

Physician Payment: Current System and Opportunities for Reform

Prepared for *Building Consumer and Physician Consensus around
Physician Payment Reform*

Co-sponsored by the Institute of Medicine, the ABIM Foundation and
AARP
March 13, 2009

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AARP Policy and Strategy

Research Report

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AARP's Public Policy Institute informs and stimulates public debate on the issues we face as we age. Through research, analysis and dialogue with the nation's leading experts, PPI promotes development of sound, creative policies to address our common need for economic security, health care, and quality of life.

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INTRODUCTION

Over the past five years, physician payment, particularly for Medicare, has risen to the top of the health care policy debate. Much of the reason for this rise has been Medicare's formula for updating physician payment rates, which has called for cuts to payments in response to volume increases. The Congress has acted to prevent these cuts, but finding the resources to pay for them has been politically challenging. Observers have noted that the basic payment system encourages volume increases, quality does not seem to improve with volume, and specialists seem to be advantaged by the system over primary care clinicians.

This paper is intended to provide a starting point for a discussion on how to improve payment to physicians, with a focus on Medicare, but with application more broadly, since many payers use Medicare's system. We provide some background on the payment system, offer some thoughts on our goals and expectations for the delivery of health care broadly, and outline how, ideally, physician payment should be an important lever to accomplish these goals.

We describe the most prominent ideas being offered and tested to improve physicians' performance: pay-for-performance, episode-based payment, accountable care organizations, and the patient-centered medical home. These ideas are all designed to be compatible with the existing fee-for-service structure, where patients may choose their providers. Most of these ideas are in the development and testing phase, and it is difficult to say how successful they will be. A challenge across all the models is addressing the insufficiency of measures of outcomes and quality that tie convincingly to physician care (especially a particular physician's care). Another key issue is how much money is tied to the new incentives for quality and efficiency—the smaller the share, the less likely they are to change behavior.

We also look outside the U.S. borders to international models of physician payment. We see interesting elements, like pay-for-performance in the United Kingdom, budget targets with all-payer systems in Germany and Japan, physician profiling and medical homes in France, and combined payments to specialists and hospitals in many countries. Fee-for-service payments and a lack of integrated delivery systems or multispecialty group practice is quite common internationally, as it is here. But as we review the indicators of performance for those countries' health care systems, it is difficult to say that payment system design is the driver of these differences. Indeed, the larger context of government role and system financing and organization may drive more of the differences among countries than the features of the payment systems.

So, what are the best proposals to adopt in the U.S. health care system? The ideas under development for physician payment—pay-for-performance, episode-based payment, accountable care organizations, and the patient-centered medical home—all hold promise for aligning incentives toward better quality and efficiency of care. The key questions for discussion include whether we should try them all, whether they are compatible with each other, what unintended consequences might result if and when they are adopted on a large scale, where to commit the most political and administrative capital, and what other ideas for improving physician payment await examination.

WHAT ARE THE GOALS FOR A PAYMENT SYSTEM?

Payment systems define the type of services for which payment will be made and the value of the services relative to each other. They create incentives for physicians to provide more or fewer services, see more or fewer patients, and, potentially, to control the costs of providing services.¹

Payment policy should align with the goals of the health care system.² Ideally, payment methods should create incentives for payers and patients to receive *value* for money spent. The term “value” is a preference-weighted assessment of a particular combination of quality and cost of care.³ Quality measures should include health outcomes whenever feasible and cost should reflect whether care is provided efficiently, using the least costly set of resources to produce these outcomes.⁴

Of necessity, the payment system must contribute to a sustainable path for health care spending. Physician payments also should reasonably track the cost of providing services. Ideally, the payment system should promote shared accountability among providers, drive greater coordination and integration between and among providers, be feasible (simple, not unduly burdensome, and relatively inexpensive to administer), and be easy for physicians and others to understand.

Payment Should Leverage High Performance in These Areas⁵

- *Patient-level health outcomes* such as mortality, morbidity, patient experience, including patient perceptions of their health and functional status, and physical and mental health, patient preferences, and quality of life.
- *Total cost and efficiency of care*, taking into account patient out-of-pocket costs for treatment of an entire episode of care, as well as total physician visits and hospital days.
- *Appropriateness of care* with a focus on evidence-based interventions, to ensure that patients receive the right care at the right time and in the right setting.
- *Administrative efficiency* so that operationally, the payment system is compatible with other data systems, is part of clinical work flow to the extent possible, and can be easily maintained and updated.

¹ Robinson, 2001.

² AARP, an organization representing over 40 million members, has identified four goals, three of which apply to this discussion: (1) Everyone should have adequate coverage and receive high quality care; (2)The health care system should be affordable and sustainable; (3)The health care system should promote health. See AARP, 2008.

³ NQF, 2009.

⁴ “Efficiency of care” is a measure of the relationship of the cost of care associated with a specific level of performance measured with respect to the other five Institute of Medicine (IOM) aims of quality. The Institute of Medicine identified 6 domains for quality. Care should be: effective, safe, patient-centered, efficient, timely, and equitable. See NQF 2009; IOM 2001.

⁵ NQF, 2009.

The widening gap between primary care and specialty income demonstrates how payment methods can also influence the mix and training of clinicians.⁶ This gap has adversely affected the percentage of U.S. medical graduates choosing careers in primary care.⁷ A system that rewards primary care with higher payments for high quality and relatively less for procedures may create positive incentives for graduates to choose primary care careers. To the extent the U.S. health care system has tilted too heavily toward specialty care, changing this imbalance will require paying relatively more for primary care services to physicians and advance practice nurses.

Payment methods can also influence the organization of care. In general, a combined payment for a broad scope of services (e.g., all care related to a particular episode) supports more organized delivery systems and a team approach to care. These systems are better able to allocate, manage, and share resources, while the affiliated clinicians have greater incentives to coordinate the management of services for the patient experiencing the episode. In contrast, a separate payment for each item and service allows providers to prosper in individual practice rather than organized networks. Experts recommend that the payment system should drive greater integration and coordination to improve the quality of care.

HOW DO WE PAY PHYSICIANS?

There are three main ways of paying physicians:

- *fee-for-service* payment, which pays an amount for each individual service the physician or associated clinician provides;
- *capitation*, which pays a fixed amount for every patient in the physician's practice, regardless of the amount or level of services the patient uses; and
- *salary* payment, in which a physician is employed by a health system or health plan and is paid without regard to the services the physician provides.

Each of these approaches carries incentives that tend to encourage particular behaviors. For example, fee-for-service payment encourages more and costlier services which, in turn, can lead to higher prices, higher rates of unnecessary service use, and rising spending.⁸ Fee-for-service payment may foster duplication of services and the involvement of multiple physicians in a patient's treatment, both of which can adversely affect the quality of care.⁹ Under capitation (particularly without good risk adjustment), physicians will have higher payments if they withhold services or see only healthier patients. Pure salary systems can lower productivity if compensation is not related to productivity.

⁶ Nicholson, 2002; Hurley, 1991.

⁷ Bodenheimer, 2007

⁸ Robinson, 2001; Simoens, 2004.

⁹ Davis, 2007.

However, as Berenson has noted, these negative effects do not necessarily materialize and can be mitigated with payment features. For example:

- Fee-for-service payment does not necessarily promote growth of all services equally: in the Medicare program, advanced imaging, tests, and “other” (non-major surgical) procedures have grown rapidly but this has not been the case for the volume in major procedures.¹⁰
- Under capitation, if the physician or physician group is accountable for the cost of a patient’s care over a period of years, the incentive is to keep a patient healthy, even if it means providing some high-cost services to do so.
- Salary may not deter high performance and productivity if it is coupled with incentive bonuses that reward these behaviors.

Payment systems alone are not enough to ensure high performance, because physician behavior is not simply, or even primarily, a function of payment incentives. A commitment to provide the best and most appropriate care to patients; a sense of professional values, including balancing the imperative to meet an individual’s needs with managing finite resources;¹¹ and a desire to respond to patient preferences are important determinants of physician behavior.

PHYSICIAN PAYMENT IN THE MEDICARE PROGRAM

Fee-for-service is the dominant payment method for physicians in the traditional Medicare program.¹² The fee a physician receives for any given service is determined by two main factors:

- the *resource-based relative value scale (RBRVS)*, which sets a value for each of the approximately 7,500 individual services provided by physicians; and
- the *sustainable growth rate system (SGR)*, which determines the price (conversion factor) that translates each relative value into a dollar amount.

The RBRVS is based on a set of formulas intended to reflect the resources it takes physicians to provide each service or item covered under the fee schedule. Many private payers also use adaptations of this system. A service that requires a great deal of time and training to perform, plus nurse time and supplies, will have a higher payment than other services. The RBRVS also includes adjustments to reflect the type and location of the provider. Payments are lower for advance practice nurses, for example, and payments are higher in areas where there are shortages of physicians.

¹⁰ Berenson, 2009; MedPAC, 2008c.

¹¹ ABIM Foundation et al., 2002.

¹² There are several exceptions to pure fee-for-service. For example, nephrologists seeing patients with end-stage renal disease receive partial capitation payments. Surgeons receive a global fee that covers all of the physician services around a major procedure. The focus of this section is on Medicare’s “mainstream” fee-for-service payment system that controls the majority of physician payments.

The SGR translates each value established under the RBRVS into an actual price per service to be paid to the clinician and updates those prices annually. The SGR is intended to control growth in physician spending by determining how much Medicare can afford to spend on physician services each year (with affordability defined by the gross domestic product), and to increase or decrease the price paid for a service depending on whether actual spending has been more or less than the SGR allows.

The SGR is not the same as a global budget. Payments for services are not held back in a given year if spending is higher than the SGR target in that year. Instead, the fee schedule update for *future years* is adjusted so that over time, actual spending will be brought into line with the spending target.¹³

THE CURRENT MEDICARE PHYSICIAN PAYMENT SYSTEM: PROBLEMS AND INCREMENTAL IMPROVEMENTS

Neither the RBRVS nor the SGR promotes the delivery of efficient or effective care, and many assert that these mechanisms actually negatively affect primary care. Criticisms of the relative value system have identified several ways that it fails to promote the best use of resources.¹⁴ The system of valuing services favors new, high-technology services. Because the system is a zero-sum one, the relative payments for evaluation and management services like office visits tend to lose value relative to the new, high-technology services. This is one explanation for the relatively lower compensation for primary care physicians relative to specialists.

The Relative Value Scale Update Committee, or RUC, makes recommendations to the Centers for Medicare and Medicaid Services (CMS) for changes to the relative values of individual services based on an ongoing evaluation of whether the relative values are correct as well as evaluation of new services.¹⁵ To counter the tendency for the RUC to favor high technology interventions over evaluation and management services, some observers have suggested changes in the process. In 2006, the Medicare Payment Advisory Commission (MedPAC) called for CMS to establish a standing panel of experts to help it identify overvalued services and to review recommendations from the RUC.¹⁶ MedPAC called for the group to include members with expertise in health economics and physician payment, as well as members with clinical expertise. Consumers could be a part of this panel of experts as well, particularly if resources were made available to provide technical support for them. MedPAC's idea would not supplant the RUC, but provide input from another set of perspectives. Alternatively, the American Medical Association (AMA) or CMS (as a suggestion or requirement to the AMA) could simply change the composition of the RUC to include more representatives of primary care specialties and other experts, as well as consumer representatives.

¹³ For a more complete explanation of the SGR system, see GAO 2002.

¹⁴ Berenson, 2008; MedPAC, 2008; Pham and Ginsburg, 2007.

¹⁵ The American Medical Association operates the RUC (the majority of whose members are appointed by the medical societies), providing staff, governance, and financial support. CMS does not always take specific RUC recommendations but relies heavily on the RUC to maintain the system.

¹⁶ MedPAC, 2006.

MedPAC has called for other changes to the relative weights that would reduce payments for high technology services (which would increase payments for other all other services). These ideas include:

- Conduct a focused review of services that have experienced substantial changes in length of stay, site of service, volume, practice expense, and other factors that may indicate changes in physician work.
- In consultation with the expert panel, identify new services likely to experience reductions in value. Those services would be referred to the RUC and reviewed by the Secretary.
- Increase the “equipment use assumption” (part of the formula that values practice expense).

The current Medicare payment system does not reflect the value to the patient or clinical effectiveness of a particular service. An ineffective but high-resource service can be highly compensated. Some observers have discussed the idea of reflecting the value of a service in the payment rates so that services that are known to improve health, functioning, or patient experience would be weighted higher than services with less evidence of improving care. Making this idea operational is challenging, particularly because evidence linking services and patient outcomes in most health care services is lacking.

A broader criticism of Medicare’s approach to measuring resource use is that paying for each item and service separately leads to growth in volume and higher Medicare payments. This concern has led to the ideas of bundling and accountable care organizations that we describe later in this paper.

Critics of the SGR charge that it fails to promote shared accountability among physicians. The SGR system is based upon the collective behavior of all physicians in determining payment adjustments that result when actual spending differs from spending targets. However, these broad aggregate targets lack direct incentives for individual physicians to adjust their practice patterns when volume starts to grow; indeed, physicians who increase volume can receive higher payments even in the face of fee reductions. Physicians who limit their volume would face reductions in income by doing so, and then would be penalized through the SGR mechanism if others failed to reduce their volume.

Some physicians can offset lower per service payments by increasing the mix of services they provide, focusing on services that remain relatively well-paid. Physicians who offer a narrower range of services or services for which payment is especially low, such as primary care, may not be willing to continue treating Medicare patients if payments fall significantly. Thus the SGR is problematic not just because it fails to promote efficiency, but because it also could lead to reduced access to care for beneficiaries.

One potential incremental change to address this drawback might be to create separate SGR pools based on physician specialty, type of service, or the performance of smaller numbers of physicians practicing in the same geographic area. In this type of structure, payment cuts only would track to high-volume specialties, services, or groups of physicians, and offer the potential for positive updates for physicians or services that are not growing rapidly.

IMPROVING PHYSICIAN PAYMENT

To improve quality and efficiency, physician payment reform ideas should improve financial incentives, reorganize care delivery, and enhance the viability of primary care. Most of the ideas discussed below are in the development and testing phase and it is difficult to say how successful they will be. These ideas share some key goals, but the mechanisms differ:

- Pay-for-performance programs generally do not change the basic payment system. Depending on how they are structured, they can add a bonus or penalty when a clinician meets or exceeds a benchmark for quality or efficiency; add a bonus for improving past performance; or add a penalty for failure to achieve targets. Key issues are the rigor and scope of the assessment measures and the amount of payment that follows performance.
- Episode-based payment aggregates a group of related services and looks across a longer time horizon to base payment, giving clinicians the incentive to manage the mix of services more efficiently. Key issues are defining the episodes, attribution, risk adjustment, and holding multiple providers accountable.
- Accountable care organizations encourage physicians to work together by allowing them to share in savings from better resource management and higher quality. Key issues are how to define these groups (virtual or otherwise) and how they will share savings if they materialize.
- The patient-centered medical home model is intended to recognize the costs of care coordination and management and provide more resources for primary care. A key issue is defining what constitutes a medical home.

The emphasis on bolstering primary care through payment policy is key. Primary care clinicians can focus on the overall needs of patients and are well suited to coordinate care and motivate patients to self-manage their conditions. Strong primary care is associated with better care at lower costs.¹⁷ MedPAC has noted that a reduced reliance on specialty care with a corresponding increase in primary care produces higher quality, better health outcomes, and greater patient satisfaction.¹⁸

PAY-FOR-PERFORMANCE

Pay-for performance (P4P) is “a remuneration arrangement in which a portion of the payments is based on performance assessed against a defined measure.”¹⁹ Providing financial incentives for better outcomes is an idea shared across all the reform ideas. However, in practice to date, P4P programs typically assess discrete conditions and do not necessarily yield a coherent or comprehensive picture of a physician’s practice.

¹⁷ Sepulveda, 2008.

¹⁸ MedPAC, June 2008.

¹⁹ Hahn, 2006.

Unlike the other reform ideas we discuss in this section, pay-for-performance programs, though not universal, are becoming common. In a 2007 report, researchers reported that 30 percent of primary care physicians had P4P in their plan contracts, and about 28 percent of physicians in group practice had quality incentives in their compensation. Incentives were most often awarded for achieving clinical targets and patient satisfaction.²⁰

The Institute of Medicine (IOM) outlined broad goals for P4P in Medicare across all provider groups.²¹ It recommended:

- creating a bonus pool, largely from existing funds, by dedicating a portion of payments to be distributed to providers performing well on clinical quality, patient-centered care, and efficiency;
- giving bonuses to both high performers and those showing improvement; and
- reporting meaningful information about performance that is understandable to providers and consumers.

However, the IOM committee noted numerous implementation challenges with P4P, such as the paucity of measures to assess performance on cost and quality; inadequate risk adjustment; determining the proper level of financial rewards to influence provider behavior; the potential for unintended consequences, such as the possibility that providers may shun sicker patients and the potential for widening disparities; and the possibility of “teaching to the test,” thereby creating incentives for physicians to focus on areas being measured to the detriment of other aspects of care.

In addition, the IOM recognized that the evidence on P4P is limited. One study of the Bridges to Excellence (BTE) program found better performance by physicians who were recognized in the program compared to physicians who did not earn this distinction on a variety of quality and resource use measures.²² However, a 2007 review found that the best controlled studies of P4P initiatives did not generally show significant improvements. When significant improvements were achieved, they primarily reflected better documentation of care.²³ The authors concluded that:

- when benchmarks are used, the providers being rewarded were generally already providing higher quality care;
- initiatives must commit to communicating well with providers about participation in the initiative and how they will be compensated;
- early “improvements” in measures may actually just reflect better documentation of care by providers;

²⁰ Christianson et al., 2007.

²¹ IOM, 2006.

²² Rosenthal, 2006.

²³ Christianson et al., 2007.

- physician “gaming” is a potential problem;
- P4P should be implemented gradually; and
- P4P is not a permanent solution but a linkage to further payment reform.²⁴

In 2007, CMS initiated the Physician Quality Reporting Initiative (PQRI) in response to a requirement of the 2006 Tax Relief and Health Care Act (TRHCA). PQRI includes an incentive payment for physicians who *report* data on quality measures provided to Medicare beneficiaries. Although PQRI initially pays for reporting and not for quality, it is considered a precursor to P4P. To date, only a small proportion of physicians have participated in the program.²⁵

EPISODE PAYMENTS

Episode-based payment is an approach that makes a fixed payment for a bundle of related services or for an episode of care.²⁶ A fundamental rationale for basing payments on episodes is to promote quality improvement, including efficiency and better use of health care resources. Both providers and beneficiaries may stand to gain financially from episode payment methods, since reducing the provision of unnecessary services would translate into lower overall cost sharing.

This approach takes into account the outcomes and cost of care over an extended (but pre-determined) period of time, and gives a person-level focus to payment by considering how a patient experiences a disease or health condition. It motivates careful resource stewardship because the provider gets one payment for a package of services, and encourages collaboration among the providers who care for a patient during the defined episode. Payers can apply episode-based payment to physician services alone or to a broader array of services that span health care settings, such as physician visits and hospital services, or physician, hospital, and post-acute services. An episode can encompass an acute event (easily defined and with a predictable recovery period) or a chronic event (gradual onset, ongoing treatment) or combine both acute and chronic episodes.²⁷

A key question is how to define the episode—that is, what services and over what period of time. A payment for a heart attack episode might, for example, include all outpatient physician services over a 60-day period: office visits, emails and phone calls, care coordination, laboratory, and diagnostic services. Alternatively, the payment could encompass a broader set of services: the inpatient hospital costs, physician visits and consultations during the hospital stay, and any post-acute care.

An episode could start much earlier than the heart attack event itself if a good marker for a patient likely to have a heart attack could be found. If so, preventive services could also

²⁴ Christianson et al., 2008.

²⁵ In 2007, 16 percent of eligible providers reported on at least one PQRI measure. CMS, 2008.

²⁶ CBO, 2008b.

²⁷ NQF, 2009.

be included in the episode. This would make providers accountable for preventing the event.²⁸

Designing episode payment is challenging. A framework for measuring episodes developed by The National Quality Forum (NQF) identifies five technical areas that must be addressed to advance episode-based assessment that would help form the basis of payments:

- ensuring data integrity;
- aggregating data;
- adjusting for case/severity mix;
- attributing care across multiple providers or settings; and
- developing performance measures to assess the quality of care and resource use for an episode of care.²⁹

When care is highly dispersed across numerous physicians, as it often is for Medicare beneficiaries, determining the physician responsible for a particular process or outcome is technically and politically challenging. This problem is a particular concern in the traditional Medicare program where beneficiaries can choose their doctor without a referral. In a 2007 study of Medicare beneficiaries, Pham et al. found that the average patient saw two primary care physicians and five specialists in a median of four different practices during the year. Patients with chronic conditions such as diabetes, coronary artery disease and lung cancer saw even more physicians.³⁰

Although episodes typically are constructed around a single condition, most Medicare patients have more than one condition. Designing episode payments for patients with multiple conditions is complex. The definition of episodes should limit incentives to shift care outside of the time window of the episode, or to settings or providers who are paid separately. Other challenges in designing episode-based payment systems include structuring payments to account for differences in patient severity, being neutral to whether a physician chooses expensive or inexpensive therapies if they are both equally effective, and ensuring that the method of sharing the episode payment among providers encourages those providers to coordinate care.

The Medicare program already has experience with episode-based payment for people with end-stage renal disease (ESRD). Facilities treating ESRD patients receive from Medicare a bundled payment (called the composite rate) for a set of services, including tests, certain drugs, and supplies necessary to provide dialysis treatment.³¹ Nephrologists

²⁸ For a more detailed discussion of episode payments focusing on a hospitalization, see Chapter 4 of the Medicare Payment Advisory Commission's (MedPAC) June 2008 Report to Congress and NQF, 2009.

²⁹ NQF, 2009.

³⁰ Pham et al., 2007.

³¹ Under current law Medicare pays for certain drugs (erythropoietin, vitamin D, and iron) and laboratory tests separately outside of the bundled payment. Beginning in 2011, however, the episode payment will be expanded to include injectable drugs and biologics and laboratory tests associated with treatment of ESRD.

receive a separate, capitated payment that varies with the number of visits by ESRD patients. Medicare also pays for home health services on an episode basis, with a single risk-adjusted payment amount for all services provided during a 60-day episode of home health care. The DRG payment for hospital services is another example of an episode-based payment.

The private sector uses a variety of software tools to evaluate physician resource use across episodes of care. These “grouper” tools sort claims data using clinical algorithms to make determinations about physician efficiency and, sometimes, a combination of efficiency and quality. MedPAC has compared several of these tools to a nationally-representative five percent sample of Medicare claims.³²

Episode-based payment can create incentives for physicians to underuse needed services, which may harm the patient. Therefore, this approach must be coupled with an assessment of the quality provided during the episode, particularly patient outcomes, processes of care, as well as the resources used during the episode.³³

ACCOUNTABLE CARE ORGANIZATIONS

Researchers and policymakers have shown growing interest in an idea to alter Medicare physician payment through the creation of accountable care organizations (ACOs).³⁴ ACOs are groups of physicians who voluntarily come together to share in potential savings from reducing total Medicare spending for their patients. (They could be multi-specialty group practices, integrated delivery systems, or a looser group of physicians who come together just to participate in sharing the savings.) The goals of this arrangement are accountability for cost and quality, aligned incentives, and rewards for high quality care and efficiency.

Physicians in ACOs could be paid according to the normal Medicare fee-for-service mechanisms, under risk-adjusted capitation, or based on a global budget. They could earn bonuses if they keep the rate of growth in **total** spending for part A and part B services for the ACOs patients below a pre-determined target rate of growth. Bonuses would be based on meeting a combination of pre-set targets for performance and spending. Quality measures would include clinical processes, outcomes of care, and patient experience. To succeed in reducing total spending and ensuring high quality care for those patients for whom they are accountable, ACO physicians would need to influence the practice styles of specialists and other health care providers to whom they refer, because they would be collectively responsible for all spending (Parts A and B) for their patients.

Beneficiaries could be matched to an ACO based on the physician from whom they received most of their evaluation and management care (e.g., visits) in the year before start of the program. However, beneficiaries would not be locked in to these physicians and could receive care from physicians of their choice.

³² MedPAC, 2006.

³³ NQF, 2009.

³⁴ Fisher et al., 2009.

Although ACOs have the potential to improve patient care while saving money, there are reasons to be concerned about the impact of this arrangement on physician behavior. For example, one of the ways for ACOs to reduce their rate of spending growth and potentially improve quality scores is by shedding their sickest patients. Over time, the strategy of dropping sicker patients could create access and discontinuity of care problems for beneficiaries. This concern might be mitigated by assigning physician responsibility based on past visits, monitoring changes in physician panels, and by appropriately risk-adjusting payments and bonuses.

Another concern is that physicians might cut back on needed care in order to reduce spending (thereby qualifying to receive a bonus). While ideally physicians would reduce hospital and emergency room care by providing better ambulatory care, they could also do so by referring fewer patients to these sorts of services, even when such services are appropriate.

Physicians—particularly specialists—who are able to perform a high volume of services to generate revenue have little incentive to join an ACO, sign legal agreements, and work in a structure that requires shared accountability. Moreover, the ACO may seem so large that even well-intentioned physicians might hesitate to join if they thought others in the group would not alter their practice patterns. Primary care physicians in particular might not have enough leverage on specialists (like the ones in the previous paragraph who pass on the ACO concept) to influence their practice patterns.

PATIENT-CENTERED MEDICAL HOME

In the last several years, physician groups have advanced the patient-centered medical home as an innovation in physician payment (note that in at least one state the idea is called “health-care home”). Although proponents have considered a number of different payment models, the model most commonly discussed (and that will be tested in a Medicare demonstration beginning in 2009) continues fee-for-service payment and pays an additional monthly fee to a primary care clinician to help cover time spent on care coordination and investment in health information technology.³⁵

As the concept of the medical home gains momentum in the private sector and in policy debates, there has been an emerging tension in expectations over what the idea should achieve.³⁶ Some view the medical home as an extension of the Chronic Care Model developed by Ed Wagner, with a focus on improving care for people with chronic conditions, while others view the model as improving responsiveness to the needs of all patients and promoting a more broad-based patient-centered model of care. Still others see the medical home as an opportunity to promote better mental health care diagnosis and treatment.

In spite of broad support among the aforementioned medical organizations, some have expressed reservations about the concept. For example, some fear that: the medical home does not focus on how to support coordination beyond the primary care practice; consumers may be unwilling to participate in medical homes; medical homes may not

³⁵ PCPCC, 2009.

³⁶ Berenson, 2008b.

Defining the Medical Home

Key primary care societies—including the American Academy of Family Physicians (AAFP), the American College of Physicians (ACP), the American Academy of Pediatrics (AAP) and the American Osteopathic Association (AOA)—offer a vision for comprehensive primary care characterized by:

- An ongoing relationship with a personal physician trained to provide “first contact, continuous, and comprehensive care,” who “leads a team of individuals who collectively take responsibility for the ongoing care of patients;”
- a commitment to coordinating care across settings to meet the full range of needs related to preventive, acute, chronic and end-of-life care;
- use of registries and health information technology to assure patients get needed care “where they want it, in a culturally and linguistically appropriate manner;”
- enhanced access to care via open scheduling and new forms of communication among patients, physicians and staff (e.g., email and telephone visits);
- reliance on evidence-based practice and continuous quality improvement;
- new approaches to payment that recognize the additional work involved in the model.

save money;³⁷ and the concept may be too idealized given that few models exist and that Medicare care coordination demonstrations were not, for the most part, successful.³⁸

Although much of the discussion about medical homes has focused on definitional issues, payment is a primary issue that is driving adoption of the concept. Many medical home pilots combine fee-for-service payments with a per-person, monthly “care coordination” fee paid to the medical home for each patient the practice sees. The amount of this fee may be set to cover all of the costs of investments in information technology and practice enhancements, or it may aim to lower the costs of care coordination activities only (likely a smaller amount). MedPAC recommended that the medical home initiative be combined with a pay-for-performance program, so that practices with high scores on quality and efficiency measurement receive bonus payments, and those that do not are penalized financially.³⁹ The Commission also recommended that CMS provide regular feedback to the medical homes in the Medicare demonstrations about their performance.

INTERNATIONAL MODELS OF PHYSICIAN PAYMENT

We looked to international models of physician payment to examine alternative payment strategies already in use. For each country, we searched electronically for information on

³⁷ Fisher, 2008.

³⁸ Iglehart, 2008.

³⁹ MedPAC, 2008.

the physician payment system and obtained additional information through direct contact with knowledgeable individuals. For France and Japan, we interviewed representatives responsible for health care matters from the French and Japanese embassies in Washington, DC. For the United Kingdom and Germany, we emailed questions to individuals responsible for or knowledgeable about physician payment within the ministries of health.

Ideally, we would have looked at a broader set of countries. However, details of payment systems in many countries are lacking in the literature; therefore, our sample is largely of convenience based on countries for which we could identify information on physician payment in the literature.⁴⁰

UNITED KINGDOM

Health coverage in the United Kingdom is universal, with all residents entitled to care that is largely free at the point of service.⁴¹ Every National Health Service (NHS) patient must register with a general practitioner (GP). Access to specialists is controlled through the GP.

Primary Care Providers

General practitioners (GP) in the UK are independent providers who contract with the NHS through local public bodies, called Primary Care Trusts. The Trusts secure the provision of health care in a geographic area and enter into contracts with primary care practices, paying them a capitated amount per patient. Each practice, in turn, determines how its providers are compensated. While most GPs are partners (and therefore receive a share of profits), practices are increasingly replacing partners with salaried GPs. The Trusts also employ and pay a salary to a small number of GPs.

All GPs and GP practices can receive performance payments based on the quality of care provided, communication with patients, and health information technology capability. GPs serve as gatekeepers; patients must visit their primary care provider to obtain a referral to specialists.

Physician practices may earn additional payments by participating in the Quality and Outcomes Framework (QOF). This system began in 2004, with the aim of increasing the supply of general practitioners and promoting performance and quality goals.⁴² These quality measures consist of 146 indicators across seven areas of practice in ten domains of care.⁴³ A portion of quality payments is made at the beginning of the year. These payments are based on expected quality achievement and allow quality payments to flow before all measures and final quality scores are calculated. Clinical measures and

⁴⁰ While there are many international comparative studies with the U.S., (e.g., on access to coverage, financing, performance on quality metrics, organization of health delivery), there is little detailed information about physician payment. See Cylus and Anderson, 2007; Davis, 2007; Schoen 2007; OECD, 2008; McKinsey, 2008; Kaiser Family Foundation, 2009.

⁴¹ Boyle, 2008.

⁴² OECD, 2008; Department of Health, 2003.

⁴³ The ten domains are coronary heart disease, hypertension, diabetes, stroke, COPD, epilepsy, hypothyroidism, cancer, mental health, and asthma. For each domain, the seven areas of practice are clinical care, patient experience, organization, additional services (e.g. maternity care, cervical cancer screenings), holistic care, quality practice, and patient access.

payments are risk-adjusted based on disease prevalence in the clinician's local area.⁴⁴ At the end of the year, actual performance of the practice is compared with its expected performance and payment adjustments are made.

The larger goal of the framework is to increase health spending in order to bring the U.K. closer to other European Union countries. The quality initiatives are a means of targeting new spending on needed services and patient populations.

Specialists

Specialists in the UK are typically salaried employees of the NHS hospitals, although they may supplement their salary by treating private patients. Reforms to specialist payment in 2003 were aimed at increasing the number of specialists in the public system. To that end, specialist physicians must provide a certain number of hours of service to the NHS if they want to see private patients. As with GPs, specialist pay depends on achieving performance benchmarks on several dimensions, including clinical care, patient satisfaction, and outcomes.⁴⁵

GERMANY

Until recently, health coverage in Germany was not automatic, although nearly everyone had coverage.⁴⁶ Prior to 2009, public health insurance was mandatory for about 75 percent of the population (those earning below a threshold amount.) Individuals earning more than that amount were not required to obtain coverage, but were allowed to remain in the public system or purchase private insurance. Most of those earning more than the threshold (75 percent) chose to stay in the public system.⁴⁷ In 2009, health insurance—either in the public system or through private insurance—became mandatory for all.

Primary Care Providers

Primary care doctors in Germany typically work in solo practices and are paid under a fee-for-service system. Payers set global limits on spending for physician services. All physicians belong to one of 17 physician-controlled regional associations that negotiate global budgets for the region with payers, called “sickness funds.”⁴⁸ Physician associations or unions actively negotiate payment rates for individual services with sickness funds and the government.

Global budgets are binding and are administered by quarter. Funds make per-service payments to physicians as long as the quarterly budget is solvent. Once the quarterly budget is exhausted, payments from individual sickness funds cease until the next quarter. In this case, physicians may see patients but do not get paid for their services.

⁴⁴ Department of Health, 2003.

⁴⁵ OECD, 2008.

⁴⁶ OECD, 2008.

⁴⁷ Commonwealth Fund Commission on a High Performance Health System, 2008.

⁴⁸ These regional physician associations are required to guarantee adequate medical services in terms of quality, geographic coverage, time, needs, and economic efficiency (personal communication from Lutz Reimer, Ph.D., German Ministry of Health, January 30, 2009).

However, physicians may choose to stop seeing patients when the quarterly funds run out.⁴⁹

Primary care doctors in Germany are not gate keepers and referrals are not generally needed for a patient to see specialists. As of 2004, however, all insurers must offer members the option of enrolling in a “family physician care” model, with incentives for doing so.⁵⁰ Most patients have a family doctor whom they generally see before consulting a specialist.⁵¹

Specialists

Specialists in Germany are often hospital-based and salaried (their salaries are part of larger hospital budgets that are negotiated annually between hospitals and insurers), but may also work in private practices where they receive fee-for-service payments. Specialists in private practice face the same global budgets as primary care providers and are paid in the same way.

Payment to hospital-based doctors has been problematic.⁵² In Germany, hospital physicians make less than primary care doctors, on average (see Table 2 in Appendix B) and less than physicians in many other western countries. In 2006, the union representing hospital-based physicians went on strike over a proposal that would have increased the official work week for employees at university hospitals.

FRANCE

All legal residents in France are covered by public health insurance. In addition to public insurance, about 85 percent of the population purchases supplementary insurance (or gets it through an employer) that helps cover cost-sharing and uncovered services.

Primary Care Providers

Most primary care and specialist physicians are in private practice. Payments are made based on a per-service reference price (similar to the system in Medicare), which is set through negotiation among the government, the national health insurer, and physician unions. Physicians with four or more years of experience have the option of setting their own fees outside of the official fee schedule (with the excess paid by the patient.). However, in return for accepting reference pricing as full payment, physicians receive pension and health care subsidies from the government.

Specialists

Most specialists are in private practice and subject to the same fee schedule and reference price system as primary care physicians. About one-fifth of all specialists are salaried employees of hospitals and are allowed, with certain limitations, to supplement their income by treating private patients.

⁴⁹ Knox, 2008.

⁵⁰ Busse, 2008.

⁵¹ OECD, 2009.

⁵² Nowack, 2006.

An important feature of France’s physician payment approach is physician profiling. The national health insurer monitors physician use of resources, including prescribing patterns, procedures, and other service use. Outliers are identified and notified of their excess use. The cost surveillance system is not new, but was apparently not aggressively enforced until recently, as efforts to control cost growth have intensified.⁵³

To rein in cost growth, France began in 2004 to require patients to identify a “physician home” – a gatekeeper who may be either a primary care physician or specialist. Physicians receive a nominal annual payment per patient for serving in this capacity. Patients who bypass their designated gatekeeper incur higher cost sharing that, by law, cannot be covered by supplemental insurance plans. In addition, the government has moved to limit first dollar coverage as another means of controlling costs.⁵⁴

About five years ago the French government began auditing physician practices on a five-year cycle to assess health care quality. Performance results do not affect individual provider pay, but are taken into account in the budget negotiation process among the government, insurer, and physician unions.⁵⁵

JAPAN

Japan has universal health insurance coverage for a comprehensive range of services. Coverage is provided either through employment (for large and medium sized firms), national government-sponsored insurance (for medium and small firms), or community-sponsored insurance (for the unemployed, elderly, or self-employed).

Primary Care Providers

Most physicians in Japan are in private practice and paid fee-for-service, based on amounts established by the government. In order to control spending on physician services, the government monitors and adjusts the price paid for individual services or drugs through a three-step process, which is reminiscent of the U.S.’s sustainable growth rate system but differs in that fees are adjusted by service:

- First, the government determines an annual global rate of growth (or decline) in health spending.
- This is translated into growth rates for medical, dental, and drug spending.
- The prices paid for certain individual services may be adjusted in order to achieve the target rate of change in global spending. Payment is reduced for procedures that experience large increases in volume (for example, the amount paid for MRIs of the head fell by 30 percent between 1980 and 2002).

⁵³ Personal communication from Jacques Drucker, MD, Counselor of Health, Embassy of France in Washington, DC, January 27, 2009.

⁵⁴ Ibid.

⁵⁵ Ibid.

Additional billing rules limit the number of similar procedures that can be performed within a time period.^{56,57} Although there is not an explicit pay-for-performance program for physicians, policymakers recognize the need for incentives to encourage quality of care⁵⁸ and there are care guidelines for some conditions that influence payment.

Specialists

Specialists in Japan are paid the same way that primary care physicians are paid. The physician workforce in Japan is divided by practice location and the boundaries between specialists and primary care doctors are less distinct than in most western countries.⁵⁹ Physicians are more likely to address a patient's multiple conditions, in contrast to more focused specialty practice in the U.S.⁶⁰ Japan's hospital-based physicians earn far less than their counterparts in private practice, as shown in Table 1.⁶¹

An important payment reform to improve efficiency in all areas of the delivery system has been the introduction of *per diem* medical management fees to cover all services a physician provides. The system is only in place for a few conditions and is still under development. In addition, patients are also being charged more for physician services as a way to control costs. Older patients are facing higher cost sharing as a means of controlling what policymakers consider unnecessary service use.⁶² Currently, elderly patients face 10 percent cost sharing for most medical services, compared to 30 percent for most non-elderly adults.⁶³

LESSONS FROM ABROAD

Cost Control

The most obvious similarity between the U.S. and the international examples studied is reliance on fee-for-service payment to physicians (see Table 1.) Just as in the Medicare program, three of the four systems (France, Germany, and Japan) use this method. However, specialists are likely to be paid by salary, notably in Germany and the U.K. As indicated in Table 2, salary payment reduces the disparity between primary care and specialty income and also reduces the incentives to increase service provision.

However, in contrast to Medicare, each of the countries also uses global budgeting to limit expenditure growth. Germany has the "hardest" budgeting scheme wherein payments cease when the allotted budget is depleted. France and Japan have less aggressive approaches, and attempt to limit spending by changing patient and physician

⁵⁶ For example, MRI and CT scans performed in the same month cannot both be billed.

⁵⁷ Ikegami and Campbell, 2004.

⁵⁸ Personal communication from Tadayuki Mizutani, First Secretary – Health and Welfare, Embassy of Japan, January 28, 2009.

⁵⁹ Specialty training and certification is far less intensive in Japan than in other countries. Physicians are free to declare areas of specialization even if they have not trained in those areas. Training is required for board certification in specialties, but no central oversight of program quality or criteria for certification. (McKinsey & Company, 2008.)

⁶⁰ Jeong and Hurst, 2001.

⁶¹ McKinsey & Company, 2008.

⁶² Ibid.

⁶³ Ibid.

behavior through higher cost sharing and fee schedule adjustments. Japan has been more aggressive in reducing prices for individual services as a response to rapid increases in volume growth (in contrast to the German approach of cutting spending across all services). France profiles physician resource use to control spending, although it is not clear to what degree this system has actually been enforced. Appendix B contains a summary of the key payment features of the U. S. and the countries studied.

In all of the countries we studied, physician unions or associations were involved in the process of determining how to set prices for services within budget constraints. The most active involvement seems to occur in Germany and France, although physician unions in Japan also play a role in this process.

In the U.S., responsibility for determination of payment is fragmented and physicians' role is less explicit than abroad. In Medicare, physician involvement is limited to the RUC. Physicians are not actively involved in helping to manage budgets for physician services at any level. They do, however, have considerable political influence in Medicare (and Medicaid) payment policy, and they actively negotiate with private payers.

In the U.S., private payers determine their own payment approaches. Even payers who use the same method, for example fee-for-service, negotiate different payment rates. Physicians are likely to be able to negotiate higher payments in areas where a particular specialty is in shorter supply. In addition, although Medicare's fee-for-service framework often forms the basis of physician payment in the private sector, private payers typically pay higher rates than public programs.

U.S. physicians earn significantly more than many of their counterparts elsewhere (see Table 2 in Appendix B.). Researchers have identified prices paid for services (as well as technologies) as one explanation for higher spending in the U.S.⁶⁴ However, it is important to note that the earnings shown do not include any differences in productivity that might exist among countries.

The earnings shown for U.S. physicians reflect payments from many different private payers in addition to Medicare. In the U.S., no single payer dominates on a national scale. Physicians and other providers often note that they must offset low reimbursement rates from public programs with higher reimbursement from private payers. In addition, Medicare's ability to influence provider behavior through the payment system is limited if Medicare patients account for a relatively small percentage of a physician's practice. In the countries we studied, income from the main public payer dominates physician earnings. In the UK, for example, 90 percent of primary care physician earnings comes from the NHS.⁶⁵

France, Germany, and Japan have seen slower growth in health care expenditures than the U.S., with lower spending on physician services (see Table 3 in Appendix B.) Strict global budgeting in Germany has kept spending growth in check; Germany has seen the

⁶⁴ Anderson et al., 2003.

⁶⁵ Personal communication from Richard Armstrong, Deputy Director of Primary Medical Care, UK Commissioning and System Management Directorate, February 3, 2009.

lowest growth in health care spending of all countries we studied over the period 2000–2006. Both France and Japan have seen lower rates of growth than the U.S. Physician payment policies are only one part of the explanation behind growth in health care spending, and other factors may also help explain differential rates of growth.

How Do These International Payment Systems Perform?

Given the differences we observe in physician payment systems, how well does each of these systems succeed in achieving the goals of quality, efficiency, and sustainability described earlier in this paper?

The U.S. spends far more on physician services than any other country. Per capita spending for physician services is more than twice as high in the U.S. as it is in Japan, the next highest country in our study, and more than four times that of France and Germany. Other studies have pointed out the much higher overall health care spending in the U.S.,⁶⁶ and spending on physician services is one factor in the higher overall spending.⁶⁷ Despite lower spending, the countries studied have nearly universal health insurance coverage, while in the U.S., roughly one-third of adults are un- or under-insured.⁶⁸

Nevertheless, higher spending for physician services does not guarantee better coordination or patient outcomes. A 2008 Commonwealth Fund survey of chronically ill adults in eight countries found that patients in the U.S. were more likely to report problems with care coordination or to experience medical errors. France, Germany, and the UK⁶⁹ all performed better in terms of coordinating care, protecting patients from medical errors, and ensuring prompt access to needed care.⁷⁰ Germany appears to do best in terms of care coordination. In a 2006 survey of seven countries, German primary care providers were more likely than providers elsewhere to report that they routinely gave patients with chronic illness written instructions, had access to lists of patients by diagnosis or in need of care, and generally felt well prepared to care for chronically ill patients. A national disease management initiative may explain Germany's success in care coordination.⁷¹

Although several of the countries studied have achieved at least a modicum of control over spending, it is not clear the extent to which the payment system has affected the quality of care or resource use. The U.K., in particular, has put in place an extensive pay-for-performance program that links performance to payment. However, as noted earlier, the U.K. pay-for-performance framework is not an effort to reduce spending growth, but an effort to control how and where new spending goes. The U.K. government has committed to significantly increasing the proportion of GDP devoted to health spending.

⁶⁶ Agrisano 2007; Commonwealth Fund 2008; Anderson et al. 2003.

⁶⁷ Cylus and Anderson, 2007.

⁶⁸ Collins et al. 2008.

⁶⁹ Japan was not a part of the Commonwealth survey.

⁷⁰ Schoen et al. 2008.

⁷¹ Schoen et al. 2006.

CONCLUSION

Our goals for the payment system of the future are clear—better and more efficient care at a sustainable cost. The problems with our current payment system also are clear: incentives to increase volume, undervalued primary care, and a fragmented and inefficient delivery system. International models include some familiar ideas, but are worth looking at in greater detail to determine how much they contribute to better quality and cost in those countries.

So what are the best proposals to adopt in the U.S. healthcare system? The ideas currently under development for physician payment—pay for performance, episode-based payment, accountable care organizations, and the patient-centered medical home—all hold promise for aligning incentives toward better quality and efficiency. Key questions for discussion include whether we should try all of these ideas, whether they are compatible with each other, what unintended consequences might result if and when they are adopted on a large scale, where to commit the most political and administrative capital, and what other ideas for improving physician payment await examination.

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APPENDIX A: CBO OPTIONS TO CHANGE THE UPDATE FOR PHYSICIAN PAYMENTS

In December 2008 the Congressional Budget Office (CBO) examined the budget implications of various options for changing the way Medicare pays for physician services, including several that would modify or replace the SGR mechanism. Table A1 summarizes the CBO options and the impact on federal spending over five and ten years. We discuss them briefly below.

The options CBO considered range from a straightforward freeze of payment for ten years, from 2009–2019 to a complex proposal that would exempt evaluation and management (E&M) services from any global spending controls (E&M services would be updated by the Medicare Economic Index (MEI) and create four service-specific updates for remaining services.

- Freeze physician payment rates at their 2009 levels through 2019. Spending targets would continue to be calculated and the SGR would continue to be used to compare actual spending with target spending, but payment rates would not be set based on the SGR during those ten years. After 2019, physician payment rates would once again be set based on the SGR. CBO estimates that after the ten-year rate freeze payment rates would be reduced by about 5 percent each year for more than a decade after to recoup overspending in past and future years.
- Eliminate the SGR as a mechanism for determining payment updates and instead update payment rates each year by the MEI.
- Replace the SGR with updates based on the MEI, but include a provision to shield beneficiaries from the increase in spending by removing the added costs from the calculation of beneficiary premiums.
- Create service-specific targets updated for different categories of physician services. The existing SGR would remain but would be applied separately to each of five categories: anesthesia; evaluation and management (E&M); imaging and tests; major procedures; and minor procedures.⁷² So-called “incident-to” services such as diagnostic laboratory services or physician-administered drugs would be assigned to each category based on the category’s share of total expenditures during the year.
- Create multiple service categories for tracking spending and updating payment rates, but exempt E&M services from the SGR. The payment amount for E&M services would be updated by the MEI. The four service groups subject to specific SGR-updates would be major procedures, minor procedures, anesthesia, and imaging and tests. Updates for each of these categories would be calculated in the same way described in the previous option.

⁷² This option would freeze the payment rate for 2010 at the 2009 level (thus avoiding the predicted 21 percent decrease in 2010) and would begin the new multiple-SGR system in 2011. In addition, this option would begin tracking target and actual spending in 1998, instead of 1996, the current base year.

Table A1		
CBO Options for Modifying Medicare Payments to Physicians		
CBO Budget Option	Change in Mandatory Spending (Billions of Dollars)	
	2010–2014	2010–2019
Freeze physician payment rates through 2019	\$100.0	\$318.0
Replace the SGR mechanism with annual updates based on the MEI	130.0	439.0
Replace the SGR mechanism with annual updates based on the MEI and include a hold-harmless provision for Part B premiums	164.0	556.0
Create service-specific updates for physician payment rates	73.0	184.0
Use the MEI to update payment rates for E&M services, and create service-specific updates for remaining services	88.0	253.0
Source: CBO 2008a.		

APPENDIX B: INTERNATIONAL COMPARISON DATA

Table B1					
Elements of Physician Payment in Five Countries					
	United States	France	Germany	Japan	United Kingdom
Primary Care Payment	FFS	FFS	FFS	FFS	Capitation
Specialist Care Payment	FFS	FFS	Salary/ FFS	FFS	Salary
Global Budgeting	No	Yes (Soft)	Yes (Hard)	Yes (Soft)	No
Physician Involvement in Budgeting	No	Yes	Yes	Yes	No
Physician Profiling	No	Yes	No	No	No
Pay for Performance	Yes (limited)	No	No	No	Yes

Table B2				
Comparing Specialist and Primary Care Physician Pay				
	Average Specialist Earnings (\$US PPP 2002*)	Average Primary Care Earnings (\$US PPP 2002)	Ratio of Specialist to Primary Care Earnings	Ratio of PC Earnings to Average Wage
US	\$267,993	\$151,682	1.77	3.4
France	116,077	67,221	1.73	2.6
UK	127,285	102,964	1.24	3.1
Germany	56,455	71,443	0.79	3.3
Japan**	n/a	n/a	0.60	n/a

* Figures are in US dollars, adjusted to reflect purchasing power parity (PPP), a measure that equalizes amounts to reflect differences in purchasing power.

** Ratio for Japan reflects ratio of hospital-based to clinic-based physician earnings.

n/a: not available.

Source: NERA, 2004; OECD, 2008 (Ratio of PC Earning to Average Wage); McKinsey & Company, 2008 (Japan).

Table B3				
Comparing Growth in Health Expenditures				
	Real Annual Growth Rate			Per Capita Spending on Physician Services*
	2000–2001	2003–2004	2005–2006	2004
US	6.1	3.9	3.5	\$1,362
France	3.2	3.5	1.6	\$371
UK	5.7	7.3	5.4	n/a
Germany	2.7	-1.2	1.8	\$307
Japan	3.6	2.2	n/a	\$563

n/a: not available

*Spending adjusted for difference in cost of living.

Source: OECD Health Data, 2008 (growth rates); Cylus and Anderson, 2007 (spending).