

US Approaches to Physician Payment: The Deconstruction of Primary Care

Robert A. Berenson, MD¹ and Eugene C. Rich, MD^{2,3}

¹The Urban Institute, Washington, DC, USA; ²Creighton University, Omaha, NE, USA; ³Mathematica Policy Research, Washington, DC, USA.

The purpose of this paper is to address why the three dominant alternatives to compensating physicians (fee-for-service, capitation, and salary) fall short of what is needed to support enhanced primary care in the patient-centered medical home, and the relevance of such payment reforms as pay-for-performance and episodes/bundling. The review illustrates why prevalent physician payment mechanisms in the US have failed to adequately support primary care and why innovative approaches to primary care payment play such a prominent role in the PCMH discussion. FFS payment for office visits has never effectively rewarded all the activities that comprise prototypical primary care and may contribute to the “hamster on a treadmill” problems in current medical practice. Capitation payments are associated with risk adjustment challenges and, perhaps, public perceptions of conflict with patients’ best interests. Most payers don’t employ and therefore cannot generally place physicians on salary; while in theory such salary payments might neutralize incentives, operationally, “time is money;” extra effort devoted to meeting the needs of a more complex patient will likely reduce the services available to others. Fee-for-service, the predominant physician payment scheme, has contributed to both the continuing decline in the primary care workforce and the capability to serve patients well. Yet, the conceptual alternative payment approaches, modified fee-for-service (including fee bundles), capitation, and salary, each have their own problems. Accordingly, new payment models will likely be required to support restoration of primary care to its proper role in the US health care system, and to promote and sustain the development of patient-centered medical homes.

KEY WORDS: primary care; reimbursement; health care delivery.

J Gen Intern Med 25(6):613–8

DOI: 10.1007/s11606-010-1295-z

© Society of General Internal Medicine 2010

INTRODUCTION

Payment reform is an integral feature of the joint principles of the Patient-Centered Medical Home (PCMH). Current US physician payment mechanisms have failed to adequately support

basic primary care services, let alone the enhanced primary care functions of the fully implemented “medical home.”² Consequently, policymakers and practice reform advocates have identified payment reform as a necessary, if not sufficient, element of success for the transformation of today’s struggling generalist practices into the patient-centered medical homes of tomorrow. Our paper’s purposes are to explore the history of US primary care physician reimbursement, describe the current system within the context of that history, and illustrate why prevalent physician payment mechanisms are inadequate for even basic primary care services, let alone the fully implemented “medical home.”

LIVING OFF VISITS: THE TRADITIONAL ECONOMICS OF FEE FOR SERVICE PRIMARY CARE

The dominant mode of physician payment in the US is fee-for-service (FFS), representing over 90 percent of primary care practice revenue³ predominately for office visits. Face-to-face patient encounters have long been a core component of primary care services and remain highly valued by both patients and physicians.^{4–7} Furthermore, many specialist physicians have been quite handsomely rewarded through FFS payment. So why is payment reform viewed by so many as essential to the PCMH?

In the US, FFS payments have been problematic for primary care for many decades. Private insurers and then the Medicare program relied on the “customary, prevailing, and reasonable” (CPR) approach to setting physician fees, which by the 1980s had led to a variety of distortions, including overpayments for many procedures relative to the evaluation and management services that constitute the core of primary care fees.^{8,9} Although 1989 legislation authorized the resource-based relative value scale (RBRVS) as the basis for a new Medicare Fee Schedule, a variety of problems emerged to confound the hoped-for improvements in primary care reimbursement.¹⁰ Recent years have seen increasing problems with the generosity of FFS payments for primary care services relative to specialists’ services, contributing to declining interest of US-trained medical students in primary care careers.¹⁰ Various approaches are available for adjusting fees for primary care physician visits and are simpler than developing new payment systems for PCMHs.¹¹ However, merely enhancing how office visits are reimbursed under fee schedules might not be the best approach to improving primary care medicine. Indeed, not just US primary care physicians are frustrated by a mode of practice relying on generating many brief patient encounters. “Across the globe doctors are miserable because they feel like hamsters on a treadmill. They must

There are many mechanisms to pay physicians; some are good and some are bad. The three worst are fee-for-service, capitation, and salary.
Robinson¹

run faster just to stand still...The result of the wheel going faster is not only a reduction in quality of care, but also a reduction in professional satisfaction and an increase in burnout among physicians."¹² The structure of FFS payments for office visits may be the engine driving this treadmill (see Table 1).

Most FFS payment models were established at a time when the physician focus of attention was on responding to patients presenting with acute illnesses, generating "the tyranny of the urgent."¹³ Although research suggests office visit lengths in the US have actually increased slightly in recent years, physicians report feeling more rushed,¹⁴⁻¹⁶ not in small part because of the growing number of clinical items needing attention during office visits.^{17,18}

This pressure is hardly surprising because now there is more to do for patients than when visit definitions and corresponding fees were devised. There are a greater number of effective preventive services to recommend and discuss. There are also more patients with chronic illnesses who can benefit from available long-term management interventions and a rising prevalence of multiple, co-occurring chronic diseases.¹⁹ Direct-to-consumer advertising of health care services adds even more topics for conversation between physicians and patients²⁰ as do the health information Internet queries brought to the office by web-savvy patients.²¹ Recent analyses have suggested that for a typical panel of patients, primary care physicians are now woefully short of time to even discuss basic preventive services, much less address chronic illness care.^{22,23}

FFS payment for primary care encounters requires substantial recalibration to support the time needed by primary care physicians to meet these expectations.²⁴ Furthermore, the current definitions of office visits²⁵ and their related regulatory standards reinforce what many consider an out-

moded style of face-to-face, physician-patient encounters, with their emphasis on taking and documenting medical histories, performing physical examinations, and engaging in "clinical decision-making." This traditional orientation may have been logical for patients with new complaints, but is inappropriate to capture the range of activities performed for patients with chronic conditions.

Thus, it may be difficult for even a recalibrated visit-based fee structure to reward the classic features of primary care (accountable, accessible, continuous, coordinated and comprehensive).^{26,27} For example, a conscientious primary care physician might monitor physiologic and laboratory data remotely and engage (or delegate additional professionals to engage) in proactive e-mail or phone communication to replace an office visit or avert emergency room care. These non-visit services are not presently reimbursed, however. Enhanced access to the practice might be provided by modified, open access scheduling facilitating same day "walk-ins" for patients with urgent health problems.²⁸ But doing so can be challenging²⁸; and more generous availability of appointments can result in more unfilled—and unreimbursed—slots. To assure financial viability practices, physicians often perceive they must fill the schedule with routine visits;²⁹ patients with urgent needs can wind up in the emergency room by default.

It would be tempting to codify every distinct activity that primary care physicians perform and then pay fee-for-service for them. Unfortunately, "for every complex problem, there is a solution that is simple, neat, and wrong" (H.L. Mencken). Consider the relatively simple approach of payment for "asynchronous communication" like e-mails. Although there have been some payer experiments in reimbursing for e-mail consultations as alternatives to an office visit, payers correctly resist requests to reimburse FFS for routine e-mails and phone calls. The transaction costs of submitting and processing

Table 1. Payment Models for Primary Care Services

Payment model	Key attributes	Key advantages	Key disadvantages
Fee-for-service	Payment for each patient encounter (typically an office visit)	<ul style="list-style-type: none"> • Predominant payment method, familiar to physicians and patients • Has served many medical specialties well • Incentivizes performance of specific, targeted activities • Rewards physician industriousness 	<ul style="list-style-type: none"> • Does not directly reward key primary care functions, especially coordination or comprehensive care of patients with multiple chronic conditions • Inadequate or infeasible for rewarding enhanced access (e.g., after hours, telephone or e-mail communication) • Does not facilitate practice redesign to better serve patient needs
Capitation	Periodic (e.g., monthly) payment per patient	<ul style="list-style-type: none"> • Creates clear accountability between primary care clinician and patient • Provides the financial flexibility for clinician to redesign and invest in personnel and technology needed to provide other primary care functions (e.g., enhanced access, care coordination) 	<ul style="list-style-type: none"> • Case mix payment adjustment and capitation rate-setting challenges • Incentives potentially to withhold services • Unpopularity of capitation with some patients (and many physicians)
Salary	A fixed amount paid regularly for personally provided professional services	<ul style="list-style-type: none"> • Theoretically physician can act in patient's best interests without concerns about financial self-interest • Within a group, administratively straightforward and a base for additional performance incentives 	<ul style="list-style-type: none"> • "Time is money"—physician still needs to allocate time among competing patients' needs • Generosity of salary depends on financial well-being of the group—so physician not really indifferent to payers' incentives • Does not explicitly reward industriousness • Administratively not feasible for most third party payers

legitimate claims would likely exceed the value of the actual reimbursement. In addition, there are daunting concerns about verification of such communications (consider the fraud potential for an electronic billing system linked to e-mail authoring software). Finally, there would be a serious moral hazard problem with FFS payment for e-mails; one doubts the long-term viability of a FFS payment system in which patients and doctors are text messaging back and forth while the third-party payer pays the bill for each interaction.³⁰

Under idealized market competition, primary care physician practices might theoretically provide non-reimbursed primary care activities (like enhanced access or care coordination) as “loss leaders” to attract and retain the allegiance of patients who would also seek care for reimbursable services. However, with primary care physicians in short supply—and those remaining burdened by the “treadmill” of visit-based payments—these market mechanisms do not appear to be working. In many communities it appears that primary care physicians no longer want or need more patients, especially not those with complex health care needs,^{31,32} and too few graduates are entering the primary care workforce.³³ To the extent that some fee-for-service physicians fulfill the complete primary care role, meeting their patients’ needs outside of the constraints of the office visits, they are doing so despite, not in response to, current payment incentives. Not surprisingly, most physicians focus on what they are paid to do. As a result, primary care physicians seem to be directing their patients with urgent problems to the emergency room, especially but not solely after hours; surveys confirm widespread problems with access after hours.³⁴

Thus, in 2010 titular, primary care, practices in the US may carry out few of the functions policymakers ascribe to primary care. Because current FFS mechanisms reward US primary care poorly in relation to other specialties, it is hardly surprising that discussions of enhanced primary care capabilities and services are quickly followed by proposals for payment reform. Use of health information technology, remote monitoring of patient conditions, support for informed patient decision-making, enhanced tools and expertise in patient education are but a few of the elements proposed for twenty-first century primary care.³⁵ These require time and investments in technology and personnel far beyond anything currently reimbursed through current visit-based fees.^{36,37}

CAPITATION AND THE LEGACY OF “MANAGED CARE”

Capitation theoretically corrects for the overreliance on face-to-face office visits that characterize the primary care FFS business model (see Table 1). In paying a per-person-per-month (PPPM) payment for an average amount of services for a population under a physician’s care, the payer allows the practitioner to determine how to allocate her own time and efforts to care for assigned patients. If FFS payment systems can’t efficiently support the key primary care functions like enhanced access (e.g., after hours visits, phone calls, secure e-mails), care coordination (through interdisciplinary teams, patient registries, remote monitoring, and patient reminders), and accountable, patient-centered care (e.g., teaching patient self-management skills and deploying shared decision-making

tools), then capitation payments, arguably, should facilitate the needed flexibility to do so.

Renewed discussion of capitation (“per-head” or per patient) payment models for primary care requires a careful distinction. In the 1980s and 1990s, “capitation” payments to physicians often involved physician financial responsibility for a broad range of health care services, including those delivered by other providers, thereby transferring some of the insurance risk from the insurer or employer to the physician practice. Now, in considering payment reform for medical homes, the concept of capitation has been used in a much narrower way, referring generally only to monthly per-patient payments to primary care to support services provided by the primary care physicians themselves, not for services performed by specialists or hospitals (although there might be some pay-for-performance targets related to avoidable utilization, such as some ER visits).

Nonetheless, whatever the form of capitation payment proposed, risk adjustment for underlying patient health status is important because different primary care patients have different needs for enhanced primary care services. Past managed care efforts at per capita payments for primary care rarely risk adjusted for health status; typically, monthly payments varied based only on age and gender, adjustments which predict only one percent of subsequent spending. Risk adjustment approaches that differentiate patients based on their underlying clinical diagnoses (even as recorded in administrative data bases rather than medical records) do a much better job of predicting spending.^{38–40}

Inadequate risk adjustment caused payment mismatches—over- or under-payments in relation to the disease burden and care burden for providers. The result was that many primary care physicians with a sicker population received payment shortfalls and may have succumbed to the temptation to offload their professional obligations to others, such as specialists, rather than use capitation’s inherent flexibility to better manage these patients. (Even when “at-risk” for downstream spending, physicians’ risk usually was limited.) Under this scenario, instead of promoting access, continuity, and comprehensive care, capitation often had the perverse effect of “ping-ponging” patients.

A second problem with previous implementation of primary care capitation was “actuarial mindlessness.” Typically, health plan actuaries simply converted established prices and volumes seen in FFS claims data from primary care physicians into monthly per capita payment amounts adjusting only for the aforementioned age and sex bands. Such a process ignored the reality that fee schedule amounts for office visits fail to take into account the activities that physicians do—or should do—that are not associated with office visits but were expected of them in the managed care context of primary care physicians’ functioning as gatekeepers.³⁶ In short, managed care often promoted a care delivery model that expected primary care physicians to assume greater responsibility for patient care but paid capitation amounts based on the FFS payments oriented to face-to-face office visits. Many physicians experienced shortfalls because of this mismatch of expectations and payment. Capitation as a payment approach became seen as the culprit, but one could argue that the relative inadequacy of the capitation amount was the core problem.

These problems interacted with a developing public viewpoint that capitation created physician “double agents.”^{41,42}

who, the argument ran, faced unacceptable conflicts of interest. How much of the hostility to managed care was related to the concern about capitation and physician conflict-of-interest is debatable. Certainly, much of the popular manifestations of the backlash, such as the diatribe by Helen Hunt against her HMO in the 1998 movie *As Good As It Gets*, related more to the perception of insurance companies themselves callously denying patients needed services; many physicians were similarly frustrated by plan intrusion into their autonomy to make clinical decisions with their patients. Nevertheless, whatever the role capitation payments played in the managed care backlash, the actual possibility of and public perception of substantial conflict-of-interest remains an important issue in considering this as a payment model for the PCMH, a difficulty that is unlikely to be resolved, at least in the near term, by improved risk adjustment methods.⁴³ Surveys confirm that patients are more comfortable with the incentives associated with FFS than with capitation.^{44–46}

SALARY: PHYSICIAN AS EMPLOYEE

Although recent studies show a substantial increase in the number of physicians who are employees rather than practice owners,⁴⁷ neither Medicare nor most private payers have direct physician employment as a realistic payment option. Some group and staff model HMOs have long had salaried physicians in employed relationships, and certain government health care services, like the military and Veterans Affairs health systems, have long experience with employed, salaried physicians. However, most US physicians are not in exclusive relationships with a single payer, but rather contract with many. Without employing physicians, neither individual health plans nor Medicare have seen salary as a payment option. Nevertheless, because of the growth of physician employment in hospitals and medical groups, we briefly consider salary as a payment model.

Payment by salary neither offers overt incentives to withhold care (as with capitation) nor to over-provide (as with FFS). Indeed, some concerned about preserving physician professionalism to act in their patients' best interests have viewed salary payments as "incentive neutral," and therefore preferable to other approaches (see Table 1).⁴⁸ Theoretically unconcerned about incentives driving enhanced personal remuneration, the salaried primary care physician might devote time to doing what is best for patients. Anecdotally, many medical directors and physicians in multispecialty group practices believe that salary best supports the patient-centered values their organizations strive for and that organizational culture can support effective reliance on salaried practice.

Of course, "time is money," and extra effort devoted to meeting the needs of a more complex patient will either increase the total hours worked by the salaried physician or reduce the time available to serve other patients (in reality, probably both). Furthermore, the financial well-being of the organization that employs the physician ultimately determines the generosity of the salary, work schedule, bonus (if any), and other amenities available, so employed physicians are not truly incentive neutral under salaried payment.

Whether the organization receives payments predominantly by capitation or FFS will affect how even salaried physicians respond. Of course, depending on the financial underpinnings

and business model of the practice, substantial incentive pay (i.e., "bonus") may augment the base income and re-orient the physician incentives from "salary" to one of the alternative frames discussed.⁴⁹ In group practices in heavily capitated, managed care environments, bonus payments for salaried physicians based on group practice "net revenue" was a common incentive system⁴⁹ and proved an effective way to reduce cost per patient.⁵⁰ In predominantly FFS environments, salaried physicians are often rewarded for maximizing their visit-based productivity, thereby mimicking FFS payment incentives.⁵¹

Further, although salary may theoretically mitigate incentives to do too much or too little, it sends no clear signals about desirable physician behavior. In caricature, "salary undermines productivity, condones on-the-job leisure, and fosters a bureaucratic mentality in which every procedure is someone else's problem."¹ Anecdotally, many hospital executives rue the decisions made during the heyday of managed care to buy and own primary care practices, perceiving that they converted industrious, productivity-oriented physicians into complacent, salaried employees.⁵² Further, some consider that, "...salaried models often lack the element of a social contract between the personal physician and the patient...In salaried environments, physicians tend to consider the organization as having the principal accountability to the patient, this has been reflected in lower patient trust of the individual physician."³⁶

COMPLEMENTING THE "BASE PAY": PAY FOR PERFORMANCE

Pay for performance (P4P) has received considerable attention in recent years as a potentially important payment innovation. The basic objective of P4P involves use of marginal financial incentives to reward (or penalize) clinicians and other providers for meeting (or failing to meet) predetermined performance goals as reflected in specific performance measures. The measures can attempt to measure quality (processes and outcomes), spending, and/or patient experience. Short of providing actual financial incentives as P4P does, reporting and public recognition of physician performance against standard measures can also theoretically influence desired behaviors.

There is an extensive literature exploring the potential pros and cons of reliance on measures for assessment of physicians' performance and of P4P, but scanty evidence on P4P outcomes.^{53,54} A recent summary concluded that many P4P design issues remain unresolved, including: whether programs should target individual physicians or groups; the proportion of physician remuneration needed to change behavior; and whether incentives should primarily reward level of performance or the rate of improvement.⁵⁵ A fundamental problem limiting P4P's potential is the current—and likely long term—lack of meaningful and actionable performance measures in many areas of interest, particularly measures that could apply to the individual provider or small practice site.⁵⁶ In reference to the medical home and related concepts such as "accountable care organizations," broader measures that target multiple dimensions of care and foster accountability among teams of professional caregivers are needed.^{55,57}

For purposes of this discussion it is important to emphasize that P4P is not itself a core payment approach; at best, it can

complement other payment methods. Indeed, measurement reporting and P4P may well be a natural complement to other approaches. For example, because an important concern about capitation is that it may lead to underuse of needed services, reporting and rewarding performance on primary and secondary prevention measures might help mitigate the untoward physician behavior resulting from overzealous response to capitation incentives.

RECALIBRATING FEE-FOR-SERVICE: EPISODE-BASED PAYMENT AND BUNDLING

There is growing interest in promoting greater cooperation among hospitals, physicians, and other health care providers—cooperation that might be facilitated by bundling payments to include all services associated with an episode of care, such as a hospital admission and immediate post-inpatient care. This approach to bundling emphasizes including all the providers who otherwise would receive separate, provider-specific payments into the bundle and then letting the various parties figure out how to work together to provide quality care within the constraints of the bundled payment amount and also to figure out how to allocate the payment among the parties.

A more straightforward, less ambitious approach would forgo the bundling across providers but would extend the payments to a single provider for a longer period of time, essentially reducing the opportunity for generating additional FFS visits by putting the value of those visits into the episode's base payment. This approach has long been used within FFS—surgeons typically receive a 90-day global period payment for major surgical procedures to include needed follow-up visits. Similarly, renal physicians receive a monthly payment for an “episode” of dialysis in the Medicare Fee Schedule. Of note, a few years ago, the definitions of these monthly payments were modified to vary payments based on the number of dialysis visits actually made, based on the observation that the monthly payment approach was producing too few face-to-face visits. This experience might provide a cautionary note about forgoing visit-based payments altogether in supporting the PCMH.

Further, although bundling and episode-based payment approaches may have a role for some kinds of care, application to primary care and the PCMH seems problematic. While primary care physicians surely will continue to encounter patients with straightforward acute problems or a single chronic condition, the greater challenge is serving patients with multiple chronic conditions.⁵⁸ Even caring for acute, minor illnesses varies depending on the presence of co-morbidities. While many of these chronic conditions cluster together, e.g., hypertension, congestive heart failure, diabetes, chronic renal failure, etc., current episode payment approaches (as well as clinical practice guidelines and P4P measures) generally assume independence of these conditions.¹⁹ Indeed, even the concept of an episode of a chronic condition might be viewed as an oxymoron since they generally do not end, except in death.⁵⁹

CONCLUSION

Although there is limited research on the influence of payment systems on physician behavior,^{1,60} what does exist supports

the presumption that payment incentives do affect behavior in predictable directions.^{3,61} FFS encourages and capitation discourages resource consumption. The dominant fee-for-service approach as implemented in the US over the past 2 decades has contributed to both the continuing decline in the primary care workforce and the diminished capability to serve patients well. Yet, the conceptual alternative payment approaches, capitation, salary, and now a modification of FFS—episode-based bundles, each have their own problems. New payment models, probably combining the best—or least worst—of the standard approaches, will likely be required to restore primary care to its proper role in the US health care system and to promote and sustain the development of patient-centered medical homes. In our companion article, we explore in detail the range of payment options that might be employed to reward such enhanced primary care.

Acknowledgements: This work is adapted from material presented at the conference “Patient-Centered Medical Home: Setting a Policy Relevant Research Agenda” held July 27–28, 2009, at the Fairfax at Embassy Row, Washington, DC. This conference was developed through a collaboration of the Society of General Internal Medicine (SGIM), the Society of Teachers of Family Medicine (STFM), and the Academic Pediatrics Association (APA). This work was supported by grants to SGIM from the American Board of Internal Medicine Foundation, the Commonwealth Fund, and the Agency for Health Care Research and Quality. The Commonwealth Fund also supported Dr. Berenson's work reviewing payment approaches.

The authors would like to thank Dr. Michael Chermew and Dr. Lori Heim for their thoughtful comments on an earlier draft of these papers; thanks as well for the comments and suggestions from the participants in the conference, “Patient-Centered Medical Home: Setting a Policy Relevant Research Agenda.”

Conflicts of Interest: None disclosed

Corresponding Author: Eugene C. Rich, MD; Mathematica Policy Research, Washington, DC, USA (e-mail: erich@mathematica-mpr.com).

REFERENCES

1. **Robinson JC.** Theory and practice in the design of physician payment incentives. *Milbank Q.* 2001;79(2):149,77, III.
2. **AAFP, AAP, ACP, AOA.** Joint principles of a patient-centered medical home. 2007 March 5 2007;2009(September 11):1.
3. **Goodson JD, Bierman AS, Fein O, Rask K, Rich EC, Selker HP.** The future of capitation: The physician role in managing change in practice. *J Gen Intern Med.* 2001;16(4):250–6.
4. **Landon BE, Reschovsky J, Blumenthal D.** Changes in career satisfaction among primary care and specialist physicians, 1997–2001. *JAMA.* 2003;289(4):442–9.
5. **Geraghty EM, Franks P, Kravitz RL.** Primary care visit length, quality, and satisfaction for standardized patients with depression. *J Gen Intern Med.* 2007;22(12):1641–7.
6. **Gross DA, Zyzanski SJ, Borowski EA, Cebul RD, Stange KC.** Patient satisfaction with time spent with their physician. *J Fam Pract.* 1998;47(2):133–7.
7. **Lin CT, Albertson GA, Schilling LM, et al.** Is patients' perception of time spent with the physician a determinant of ambulatory patient satisfaction? *Arch Intern Med.* 2001;161(11):1437–42.
8. **Roe BB.** Sounding boards. the UCR boondoggle: A death knell for private practice? *N Engl J Med.* 1981;305(1):41–5.
9. **United States.** Physician Payment Review Commission. Annual Report to Congress. 1989.
10. **Bodenheimer T, Berenson RA, Rudolf P.** The primary care-specialty income gap: Why it matters. *Ann Intern Med.* 2007;146(4):301–6.
11. **Medicare Payment Advisory Commission.** Report to congress: Medicare payment policy. March 2009:77–128; 2009.

12. **Morrison I, Smith R.** Hamster health care. *BMJ*. 2000;321(7276):1541–2.
13. **Wagner EH, Austin BT, Von Korff M.** Organizing care for patients with chronic illness. *Milbank Q*. 1996;74(4):511–44.
14. **Trude S.** So much to do, so little time: Physician capacity constraints, 1997–2001. Result from the Community Tracking Study. 2003 May 2003;8(May):1–4.
15. **Cherry DK, Hing E, Woodwell DA, Rechtsteiner EA.** National ambulatory medical care survey: 2006 summary. *National Health Statistics Reports*. 2008 August 6, 2008;3(Number 3 August 6, 2008):1–40.
16. **Mechanic D.** The uncertain future of primary medical care. *Ann Intern Med*. 2009;151(1):66–7.
17. **Abbo ED, Zhang G, Zelder M, Huang ES.** The increasing number of clinical items addressed during the time of adult primary care visits. *J Gen Intern Med*. 2008;23(12):2058–65.
18. **Linzer M, Manwell LB, Williams ES, et al.** Working conditions in primary care: Physician reactions and care quality. *Ann Intern Med*. 2009;151(1):28–36.
19. **Boyd CM, Shadmi E, Conwell LJ, et al.** A pilot test of the effect of guided care on the quality of primary care experiences for multimorbid older adults. *J Gen Intern Med*. 2008;23(5):536–42.
20. **Murray E, Lo B, Pollack L, Donelan K, Lee K.** Direct-to-consumer advertising: Physicians' views of its effects on quality of care and the doctor-patient relationship. *J Am Board Fam Pract*. 2003;16(6):513–24.
21. **Ahmad F, Hudak PL, Bercovitz K, Hollenberg E, Levinson W.** Are physicians ready for patients with Internet-based health information? *J Med Internet Res*. 2006;8(3):e22.
22. **Yarnall KS, Pollak KI, Ostbye T, Krause KM, Michener JL.** Primary care: Is there enough time for prevention? *Am J Public Health*. 2003;93(4):635–41.
23. **Ostbye T, Yarnall KS, Krause KM, Pollak KI, Gradison M, Michener JL.** Is there time for management of patients with chronic diseases in primary care? *Ann Fam Med*. 2005;3(3):209–14.
24. The American Geriatrics Society-members-Charles Cefalu testimony; 2009(12/10/2009).
25. American Medical Association. Current procedural terminology : CPT. 1999.
26. Institute of Medicine. Division of Health Manpower and Resources Development. A manpower policy for primary health care : Report of a study. Washington: National Academy of Sciences; 1978.
27. International Conference on Primary Health Care. Declaration of Alma-Ata. *WHO Chron*. 1978;32(11):428–30.
28. **Mehrotra A, Keehl-Markowitz L, Ayanian JZ.** Implementing open-access scheduling of visits in primary care practices: A cautionary tale. *Ann Intern Med*. 2008;148(12):915–22.
29. Six steps to open access scheduling success; 2009(12/10/2009).
30. **Berenson RA, Horvath J.** Confronting the barriers to chronic care management in Medicare. *Health Aff (Millwood)*. 2003 Jan–Jun;Suppl Web Exclusives:W3,37–53.
31. Medicare Payment Advisory Commission. A data book: Healthcare spending and the Medicare program. 2008 June 2009;1(June):i–210.
32. **Lishner DM, Richarson M, Levine P, Patrick D.** Access to primary health care among persons with disabilities in rural areas: A summary of the literature. *J Rural Health*. 2008;12(1):45–53.
33. **Colwill JM, Cultice JM, Kruse RL.** Will generalist physician supply meet demands of an increasing and aging population? *Health Aff (Millwood)*. 2008;27(3):w232–41.
34. **Schoen C, Osborn R, Doty MM, Bishop M, Peugh J, Murukutla N.** Toward higher-performance health systems: Adults' health care experiences in seven countries. *Health Aff (Millwood)*. 2007;26(6):w717–34.
35. **Davis K, Schoenbaum SC, Audet AM.** A 2020 vision of patient-centered primary care. *J Gen Intern Med*. 2005;20(10):953–7.
36. **Goroll AH, Berenson RA, Schoenbaum SC, Gardner LB.** Fundamental reform of payment for adult primary care: Comprehensive payment for comprehensive care. *J Gen Intern Med*. 2007;22(3):410–5.
37. American College of Physicians. Reforming physician payments to achieve greater value in health care spending. 2009;1–46.
38. **Newhouse JP, Buntin MB, Chapman JD.** Risk adjustment and Medicare: Taking a closer look. *Health Aff (Millwood)*. 1997;16(5):26–43.
39. **Newhouse JP.** Patients at risk: Health reform and risk adjustment. *Health Aff (Millwood)*. 1994;13(1):132–46.
40. **Ash AS, Ellis RP, Pope GC, et al.** Using diagnoses to describe populations and predict costs. *Health Care Financ Rev*. 2000;21(3):7–28.
41. **Mechanic D, Schlesinger M.** The impact of managed care on patients' trust in medical care and their physicians. *JAMA*. 1996;275(21):1693–7.
42. **Angell M.** The doctor as double agent. *Kennedy Inst Ethics J*. 1993;3(3):279–86.
43. **Schoenbaum SC.** Physicians and prepaid group practices. *Health Aff (Millwood)*. 2004 Jan–Jun;Suppl Web Exclusives:W4,76–8.
44. **Gallagher TH, St. Peter RF, Chesney M, Lo B.** Patients' attitudes toward cost control bonuses for managed care physicians. *Health Aff*. 2001;20(2):186–92.
45. **Pereira AG, Pearson SD.** Patient attitudes toward physician financial incentives. *Arch Intern Med*. 2001;161(10):1313–7.
46. The public and the health care delivery system—toplines—Kaiser Family Foundation. 2009(8/23/2009).
47. **Casalino LP, November EA, Berenson RA, Pham HH.** Hospital-physician relations: Two tracks and the decline of the voluntary medical staff model. *Health Aff (Millwood)*. 2008;27(5):1305–14.
48. **Relman AS.** Salaried physicians and economic incentives. *N Engl J Med*. 1988;319(12):784.
49. **Pedersen CA, Rich EC, Kralewski J, Feldman R, Dowd B, Bernhardt TS.** Primary care physician incentives in medical group practices. *Arch Fam Med*. 2000;9(5):458–62.
50. **Kralewski JE, Rich EC, Feldman R, et al.** The effects of medical group practice and physician payment methods on costs of care. *Health Serv Res*. 2000;35(3):591–613.
51. **Robinson JC, Shortell SM, Li R, Casalino LP, Rundall T.** The alignment and blending of payment incentives within physician organizations. *Health Serv Res*. 2004;39(5):1589–606.
52. **Lake T, Devers K, Brewster L, Casalino L.** Something old, something new: Recent developments in hospital-physician relationships. *Health Serv Res*. 2003;38(1 Pt 2):471–88.
53. **Sobero ME.** Assessment for pay-for-performance options for medical physician services: Final report. 2006;1–191.
54. **Rosenthal MB, Dudley RA.** Pay-for-performance: Will the latest payment trend improve care? *JAMA*. 2007;297(7):740–4.
55. **Mechanic RE, Altman SH.** Payment reform options: Episode payment is a good place to start. *Health Aff (Millwood)*. 2009;28(2):w262–71.
56. **Landon BE, Normand SL.** Performance measurement in the small office practice: Challenges and potential solutions. *Ann Intern Med*. 2008;148(5):353–7.
57. **Fisher ES, Staiger DO, Bynum JP, Gottlieb DJ.** Creating accountable care organizations: The extended hospital medical staff. *Health Aff (Millwood)*. 2007;26(1):w44–57.
58. **Wolff JL, Boulton C.** Moving beyond round pegs and square holes: Restructuring Medicare to improve chronic care. *Ann Intern Med*. 2005;143(6):439–45.
59. **Lynn J, Milbank Memorial Fund.** Sick to death and not going to take it anymore! Reforming health care for the last years of life. Berkeley, Calif.: New York: University of California Press; Milbank Memorial Fund; 2004.
60. **Maynard A.** Incentives in health care: The shift in emphasis from the implicit to the explicit. chapter 8. In: **Dubois CA, McKee M, Nolte N, eds.** *Human Resources for Health in Europe: European Observatory on Health Systems and Policies Series*. N. Berkshire: European Observatory on Health Systems; Open University Press; 2006:1–15.
61. **Gosden T, Forland F, Kristiansen IS, et al.** Impact of payment method on behaviour of primary care physicians: A systematic review. *J Health Serv Res Policy*. 2001;6(1):44–55.