# Setting Hospital Rates To Control Costs And Boost Quality: The Maryland Experience

The state's all-payer system has kept hospital cost growth well below the national trend—and could be replicated elsewhere.

**by Robert Murray**

**ABSTRACT:** For decades Maryland has maintained a hospital payment system in which all payers—public and private—pay the same rates. This paper describes Maryland's all-payer hospital payment system—the legislative goals and principles that directed regulatory efforts in the state; how well the system performs in meeting these goals; and current initiatives on payment design, quality-based reimbursement, and their application elsewhere in the health sector. Maryland's rate-setting system is one of the most enduring and successful cost containment programs in the United States. Lessons learned are relevant to other states and provide useful bases for consideration of future health reform strategies. [Health Aff (Millwood). 2009;28(5):1395–405; 10.1377/hlthaff.28.5.1395]

Hospital rate regulation in Maryland was established by an act of the Maryland legislature in 1971. This action followed a period of rapidly rising hospital costs and serious financial losses by hospitals treating large numbers of uninsured patients. The Maryland Hospital Association (MHA) initially proposed rate regulation as a means of financing the growing levels of hospital uncompensated care. Hospital trustees drafted the original legislation, and the MHA strongly supported the final bill before the legislature. As business and community leaders, hospital trustees recognized the broad societal benefits of a system that would both provide financial stability and constrain hospital costs.

The act established the Health Services Cost Review Commission (HSCRC), a government agency with broad powers of hospital rate setting and public disclosure; however, the legislature left it to the commission to flesh out the details. This foresight has allowed the HSCRC to adapt the rate system to changing dynamics.[1]

The HSCRC believed that hospitals should operate under consistent payment

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incentives. Thus, in 1977 it negotiated a waiver to require Medicare and Medicaid to pay Maryland hospitals on the basis of rates it approved. As a result, the HSCRC exercises full rate-setting authority for all payers and all general acute hospitals in Maryland. This Medicare waiver is the linchpin for the system and a galvanizing force for all stakeholders.

## Operational Characteristics And Jurisdiction

The HSCRC is governed by seven volunteer commissioners appointed by the governor for four-year staggered terms. Commissioners provide a broad array of health care backgrounds and expertise, but no more than three may have provider affiliations. Day-to-day operations are performed by twenty-eight full-time staff with expertise in accounting, data systems, hospital financing, and policy development.

The HSCRC is politically and legally independent. Its annual budget (currently $4.5 million) is funded through user fees and is not subject to the constraints of the state's general fund. Its rate-setting authority establishes service-specific rates for all inpatient, hospital-based outpatient, and emergency services at forty-seven general acute, three specialty, and three private psychiatric hospitals in Maryland with regulated revenue in excess of $13 billion annually. The HSCRC collects data on the costs, patient volume, and financial condition of the hospitals, as well as patient-level inpatient and outpatient data. Robust auditing and compliance ensure conformity with charging and data-submission requirements. The HSCRC distributes annual reports on hospital operations. All commission files are publicly available.[2]

■ **Legislative principles.** The enabling legislation requires the HSCRC to (1) constrain hospital costs; (2) ensure access to hospital care for all citizens; (3) improve the equity and fairness of hospital financing; (4) provide for financial stability; and (5) make all parties accountable to the public. The legislature also articulated several principles to guide the design of the regulatory system.[3]

*Market failure.* The legislature believed that the market would not achieve the multiple goals of cost containment, access, equity, stability, and accountability on its own. To rectify perceived defects in hospital markets, the enabling statute (1) gave the HSCRC broad powers of data collection and disclosure to correct for information asymmetry and absence of timely and accurate data in the hospital market; (2) instructed the commission to set rates prospectively, in contrast to the open-ended "cost-based" reimbursement systems of the time; and (3) required that HSCRC-approved rates reflect underlying costs, resulting in more-efficient resource allocation. HSCRC-created financial incentives (bundled payment structures, variable and fixed cost adjustments, and incentives for improved quality) reflect this mandate.[4]

*Solvency for efficient and effective hospitals.* The HSCRC establishes rates that enable hospitals providing "efficient and effective" care (as defined by the commission) to

operate on a solvent basis. There are no discounts to specific payers, and uncompensated care is shared by all providers. These provisions enable the HSCRC to balance the goals of ensuring cost containment and the financial health of the industry.[5]

*Support hospitals' social mission.* The legislature viewed access to health care as a "right" of all Maryland citizens and the provision of that care a societal responsibility of all hospitals. Therefore, the HSCRC was to establish a way of paying for care to the uninsured, but to do so in a reasonable, equitable, and transparent way.

*Fairness and equity.* The 1971 statute identified the key components of the commission's equity principle. First, the HSCRC is a politically independent agency, so it can set rates without "undue discrimination or preference to any payer." Second, the legislature believed that patients should pay only for the cost of their own care, not the care provided to other patients (no cross-subsidization or cost shifting). And third, the legislature intended that all payers and patients should pay their fair share of hospital costs, including uncompensated care.

■ **Regulatory approach.** The HSCRC's regulatory approach included requiring hospitals and payers to provide timely and accurate data to develop payment methods consistent with market-based principles and legislative intent.

*Use of financial incentives.* Recognizing the absence of incentives for hospitals to improve efficiency and quality, the commission worked with industry to develop clear, attainable, and strong financial incentives to improve their operations. These allow hospitals to keep all savings from improvements in the defined areas,[6] improving the financial health of hospitals that respond.

*Hospitals at risk for operations under their control.* In a system with 100 percent prospective payment, hospitals are completely at risk for their spending decisions. Under a cost-based payment system, hospitals are not at risk at all. The HSCRC believed that the most appropriate policy lay between these two extremes. Hospitals should be at financial risk for managing operating costs, but adjustments should be made for other elements of their operations (for example, patients' illness burden, levels of uncompensated care, and area wage variations).

*Cost control, not profit control.* The system seeks to control hospital costs, but not hospital profits. Similarly, it constrains overall hospital budgets, but not hospital management. As a result, hospital managers are given maximum flexibility to allocate resources.

*No cost shifting.* As noted, markets work best when prices reflect costs. Payers and hospitals should be motivated to save money by lowering hospital costs rather than shifting them to other payers. Hospitals in competitive markets earn profits by managing cost and utilization, not through the application of artificially high markups and shifting costs.

*Long-term focus.* Finally, the HSCRC seeks to achieve its policy goals over time and avoid major short-term disruptions in the hospital delivery system.

## Rate-Setting Methods And Data

The Maryland system incorporates the major design features of Medicare's hospital prospective payment system (PPS)[7] and some unique features developed in response to local circumstances. The primary rate-setting initiatives and unique system programs are described below and in Exhibit 1.

■ **Payment structure.** Unlike Medicare's per case payment system, Maryland uses service-specific unit rates as the basis of payment (for example, intensive care unit [ICU] charges per day, operating room charges per minute). Payments are

**EXHIBIT 1**
**Other Major Payment Initiatives And Unique Features Of The Maryland All-Payer Hospital Rate-Setting System**

| Payment initiatives | Initiated | Description/application |
|---|---|---|
| DRG-based inpatient revenue constraint system | 1976 | First state to use DRGs for reimbursement programs |
| Application of volume adjustments | 1976 | Application of 85% variable cost factor for changes in volume of services—meant to reduce incentive for unnecessary admissions |
| Total Patient Revenue (TPR) Hospitals (capitation) system | 1978 | Global or capitated budgets (inpatient and outpatient revenue) for four rural facilities |
| Peer-to-peer hospital comparisons at standardized charge per case system | 1982 | Cross-sectional hospital comparisons of standardized charges to identify and target high-charge hospitals for additional rate action |
| Incentives to reduce excess hospital capacity (Bond Indemnification Program) | 1985 | Rate incentives to close excess hospital capacity by redeeming outstanding debt and closing costs through an assessment on other hospitals' rates |
| **Initiatives to expand access** | | |
| Uncompensated care (UC) pooling | 2008 | Mechanism to increase the fairness of uncompensated care financing by equalizing UC markups across all hospitals |
| Subsidization of state's "high-risk" insurance pool | 2002 | An assessment on hospital rates used to subsidize premiums to 17,000 medically uninsurable individuals and reduce hospital UC |
| **Other unique programs** | | |
| Illness Prevention Program | 1980 | Assessment to provide funding for targeted prevention interventions and screenings on the part of hospitals |
| Nurse Support Program I<br>Nurse Support Program II | 1982<br>2002 | Assessment to provide funding for nurse tuition support, nurse recruitment and retention activities, and expanding the number of nurse educators |
| Financial Conditions Review | 1989 | Use of a set of financial and cost indicators to benchmark system performance and monitor the financial health and affordability of the system |
| Alternative methods of rate determination (ARM) | 1994 | Rate approval process for "at-risk" (global price and capitation) arrangements between hospitals and managed care organizations |
| Community Benefit Reporting (CBR) and Evaluation System | 2004 | Annual report documenting, quantifying, and evaluating hospitals' community benefit activities |

**SOURCE:** Archive of Health Services Cost Review Commission–approved policies.
**NOTES:** Approved assessments on hospital rates are broad-based and uniform and must demonstrate the potential to result in commensurate reductions in hospital costs over time (that is, must be cost-justified). DRG is diagnosis-related group.

based on the unit rates, which include costs and markups for the services provided.

■ **Revenue constraints.** Hospital revenues in Maryland are controlled through the use of per case constraints (case-mix-adjusted using all patient refined diagnosis-related groups [APR-DRGs] for inpatient and ambulatory patient groups [APGs] for outpatient services).[8] Like the Medicare system, it was developed to control utilization per encounter, adjusted for case-mix. Unlike the Medicare system, the rewards and penalties from performance are aggregated and realized through adjustments to overall hospital-approved revenue each year. This system has important payer-equity advantages over a per case payment system, because it reflects actual resources used. It also aligns the incentives across payers and hospitals (both entities have strong incentives to control utilization per case). These and other rate mechanisms were developed to support models of managed care in the state.[9]

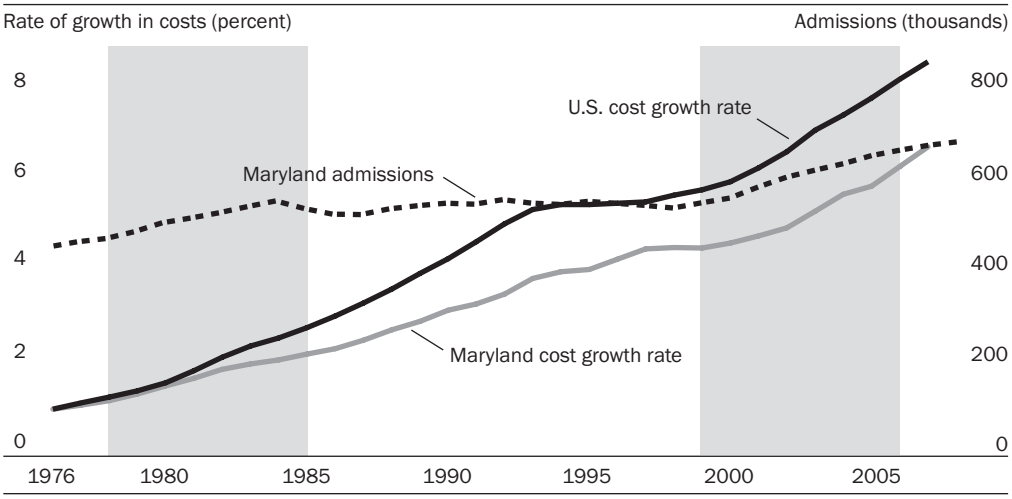
■ **Annual inflation update.** The HSCRC's annual inflation update is similar to that of Medicare, making adjustments for input-price inflation, productivity, and new technology factors. The update also includes rewards or penalties based on hospital-to-hospital comparisons of standardized charges per case.

■ **Uncompensated care financing system.** As noted, one of the unique features of the payment system is that the reasonable costs of uncompensated care are recognized prospectively in the payment rates of all hospitals. The rate system also uses a unique pooling mechanism that enables the commission to equalize the markup for uncompensated care in each hospital's rate structure without disadvantaging hospitals with "high uncompensated care."

## System Performance

■ **Cost containment.** In 1976, the cost of a Maryland hospital admission was 26 percent above the national average. In 2007, average hospital cost per case in Maryland was approximately 2 percent below the national average. During this period, Maryland experienced the second-lowest rate of increase of cost per admission of any state.[10,11] However, although costs per admission were well controlled, the same cannot be said for hospital admissions and overall hospital volume. Rate regulation was not structured to have oversight over individual physicians' decision making, and there is no legislation currently that allows the HSCRC to establish regional hospital spending limits, which would be needed to curtail case volume increases. There was a limited break on admission growth over the period 1978–2001, when changes in the volume of hospital admissions triggered the application of fixed/variable cost adjustments to payment rates. This adjustment was eliminated in 2000 as part of a rate negotiation with the hospital industry (the expectation that managed care would control volume growth prompted the HSCRC to remove volume adjustment in exchange for a lower update formula for 2001–03). Immediately, admission rates began to increase, quickly outpacing national rates. During the period 2001–07, admissions grew at an annual average rate of 2.7 percent in Maryland versus an average annual rate of 1 percent nationally (Exhibit 2). In 2008 the HSCRC reimposed

**EXHIBIT 2**
**Indexed Growth Rates In Hospital Cost Per Adjusted Admission, Maryland And United States, 1976–2007 (2008)**




**SOURCES:** Growth rate in costs per equivalent inpatient admission (EIPA) (Maryland and United States): American Hospital Association Statistics, 1976–2007. Maryland admissions: Hospital Cost Reports filed with the Health Services Cost Review Commission (HSCRC), 1976–2008.
**NOTES:** Cost growth rates are represented by solid lines and relate to the left-hand *y* axis. Numbers of admissions are represented by the dotted line and relate to the right-hand *y* axis. Explanation of shaded areas: The increase in admission rates in Maryland during 1976–1983 was driven in large part by a net increase of 1,615 beds approved by the Maryland health planning agency (a majority of which were in the Washington, D.C., suburbs, resulting in an increase in in-migration of DC patients to Maryland). In 2000, the HSCRC eliminated fixed/variable cost adjustments for changes in hospital volume in a negotiation with the hospital industry. Once this "break" on volume was eliminated, admission growth averaged 2.7 percent per year during 2000–2007. Volume adjustments were reimposed in 2008, and annual admission growth dropped to about 1.0 percent.

the cost adjustments, and growth in admissions dropped to 1 percent per year.

The experience in Maryland shows that even a modest amount of revenue constraint can result in considerable savings and that other available tools can be deployed to good effect. Had Maryland costs grown at the national rate from 1976 to 2007, hospital spending would have been cumulatively $40 billion higher than what resulted under rate setting. On the other hand, had the nation's costs grown at Maryland's rate of growth, cumulative savings would have exceeded $1.8 trillion.[12] These cost containment results are consistent with other evidence on the ability of rate-regulated systems to constrain hospital cost growth.[1]

■ **Access to care.** In Maryland, the "reasonable costs" of uncompensated care are recognized in payment rates, and all payers contribute equitably to covering these expenses. Hospitals therefore have a financial incentive to treat all patients. Between 1978 and 2007, uncompensated care in Maryland rose from 4.0 percent of revenue to more than 8.1 percent of revenue (from $36 million in 1977 to $927 million in 2007).[13] The uninsured have access to all hospitals, including private community facilities and the state's two well-known academic medical centers.

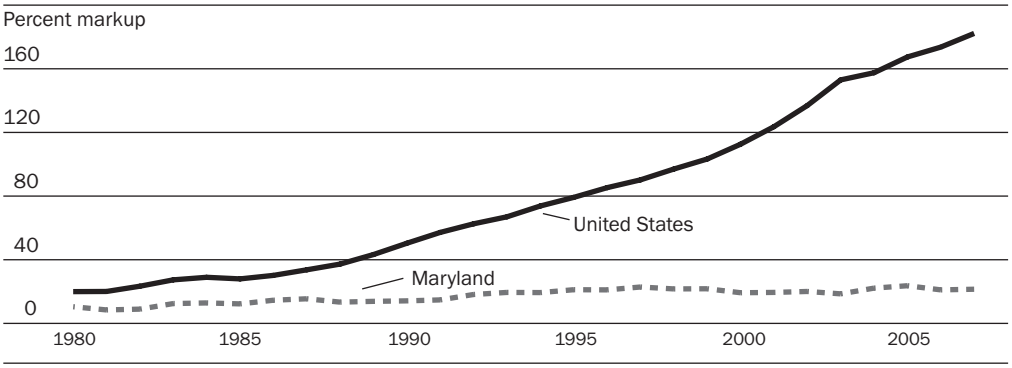
■ **Equity.** Because of rate setting, Maryland has consistently had the lowest markup of charges over cost of any state. By contrast, hospital charges have risen

much faster than hospital costs in the rest of the nation.[14] American Hospital Association data show that the average hospital markup of charges over costs nationally has increased from 20 percent in 1980 to more than 180 percent by 2007, while markups in Maryland (which are regulated by the HSCRC) have ranged from 18 percent to 22 percent and were 21.5 percent in 2007 (Exhibit 3).[10] The application of uniform markups means that Maryland hospitals cannot shift costs to the private sector and that uninsured patients are charged the same rates as fully insured patients. Nationally, hospitals publish charges that are marked up 100–400 percent over cost as the basis for negotiating payment arrangements with private plans (although few insurers actually pay published charges). Larger plans negotiate discounts from these artificially high charge levels, but small insurers (with less negotiating leverage) pay higher charges.[15] The uninsured are routinely charged two to three times what most insurers pay and more than three times Medicare-allowable costs, and the value of uncompensated care nationally is grossly exaggerated because it is valued at full-charge levels, which are unrelated to underlying costs.[16]

■ **Financial stability.** The rate system has also improved the financial stability of the industry. Maryland has been recognized by independent sources for its year-to-year stability and narrower distribution of earnings at the individual hospital level. The span between the tenth and ninetieth percentiles of total (all-payer) margins, for example, is 8.2 percent in Maryland, compared to 21.1 percent nationally in 2003.[17] In recent years, Maryland has consistently had the highest proportion of hospitals rated "investment grade" of any state.[18] Profits in Maryland hospitals have tracked national trends but have averaged about 0.7 percent lower on operating and 1.4 percent lower on total margins since 1993.[10, 19]

■ **Public accountability.** Maryland's system is also characterized by a high degree of public accountability and transparency, which contributes to the highly co-

**EXHIBIT 3**
**Average Hospital Markup (Charges Over Costs), Maryland And United States, 1980–2007**




**SOURCE:** American Hospital Association statistics, 1980–2007.
**NOTE:** Maryland's Markup includes the provision for the financing of uncompensated care (which accounts for about 8 percent of hospital revenue or approximately 40 percent of Maryland's 21.5 percent markup of charges over costs).

operative approach to the rate-setting process and ensures the continued support of the major stakeholders (hospitals, payers, and legislative leaders).[20]

## Recent Payment Innovations

■ **Improved payment accuracy.** Maryland has developed innovative incentive mechanisms to constrain hospital costs and improve the accuracy of payments. The HSCRC was the first jurisdiction to use DRGs for payment purposes beginning in 1976. Its adoption of severity-adjusted DRGs in 2001, and the Hospital-Specific Relative Value (HSRV) method for establishing DRG weights in 2005, influenced the Centers for Medicare and Medicaid Services' (CMS's) decision to adopt Medicare Severity (MS)–DRGs and cost-based weights.[21, 22]

■ **Bundled payment for outpatient services.** For much of its history, the HSCRC regulated outpatient services on a fee-for-service basis. Beginning in 2008, however, it implemented a new system for ambulatory surgery, clinic, and emergency room services using APGs. This new system is much more bundled than Medicare's outpatient PPS. It extends the per case constraint concept to outpatient services, which provides strong incentives to control outpatient utilization.[23]

■ **Pay-for-performance (P4P) initiatives.** *Phase I: Quality-Based Reimbursement (QBR).* In 2008 the HSCRC implemented a "value-based purchasing" initiative that incorporates the same design features as the CMS's planned Value-Based Purchasing initiative. QBR uses nineteen evidence-based process measures (such as administering aspirin to heart attack patients upon arrival) across four clinical categories (heart failure, pneumonia, acute myocardial infarction, and surgical infection prevention) covering approximately 15 percent of inpatient cases. The HSCRC recently approved a recommendation to place $65 million (about 0.5 percent of system revenue) at risk for redistribution from lower- to higher-performing hospitals.[24]

*Phase II: Maryland Hospital Acquired Conditions (MHACs).* The MHAC initiative was approved by the HSCRC in March 2009 (for implementation 1 July 2009), in response to the implementation of the CMS's recent Hospital Acquired Conditions (HACs). The purpose of both initiatives is to provide hospitals with incentives to reduce these highly preventable conditions. The HSCRC used its exemption under the Medicare waiver to formulate a state-specific methodology that is far broader in scope than Medicare's program and focuses on rates of preventable complications. MHACs cover all payers, a broader range of services, and fifty-one complications, compared to only ten for the CMS initiative. Preliminary modeling shows that the presence of complications may account for $521 million of additional (and theoretically preventable) hospital payments in the system (about 5.8 percent of inpatient revenue).

*Phase III: preventable readmissions.* Phase III will extend the HSCRC pay-for-performance initiative to consider hospital readmissions. Hospitals will be evaluated based on their actual rates of readmissions relative to expected levels. Phase III is anticipated to be implemented on a revenue-neutral basis—where better-

performing hospitals will receive rewards and poorer-performing hospitals will receive net reductions. Preliminary modeling shows that as much as $900 million (or about 10 percent of inpatient revenue) may be eligible for reallocation. The HSCRC is currently targeting an implementation date of 1 January 2010.[25]

## System Challenges

Maryland's largest challenge relates to its ability to extend the incentive-based concepts of hospital rate setting beyond hospital walls and transform overall system incentives away from rewarding volume. The HSCRC lacks the authority and policy tools to motivate other providers to reduce unnecessary service use and improve quality. Although Maryland has performed well in controlling hospital length-of-stay, cost per admission, and the rate of growth of hospitals' year-to-year payment levels, the growth in overall hospital volume (largely admissions and outpatient visits) in recent years has undermined the regulatory system's overall cost performance. The state ranks less favorably in overall per capita health spending and on regional variations in resource use and spending across the state (per the *Dartmouth Atlas* analysis).[26, 27]

The development of more bundled payment structures is a useful first step in curtailing volume growth. However, this approach will encounter stiff resistance from providers who must grow to survive. Thus, the largest challenge for the HSCRC and other state policymakers remains transforming the system to a model that rewards the highest levels of value for the community at large.

## Relevance Of The Maryland Experience

Maryland's all-payer rate-setting system shows that government can lead in providing a countervailing force to market failure and addressing important social goals. Policymakers should pay close attention to the scope, locus, and approach of regulatory activities that allow Maryland to succeed.

■ **Uniform approach.** The HSCRC illustrates the advantages of a system that ties all stakeholders together under a common set of rules, provides clear mandates, and allows for flexibility in design. The uniformity of approach, coupled with strong imperatives for action, contributes to the commission's cooperative rule making.

■ **Insulated from conflicts of interest.** The political, legal, and budgetary independence of the HSCRC insulates its work from conflicts of interest, regulatory capture, and political meddling. This independence frees it to solicit input from all interested parties and work in the broad public interest.

■ **Flexible approach.** The regulatory approach is important to the success of government-led efforts at reform. The HSCRC's broad statutory language gives it flexibility to fulfill its primary goals and use the regulatory system while remaining supportive of market and competitive solutions. An expanded role for government in the health sector nationally should similarly allow for a flexible approach and provide a more prominent role for market forces than has been the case in the past.

■ **Role of innovator.** Given current political constraints, the best role for government may be to act as an innovator and coordinator of public and private incentive systems. Experience in states such as Maryland and Massachusetts show that government can be an innovator in developing performance measurement, incentive-based payment, expanded access, and quality-based reimbursement. More public investment and leadership are needed in these areas at the national level. History has shown that the private sector will adopt improved cost and quality payment systems developed by government.[28]

Also, measurable progress in payment reform can be achieved by reconciling and coordinating public payment methods (Medicare, Medicaid, and state and federal employee purchasing). Above all, health reform efforts must be directed at curtailing excessive markups and cost shifting. Meaningful success in containing health care costs can only be achieved by federal action that limits the ability of dominant providers to gouge prices and shift costs to the private sector.

Whatever direction future health reform takes, the Maryland experience demonstrates that government leadership can guide effective solutions that address growing social needs and promote the competitive dynamic.

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5. Since the HSCRC began setting rates, seven hospitals have closed, and two have gone through bankruptcy.
6. Throughout the history of the HSCRC, its staff has routinely convened workgroups including representatives from hospitals, private payers, and governmental payers to assist it in the development and refinement of HSCRC targets, methodologies, and hospital performance standards.
7. In a prospective payment system, payment levels for providers are established at the beginning of the year and are in effect for the entire year. Providers have stronger incentives to reduce costs in the face of these fixed payment levels.
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23. Atkinson G, Murray R. The use of ambulatory patient groups for regulation of hospital ambulatory surgery revenue in Maryland. J Ambul Care Manage. 2008;31(1):17–23.
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