
CeltiCare Health Plan (CeltiCare)	TME member zip code (full claims) TME physician group Relative Prices Alternative Payment Methods
Connecticut General Life Insurance Company (Cigna)	TME member zip code (full claims) TME physician group Relative Prices Alternative Payment Methods
Fallon Health and Life Assurance Company (Fallon)	TME member zip code (full and partial claims) TME physician group Relative Prices

	Alternative Payment Methods
Harvard Pilgrim Health Care (HPHC)	TME member zip code (full and partial claims) TME physician group Relative Prices Alternative Payment Methods
Health New England (HNE)	TME member zip code (full claims) TME physician group Relative Prices Alternative Payment Methods
Neighborhood Health Plan (NHP)	TME member zip code (full claims) TME physician group Relative Prices Alternative Payment Methods
Tufts Health Plan (Tufts)	TME member zip code (full and partial claims) TME physician group Relative Prices Alternative Payment Methods
UniCare Life and Health Insurance Company (UniCare)	TME member zip code (partial claims) Relative Prices Alternative Payment Methods

Note: BMC HealthNet and Network Health both reported TME and RP data to the Center. Since these two payers only reported information for Medicaid Managed Care Organization (MCO) plans and Commonwealth Care plans, they are not included in this report. United Healthcare Insurance Company is not included in this report due to concerns with data quality.

ACUTE HOSPITAL HEALTHCARE SYSTEM AFFILIATION TABLE TA 3: ACUTE HOSPITAL HEALTHCARE SYSTEM AFFILIATION (2012)

System (n=12)	Acute Hospital (n=67)	Characteristics	% of Total Hospital Payments
Partners HealthCare (n=7)	Massachusetts General Hospital	A	13.78%
	Brigham and Women's Hospital	A	10.42%
	Newton-Wellesley Hospital	C	3.79%
	North Shore Medical Center	D	1.69%
	Brigham and Women's Faulkner Hospital	T	1.11%
	Martha's Vineyard Hospital	G	0.27%
	Nantucket Cottage Hospital	G	0.17%
CareGroup (n=5)	Beth Israel Deaconess Medical Center	A	5.68%
	New England Baptist Hospital	S	1.59%
	Mount Auburn Hospital	T	1.54%

	Beth Israel Deaconess Hospital - Milton	C	0.32%
	Beth Israel Deaconess Hospital - Needham	C	0.32%
UMass Memorial Health Care (n=5)	UMass Memorial Medical Center	A	5.87%
	HealthAlliance Hospital	C	0.49%
	Marlborough Hospital	C	0.25%
	Clinton Hospital	D	0.06%
	Wing Memorial Hospital	D	0.21%
Baystate Health (n=3)	Baystate Medical Center	T	3.22%
	Baystate Franklin Medical Center	G	0.32%
	Baystate Mary Lane Hospital	C	0.13%
Tufts/NEQCA (n=1)	Tufts Medical Center	A	2.71%
Vanguard (n=2)	Saint Vincent Hospital	T	1.61%
	MetroWest Medical Center	C	1.01%
Cape Cod HealthCare (n=2)	Cape Cod Hospital	G	1.50%
	Falmouth Hospital	G	0.58%
Lahey Health (n=2)	Lahey Clinic	T	3.86%
	Northeast Hospital	C	1.42%
Steward Health Care (n=10)	Steward St. Elizabeth's Medical Center	T	1.43%
	Steward Norwood Hospital, Inc.	C	0.72%
	Steward Good Samaritan Medical Center	D	0.70%
	Steward Holy Family Hospital, Inc.	D	0.62%
	Steward Morton Hospital	D	0.41%
	Steward Saint Anne's Hospital	D	0.64%
	Steward Carney Hospital	T	0.24%
	Steward Quincy Medical Center	D	0.23%
	Steward Nashoba Valley Medical Center	C	0.19%
	Steward Merrimack Valley Hospital	D	0.14%
Berkshire Health Systems (n=2)	Berkshire Medical Center	G	1.21%
	Fairview Hospital	G	0.15%
Circle Health (n=2)	Lowell General Hospital	C	1.10%
	Saints Medical Center	C	0.40%
Shriners (n=2)	Shriners Hospitals for Children Springfield	S	0.01%
	Shriners Hospitals for Children Boston	S	0.00%
Non System (n=24)	Boston Children's Hospital	S	6.00%
	South Shore Hospital		2.88%

	Dana-Farber Cancer Institute	S	3.38%
	Southcoast Hospitals Group	C	2.11%
	Winchester Hospital	C	1.70%
	Boston Medical Center	A	1.33%
	Emerson Hospital	C	1.01%
	Milford Regional Medical Center	C	0.97%
	Cooley Dickinson Hospital	C	0.96%
	Jordan Hospital	C	0.87%
	Massachusetts Eye and Ear Infirmary	S	0.75%
	Sturdy Memorial Hospital	C	0.74%
	Signature Healthcare Brockton Hospital	D	0.65%
	Mercy Medical Center	D	0.51%
	Hallmark Health	C	1.14%
	Cambridge Health Alliance	T	0.49%
	Anna Jaques Hospital	C	0.46%
	Lawrence General Hospital	D	0.41%
	Heywood Hospital	C	0.36%
	Harrington Memorial Hospital	G	0.47%
	North Adams Regional Hospital	G	0.24%
	Holyoke Medical Center	D	0.22%
	Noble Hospital	D	0.16%
	Athol Memorial Hospital	G	0.06%

Note: The Center employed an assignment hierarchy to reflect a hospital's characteristic and ensure that no hospital was counted twice: academic medical center (A) > specialty hospital (S) > teaching hospital (T) > geographic isolated hospital (G) > disproportionate share hospital (D) > community hospital (C).

Total Physician Payments in Relative Price Data

TABLE TA 4: PROPORTION OF TOTAL PHYSICIAN PAYMENTS IN THE RELATIVE PRICE DATA BY PAYERS (2011)

Payer	% Payments Reported in RP Data	% Payment Not Reported**
Aetna	71%	29%
BCBS	84%	16%
Celticare	73%	27%
Cigna*	22%	78%
Fallon*	56%	44%
HPHC	100%	0%
HNE	79%	21%
NHP	78%	22%
Tufts	96%	4%
UniCare*	60%	40%
Total	**86%**	**14%**

Notes:
*The Center requires commercial payers to submit relative price information for its top 30 physician groups based on the share of total payments within each payer's network. Certain payers also reported the information on the remaining physician groups' total payments in aggregate. The asterisked payers tended to contract with individual physicians or smaller/local practice groups instead of contracting with larger/parent physician groups, resulting in a higher proportion of total payments in their networks made to physician and physician groups that were not the top 30 physician groups in the payers' networks.
** Physicians or physician groups which are normally paid based on each payer's standard fee schedule are not included in the relative price reporting. The proportion of the payments to these physicians/physician groups as of total payments to all physicians within each payer's network is listed here.

Provider Quality Measures

TABLE TA 5: QUALITY MEASURES USED WITHIN ANNUAL REPORT[19]

Set	Name	Description	Measure Developer & Data Source	Measure start date	Measure end date
Hospital Compare	Aspirin prescribed at discharge for AMI (AMI 2)	Percentage of acute myocardial infarction (AMI) patients who are prescribed aspirin at hospital discharge	Centers for Medicare & Medicaid Services: Health record	7/1/2011	6/30/2012
Hospital Compare	% of heart attack patients given PCI within 90 minutes of arrival	Percentage of acute myocardial infarction (AMI) patients with ST-segment elevation or LBBB on the ECG closest to arrival time receiving primary percutaneous coronary intervention (PCI) during the hospital stay with a time from hospital arrival to PCI of 90 minutes or less.	Centers for Medicare & Medicaid Services: Health record	7/1/2011	6/30/2012
HCAHPS	% of patients reporting that room was 'always' clean	The percentage of patients responding to the HCAHPS survey who reported that their room and bathroom were "Always" clean.	Agency for Healthcare Research and Quality: Patient Reported Data/Survey	7/1/2011	6/30/2012
HCAHPS	% of patients who reported that staff 'always' explained about medicines	The percentage of patients responding to the HCAHPS survey who reported that staff "Always" explained about medicines before giving it to them.	Agency for Healthcare Research and Quality: Patient Reported Data/Survey	7/1/2011	6/30/2012
HCAHPS	% of patients reporting that doctors 'always' communicated well	The percentage of patients responding to the HCAHPS survey who reported that their doctors "Always" communicated well.	Agency for Healthcare Research and Quality: Patient Reported	7/1/2011	6/30/2012

[19] Cholesterol screening test for cardiovascular disease, Birth Trauma Rate: Injury to Neonates, and Central Venous Catheter-Related Blood Stream Infection Rate have not been endorsed by the NQF

			Data/Survey		
HCAHPS	% of patients reporting that nurses 'always' communicated well	The percentage of patients responding to the HCAHPS survey who reported that their nurses "Always" communicated well.	Agency for Healthcare Research and Quality: Patient Reported Data/Survey	7/1/2011	6/30/2012
HCAHPS	% of patients who reported that they were given information about what to do during their recovery at home	The percentage of patients responding to the HCAHPS survey at each hospital who reported that YES, they were given information about what to do during their recovery at home.	Agency for Healthcare Research and Quality: Patient Reported Data/Survey	7/1/2011	6/30/2012
HCAHPS	% of patients who gave their hospital a rating of 9 or 10 (highest)	The percentage of patients responding to the HCAHPS survey who gave their hospital a rating of 9 or 10 on a scale from 0 (lowest) to 10 (highest).	Agency for Healthcare Research and Quality: Patient Reported Data/Survey	7/1/2011	6/30/2012
HCAHPS	% of patients who would definitely recommend the hospital	Percentage of patients who reported YES, they would definitely recommend the hospital.	Agency for Healthcare Research and Quality: Patient Reported Data/Survey	7/1/2011	6/30/2012
HCAHPS	% of patients who reported that their pain was 'always' well controlled.	The percentage of patients responding to the HCAHPS survey who reported that their pain was "Always" well controlled.	Agency for Healthcare Research and Quality: Patient Reported Data/Survey	7/1/2011	6/30/2012
HCAHPS	% of patients who reported that the area around their room was 'always' quiet at night	The percentage of patients responding to the HCAHPS survey who reported that the area around their room was "Always" quiet at night.	Agency for Healthcare Research and Quality: Patient Reported Data/Survey	7/1/2011	6/30/2012

HCAHPS	% of patients who reported that they 'always' received help as soon as they wanted	The percentage of patients responding to the HCAHPS survey who reported that they "Always" received help as soon as they wanted.	Agency for Healthcare Research and Quality: Patient Reported Data/Survey	7/1/2011	6/30/2012
HEDIS	Appropriate testing for children with pharyngitis	The percentage of children 2 - 18 years of age who were diagnosed with pharyngitis, dispensed an antibiotic and received a group A streptococcus (strep) test for the episode. A higher rate represents better performance (i.e., appropriate testing).	National Committee for Quality Assurance: Administrative claims; Health record	1/1/2010	12/31/2010
HEDIS	Appropriate treatment for children with upper respiratory infection (URI)	Percentage of children who were given a diagnosis of URI and were not dispensed an antibiotic prescription on or three days after the episode date	National Committee for Quality Assurance: Administrative claims; Health record	1/1/2010	12/31/2010
HEDIS	Cholesterol screening test for cardiovascular disease	Percentage of members 18 to 75 years of age who were discharged alive for AMI, coronary artery bypass graft (CABG), or percutaneous coronary interventions (PCI) from January 1 to November 1 of the year prior to the measurement year, or who had a diagnosis of ischemic vascular disease (IVD) during the measurement year and the year prior to the measurement year, who had a LDL-C screening and LDL-C control (less than 100 mg/dL).	National Committee for Quality Assurance: Administrative claims; Health record	1/1/2010	12/31/2010
HEDIS	Breast Cancer Screening	Percentage of eligible women 40-69 who receive a mammogram in a two year period	National Committee for Quality Assurance: Claims/clinical record	1/1/2010	12/31/2010
HEDIS	Diabetes: Hemoglobin A1c testing	Percentage of adult patients with diabetes aged 18-75 years receiving one or more A1c test(s) per year	National Committee for Quality Assurance: Administrative claims; health record	1/1/2010	12/31/2010

HEDIS	Diabetes: Cholesterol (LDL-C) Screening Test	Percentage of adult patients with diabetes aged 18-75 years receiving at least one lipid profile (or ALL component tests)	National Committee for Quality Assurance: Administrative claims	1/1/2010	12/31/2010
HEDIS	Diabetes: Tests to Monitor Kidney Disease	Percentage of adult diabetes patients aged 18-75 years with at least one test for microalbumin during the measurement year or who had evidence of medical attention for existing nephropathy (diagnosis of nephropathy or documentation of microalbuminuria or albuminuria)	National Committee for Quality Assurance: Administrative claims	1/1/2010	12/31/2010
Hospital Compare	ACEI or ARB for left ventricular systolic dysfunction (LVSD)	Percentage of heart failure (HF) patients with left ventricular systolic dysfunction (LVSD) who are prescribed an ACEI or ARB at hospital discharge. For purposes of this measure, LVSD is defined as chart documentation of a left ventricular ejection fraction (LVEF) less than 40% or a narrative description of left ventricular systolic (LVS) function consistent with moderate or severe systolic dysfunction.	Centers for Medicare & Medicaid Services: Health record	7/1/2011	6/30/2012
Hospital Compare	Evaluation of left ventricular systolic function (LVS)	Percentage of heart failure patients with documentation in the hospital record that left ventricular systolic (LVS) function was evaluated before arrival, during hospitalization, or is planned for after discharge.	Centers for Medicare & Medicaid Services: Health record	7/1/2011	6/30/2012
Hospital Compare	Initial antibiotic selection for community-acquired pneumonia (CAP) in immunocompetent patients	Percentage of pneumonia patients 18 years of age or older selected for initial receipts of antibiotics for community-acquired pneumonia (CAP)	Centers for Medicare & Medicaid Services: Discharge data	7/1/2011	6/30/2012
PSI	Accidental Puncture or Laceration	Percent of medical and surgical discharges, 18 years and older, with ICD-9-CM code denoting accidental cut, puncture, perforation, or laceration in any secondary diagnosis field.	Agency for Healthcare Research and Quality: Discharge data	10/1/2010	9/30/2011

PSI	Birth Trauma Rate: Injury to Neonates	Percentage of neonates with specific birth trauma per 1000 births. Exclude infants with injury to skeleton and osteogenesis imperfecta, subdural or cerebral hemorrhage in preterm infant.	Agency for Healthcare Research and Quality: Discharge data	10/1/2010	9/30/2011
PSI	Central Venous Catheter-Related Blood Stream Infection Rate	Rate per 1,000 discharges	Agency for Healthcare Research and Quality: Discharge data	10/1/2010	9/30/2011
PSI	Iatrogenic Pneumothorax (risk adjusted)	Percent of medical and surgical discharges, 18 years and older, with ICD-9-CM code of iatrogenic pneumothorax in any secondary diagnosis field.	Agency for Healthcare Research and Quality: Discharge data	10/1/2010	9/30/2011
PSI	Postoperative DVT or PE	Percent of adult surgical discharges with a secondary diagnosis code of deep vein thrombosis or pulmonary embolism	Agency for Healthcare Research and Quality: Discharge data	10/1/2010	9/30/2011
PSI	Postoperative Respiratory Failure Rate	Percentage of postoperative respiratory failure discharges among adult, elective surgical discharges in a one year time period.	Agency for Healthcare Research and Quality: Discharge data	10/1/2010	9/30/2011
SCIP	Prophylactic antibiotic received within 1 hour prior to surgical incision	Surgical patients with prophylactic antibiotics initiated within one hour prior to surgical incision. Patients who received vancomycin or a fluoroquinolone for prophylactic antibiotics should have the antibiotics initiated within two hours prior to surgical incision. Due to the longer infusion time required for vancomycin or a fluoroquinolone, it is acceptable to start these antibiotics within two hours prior to incision time.	Centers for Medicare & Medicaid Services: Health record	7/1/2011	6/30/2012
SCIP	Prophylactic antibiotic selection for surgical patients	Surgical patients who received prophylactic antibiotics consistent with current guidelines (specific to each type of surgical procedure).	Centers for Medicare & Medicaid Services: Health record	7/1/2011	6/30/2012

SCIP	Prophylactic antibiotics discontinued within 24 hours after surgery end time	Surgical patients whose prophylactic antibiotics were discontinued within 24 hours after Anesthesia End Time. The Society of Thoracic Surgeons (STS) Practice Guideline for Antibiotic Prophylaxis in Cardiac Surgery (2006) indicates that there is no reason to extend antibiotics beyond 48 hours for cardiac surgery and very explicitly states that antibiotics should not be extended beyond 48 hours even with tubes and drains in place for cardiac surgery.	Centers for Medicare & Medicaid Services: Health record	7/1/2011	6/30/2012
SCIP	Surgery Patients with Perioperative Temperature Management	Surgery patients for whom either active warming was used intraoperatively for the purpose of maintaining normothermia or who had at least one body temperature equal to or greater than 96.8Â° F/36Â° C recorded within the 30 minutes immediately prior to or the 15 minutes immediately after Anesthesia End Time.	Centers for Medicare & Medicaid Services: Health record	7/1/2011	6/30/2012
SCIP	Urinary catheter removed on Postoperative Day 1 (POD1) or Postoperative Day 2 (POD2) with day of surgery being day zero.	Surgical patients with urinary catheter removed on Postoperative Day 1 or Postoperative Day 2 with day of surgery being day zero.	Centers for Medicare & Medicaid Services: Health record	7/1/2011	6/30/2012

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