

CHCS

Center for
Health Care Strategies, Inc.

Sound Practices in Medicaid Payment for Hospital Care

By:
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ACS, a Xerox Company

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Foreword

The Center for Health Care Strategies (CHCS) is pleased to publish the third in its series on reforming Medicaid payment. This third paper, *Sound Practices in Medicaid Payment for Hospital Care*, by Kevin Quinn and Connie Courts of ACS, with valuable guidance from Deborah Bachrach, CHCS senior program consultant, scans current state practices in hospital inpatient and outpatient payment and suggests approaches for incentivizing improvements in quality and reductions in unnecessary expenditures. Through this series, CHCS hopes that it is helping federal and state policymakers take fuller advantage of Medicaid's ever-increasing purchasing power. By getting its payment fundamentals in order, Medicaid will be able to take its rightful seat at the payment reform table with Medicare and commercial purchasers.

We would like to thank the Robert Wood Johnson Foundation for its ongoing support of Medicaid leadership and capacity building. We also wish to acknowledge the editorial contributions of Lorie Martin and Kathy Moses.



Stephen A. Somers, PhD
Center for Health Care Strategies, Inc.

The **Center for Health Care Strategies** is a nonprofit health policy resource center dedicated to improving health care quality for low-income children and adults, people with chronic illnesses and disabilities, frail elders, and racially and ethnically diverse populations experiencing disparities in care. CHCS works with state and federal agencies, health plans, and providers to develop innovative programs that better serve Medicaid beneficiaries.

For more information, visit www.chcs.org

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This paper describes eight sound practices in purchasing hospital care. It is intended for Medicaid programs interested in reforming their payment methods and for others interested in Medicaid payment. Neither the authors nor their employer has a financial interest in the products and companies mentioned.

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Executive Summary

Medicaid now covers more Americans than Medicare, with another 25 million enrollees expected by 2014. After that point, Medicaid is expected to surpass Medicare in spending, for the first time. Already, it ranks with K-12 education as the single largest item in state budgets. For policymakers required to balance the budget, the program will demand ever-increasing attention.

In anticipation, Medicaid agencies are rethinking how they pay hospitals. Not only are hospitals their single largest budget item, but the program has growing influence in how hospital care is delivered. Medicaid now pays for one-fifth of hospital stays nationwide, and is crucial in funding newborn, pediatric, obstetric, and psychiatric care.

In general, payment methods so far have not been sophisticated. For outpatient care, about half the states still use cost reimbursement, an approach dating from the 1970s. Cost reimbursement penalizes efficiency, allows Medicaid little control over spending, and obscures any insight into the care being purchased. For inpatient care, one-third of the states do not use Diagnosis Related Groups (DRGs), despite the success of DRGs since their introduction 27 years ago. Of the states that do use DRG-based payment, at least 10 use a Medicare algorithm that has been obsolete since 2007.

As part of its initiative to help states become more effective purchasers of health care, the Center for Health Care Strategies (CHCS) commissioned this paper on sound practices in Medicaid purchasing of hospital care. These suggested practices are as follows:

1. **Choosing a suitable payment method.** For inpatient care, payment using one of several DRG algorithms is recommended. For outpatient care, states have several options, including Enhanced Ambulatory Patient Groups, a full Ambulatory Payment Classification (APC) method modeled after Medicare, or a simplified APC fee schedule.
2. **Ensuring transparency.** Methods should be internally consistent, providing clear incentives to hospitals. Detailed information about methods should also be readily available to the public.
3. **Ensuring appropriate case-mix adjustment.** The Medicare and Medicaid populations differ greatly in case mix, that is, in the types of hospital care they require. States should choose a DRG algorithm designed for use in Medicaid, which the current Medicare algorithm was not.
4. **Targeting payment to policy priorities.** States traditionally have not been strategic in how they make payments. When budgets are tight, maintaining rates for services where Medicaid has a large market share can do more to maintain access than across-the-board initiatives.

IN BRIEF

As Medicaid prepares for an estimated 25 million additional beneficiaries through health reform in 2014, ensuring that program dollars -- particularly those for costly hospital stays -- are used effectively is critical. This resource paper, developed to help guide Medicaid purchasing decisions, outlines eight sound practices for purchasing hospital care, including:

1. Choosing a suitable payment method;
2. Ensuring transparency;
3. Ensuring appropriate case-mix adjustment;
4. Targeting payment to policy priorities;
5. Paying for quality;
6. Regular updating;
7. Building analytical capability; and
8. Hospital consultation and education.

The paper concludes with a discussion of different payment methods and how they intersect with value-based purchasing principles.

5. ***Paying for quality.*** Medicaid programs, like other payers, increasingly recognize the impact of payment methods on quality of care. This paper offers an overview of the options available.
6. ***Regular updating.*** Medicaid payment methods should be reviewed annually, to include technical updates for new software versions as well as review of payment levels and payment policies. In practice, ineffective update processes cause many of the payment problems seen in Medicaid.
7. ***Building analytical capability.*** With 49 Medicaid programs spending at least \$100 million a year on hospital care, in-house analytical capability is essential for effective program management.
8. ***Hospital consultation and education.*** Strong consultation and education processes enable payment method success, both in the political arena and in everyday operations.

A. Current Medicaid Payment Methods

A.1 Introduction

Today, Medicaid insures more people than Medicare. Another 25 million are expected to be covered by 2014.¹ In 2016, Medicaid is expected to surpass Medicare in spending for the first time.² Within state budgets, Medicaid now rivals K-12 education as the largest item. While Medicaid grows, state tax revenues decline. Overall, FY 2010 presented “the most difficult challenge for states’ financial management since the Great Depression,” according to state budget experts.³ In coming years, Medicaid programs will face enormous fiscal pressures.

Within Medicaid budgets, fee-for-service hospital care retains its No. 1 position in terms of total spending, at \$84 billion in 2006.⁴ Medicaid (including managed care) now pays for one in five hospital inpatients, and that percentage will grow as Medicaid grows. For newborn, pediatric and obstetric care, Medicaid pays for almost half of all inpatients.⁵ Medicaid is also a crucially important payer for psychiatric care. How, and how much, Medicaid pays for services has real effects on access and quality.

Yet Medicaid purchasing practices—with a few exceptions—are generally not sophisticated. In 2010, most states pay for outpatient care using cost reimbursement methods little changed from the 1970s. Fully one-third of states have not implemented inpatient payment by Diagnosis Related Group (DRG), which Medicare successfully pioneered 27 years ago. As states work to simultaneously control spending, ensure access and encourage quality, interest in more sophisticated payment methods is growing.⁶ Medicaid directors, for example, are reported to have “notable and widespread interest” in the quality, payment and coordinated care demonstrations made possible by the Affordable Care Act.⁷ But if new initiatives are to be successful, they must be built on a sound base of payment methods.

A.2 Current Medicaid Methods for Inpatient Hospital Payment

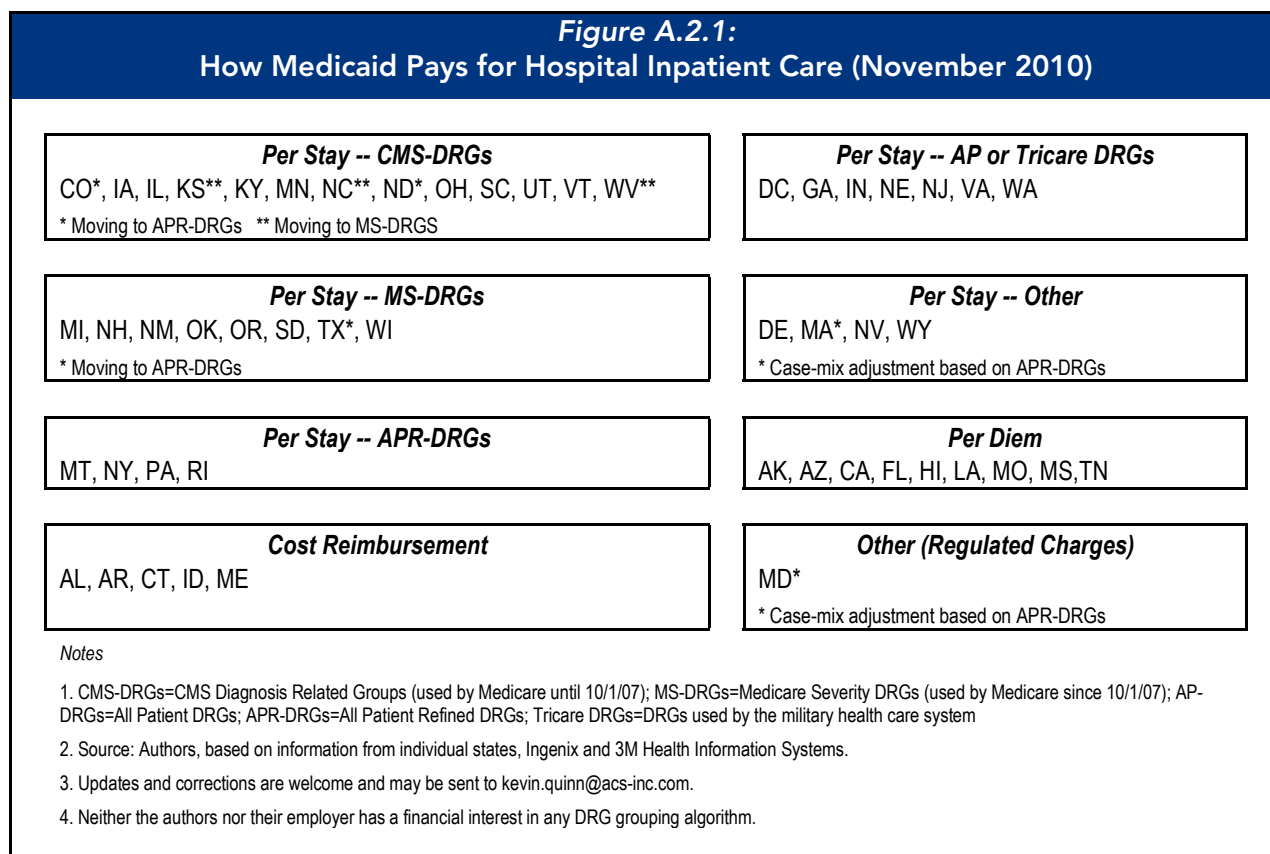
Medicaid fee-for-service payment for inpatient hospital care was \$43 billion in 2006, growing by 8.2% a year since 2002.⁸ As shown in Figure A.2.1, the predominant payment methods are as follows.

- **Payment per hospital stay using Diagnosis Related Groups.** The hospital is paid a fixed amount per DRG. Eight DRG grouping algorithms, or groupers, offer alternative methods of grouping many thousands of diagnoses and procedures into a more manageable number of DRGs, also taking into account the impact of complications and comorbidities (CC). In all cases, DRG payment equals a relative weight for the specific DRG times an overall DRG base price. For example, the current Medicare MS-DRG payment rates for pneumonia are:⁹

| | |
|-------------------------------------|-----------------------------------|
| ▪ DRG 195, pneumonia without CC: | $0.7096 \times \$5,584 = \$3,963$ |
| ▪ DRG 194, pneumonia with CC: | $1.0152 \times \$5,584 = \$5,669$ |
| ▪ DRG 193, pneumonia with major CC: | $1.4796 \times \$5,584 = \$8,262$ |

For DRG 195, for example, the relative weight of 0.7096 reflects the average nationwide hospital cost for DRG 195 relative to the average nationwide hospital cost for all DRGs. In general, a hospital’s own charges and costs have no impact on the payment it receives. The chief exception is “outlier” payments for a few stays that are extraordinarily expensive.

- **Cost reimbursement.** A few states continue to use the cost reimbursement method that prevailed in the 1970s under Medicare and Medicaid. When a claim is received, an interim payment is made at a percentage of charges. After the annual hospital cost report is submitted and reviewed, payment on the claim is retrospectively settled to a percentage of cost, with either Medicaid or the hospital making a payment to the other. This process can take up to several years.
- **Per diem.** Nine states pay hospitals per diem. Typically, the rates are specific to each hospital, and each hospital receives the same rate for every inpatient day. Rates are usually calculated from hospital cost reports. The rate may be prospective, meaning that once the rate is set then the per diem payment is final. Alternatively, the per diem payment may be subject to cost settlement, in which case the method would be described more accurately as cost reimbursement.



A.3 Current Medicaid Methods for Outpatient Hospital Payment

Medicaid fee-for-service payment for outpatient hospital care was \$12 billion in 2006, growing by 4.2% a year since 2002.¹⁰ The distinctions among payment methods are less clear than for inpatient care. These methods can be categorized into four broad approaches, as shown in Table A.3.1.

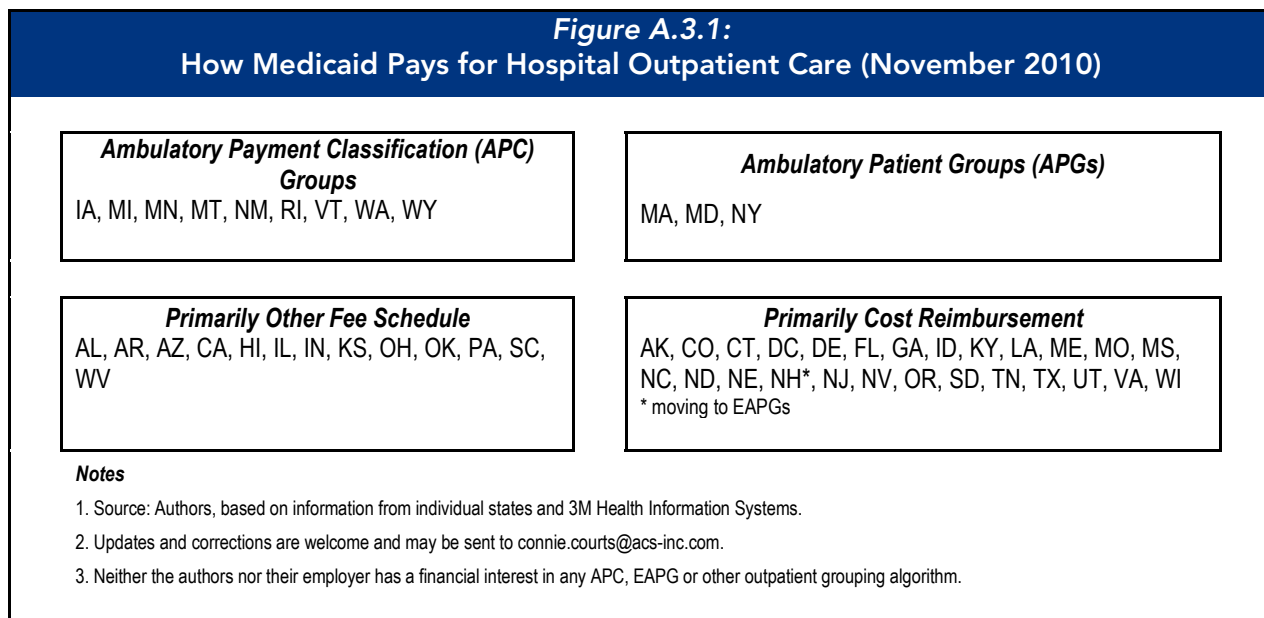
- **Cost reimbursement.** As with inpatient cost reimbursement, outpatient claims are first paid at a percentage of charges and then settled to a percentage of cost a year or two later. Lab services are an exception; these services are typically paid using Medicare’s clinical lab fee schedule, without settlement. A state may also carve out other services that are paid using fee schedules.

- **Other fee schedule.** If a state uses fee schedules extensively, the table categorizes it as “other fee schedule,” even if a few services are reimbursed based on cost. A state may develop its own fees for surgeries, imaging, therapy, clinic visits, or emergency room visits or it may adopt them from another source, such as Medicare's previous fee schedule for ambulatory surgical centers.
- **Ambulatory Payment Classification (APC) groups.** Medicare implemented its APC-based method in 2000. It is essentially a fee schedule, with thousands of procedure codes each assigned to one of 838 APCs. Each APC has a relative weight that is multiplied by an APC conversion factor (analogous to the DRG base price) to arrive at a fee. Unlike DRGs, a single visit may include multiple APCs and multiple separate payments. Payment for a chest pain patient seen in the emergency room, for example, might be as follows.

- CPT 99284, ER visit → APC 615, Level 4 ER visit → $3.311 \times \$67 = \223
- CPT 71010, chest x-ray → APC 260, Level II plain film → $0.666 \times \$67 = \45
- CPT 93005, EKG → APC 099, EKG → $0.394 \times \$67 = \26

Some states, such as Montana, have closely followed the Medicare model, which also includes various rules regarding modifier use, “composite APCs,” “conditional packaging,” and other topics. Other states, such as Rhode Island, use an “APC fee schedule,” which is a simplified method without composite APCs, conditional packaging, or other complexities.

- **Enhanced Ambulatory Patient Groups (EAPGs).** EAPGs take a more bundled approach than APCs, that is, fewer ancillary services are separately payable. EAPGs also use diagnosis to categorize medical visits. The patient above, for example, would be assigned to APG 604 (chest pain) and a single payment would cover the ER evaluation, the chest x-ray and the EKG. Each EAPG has a relative weight that is multiplied by a conversion factor to yield a payment rate.



B. Sound Practices

B.1 Choosing a Suitable Payment Method

A state’s most important decision is the choice of an overall approach. Of the methods described in Sections A.2 and A.3, which are most suitable?

Though the details may be complicated, the essential difference among methods is the unit of payment. For inpatient care, payment can be per dollar of charges, per dollar of cost, per day, or per stay. For outpatient care, payment can be per dollar of charges, per dollar of cost, per visit, or per service. The choice divides financial risk between the payer and the hospital. Whatever the unit of payment, hospitals have financial incentives to *increase* the number of units they provide and to *decrease* their own cost per unit. Payment per day rewards increased length of stay; payment per stay rewards decreased length of stay.

B.1.1 A Brief History of Hospital Payment

Starting in 1965, Medicare and Medicaid paid hospitals based on audited cost reports. Hospitals had strong incentives to increase cost and exploit ambiguities in cost reporting. In response, Medicare became ever more specific—hospitals might say intrusive—in defining allowable costs. Yet costs and payments grew and grew.

In 1983, Congress enacted a new payment method for inpatient care, to take effect barely five months later. The Prospective Payment System paid hospitals depending on a patient’s clinical characteristics, defined using 467 DRGs. Payment per DRG was fixed, giving hospitals new and strong incentives to control cost. Sicker patients were assigned to higher-paying DRGs, thereby ensuring access to care for a range of conditions. A key feature—often under-appreciated—is that DRGs defined “the product of a hospital,” creating a common language for clinicians and financial managers.

DRG-based payment, according to a top hospital association executive, was “the most effective cost-containment program ever enacted, successful beyond anyone’s expectations.”¹² Not only did Medicare gain control over spending, but hospitals profited handsomely.¹³ The win/win occurred in large part because hospitals became much more efficient, decreasing length of stay, re-thinking how to deliver care, and sharpening their purchasing practices. Since then, DRG payment has been adopted by two-thirds of Medicaid programs, many commercial insurers, and even other countries.

Impressed, Congress in the 1980s extended “prospective payment” to other types of care, including hospital outpatient, home health, and nursing facility. The follow-on implementations, however, have not been as successful.¹⁴ In the case of outpatient hospital care, the industry was expecting “outpatient DRGs,” which is not what happened. Medicare commissioned the development of Ambulatory Patient Groups, which were implemented by Iowa Medicaid and several other payers in the 1990s. Medicare, however, ended up developing its own grouper, Ambulatory Payment Classification (APC) groups.

Box B.1.1: Payment Methods vs. Payment Levels

This paper addresses payment methods rather than payment levels. There is no necessary connection between the two. Consider a state whose hospital industry incurs \$100 million of cost in treating Medicaid patients. Using a cost reimbursement method, a state could choose to pay 100% of cost or, say, 65% of cost. Using a DRG payment method, a state could set the DRG base price to pay out \$100 million or, say, \$65 million.

Choice of payment methods does affect the growth of payments over time, however. After Medicare replaced cost reimbursement with DRGs in 1983, the growth in Medicare inpatient spending slowed significantly, for example.¹¹

The story of how “outpatient DRGs” evolved into APGs and then APCs reflects a sense of urgency to replace the badly flawed method then in use. Because of the urgency, avoiding complexity and contention became overriding considerations. A fee schedule approach met both criteria. It had few mechanisms to control cost and allowed separate payments for many drugs and devices, which those industries had lobbied for. Looking back, individuals involved in APC policy development seem to believe that the goal of creating incentives to control spending remains unrealized.¹⁵ In recent years, Medicare has put a few such incentives in place, e.g., through the use of composite APCs that generate a bundled payment for certain procedures.

B.1.2 Choices for States

Regardless of which option a state chooses, it seems clear that any attempt to continue cost reimbursement is *not* recommended. Cost reimbursement penalizes efficiency, is inherently opaque, pays different amounts for similar care, and makes Medicaid vulnerable to hospital cost-allocation schemes.¹⁶

For inpatient care, there is little disagreement that payment per stay, using DRGs, is the best practice. Twenty-seven years of experience have demonstrated the value of understanding what is being purchased and of giving hospitals incentives to control their own costs.¹⁷ For the one-third of states that continue to use per-diem payment methods or cost reimbursement (or sometimes a confusing mixture of the two) it seems clear that moving to DRG payment would be an improvement. That said, there is more than one DRG algorithm to choose from, as will be discussed in Section B.3.

For outpatient care, the choice is not as clear. The main options are a full APC fee schedule (e.g., Montana), a simplified APC fee schedule (e.g., Rhode Island), and an updated version of APGs called Enhanced APGs (e.g., New York). Table B.1.2.1 summarizes the key features in comparison with cost reimbursement. EAPGs provide the strongest cost control incentives and the highest degree of purchasing clarity. A full APC method very similar to that used by Medicare may be more acceptable to hospitals, partly because it does less to control cost and partly because of familiarity. An APC fee schedule, without conditional packaging, composite APCs and other complexities, has simplicity as its chief benefit, but with the drawback of less cost control. Rhode Island, for example, was able to design and implement an APC fee schedule within six months. The state, however, emphasizes that it is an interim method, pending a decision on the most appropriate approach for the long term.¹⁸

**Table B.1.2.1:
Comparison of Outpatient Payment Method Options**

| Criterion | Cost Reimbursement | EAPGs | Full APCs | APC Fee Schedule |
|--|---|-------------------------------------|------------------------------------|------------------------------------|
| Example | New Hampshire | New York | Montana | Rhode Island |
| General approach | Pay percent of charge, then settle to percent of cost | Group to EAPG then pay rate by EAPG | Group to APC, then pay rate by APC | Group to APC, then pay rate by APC |
| Multiple groups payable for same visit | NA | Yes | Yes | Yes |
| Approach to bundling (packaging) | None | Most | Some | Least |
| Payment for emergency room and clinic visits | Pay percent of charge, then settle to percent of cost | By diagnosis | By procedure code | By procedure code |
| Payment for lab services | Lab fee schedule | By EAPG (23 groups) | Lab fee schedule | Lab fee schedule |
| Total groups | NA | 496 | 836 | 836 |
| Purchasing clarity (clinical meaningfulness) | None | Best | Limited | Very limited |
| Relative weights | NA | No national weights | Medicare | Medicare |
| National Correct Coding Initiative | Excluded | Included | Included | Excluded |
| Overall spending | Reflects total cost and Medicaid pay-to-cost decision | Reflects EAPG conversion factor | Reflects APC conversion factor | Reflects APC conversion factor |

As an example of how a state can choose among payment method options, Table B.1.2.2 shows the results of a decision process that New Hampshire used. For purposes of discussion, a workgroup of state and consultant staff listed ten criteria and then gave “grades” of A, B, C, D or F to each option. Such a scorecard approach provides structure to a complex discussion. It also highlights the trade-offs, for example between fairness and simplicity or between efficiency incentives and implementation cost. With minor adaptations, this approach can be used in selecting a suitable payment method for any provider type.

In this case, New Hampshire chose an EAPG-based method, which is now being designed. In other states, Medicaid programs might use different criteria, assign different grades, and arrive at a different choice. New Mexico, for example, implemented an APC fee schedule on November 1, 2010.

| Criterion | Explanation | Current Method: Cost Reimb | Option: EAPGs | Option: Full APCs | Option: APC Fee Schedule |
|-----------------------|---|----------------------------|---------------|-------------------|--------------------------|
| Access | Gear payment to expected resource cost | B | B | A | A |
| Quality | Specifically facilitate improvement | F | C | D | D |
| Efficiency | Reward lower hospital cost for same care | F | A | C | D |
| Fairness | Similar pay for similar care; reflect uncontrollable cost differences | D | A | B | B |
| Policy control | Overall and for specific priorities | F | A | A | C |
| Purchasing clarity | Enable understanding of services | F | B | C | C |
| Admin ease--State | Consider impact on agency staff and MMIS | D | B | C | C |
| Admin ease--hospitals | Consider impact on coding, billing, accounting | B | C | B | B |
| Simplicity | In modern health care, a virtue in itself | B | D | C | A |
| Input data quality | Base calculations on good data | D | B | C | C |

Notes

1. "Grades" were assigned for purposes of discussion in New Hampshire. Different states may decide to assign different grades for each criterion.
2. The current New Hampshire method also includes a fee schedule for lab services, without cost settlement.
3. Source: ACS Government Healthcare Solutions, *Purchasing Hospital Outpatient Care: An Assessment of Options*, Report to the New Hampshire Department of Health and Human Services (Concord, NH: ACS, 2010).

B.2 Ensuring Transparency

Whatever payment method is chosen, transparency in design and documentation brings four benefits. First, good government requires openness and accountability, especially given the magnitude of payments to hospitals. Second, the best payment methods reward performance, for example in improving access, quality or efficiency. But if the incentives are confusing then hospitals can't respond appropriately. Third, confusing methods mean states do not know what they are purchasing. Fourth, and not least, confusing methods are hard to update.

The epitome of opacity was Medicare's outpatient method in the 1990s. Many services were paid by cost reimbursement, with lab services and durable medical equipment paid by fee schedule. For many procedures, payment was a blend of hospital-specific cost and of fee schedule amounts paid to non-hospital providers, such as ambulatory surgical centers. Beneficiary co-insurance, which elsewhere in Medicare was 20% of the Medicare payment, was 20% of the hospital *charge*. It was all so confusing that the notorious "formula-driven overpayment" gave hospitals an extra \$1.8 billion a year that Congress

never intended.¹⁹ No one really knew what Medicare was purchasing, how hospitals compared, or what the true incentives were.

In Medicaid hospital payment, common problems with transparency include the following:

- **Overly complex methods.** Without being as extreme as the example above, many Medicaid payment methods are very complex, especially if modifications are layered upon previous modifications.
- **Conflicting incentives.** Conflicts can arise when a state mixes different methods. For example, a DRG payment method may have hospital-specific DRG base prices calculated from each hospital's cost report. In these circumstances, it is unclear whether the net incentive is to decrease or increase cost.
- **Special-interest provisions.** One state's statute, which otherwise describes an inpatient per diem method in general terms, specifically says baclofen drug pumps must be paid at 100% of cost. Similarly, federal statutes include obscure provisions intended to place certain hospitals in specific wage areas for purposes of Medicare payment. Such provisions undermine public trust.
- **Non-public documentation.** Medicaid websites should ideally contain key pieces of documentation such as the state plan (i.e., Attachments 4.19A and 4.19B), state regulations, plain-language explanations of payment calculations, provider billing instructions, fee schedules, and provider training materials. See Box B.2.1 for four examples of useful documentation.
- **Out-of-date documentation.** Outdated documentation is a common and extremely frustrating problem.
- **DSH payments.** Supplementary disproportionate share hospital payments were \$13 billion in 2006, or 25% of all Medicaid payments to hospitals.²⁰ These payments are not tied to individual inpatient or outpatient services. DSH payments are outside the scope of this study, but the calculations are typically anything but transparent.

Box B.2.1: Examples of Transparency on the Web

- **New York:** www.nyhealth.gov/health_care/medicaid/rates/index.htm Includes fee schedules and provider training presentations for the new APR-DRG and EAPG payment methods.
- **Montana:** <http://medicaidprovider.hhs.mt.gov/> then select "Resources by Provider Type" and "Hospital (Inpatient)" or "Hospital (Outpatient)." Includes provider manuals, regulations, fee schedules, frequently asked questions (FAQ) and other information.
- **Rhode Island:** www.dhs.ri.gov, then select "Provider Types" and "Inpatient Facility" or "Outpatient Facility." Includes inpatient and outpatient rate schedules, FAQ documents, and a "DRG Calculator" spreadsheet that can be used to calculate expected payment on a claim.
- **Utah:** <http://health.utah.gov/medicaid/index.html>, then select "Health Care Providers." Includes provider manuals and DRG Calculator.

Note: These examples are intended to be useful. Other states not included may also provide good hospital payment method documentation.

Box B.2.2: Improving Transparency in New York

New York Medicaid recently overhauled its hospital payment methods, in part to improve transparency. In the 1980s, New York became a leader among states by commissioning the development of All Patient DRGs (AP-DRGs), which were more suitable for Medicaid than the Medicare DRG algorithm. Over time, however, the payment method became increasingly intricate. Payment adjustments included not only capital and medical education but also utilization shifts, “substantially changed institutions,” “distressed hospitals,” hazardous waste costs, non-Medicaid labor costs, and others. Although hospital-specific DRG base prices were updated periodically, even in 2009 they still reflected cost report data from 1981. The relationship between hospital cost and Medicaid payment became unknowable. Hospital rate appeals were numerous and drawn out.

On the outpatient side, the payment method was too simple, if anything. Ceilings for clinic and ER payments were very low, e.g., capped at \$67.50 plus a capital add-on for all services provided during a clinic visit, no matter how complex. Hospitals did their best to shunt patients into inpatient care. In 2006, New York ranked No. 44 among states in the inpatient/outpatient split of its hospital payments.²¹

In an ambitious initiative, New York simultaneously developed new payment methods for inpatient and outpatient care and shifted \$600 million a year from inpatient care to outpatient care. For inpatient care, New York implemented All Patient Refined DRGs (APR-DRGs) on December 1, 2009 and reduced the list of payment adjustments to include only wage costs, capital, and medical education. For outpatient care, payment using Enhanced Ambulatory Patient Groups was implemented for hospitals on December 1, 2008, and then extended to ambulatory surgical centers, community clinics and mental health agencies. During development and implementation, state and contractor staff met repeatedly with hospitals and other interested parties across the state. Hospitals are now on record endorsing these changes, calling them an essential foundation to reform.

B.3 Appropriate Case-Mix Adjustment for a Medicaid Population

B.3.1 Inpatient Case-Mix Adjustment

Medicaid is not Medicare, and the differences must be considered whenever a Medicare method is used for Medicaid. Figure B.3.1.1 shows that 61% of Medicaid inpatient stays nationwide are obstetric and pediatric (including newborns). These categories represent less than 1% of Medicare stays; in fact Medicare pays for, literally, fewer than 10 newborns a year.²² These case-mix differences can affect the accuracy, and the validity, of algorithms used to group “similar” patients.

When Medicare introduced DRGs in 1983, it was mindful that Medicaid and other payers would use its DRG algorithm. About 40 conditions were split into pediatric and adult DRGs because of significant differences in resource use. In developing relative weights to reflect the use of hospital resources for different DRGs, Medicare supplemented its own data with all-payer data from approximately 20 states. Medicare also planned to restructure the neonatal DRGs, which were especially inaccurate even with all-payer weights.²³

All that changed in 2004:

“We advise those non-Medicare systems that need a more up-to-date system to choose from other systems that are currently in use in this country, or to develop their own modifications. As previously stated, we do not have the data or the expertise to develop more extensive newborn

and pediatric DRGs. *Our mission in maintaining the Medicare DRGs is to serve the Medicare population.*²⁴ (Emphasis added)

Moreover, in 2007 Medicare itself adopted a new grouper, which was the most significant change in DRG payment since 1983. Medicare Severity DRGs, or MS-DRGs, was a completely new algorithm that, among other changes, increased the number of DRGs from 538 to 745. Medicare emphasized that MS-DRGs were developed only for the Medicare population. For example:

“The MS-DRGs were specifically designed for purposes of Medicare hospital inpatient services payment.... We simply do not have enough data to establish stable and reliable DRGs and relative weights to address the needs of non-Medicare payers for pediatric, newborn, and maternity patients. For this reason, we encourage those who want to use MS-DRGs for patient populations other than Medicare [to] make the relevant refinements to our system so it better serves the needs of those patients.”²⁵

Medicare’s policy change put Medicaid programs in a difficult position. The previous Medicare grouper, called CMS-DRGs, is obsolete. Medicaid use of MS-DRGs can be hard to defend, unless a state can make substantial adaptations or has almost its entire pediatric and obstetric population in managed care. Even then, Medicaid fee-for-service rates are often looked to by managed care plans in rate-setting and by states in evaluating managed care costs. Table B.3.1 compares MS-DRGs with two leading options, All Patient Refined DRGs (APR-DRGs) and All-Payer Severity Adjusted DRGs (APS-DRGs). Another algorithm, All Patient DRGs (AP-DRGs), which is still used by several states, is not shown because it has been supplanted by APR-DRGs.²⁶ In choosing among options, a state may find a “scorecard” approach useful (Table B.1.2.2).

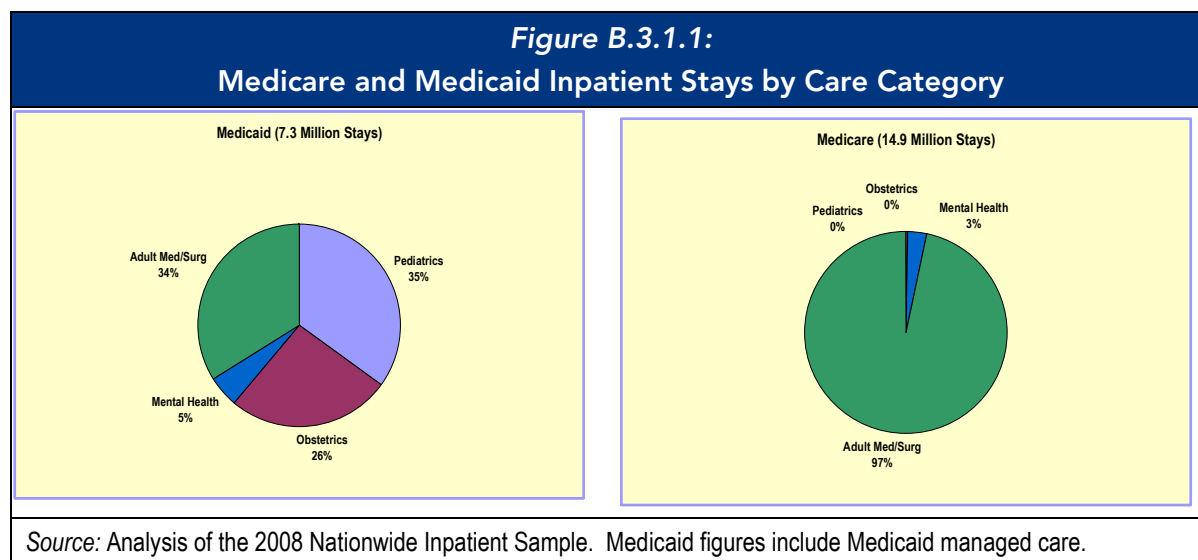


Table B.3.1:
Comparison of DRG Algorithms for Medicaid

| Criterion | MS-DRGs V.28 | APR-DRGs V.28 | APS-DRGs V.28 |
|--|---|---|--|
| Developer | CMS (Maintained by 3M) | 3M and NACHRI | Ingenix |
| Population | Medicare (age 65+ or under age 65 with disability) | All patient (based on the Nationwide Inpatient Sample) | All patient (based on the Nationwide Inpatient Sample) |
| Overall approach and treatment of complications and comorbidities (CC) | Intended for use in Medicare population. Includes 335 base DRGs, initially separated by severity into “no CC,” “with CC” or “with major CC” DRGs. Low-volume DRGs were then combined. | Structure unrelated to Medicare. Includes 314 base DRGs, each with four severity levels. There is no CC or major CC list; instead, severity depends on the number, nature and interaction of CCs. | Structure based on MS-DRGs but adapted to be suitable for an all-patient population. Includes 407 base DRGs, each with three severity levels. Same CC list and major CC list as MS-DRGs. |
| Number of DRGs | 746 (including 2 error DRGs) | 1,258 (including 2 error DRGs) | 1,223 (including 2 error DRGs) |
| Newborn DRGs | 7 DRGs, no use of birth weight | 28 base DRGs, each with four levels of severity, based in part on birth weight | 9 base DRGs, each with three levels of severity, based in part on birth weight |
| Psychiatric DRGs | 9 DRGs; most stays group to “psychoses” | 24 DRGs, each with four levels of severity, classification more granular | 10 base DRGs, each with three levels of severity |
| Payment use by Medicaid | MI, NH, NM, OK, OR, SD, TX, WI | MA, MD, MT, ND*, NY, PA, RI, TX* | NA |
| Payment use by other payers | Commercial plan use | BCBSMA, BCBSTN | Commercial plan use |
| Other users | Hospitals | Hospitals, AHRQ, MedPAC, JCAHO, various state “report cards” | Hospitals, AHRQ, various state “report cards” |
| Uses in measuring hospital quality | Used as risk adjustor in measuring readmissions. Used to reduce payment for hospital-acquired conditions. | Used as the risk adjustor in measuring mortality, readmissions, complications | Used as the risk adjustor in measuring mortality and readmissions and to reduce payment for hospital-acquired conditions |
| Notes | | | |
| 1. An asterisk indicates intended use. | | | |
| 2. Descriptions have been reviewed with the DRG developers. Neither the authors nor their employer has a financial interest in any DRG grouping algorithm or related software. | | | |
| 3. CC=complications and comorbidities; NACHRI=National Association of Children’s Hospitals and Related Institutions; AHRQ=Agency for Healthcare Research and Quality; MedPAC=Medicare Payment Advisory Commission; JCAHO=The Joint Commission. | | | |

B.3.2 Outpatient Case-Mix Adjustment

On the outpatient side, case-mix adjustment is much less of an issue. To be sure, two of the options discussed in Section B.1.2—full APCs and an APC fee schedule—were developed for the Medicare population using Medicare data. However, APC-based payment is so unbundled and so procedure-

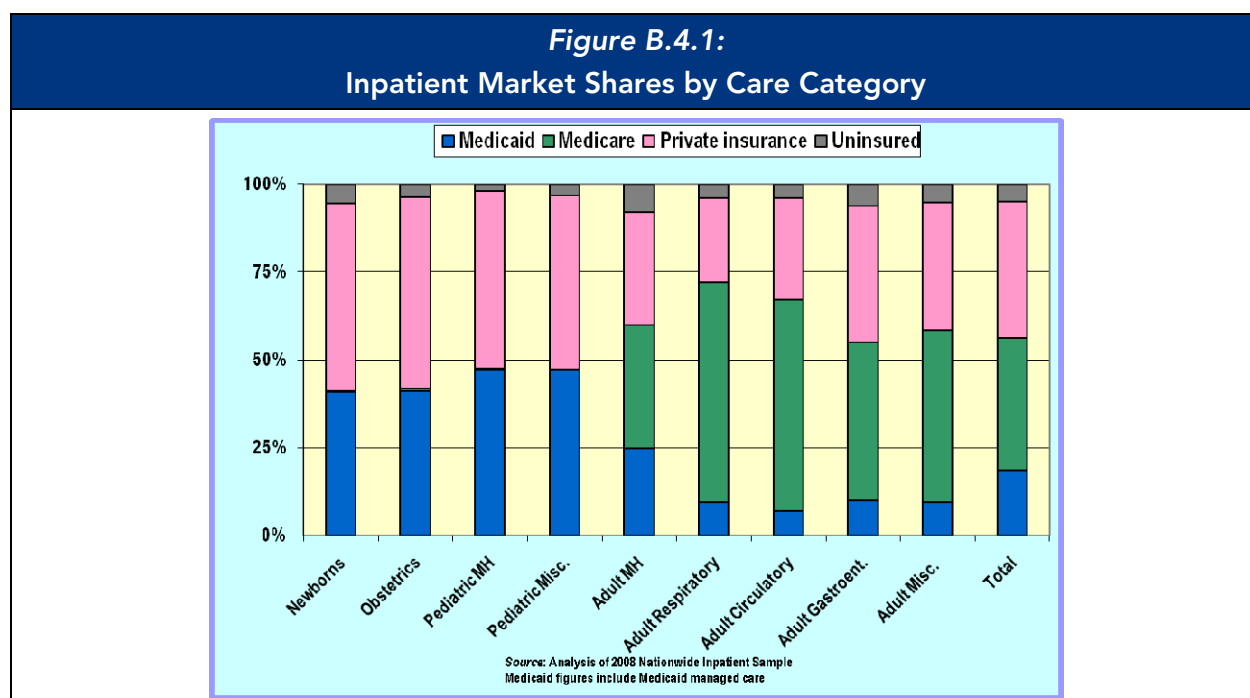
oriented that it can be used for Medicaid. Although Medicare and Medicaid patients may differ in the procedures they receive, the procedures themselves can be expected to be similar across patient populations. The third option—EAPGs—is more bundled and less procedure-oriented, thereby making case-mix adjustment more important. But the EAPG algorithm was developed for use by all payers, including Medicaid. No national set of relative weights is available, but New York Medicaid developed its EAPG weights based on a very large dataset of outpatient visits.

B.4 Targeting Payment to Medicaid Policy Priorities

Medicaid programs traditionally have not been strategic in how they spend their limited funds for hospital care. Payment methods tend to be broad-brush approaches. For example, in a cost reimbursement method all hospitals may receive the same percentage of cost while in a DRG payment method, the relative weights may be adopted from an outside source and used as is.

A broad-brush approach has the virtue of simplicity. In tight budget times, however, a more targeted approach may do more to maintain access to quality care. This is true because Medicaid plays very different roles in the sub-markets for hospital care. Nationwide, Medicaid pays for almost half of obstetric, newborn and pediatric stays, and almost a quarter of psychiatric stays (Figure B.4.1).²⁷ Medicaid pays for fewer than 10% of adult circulatory, respiratory, and other stays. Medicaid matters when a hospital opens a neonatal intensive care unit, but *Medicare* matters when a hospital opens a cardiac catheterization lab.

For FY 2011, freezing or even reducing provider payment rates is the most common Medicaid cost containment strategy, planned by 35 states.²⁸ When money is tight, across-the-board reductions may feel “fair.” But if attention is re-focused from the hospitals to the patients, the problem becomes apparent: the reductions threaten beneficiary access to NICU care much more than they do access to cardiac catheterization. As an alternative, consider a strategy implemented by Montana and Rhode Island and proposed for implementation by Mississippi. The strategy is to explicitly boost payment for some care



categories while reducing payment for others. Higher payment for obstetrics and neonatology will help keep these services available. Lower payment for the adult medical and surgical categories, however, probably will not jeopardize access for Medicaid beneficiaries, since the economics of these services depend so heavily on Medicare payment levels.

A similar issue exists in comparing payment for inpatient and outpatient services. Many states follow Medicare in being better payers on the inpatient side. Although Medicare does not pay based on cost, its rates work out to 95% of cost for inpatient care and 87% of cost for outpatient care.²⁹ Ideally, states should have current estimates of their pay-to-cost ratios, analyzing how changes in pay-to-cost ratios might affect access by care category in both settings. For example, outpatient rates that are set too low can result in admissions for care that could have been more efficiently provided on an outpatient basis.

B.5 Paying for Quality

Medicaid, like other payers, traditionally has not had a strategy of using payment methods to encourage quality care. Now, however, payers are taking genuine interest.

One problem with a “hands-off” attitude is that payment methods *cannot* be neutral. The typical method rewards volume of care and therefore penalizes providers who prevent illness, reduce complications, and minimize readmissions.³⁰ Although hospitals and their staffs work hard to provide quality care, at some point the business model simply may not exist for expensive quality programs. In a 2005 study, 13 of 15 successful projects to reduce readmissions were canceled after special funding ran out. “These hospitals knew they had something that worked,” said the lead researcher, Harlan Krumholz. “But they couldn't come up with a business model that could afford it.”³¹

To create such a business model, payers have been changing the incentives. Payers have been swayed by the growing evidence that despite all the successes of modern medicine there remains considerable room for improvement. The Institute of Medicine, in *To Err Is Human*, famously estimated that 44,000 to 98,000 hospital patients a year die from preventable errors.³² In 2002, patients suffered an estimated 1.9 million hospital-acquired infections, with 99,000 related deaths.³³ That same year, only 20% of hospitals consistently (more than 90% of the time) implemented certain evidence-based processes of care.³⁴ Infections and other complications account for almost 10% of the cost of hospital care, according to analyses of Maryland and California data.³⁵ And fully one-fifth of Medicare inpatients are back in the hospital within 30 days—at enormous cost to patients and the program.³⁶

Although many adverse events cannot be prevented, many can be. Johns Hopkins Hospital and hospitals in Michigan and elsewhere have demonstrated that infection rates can be reduced almost to zero in intensive care units, where the sickest patients are subject to numerous invasive procedures.³⁷ The Seton hospitals in Texas have sharply reduced birth complications by, among other measures, restricting the induction of childbirth before 39 weeks.³⁸ The percentage of hospitals that consistently implement the list of above-mentioned process measures has quadrupled, to 86%. And various pilot programs, especially for congestive heart failure, have demonstrated success in reducing readmission rates.

Modifications to payment methods take different forms. Medicare, which has been a leader in these efforts, started by building a 2% payment differential into DRG payments depending on whether hospitals reported process-of-care measures (regardless of results). It then spurred hospitals on by publishing risk-adjusted readmission and mortality rates on www.hospitalcompare.gov. Quality results affected payment when Medicare started reducing DRG payment for some stays with a hospital-acquired condition (HAC), such as a pulmonary embolism after hip replacement. (Payment is affected because the HAC does not count as a complication in assignment of the DRG.) Initially, however, Medicare's HAC list was so narrowly written that it affected just 0.001% of Medicare inpatient payments.³⁹

The Affordable Care Act will take Medicare much deeper into these waters. Starting in October 2012, Medicare will reduce payments to hospitals with high readmission rates for selected conditions, starting with heart failure, heart attack, and pneumonia. Reductions will be based on the estimated cost of excess readmissions, up to 1% of total inpatient payments in federal FY 2013, rising to a maximum of 3% in FFY 2015, when additional conditions may be added to the calculation. At the same time, Medicare will implement a value-based purchasing program to make 1% of total inpatient payments contingent on quality measures, including processes of care, patient satisfaction, and outcomes. A year later, measurement of efficiency is also to be used. Hospitals that do particularly well will see increased payments, while poorly performing hospitals will be penalized.

Box B.5.1: Paying for Quality in Maryland

Maryland is a national leader in incentivizing hospitals to provide quality care. Despite the uniqueness of its rate-setting system—all payers, including Medicare and Medicaid, pay the same rates—the Maryland initiatives can be models for other states to consider. The Health Services Cost Review Commission has three pay-for-quality initiatives under way or under development.

- **Quality Based Reimbursement Initiative** – This initiative, implemented in 2008, varies payment rates depending on each hospital's achievement on process-of-care measures. A multi-stakeholder workgroup chose 19 initial measures related to heart attack, heart failure, pneumonia, and prevention of surgical infection. Additional measures may be added in the future. High-performing hospitals and hospitals with the most improvement receive rewards, while the poorest performing hospitals are penalized. The initiative is similar to, but more developed than, Medicare's efforts to improve the process of care.
- **Hospital Acquired Conditions Initiative** – This initiative, implemented in 2009, is much wider in scope than the similarly named Medicare initiative. While Medicare addresses a few in-hospital complications that are rarely seen, the Maryland initiative targets a list of 52 potentially preventable complications (PPC) that includes stroke, renal failure and pneumonia. This initiative compares each hospital's case mix-adjusted complication rate to a state-wide target rate for each PPC and then applies rewards or penalties.
- **Hospital Preventable Readmissions Initiative** – This initiative, with an expected implementation date in early 2011, will focus on potentially preventable readmissions (PPRs). Unlike the Medicare approach, which focuses on readmission rates for three conditions, the Maryland approach will include a wide range of conditions. As with the PPC initiative, each hospital's case mix-adjusted PPR rate will be compared with target levels. Hospitals will receive rewards or penalties depending on performance. Other types of providers, such as nursing facilities and home health agencies, are also involved in efforts to reduce hospital readmission rates.

Another option under discussion is to lengthen the definition of an inpatient stay so that it includes all potentially preventable readmissions within a week or two of discharge. Hospital quality measures can also factor into payment for other provider types. Most notably, the “medical home” may include incentives paid to physicians with low rates of potentially preventable hospital admissions, complications, readmissions, and emergency room visits. Savings on the hospital side then can be used to fund additional services from the medical home.⁴⁰

Among Medicaid programs, Arkansas and Pennsylvania were early innovators. In 2007 and 2008, Arkansas paid over \$9 million in bonuses to hospitals that performed well on the Medicare process of care measures.⁴¹ Pennsylvania took a different approach, focusing on its own set of measures, but bonuses have not been paid out in recent years. Maryland currently has the most extensive pay-for-quality incentives (see Box B.5.1). Effective July 1, 2010, New York Medicaid is reducing payments to hospitals with high rates of potentially preventable readmissions, covering a much wider range of conditions than Medicare will. The initiative is expected to save at least \$35 million in a nine-month period.⁴²

Table B.5.1 provides a summary of the leading hospital quality measures. Some pay-for-quality initiatives are targeted at quality problems affecting specific patients. An example is Medicare’s policy on hospital-acquired conditions, where payment is reduced if a hospital claim includes a “never event” or other condition that should rarely, if ever, occur during a stay. An alternative approach is to analyze a year’s worth of data, calculate hospital-specific quality rates relative to a benchmark, and then sets bonuses or penalties by hospital. These amounts may be paid or collected by adjusting payment for each claim going forward, for example by adjusting the DRG base price. This approach has the major advantage that it focuses attention on overall hospital-wide quality rates rather than on individual stays.

In the hospital outpatient department, to date there has been much less interest in measuring and paying for quality differences. Most significantly, Medicare now has a 2% incentive in its APC payment rates for hospitals to report 11 quality measures related to chest pain, heart attack, surgery, and imaging.⁴³ This initiative is presumably a first step on the path toward creating incentives for better care in the outpatient setting.

Table B.5.1: Summary of Leading Hospital Inpatient Quality Measures

| Hospital Quality Measure | Source | Prevalence in Hospital Care | Requires MMIS Changes |
|---------------------------------------|----------|------------------------------|-----------------------|
| Patient safety indicators | AHRQ | Medium | No |
| Never events | NQF | Rare | Usually no |
| Hospital-acquired conditions | Medicare | Rare | Yes—POA, pricing |
| Potentially preventable complications | 3M | Common | Yes—POA |
| Potentially preventable readmissions | Medicare | Common (CHF, AMI, pneumonia) | No |
| Potentially preventable readmissions | 3M | Common (broad list) | No |
| Clinical quality process measures | Medicare | Common | No |
| Customer satisfaction | HCAHPS | Common | No |
| Risk-adjusted mortality | 3M | Common | No |

AHRQ=Agency for Healthcare Research and Quality, NQF=National Quality Forum, POA=present-on-admission indicator, HCAHPS=Hospital Consumer Assessment of Healthcare Providers and Systems, MMIS=Medicaid Management Information System, CHF=congestive heart failure, AMI=acute myocardial infarction (heart attack)

B.6 Regular Updating

Value purchasing is a journey, not a destination. History shows us that a new payment method likely will be in place for 10, 15, 20 years or more. Making the change—for example, from cost reimbursement to payment by DRG, APC, or EAPG—is typically a major effort, requiring changes to the MMIS, the Medicaid state plan, and to established ways of doing business with hospitals. Even with contractor support, it is a lot of work. Once the new method is in place, the tendency is to turn to other priorities. History, however, also shows us that good payment methods go bad when they are not regularly updated. Examples of problems include:

- **Inflexible specifications.** Since 1991, New Jersey Medicaid has used Version 8 of the AP-DRG algorithm, based on utilization and cost data from 1988.⁴⁴ Since then, annual ICD-9-CM diagnosis and procedure code changes have had to be cross walked back to values that Version 8 can read. The grouper logic itself has not been updated to reflect almost 20 years of changes in hospital care.
- **Code set updates.** Most payment methods depend on detailed diagnosis and procedure codes, which are updated annually. Under the Health Insurance Portability and Accountability Act, Medicaid programs must accept (though not necessarily cover) currently valid codes and cannot require hospitals to submit obsolete codes. Therefore all payment methods should be updated annually to accept currently valid code set values.
- **Dollar-denominated amounts.** DRG methods typically include provision for cost outlier payments, which depend on specific dollar thresholds. If these dollar values are not updated for inflation, more and more stays receive outlier payments. The Office of Inspector General criticized several states for this problem several years ago, and recently began new audits.⁴⁵ The obverse problem occurs when the DRG base price or APC or EAPG conversion factor is not updated for inflation. Payment rates need not be increased every year, but they should be reviewed.
- **Big swings in payment by hospital.** States that do not pay by DRG (and even some that do) typically base their payment rates on Medicare cost reports. If more than two or three years elapse between “rebasings” exercises, then hospitals can see big swings in payment. The solution is simply to update the payment method more often.
- **Payment policy problems fester with age.** In 1998, Congress enacted the “sustainable growth rate” (SGR) to control Medicare spending on physician services. The SGR is a flawed mechanism, but Congress has repeatedly enacted short-term overrides without reforming the SGR itself. In 2010, with the SGR requiring a draconian 21% fee cut, the cost of another short-term fix almost torpedoed the Affordable Care Act.⁴⁶

For a prospective payment system, based for example on DRGs, APCs or EAPGs, the tasks involved in annual updates can be summarized by the mnemonic “groups, weights, rates and rules.”

- **Groups.** Grouping refers to the assignment of individual diagnosis and procedure codes from a claim to an inpatient DRG or outpatient APC or EAPG. States do not typically change the grouping logic themselves, but they are responsible for installing updated software in the MMIS every year.
- **Weights.** Relative weights, which show the hospital resources typically needed for a particular group relative to the overall average, should be updated with every grouper update.

- **Rates.** Weights are turned into rates through multiplication by the DRG base price for inpatient care or the conversion factor for outpatient care. Whether to increase base prices and conversion factors is a technically complex and politically charged judgment call. An evidence-based framework can help defend a state's decision-making process in the court of public opinion (and sometimes in courts of law).⁴⁷ At the federal level, the Medicare Payment Advisory Commission annually provides excellent advice to Congress on this question.⁴⁸
- **Rules.** "Rules" refer to all other aspects of the payment method, such as outlier calculations, inclusions and exclusions by type of hospital, etc. Outlier thresholds should typically be adjusted every year while other rules should be at least reviewed.

Box B.6.1: Updating Payment Methods in Montana

Montana was among the first states to implement an APC-based payment method for outpatient care, in 2003, and to replace the obsolete CMS-DRG grouper, in 2008. Both methods are updated every year.

APC-based payment is based on CPT and HCPCS codes, which are updated at the national level each January 1. Early in November, CMS releases its final rule updating the APC payment method incorporating the new codes and updating the APC relative weights and other parameters for every CPT and HCPCS code. Montana Medicaid, in collaboration with a payment method specialist at its fiscal agent, has an established update routine. A first step is to review the detailed documentation that Medicare provides. Medicaid staff pay attention to major payment policy changes and to Medicare changes that may conflict with Medicaid regulations or previous practice. A comparison of before-and-after Medicare fee levels is also done, focusing on procedure codes with substantial Medicaid volume.

A routine process is used to update the grouper logic in the MMIS. Depending on the scope of the Medicare changes, the agency may also issue a provider notice or change MMIS adjudication logic. A rule hearing is needed when a change in the APC conversion factor would affect overall payments. Once the changes are finalized, the provider relations website is updated to reflect the new APC fees.

DRG-based payment depends on ICD-9-CM diagnosis and procedure codes, which are updated every October 1. 3M Health Information Systems, which owns the APR-DRG software that Montana uses, annually releases a new version of its software. October 2010 was V.28.⁴⁹ Because of the limited time available for analysis, Montana typically continues to use the previous version for another nine months. This is feasible if code mapper software is installed in the MMIS to crosswalk new ICD-9-CM codes back to previously valid code values. Between October 1 and July 1, state staff have time to run paid claims data through the new grouper version in order to identify any impacts and involve stakeholders in the process. The overall payment level, which depends largely on the DRG base price, is reassessed, as are the outlier thresholds and other payment method parameters. The inpatient payment method changes are implemented through the rule hearing process, to take effect July 1.

B.7 Building Analytical Capability

With hospital payments exceeding \$100 million a year in 49 states—and exceeding \$1 billion in 17 states—there is no question that Medicaid must have accurate data at its fingertips. Fortunately, opportunities now are so much greater than there were even a few years ago. Computing power is cheaper, data analytic software is better, the Internet is a godsend for researchers, claims data are standardized (due to HIPAA), and far better Medicaid information exists at the national level (Appendix A). To take full advantage, a state needs a strong decision support system comprising three components.

- **Data warehouse.** The typical state’s MMIS was not designed for decision support and is unsuitable for this purpose. Simply put, for a non-programmer it is too cumbersome and too confusing, with hundreds or thousands of similarly named data fields. These systems are designed for efficient claims processing, not necessarily for efficient data extraction and analysis. Instead, a state needs to build a separate data warehouse, which typically is updated after every MMIS payment cycle. The update includes information on paid claims, beneficiary eligibility, provider data, and reference file information such as procedure code fees. Data warehouses can themselves be very complex. But even the simplest versions—such as a claim-level database with additional beneficiary information “tagged” onto each record—can be very useful. In any case, data warehouses must be highly customized to each state.
- **Query tool.** Commercial off-the-shelf software, such as Business Objects, Cognos and their competitors, is usually configured for use with a state’s data warehouse. Ideally, the data warehouse and the query tool are both structured to prevent the most common problems in Medicaid data analysis. For inpatient hospital analysis, it is important that a record be defined as a complete stay, which means that separate claims for a single stay must be chained together.
- **Trained staff.** A wide range of non-technical agency staff, i.e., dozens of people, should be able to use the decision support system. It is unfortunate if, in order to prevent mistakes, use must be restricted to a few specialized data analysts. Even with a well-structured data warehouse and query tool, however, the complexity of Medicaid data analysis makes good training essential. Training should cover, at minimum, data warehouse structure, query tool use, how claims are billed and paid, a “Medicaid 101” policy overview, and essentials of health care coding. Clinical knowledge can also be very useful.

B.8 Hospital Consultation and Education

Federal law specifically requires a public process in proposing hospital payment rates and soliciting comments from hospitals, beneficiaries and other interested parties. Moreover, a strong consultation process before decisions are finalized, followed by a strong provider education process once decisions have been made, increases the likelihood of ultimate success.

A successful education process is built on clarity. For major changes, it is wise to put real effort into provider training. Confusion serves no one’s interest. Moreover, hospitals receive an avalanche of communications from payers, so even major Medicaid changes may not stand out. A successful education effort may involve provider notices, in-person provider trainings, changes to policy manuals, preparation of website FAQs and pricing examples, and even distribution of hospital-specific simulation

results. Once implementation occurs, an increasingly web-savvy public expects up-to-date documentation on payment methods and rates to be available on the Internet.

Box B.8.1: Provider Consultation in Rhode Island

On July 1, 2010, Rhode Island Medicaid implemented a new payment method for hospital inpatient care, replacing a method that had been in place since 1971. Implementation was the culmination of a two-year open process of analysis and consultation.

The previous payment method, innovative at the time, required annual negotiation of hospital-specific cost budgets for serving the Medicaid population, all within a negotiated statewide payment increase called the Maxicap. Over time, however, interest waned in performing detailed review of every hospital budget. After about 1994, every hospital received the same Maxicap increase. In a year-end settlement process, payments were adjusted for changes in volume and in cost-to-charge ratios. Otherwise, however, payments reflected the cost structure of the hospital industry in 1994.

Concerned by the use of out-of-date information and wanting better incentives and greater transparency, senior Medicaid managers began considering moving to payment by DRG. In 2006, an evaluation of DRG alternatives was undertaken, with results published in *Health Affairs*. In 2008, the Community Hospital Task Force, which had been appointed by the Governor, specifically recommended that Medicaid adopt APR-DRGs. In 2009, the General Assembly directed Medicaid to move forward.

The policy development process included about a dozen consultation meetings. Meetings were open to anyone, although in practice the attendees were usually senior hospital financial executives. Each two-hour meeting included a presentation but was loosely structured in order to foster discussion.

It quickly became apparent that the previous payment method did not enable clear understanding of what was being purchased, what the pay-to-cost ratios were, or even how many inpatient stays there were. An analytical dataset comprising a year's worth of paid claims data was created (and then updated annually). A consultant chained multiple claims into single stays, grouped every stay by APR-DRG, calculated payment per stay, and estimated the hospital cost of each stay. Hospitals weighed in on which costs were relevant to include.

Hospital-level information was shared with all hospitals, and each hospital received an Excel file with its own stays. The dataset was also used for repeated simulations of payment options. A "DRG Calculator" spreadsheet was created that allows users to model payments for individual stays.

A degree of trust developed within the group, with the result that disagreements concerned policy options and not the numbers. Consensus emerged on many topics, but there were also areas of significant difference. These included: whether or not medical education should be recognized as a Medicaid cost; whether payment for mental health should be per diem or per stay; whether a transition period should be used in implementation; whether the method should also apply to Medicaid managed care plans; and whether implementation should be budget neutral.

C. Conclusion: A Vision of Value Purchasing

The performance of a particular hospital payment method can be evaluated using criteria such as those listed in Table B.1.2.2: access; efficiency; fairness; quality; clarity; policy control; data quality; and administrative ease. This concluding section describes how the recommended sound practices outlined in Section B fit with these criteria, enabling states to develop a value purchasing approach toward hospital payment.

- **Access.** Access depends on a multitude of factors; one is appropriate case-mix adjustment within a payment method.⁵⁰ That is, hospitals will try to avoid sicker patients unless they are paid more for patients who require more care. Cost reimbursement methods, despite their flaws on other criteria, automatically pay more for these patients. APC payment methods and other fee schedule approaches that pay separately for almost every individual service also enable access. If a payment method is more bundled, then it must be sophisticated enough to measure case mix accurately.
- **Efficiency.** Payment methods should incent hospitals to provide the care patients require at the lowest cost; i.e., to operate efficiently. Hospitals should be rewarded for being prudent purchasers of inputs such as staff time, equipment, and supplies. More subtly, hospitals should be prudent in the amount of care they provide. Indeed, as much as 30% of health care is estimated to be of marginal or no clinical benefit; certainly, not every patient hit on the head needs a CT scan.⁵¹ Cost reimbursement methods fail on both of these aspects of efficiency. Fee schedules more effectively reward hospitals for prudent purchasing. Fee schedules, however, incentivize hospitals to provide services even if they are of marginal or no benefit. DRGs and EAPGs are much more effective in encouraging both prudent purchasing and prudent use of services. Medicare is now moving APCs in this direction, although this payment method remains very much a fee schedule approach.
- **Fairness.** Fairness in selecting a payment method comes into play in two ways. First, hospitals should be paid similarly for similar services. Under cost reimbursement and other unsophisticated approaches, it is not uncommon for Medicaid to pay one hospital twice as much for a specific service as its pays a competing hospital across town. DRGs, APCs, and EAPGs all produce more equitable payment for hospitals in the same market. Second, payment rates should reflect important differences in hospital input costs that are truly outside the hospital's control. Medicare, for example, adjusts DRG and APC payment rates for local-area wage differences. States may follow suit or may choose a single statewide set of rates.
- **Quality.** Many mechanisms can be used to link payment to quality, and there are numerous measures of quality. To be accurate, measures that focus on mortality, readmissions, complications, and other outcomes must be adjusted for differences in patients' clinical characteristics. DRGs, and APR-DRGs in particular, are suitable inpatient case-mix adjusters, as are EAPGs in outpatient care. APCs have no clinical content, which is also a flaw in other fee schedules, per diem payment methods, and similarly unsophisticated approaches.
- **Purchasing clarity.** Given the amount of money spent on hospital care, it is important to understand the degree to which a payment method enables insight into what is being purchased. Cost reimbursement is at one extreme; DRG payment at the other. DRGs are both a financial tool and a clinical tool, used both to categorize stays and adjust for case-mix differences. (The DRG algorithm must be appropriate to the clinical population studied.) EAPGs bring needed clarity to outpatient hospital services, but not to the same degree as DRGs because more than one EAPG can

be assigned to a single visit. APCs and other fee schedule approaches provide specific detail on the services provided, but offer little insight into the patient's clinical status.

- **Policy control.** This criterion refers to Medicaid's ability to set payment levels overall and for specific clinical or geographical areas with the goal of advancing, enhancing, or constraining capacity, access, and quality. Lack of policy control is a major disadvantage of unsophisticated approaches such as per diem and cost-based methods. Conversely, under DRGs, APCs, or EAPGs, the state sets the overall payment level through the inpatient base price or the outpatient conversion factor. These levers can also be adjusted to increase or decrease rates in specific geographic areas. To adjust payments for specific clinical areas, states can apply "policy adjustors" to relative weights for DRGs, APCs, or EAPGs.
- **Data quality.** All payment methods run on data, and all data are subject to error and manipulation. The goal then is to choose payment methods where potential data concerns can be understood and addressed. Cost reimbursement runs on Medicare or Medicaid cost reports, which must be audited with specific attention to areas important to Medicaid. (Medicare auditors focus on areas important to Medicare.⁵²) DRG and EAPG methods run on diagnosis and procedure code data from the claim, while APCs run on procedure code data only. States that adopt DRGs, APCs, or EAPGs typically need to implement new MMIS edits and post-payment review procedures to ensure accurate input data.
- **Administrative ease.** Of all payment methods, only paying a percentage of charges can be said to be truly easy from an administrative standpoint (which is why it persists among some commercial payers). Straightforward per-diem and per-visit methods are almost as easy for payers. Any reconciliation to actual cost sharply increases administrative burden, since settlement of cost reports typically takes several years, generates disputes with hospitals, and adds uncertainty to budget forecasts. Prospective payment methods, such as DRGs, APCs, and EAPGs, do not carry the burden of cost settlement, but they do require annual updates and other policy maintenance.

A state's choice of payment method influences how care is delivered, how much care is delivered, and the cost of that care. It can also influence the quality of care. With Medicaid becoming an increasingly important purchaser, it is more critical than ever that Medicaid officials make sound choices. And, as this paper discusses, there is significant evidence that some methods work better than others, meaning they are more likely to incent high-quality, cost-effective care.

Appendix A: Internet Resources on Medicaid Hospital Payment

- Centers for Medicare and Medicaid Services (CMS), www.cms.gov.
 - Information on Medicare inpatient and outpatient payments is most easily found by going to www.cms.gov/center/hospital.asp.
 - Information on requirements relating to Medicaid payment methods can be found at www.cms.gov/medicaidrf/.
- Kaiser Commission on Medicaid and the Uninsured (KCMU), www.kff.org.
 - Excellent overall web resource on Medicaid.
- Medicaid Statistical Information System (MSIS), <http://msis.cms.hhs.gov>.
 - Enables skilled analysts to do on-line queries using a data mart of Medicaid information, including payments, by state.
- Center for Health Care Strategies (CHCS), www.chcs.org.
 - Information on Medicaid payment reform and many other topics.
- Agency for Healthcare Research and Quality (AHRQ), www.ahrq.gov.
 - HCUPnet (<http://hcupnet.ahrq.gov>) is an on-line tool that enables users to query nationwide data on inpatient stays and emergency room visits. Queries can be focused on “Medicaid” as the expected primary payer.
 - Clinical Classification Software is a free tool available at http://www.hcup-us.ahrq.gov/tools_software.jsp. It can be used to categorize diagnoses and ICD-9-CM procedures, either on an ad hoc basis or within a data warehouse.
- ACS, a Xerox Company, www.acs-inc.com/healthcare.aspx (click on “Payment Method Development.”)
 - Articles and backgrounders on a wide variety of Medicaid payment topics.
- Medicare Payment Advisory Commission (MedPAC), www.medpac.gov.
 - Information is focused on Medicare, with many good discussions of Medicare payment policy.
 - MedPAC also publishes a series of documents called “Payment Basics” with Medicare payment method details for various types of providers, such as hospital, ambulatory surgical center, durable medical equipment and others.
- New England States Consortium Systems Organization (NESCSO), www.nescso.org.
 - Includes educational videos on Medicaid payment methods and health care coding for Medicaid managers.
- Medicaid and CHIP Payment and Access Commission (MACPAC), www.macpac.gov.
 - The website for this new commission is expected to include information on Medicaid payment and access issues.
- Office of Inspector General, www.oig.hhs.gov.
 - Reports are issued by the Office of Audit Services and the Office of Evaluation and Inspections. Reports may address Medicaid issues or, alternatively, may address Medicare payment issues that are relevant to Medicaid.
- Government Accountability Office (GAO), www.gao.gov.
 - Issues many reports on health issues, including some directly relevant to Medicaid payment.

Appendix B: Glossary of Hospital-Related Payment Terminology

APCs – Ambulatory Payment Classification Groups. The Medicare payment method for outpatient hospital services, which was implemented in 2000. Other payers, including Medicaid, have also implemented APCs. Multiple APCs may be assigned to a single outpatient visit, but not every service is assigned to an APC. See Outpatient Prospective Payment System.

APGs – Ambulatory Patient Groups. Now also known as Enhanced Ambulatory Patient Groups (EAPGs). APGs were developed for Medicare by 3M Health Information Systems as the possible basis for a prospective payment method for outpatient hospital services. However, Medicare implemented APCs. In 2007, 3M made significant changes to the APG logic to reflect current coding and billing practices and to describe a broader, non-Medicare population. The resulting product is EAPGs.

CAH – Critical Access Hospital. A rural, limited service hospital that has been converted to a special designation as a Critical Access Hospital under the Medicare Rural Hospital Flexibility Grant Program. The majority of CAHs are in Health Professional Shortage Areas and/or Medically Underserved Areas.

CC – Complications and Comorbidities. A complication is a condition arising during the hospitalization that modifies the course of the patient's illness or the medical care required. A comorbidity is a condition existing at the time of hospitalization which has potential to affect the course of illness or medical care provided.

CMS – Centers for Medicare & Medicaid Services. CMS is a branch of the U.S. Department of Health and Human Services. CMS is the federal agency that administers the Medicare program and monitors the Medicaid programs offered by each state.

Conversion Factor (APC or EAPG). A conversion factor is a dollar figure that is multiplied by an APC or EAPG relative weight to calculate a payment rate. It is analogous to the DRG base price for inpatient care.

CPT – Current Procedural Terminology. Also known as CPT-4. A five-digit numeric coding system of procedures and services provided to patients, usually by physicians. It also includes a series of two-digit modifiers. The purpose of the coding system is to provide uniform language that accurately describes medical, surgical, and diagnostic services. The American Medical Association updates the CPT-4 quarterly. It is widely used on professional claims and, in recent years, on outpatient institutional claims. APC and EAPG assignments are based on CPT and HCPCS codes.

DSH – Disproportionate Share. Supplementary payments from Medicaid programs to hospitals that serve a disproportionate share of Medicaid and uninsured patients.

DRGs – Diagnosis Related Groups. Each inpatient stay is assigned to a single DRG based on the patient's diagnoses and the procedures performed. A relative weight is assigned to each DRG, and then multiplied by the "DRG base price" to determine the amount paid to the hospital. Subsets include:

- **CMS-DRGs** – The first major casemix group; used by Medicare from 1983 until 2007.
- **MS-DRGs** – Medicare Severity DRGs. In use by Medicare effective October 2007. A more sophisticated algorithm than CMS-DRGs, with more accurate capture of comorbidities and complications. Not suited to a Medicaid population.

- **AP-DRGs** – All-Patient Diagnosis Related Groups. An algorithm designed for use by an all-patient population, including Medicaid. Compared with CMS-DRGs and MS-DRGs, AP-DRGs include more accurate capture of neonatal care in particular.
- **APR-DRGs** – All-Patient Refined DRGs. There are four levels of severity for each of 314 DRGs in the system. APR-DRGs are designed for use by an all-patient population.
- **APS-DRGs** – All-Payer Severity-Adjusted DRGs. Designed for use by an all-patient population, including Medicaid. Like MS-DRGs and AP-DRGs, a stay can be assigned to a base DRG, base DRG plus complication, or base DRG plus major complication.

DRG base price. In DRG payment methods, the base price is a figure that is multiplied by the DRG relative weight to calculate a payment rate. It is analogous to the conversion factor for outpatient care.

HCPCS – Healthcare Common Procedure Coding System. A standard set of five-digit codes for health services, procedures, and supplies. HCPCS Level I comprises the CPT-4 codes. Level II is what people usually mean when referring to “HCPCS codes.” Level II comprises codes for durable medical equipment, ambulance services, medical supplies, dental procedures, orthotics, prosthetics and drugs. HCPCS Level III comprises local codes, which in principal are no longer used. HCPCS Level II is maintained by CMS.

HACs – Hospital Acquired Conditions. As used by Medicare, a short list of complications acquired during a hospital stay that may indicate sub-standard care for which payment should be reduced. By definition, a HAC reflects a diagnosis that was not present on admission and is on the HAC list (sometimes in combination with a procedure code).

ICD-9-CM – International Classification of Diseases, Ninth Revision, Clinical Modification. ICD-9 is a classification system of diseases, injuries, and medical conditions, developed by the World Health Organization. ICD-9-CM is a U.S. variant maintained by the National Center for Health Statistics, which revises the codes each October. The ICD-9-CM system also includes the list of inpatient hospital procedures that is used in assigning DRGs.

ICD-10-CM and ICD-10-PCS – International Classification of Diseases, Tenth Revision, Clinical Modification and International Classification of Diseases, Tenth Revision, Procedure Coding System. Intended to replace ICD-9-CM in the U.S. as of October 1, 2013. The ICD-10 diagnosis list is already in use in many countries. ICD-10-CM codes are alphanumeric instead of numeric. The switch will require extensive changes in claims processing systems across the U.S.

MMIS – Medicaid Management Information System. The MMIS is an integrated group of procedures and computer processing operations (subsystems or components) designed to meet principal Medicaid program objectives such as control of administrative costs; service to recipients, providers and inquiries; operations of claims control and computer capabilities; and management reporting for planning and control.

OPPS – Outpatient Prospective Payment System. What Medicare calls its outpatient payment method, which is based on APCs but also includes the clinical lab fee schedule for lab services, the Medicare physician fee schedule for therapy services, and certain other fees. “OPPS” and “APCs” are often used interchangeably. Strictly speaking, however, APCs are just one component of OPPS.

PPCs – Potentially Preventable Complications. This term can be used in general to refer to complications of inpatient hospital care that might have been preventable. It also sometimes refers to specific software developed by 3M Information Systems for analyzing a defined list of PPCs.

PPRs – Potentially Preventable Readmissions. This term can be used in general to refer to hospital readmissions that might have been preventable. It also sometimes refers to specific software developed by 3M Information Systems for analyzing a defined list of PPRs.

PPS – Prospective Payment System. An umbrella term typically used to refer to payment methods that pay a standard set of casemix-adjusted rates to providers, regardless of the provider's charges or cost. DRG-based payment for hospital inpatient services was the original PPS. Medicare also uses a PPS in paying home health agencies, hospice, hospital outpatient, inpatient psychiatric facilities, inpatient rehabilitation facilities, long-term care hospitals, and skilled nursing facilities.

Relative Weight (DRG, APC, or EAPG). A relative weight is assigned to each DRG, APC and EAPG. While these are different payment methods for different services, the relative weights serve a similar purpose. These weights indicate the relative costs for treating patients. For example, a DRG with a weight of 2.00 is twice as costly for a hospital as the average DRG. A DRG with a weight of 0.50 is half as costly as the average DRG. Weights are typically calculated through analysis of large datasets, such as the MEDPAR dataset for MS-DRGs and the Nationwide Inpatient Sample for APR-DRGs and APS-DRGs.

Endnotes

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