



STARFIELD SUMMIT  
...where primary care research inspires policy and practice

## **Effective Payment for Primary Care:**

### **An Annotated Bibliography**

**Starfield Summit, April 2016**

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About this work: This bibliography was created for attendees of the Starfield Summit in Washington, DC on April 23-26, 2016. It is meant to provide a summary view of what is known about effective models for primary care, and. Many models are new and evolving, and the evidence may change rapidly. Payment models are separated into categories to be presented as clearly as possible, but many overlap and defy singular classification. This remains in draft form, pending attendee input, but is intended for eventual wide scale dissemination for use by the primary care policy and research community



Policy Studies in Family Medicine and Primary Care

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## **Executive Summary**

This bibliography is meant to provide a summary view of what is known about effective payment models for primary care, and was created for attendees of the Starfield Summit in Washington, DC, on April 23-26, 2016. A list of relevant articles was obtained by reviewing titles and abstracts from a MEDLINE search on the terms “payment” and “primary care;” this list was further refined through expert opinion. For the sake of practicality, it is not intended to be comprehensive, but rather provide sufficient breadth and depth to be utilized as a resource for high-yield literature on primary care payment reform.

While the move from volume to value and away from FFS is widely accepted, there is not yet a consensus on the optimal payment model to replace it. Furthermore, many models are new and evolving, and the evidence may change rapidly. The Medicare Access and CHIP Reauthorization Act (MACRA) of 2015 will also affect the health care landscape in unknown ways, both through incentives to participate in alternative payment models and the Merit-Based Incentives Payment System (MIPS; adjusts Medicare payments to physicians up or down 4-9% based on performance). Nevertheless, there are many lessons to take away from prior and ongoing demonstration projects, studies, and lived experience.

Payment models are separated into categories to be presented as clearly as possible, but many overlap and defy singular classification. This bibliography is organized into sections guided by a series of overarching questions.

### **How Much Money Is Needed to Effectively Pay for Primary Care?**

To effectively pay for primary care, we need to not only know how (i.e. which models work best) but also how much funding is required. The reviews and reports in this section suggest an increase to 10-12% of the percentage of spending for primary care out of total health care spending would be optimal for improved outcomes and overall reduced expenditures.

### **What Do We Know About Current Payment Models?**

*P4P Added to FFS:* FFS plus P4P has been trialed in a number of studies and demonstration projects, most notably nationwide in the United Kingdom’s Quality and Outcomes Framework (QOF). Evidence and expert opinion suggest that P4P alone has only led to modest improvements for the investments required, and selection of primary care appropriate, patient-oriented outcome measures has been elusive.

*Paying for the PCMH: Enhanced FFS, Care Management and PCMH Fees:* Costs to transform to a PCMH, and maintain those changes, are significant and require financial support. Projects and demonstrations where PCMH payments have demonstrated cost

savings have been associated with collaborating with multiple payers, sharing responsibility for care management amongst a larger community network (a “virtual medical home”), targeting high utilizers of care, and/or providing timely data feedback and learning activities to practices. Most studies have used additional PMPM payments for care management or other PCMH services superimposed on FFS; some include a component of P4P and others build off of FFS with enhanced payments (more payment per visit).

*Paying for Integrated Behavioral Health:* Evidence shows integrated behavioral health can lower utilization and improve outcomes. Carve-outs, where reimbursement for behavioral health is done under an entirely different system than physical health, create major obstacles to integration. Experts recommend elimination of carve-outs along with including behavioral health in an overall population-based payment model for both mental and physical health needs.

*Paying for Integrated Public Health:* Similar to behavioral health, public health has been traditionally siloed from primary care in terms of its funding streams and workforce training; yet, the two disciplines serve complementary functions that have the potential to greatly improve population health if integrated. The successful integration of public health will require new collaborations between varied stakeholders, a defined but flexible vision and direction from the top, and enhanced ability for collective action at the regional and local level.

*Bundled Payment:* Bundled payment fits best with discrete, high cost, low frequency episodes of care.\* Experience with bundled payments in the US has primarily been through the use of Diagnosis Related Groups for acute care, where they have demonstrated cost reductions for decades. While bundled payments are just starting to be piloted for primary care in the US, evidence from other countries suggests some improvements in collaborative care at the expense of increased administrative burden, with notable difficulties in patient assignment to a specific disease category. In a world of increasing multimorbidity, such a disease-oriented rather than patient-oriented approach may not lend itself well to primary care, though it could play a role in a larger scheme incorporating collaboration with acute care providers for exacerbations of chronic disease.

*Shared Savings and Accountable Care Organizations:* In shared savings, provider groups are held accountable for the overall costs and quality of care for a defined patient population with a risk-adjusted global budget. These provider groups are eligible to share in cost savings contingent on meeting quality targets. Shared savings models can be one-sided, where groups are eligible for savings, or two-sided, where they are also subject to financial losses if expenditures exceed benchmarks. The ACA established ACOs as a formalized approach to this model through the Medicare Shared Savings Program, which includes over 400 provider groups and 8 million beneficiaries. Many private payers have followed suit in creating their own ACOs. Proponents believe ACOs complement

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\* See Miller HD under *What Do We Know About Current Payment Models?*

primary care well, as they can support practices with resources outside of FFS and create greater accountability for costs. Others cite concerns regarding upcoding for higher risk-adjusted payments, incentives for underproviding appropriate care, and limitation on creating significant change when still superimposed on a FFS model (as most are). Similar to P4P, there are issues around defining what quality measures to use. Results on savings are limited and mixed.

*Traditional Capitation:* In traditional capitation, financial risk lies with providers who are paid via fixed PMPM fees based on the average cost of care; this level of risk can have the unintended consequence of incentivizing inappropriate underproviding of services. This model grew in the 1980s and 1990s and then declined due to provider and patient backlash regarding burdensome risk and concerns about gatekeeping, respectively. Evidence on outcomes is mixed, though many suggest decreased costs. Regardless, the model did not succeed due to a lack of provider and patient acceptance.

*Comprehensive Primary Care Payment:* Comprehensive primary care payment is based in risk-adjusted PMPM fees (risk-adjusted capitation); many models include a component of P4P to counteract perverse incentives to underprovide necessary care. While finding an ideal model of risk-adjustment has been elusive, Ash and Ellis describe one that predicts a majority of patient costs. A steady cash flow independent of visit volume can support paying for care outside of a traditional visit, including necessary infrastructure and care by other members of the team. Iora Health, the most prominent example of this model, reports better chronic disease control and lower overall health care costs. Peer-reviewed studies of outcomes are needed.

*Direct Primary Care:* DPC has emerged as a disruptive model for primary care payment that bypasses the insurance system entirely: patients pay a monthly fee direct to the practice, which typically has much smaller panel sizes than average. However, patients still need to purchase catastrophic coverage for non-primary care needs. Practice leaders with experience in DPC report that it has led to cost savings as well as better patient and provider satisfaction. Others cite concerns that DPC can lead to high-cost sharing for non-primary care needs and could worsen primary care provider shortages. Efforts are currently underway to break down legal barriers to DPC's growth.

### **What are the Effects of Incentives on Physician Behavior?**

Incentives at the practice level are frequently not the same as the incentives seen at the provider level; for example, a practice may receive shared savings while the individual physicians receive nonfinancial incentives for reducing costs. In many alternative payment models, individual physician compensation remains grounded in FFS, putting cost and quality targets at odds with the primary method of reimbursement. Physicians report frustration with the administrative burdens of quality metrics, but tend to find them more palatable if their autonomy is preserved. Under productivity arrangements (as opposed to salary or pure capitation), physicians tend to spend more, but also have higher rates of meeting quality process measure targets. Increasing reimbursement for specific services, however, has not been found sufficient to change physician behavior, nor has

simply providing more information on cost-effective care. Experts recommend incorporating principles of behavioral economics to incentives to make them more effective, such as turning high-value choices into system defaults, increasing salience of incentive payments by making them timely and separate, and not overwhelming physicians with a multitude of choices.

### **How Do We Scale Effective Payment Models?**

Scaling of payment models is facilitated by practice consolidation and payer collaboration. By uniting together, small practices can better navigate new payment model requirements. Multipayer programs lead to wider adoption of models and create unified requirements that are more feasible for practices to meet; however, even these collaborations are faced with pressures to maintain the status quo and not create entirely new payment structures. Beyond multipayer solutions, a national health insurance program could establish one clear model for the country. Legal, logistical, and political barriers exist for all of these efforts.

### **Conclusions and Recommendations**

In addition to the above take-away messages from each section, there are several cross-cutting lessons learned from the studies in this review that bear mentioning.

- Primary care merits more of the total health care dollars than it currently receives, but more money alone is not enough. Funds need to be directed to build necessary infrastructure, particularly with regard to data systems that are integrated across settings and provide timely feedback.
- Effective primary care payment pays for more than just traditional primary care; it covers integrated behavioral and public health, care coordination, and related social services.
- Where payment is tied to quality, attention must be paid to selecting measures appropriate for primary care that do not create overly burdensome requirements.
- Payment models with a basis in PMPM fees allow necessary flexibility to use funds to meet varied patient needs while creating the opportunity for a proactive rather than reactive approach to patient care.
- Adequate risk adjustment is essential to protect against cherry picking patients, inappropriate underutilization of services, and undue risk on practices.
- Targeting high-cost, high-care beneficiaries leads to greater cost savings.
- Sustainable funding must be assured to maintain effective changes made in pilots and demonstrations.
- Practice transformation requires adequate up-front funds for infrastructure building in addition to ongoing costs.
- Appropriate time intervals must be allowed before assessing cost savings.

- Further research is needed to examine the variation in outcomes seen within a particular model; information on successful interventions and their requisite conditions should be widely and rapidly disseminated.

## Methods

An Ovid MEDLINE search was conducted using the search terms “payment” and “primary care”. The search was limited to articles published since 2010 in English and yielded 391 results. These search results were narrowed down by reviewing titles and abstracts for relevance to the topic and audience. Articles were then prioritized for inclusion based on level of evidence (e.g. systematic reviews) and expert opinion from members of the FMAHealth payment and research tactic teams. These experts also gave additional guidance on other articles to include. A “snowball” method of reviewing the references of the search results for additional important articles was undertaken; this method along with expert opinion was used to identify works from the grey literature for inclusion.

Articles marked with an asterisk (\*) were previously identified and described in the FMAHealth annotated bibliography “Primary Care and the Triple Aim” by Matthew Westfall, Rebecca Luoh, and Natalie Spach.

## Abbreviations used in this bibliography

AAFP	American Academy of Family Physicians
ACA	Patient Protection and Affordable Care Act
ACO	Accountable Care Organization
CAHPS	Consumer Assessment of Healthcare Providers and Systems
CDC	Centers for Disease Control and Prevention
CHIP	Children’s Health Insurance Program
CMMI	Center for Medicare and Medicaid Innovation
CMS	Centers for Medicare and Medicaid Services
DPC	Direct Primary Care
EHR	Electronic Health Record
ED	Emergency Department
FFS	Fee-for-Service
GP	General Practitioner
HHS	Department of Health and Human Services
HMO	Health Maintenance Organization
HRSA	Health Resources and Services Administration
NCQA	National Committee for Quality Assurance
P4P	Pay-for-Performance
PCMH	Patient Centered Medical Home
PMPM	Per Member Per Month
PCP	Primary Care Provider

## **How Much Money Is Needed to Effectively Pay for Primary Care?**

To effectively pay for primary care, we need to not only know how (i.e. which models work best) but also how much funding is required. These reviews and reports suggest an increase to 10-12% of the percentage of spending for primary care out of total health care spending would be optimal for improved outcomes and overall reduced expenditures.

*Koller CF, Brennan TA, Bailit MH. Rhode Island's novel experiment to rebuild primary care from the insurance side. Health Aff (Millwood). 2010;29(5):941-7.*

*Health Insurance Commissioner of the State of Rhode Island. Primary Care Spending in Rhode Island: Commercial Health Insurer Compliance. Office of the Rhode Island Health Insurance Commissioner; January 2014.*

In 2009, the Rhode Island Office of the Health Insurance Commissioner, a cabinet-level state agency with regulatory authority over commercial health insurers, set new standards for increasing the proportion of overall health care spending going to primary care from 5.9% (2008) to 10.9% over a 5 year period through value-based (non-FFS) payments. This initiative was tied to expansion of the medical home model and adoption of EHRs. The 2014 report finds that over the period from 2008-2012 primary care spending increased \$18 million while total overall medical spending decreased by \$115 million.

*Phillips RL, Bazemore AW. Primary care and why it matters for U.S. health system reform. Health Aff (Millwood). 2010;29(5):806-810.*

Phillips and Bazemore cite that only 6-7% of total health care spending for Medicare beneficiaries goes to primary care, which is likely lower for the rest of the population. They suggest, based on evidence from ongoing demonstrations, that a doubling of payments to primary care of 10-12% would reduce overall costs, decrease unnecessary health care utilization, and lower mortality rates.

*Reschovsky JD, Ghosh A, Stewart K, Chollet D. Paying more for primary care: Can it help bend the Medicare cost curve? Issue Brief (Commonw Fund). 2012 Mar; 5:1-14.*

Using a simulation model, the authors project that a permanent 10% increase in Medicare fees for primary care ambulatory visits would result in a sixfold annual return on lower Medicare costs for other services, primarily inpatient and postacute care.

*See also Fernandopulle R under Comprehensive Primary Care Payment.*



## What Do We Know About Current Payment Models?

*Saultz JW, Jones SM, McDaniel SH, et al. A New Foundation for the Delivery and Financing of American Health Care. Fam Med. 2015;47(8):612-9.*

This article outlines FMAHealth's vision for a new foundation for the delivery of health care: primary care grounded in the PCMH model and expanded by collaboration with mental health and public health. This will require a payment model that includes comprehensive payment apart from FFS to support the necessary infrastructure and interprofessional staffing.

*Sinsky CA, Dugdale DC. Medicare payment for cognitive vs procedural care: minding the gap. JAMA Intern Med. 2013;173(18):1733-7.*

This report underscores that not only is FFS inherently flawed by rewarding volume but also by weighting procedural tasks over cognitive tasks, as determined by the specialist-dominated Relative Value Scale Update Committee. Examining the difference in reimbursement for two common procedures, colonoscopy and cataract extraction, the authors find that specialists can produce more revenue in approximately 1-2 hours than a PCP receives for an entire day of work. (Note that the increased reimbursement for procedural vs cognitive services is also an issue within specialty care; a gastroenterologist can receive almost 4 times the reimbursement for performing a colonoscopy rather than counseling about the procedure or managing complex illness in a visit).

*\*Miller HD. From volume to value: better ways to pay for health care. Health Aff (Millwood). 2009;28(5):1418-1428.*

Miller reviews payment models from FFS to full capitation, noting that episode-of-care and comprehensive payment address most of the concerns around perverse incentives in FFS without the problems associated with traditional capitation. A key difference between the two models is the ability to control the number of unnecessary episodes of care; using a mix of both may be appropriate with episode-of-care payments for high cost, low frequency episodes (e.g. hip fracture) and comprehensive payments for conditions with low cost, high frequency episodes (e.g. heart failure). He recommends a transition period between FFS and a new era of episode-of-care and comprehensive payments by having virtual systems to allow for those models while the organizational mechanisms evolve.

*Bazemore A, Petterson S, Peterson LE, Phillips RL Jr. More Comprehensive Care Among Family Physicians is Associated with Lower Costs and Fewer Hospitalizations. Ann Fam Med. 2015;13(3):206-13.*

*Petterson S, Bazemore AW, Phillips RL, et al. Rewarding family medicine while penalizing comprehensiveness? Primary care payment incentives and health reform: the*

*Patient Protection and Affordable Care Act (PPACA). J Am Board Fam Med. 2011;24(6):637-8.*

Bazemore et al find that increased family physician comprehensiveness of care, as measured by claims data, is associated with decreased Medicare Part A and B costs; family physicians with the highest quintile comprehensiveness scores had lower total Medicare A and B costs by 10.3% in comparison to the lowest quintile. In the second article above, Petterson et al report on a provision of the ACA that supplies a 10% Medicare bonus to PCPs based on percentage of evaluation and management fees related to primary care. Defining primary care in this way can result in excluding PCPs that provide more comprehensive care, which is particularly an issue in more rural settings. These articles conclude that payment models should take care to reward and not penalize comprehensiveness, as it can lead to cost savings.

### *P4P Added to FFS*

*Gillam SJ, Siriwardena AN, Steel N. Pay-for-Performance in the United Kingdom: Impact of the Quality and Outcomes Framework – a systematic review. Ann Fam Med. 2012;10:461-468.*

The United Kingdom's QOF was introduced in 2004 as a national P4P intervention, combining financial incentives with electronic decision support tools. Modest population mortality reductions of a potential 11 lives per 100,000 people per year has been modeled over the first year of the program, with no further gain in the second year. There has been enhanced consolidation of evidence-based methods and improved outcomes for most conditions, however these improvements subsequently returned to pre-intervention rates. Improvements in conditions not included in the QOF were significantly lower than those incentivized. In an analysis of a minority of indicators, incentive payments were found to be cost-effective, though this did not account for administrative costs. Racial and socioeconomic disparities have narrowed. Some measures of patient experience have remained stable, while scores for continuity of care have decreased. Concerns have risen that quality of care may become too narrowly focused on QOF targets, that the QOF may detract from patient-centered care, and that process measures may not always translate to improved patient-oriented outcomes. The authors conclude that the results from this large and costly intervention are modest, and recommend caution in implementing P4P schemes.

*Starfield B, Mangin D. An international perspective on the basis of payment for performance. Qual Prim Care. 2010;18(6):399-404.*

In a commentary on the QOF, Starfield and Mangin challenge the idea of financial incentives for disease-oriented measures as not being patient-centered or reflective of the nature of primary care, where comorbidity and the context of patients' lives must be taken into account. They suggest that it is possible to incentivize patient-centered care by assessing patient-focused outcomes and the impact of multimorbidity on quality of life.

*\*Rosenthal MB, Frank RG, Li Z, Epstein AM. Early experience with pay-for-performance: from concept to practice. JAMA. 2005;294(14):1788-1793.*

The authors conducted a large natural experiment on 300 large physician organizations and found that a small P4P (5% of capitation payments) did not produce significant increases in quality. The authors suggest that the financial reward of P4P may need to be substantially increased to see significant improvements in quality.

*Scott A, Sivey P, Ait Ouakrim D, et al. The effect of financial incentives on the quality of health care provided by primary care physicians. Cochrane Database of Systematic Reviews. 2011;9.*

In six of seven studies included in this Cochrane review on P4P, positive but modest effects on quality of care were found for some of the primary outcomes. One study demonstrated no effect on quality of care. The authors conclude that there is insufficient evidence to support or not support financial incentives for primary care quality and call for better quality studies.

### *Paying for the PCMH: Enhanced FFS, Care Management and PCMH Fees*

*\*Patient-Centered Primary Care Collaborative Payment Reform Task Force. Payment reform to support high-performing practice: report of the Payment Reform Task Force. Washington, DC: Patient-Centered Primary Care Collaborative; 2010.*

*Goroll AH. Payment reform to support lasting practice reform in primary care. J Ambulatory Care Manag. 2011;34(1):33-37.*

*Nielsen M, Buelt L, Patel K, Nichols LM. The Patient-Centered Medical Home's impact on cost and quality: Annual review of the evidence 2014-2015. Patient-Centered Primary Care Collaborative; 2016.*

These two reports from the PCPCC (and commentary from Goroll) conclude that the Resource-Based Relative-Value Scale (RBRVS) FFS model is insufficient for practice transformation to the PCMH to occur and call for a movement from volume to value-based reimbursement. Noting that there has been no clear best model for primary care payment, they suggest a blended payment strategy to minimize short-comings of individual approaches. They highlight the importance of alignment across payers, as most of the successful PCMH initiatives have been associated with multi-payer collaboratives. Their review of the evidence suggests the longer programs have been in place, the more evident cost savings and improved outcomes are; adequate time before measurement needs to be allowed. Adequate risk-adjustment to avoid undue risk on practices or cherry picking of patients is essential. In the more recent PCPCC report, 21 of 23 studies that reported on cost or utilization outcomes found reductions in at least one measure.

*Berenson RA, Rich EC. How to buy a medical home? Policy options and practical*

questions. *J Gen Intern Med.* 2010;25(6):619-24.

Berenson and Rich review the different payment models available to support the PCMH, including enhanced FFS, FFS payment for additional PCMH activities, hybrid FFS plus additional PMPM fees, and comprehensive payments. In examining the strengths and weaknesses in terms of feasibility and appropriateness of incentivized behaviors, they do not find a clear “winner” but rather suggest that varying practice and patient population circumstances could lend themselves to different approaches.

*Nutting PA, Crabtree BF, Miller WL, Stange KC, Stewart E, Jaen C. Transforming physician practices to patient-centered medical homes: lessons from the national demonstration project. Health Aff (Millwood).* 2011;30(3):439-45.

*Tuggy M, Hoekzema G, Abercrombie S, et al. Primary care payment reform: the missing link. Ann Fam Med.* 2012;10(5):472-3

The AAFP started the first national PCMH demonstration, which ran from 2006-2008, in the absence of any payment reforms. The authors note that without up-front financial support, it is unlikely that most practices would be able to undergo PCMH transformation. They suggest stages of development tied to changes in payment: stage 1, practice redesign supported by enhanced FFS and P4P; stage 2, an identity shift towards proactive team-based care aided by bundled payments; and stage 3, a paradigm shift to being an integrated part of the medical neighborhood caring for population health using global payments and risk-sharing incentives. Tuggy et al echo these concepts, reporting that without payment reform to move away from FFS, practices are finding that the transition to the PCMH is financially unsustainable and leads to burnout. On the other hand, practices with some form of capitated payments have found the opposite result: better patient and provider satisfaction along with higher revenues.

*Liaw W, Moore M, Iko C, Bazemore A. Lessons for primary care from the first ten years of the Medicare coordinated care demonstration projects. J Am Board Fam Med.* 2015;28:556-564.

The authors review the available evaluations of CMS demonstrations and note limited returns on investment for care management fees, concluding with important lessons to carry forward. Expenses can be minimized by sharing resources amongst practices and avoiding interventions proven cost-ineffective, such as reimbursing providers for reviewing care plans or paying for medications. Savings can be maximized by focusing on high utilizers of care, providing in-person care coordination integrated with the primary care system, and tracking patients across the medical neighborhood (i.e. in the ED and hospital) in real time.

*Magill MK, Ehrenberger D, Scammon DL, et al. The cost of sustaining a Patient-Centered Medical Home: Experience from 2 states. Ann Fam Med.* 2015;13(5): 429-435.

In this study, Magill and co-authors report on the ongoing costs required for sustaining a PCMH. Costs per full-time equivalent primary care provider annually were

approximately \$105,000. Costs PMPM for an assumed panel of 2,000 patients was \$4.37. This analysis did not include startup costs or costs associated with an EHR or data collection. Only 27% of costs were due to activities that had potential to generate additional FFS revenue.

*Takach M. About half of the states are implementing patient-centered medical homes for their Medicaid populations. Health Aff (Millwood). 2012;31(11):2432-40.*

Takach reviews trends in Medicaid payments from a Commonwealth Fund project that provided technical assistance to 14 states working to improve their PCMH initiatives from 2011 to 2012. The majority of states participating in PCMH initiatives pay additional PMPM fees for care management and support practice training through learning collaboratives or practice coaching. Many provide additional payments for up-front costs or include a component of P4P, which may be tied to process measures, outcomes, or meeting PCMH qualifications. There are plans for phasing in shared savings in several states. Payments often flow directly to interprofessional care teams or shared networks; these teams or networks may serve one large practice or multiple smaller ones. States are adapting initiatives or developing new ones to target their highest risk patients.

*\*McCarthy D, Mueller K. Community Care of North Carolina: building community systems of care through state and local partnerships. [http://www.commonwealthfund.org/~media/Files/Publications/Case%20Study/2009/Jun/1219\\_McCarthy\\_CCNC\\_case\\_study\\_624\\_update.pdf](http://www.commonwealthfund.org/~media/Files/Publications/Case%20Study/2009/Jun/1219_McCarthy_CCNC_case_study_624_update.pdf). Accessed March 11, 2016. June 2009.*

*Fillmore H, DuBard CA, Ritter GA, Jackson CT. Health care savings with the Patient-Centered Medical Home: Community Care of North Carolina's experience. Pop Health Manag. 2014;17(3):141-148.*

Community Care of North Carolina (CCNC) is a partnership between the state and community care networks for those enrolled in Medicaid or CHIP. The state pays local networks \$3 PMPM for care management activities and physicians an additional (on top of FFS) \$2.50 PMPM for medical home activities. Physicians must provide 24-hour access to care, coordination with specialty care, and care management. Disease management programs have improved utilization and performance measures, and in 2006 alone there were savings of approximately \$154 million. CCNC started specialized programs for their high-cost, non-elderly disabled population starting in 2007; in addition to the above criteria these programs include establishment of a pharmaceutical home, integrated behavioral health, improved patient engagement, and improved system navigation and coordination of care transitions. After the first year there were increasing net cost savings (by 2011, modeled at \$120 PMPM) associated with increased access to ambulatory care and decreased hospitalizations.

*Evaluation of the Multi-Payer Advanced Primary Care Practice (MAPCP) Demonstration: First Annual Report. RTI International, The Urban Institute, National Academy for State Health Policy. January 2015.*

The Multi-Payer Advanced Primary Care Practice (MAPCP) initiative is a collaboration between public and private payers in eight states that began in 2011. Practices must meet certain PCMH criteria, coordinate with community resources, and are given care management PMPM fees, with specifics left up to each state. The state plans may also include P4P and/or shared savings. In this first annual report, two out of eight states (including Vermont, see below citation) were found to have reduced rate of growth of expenditures; the authors note that the short evaluation period limits the possibility of significant findings.

*Jones C, Finison K, McGraves-Lloyd K et al. Vermont's community-oriented all-payer medical home model reduces expenditures and utilization while delivering high-quality care. Popul Health Manag. 2015 [Epub ahead of print].*

Vermont's Blueprint for Health was launched in 2003 as a Governor's initiative and statewide expansion began in 2010. The program includes the transition of primary care practices to NCQA-recognized PCMHs, enhanced medical services by the addition of community health teams, and local leadership. This study found reduced expenditures compared to the non-intervention group, primarily through decreased inpatient and hospital outpatient utilization, with similar or improved rates of preventive services. Medical expenditures decreased by approximately \$5.8 million for every \$1 million invested in the program.

*\*Taylor EF, Dale S, Peikes D, et al. Evaluation of the Comprehensive Primary Care Initiative: first annual report. Princeton, NJ: Mathematica Policy Research; 2015.*

CMMI launched the Comprehensive Primary Care Initiative (CPCI) in 2012 as a public and private multipayer collaboration in 502 practices. CPCI provides a care management PMPM fee (average \$20, range \$8-\$40 based on risk) as well as practice learning activities and data feedback on costs, utilization, and quality. The program is designed to have higher PMPM fees for the first 2 years of the program to reflect greater start-up costs; the subsequent decrease in PMPM fees will be accompanied with the opportunity for shared savings. Practices are required to meet milestones centered on risk-stratified care management, access and continuity, care coordination across the medical neighborhood, patient engagement, and planned disease management for chronic conditions. Early results indicate savings that nearly cover the costs of the program after one year of implementation. There was a sizable but not statistically significant decline in hospital readmissions.

*Koshy RA, Conrad DA, Grembowski D. Lessons from Washington State's Medical Home Payment Pilot: What It Will Take to Change American Health Care. Popul Health Manag. 2015;18(4):237-45.*

The Washington State Multi-Payer Medical Home Reimbursement Pilot tested the use of additional quarterly PCMH PMPM payments (\$2.50 in the first 8 months, then \$2.00) to FFS with the aim of reducing avoidable hospitalizations and ED use. Clinics targeted high utilizers of care and found that one strategy did not fit all patients. Lessons learned included the importance of population health data obtained through integrated systems, in

particular timely ED and inpatient utilization reports and methods to link patients to a PCP. Pilot clinics reduced the avoidable ED utilization rate by 10.7%. The authors note infrastructure building and care coordination is different from acute care services; incremental FFS reimbursement changes are not adequate measures to shift practices to a population health approach.

*Phillips RL Jr, Han M, Petterson SM, Makaroff LA, Liaw WR. Cost, utilization, and quality of care: an evaluation of Illinois' Medicaid primary care case management program. Ann Fam Med. 2014;12(5):408-17.*

Illinois Health Connect (IHC), a case management program, and Your Healthcare Plus (YHP), a disease management program, together serve more than 2/3 of eligible Medicaid beneficiaries in Illinois. Through IHC, providers received PMPM care management fees and bonus payments for quality tied to PCMH components in addition to FFS. Online tools for population health were provided, and providers were required to meet targets for access and availability. By 2010, the fourth year of the program, Medicaid inpatient costs decreased by 30.3%, and outpatient costs rose. Annual savings reached 6.5% for IHC and 8.6% for YHP. Quality improved for nearly all metrics measured. The authors contrast the significant improvements in costs and utilization with other states that had similar Medicaid reforms but without the same outcomes, suggesting that states need to collaborate to understand how differences in implementation and policy may explain this.

*Patel UB, Rathjen C, Rubin E. Horizon's patient-centered medical home program shows practices need much more than payment changes to transform. Health Aff (Millwood). 2012;31(9):2018-27.*

*Werner RM, Duggan M, Duey K, Zhu J, Stuart EA. The Patient-centered Medical Home: An evaluation of a single private payer demonstration in New Jersey. Med Care. 2013;51:487-493.*

Patel et al describe a PCMH payment model run by Horizon Blue Cross Blue Shield, the largest insurer in New Jersey, which includes a \$3-\$5 care coordination PMPM payment in addition to FFS and the option to participate in performance bonuses of \$0.50 to \$9 PMPM or shared savings. They stress that payment changes alone are not sufficient for adequate practice transformation; nonmonetary resources are also essential such as assistance with data management tools and guides for best practices. Werner et al find no change in utilization or costs after one year, with mixed results on quality measures compared to controls. The authors call for more evaluation of why this model has worked for some and not others; however, they do note that their evaluation is limited by the short time frame. This study, as well as the below evaluation by Harris Lemak et al, differ from other demonstration projects in that they are single payer initiatives from the commercial sector.

*Harris Lemak C, Nahra TA, Cohen GR, et al. Michigan's fee-for-value physician incentive program reduces spending and improves quality in primary care. Health Aff*

*(Millwood). 2015;34(4):645-652.*

Blue Cross Blue Shield of Michigan's Physician Group Incentive Program includes more than 68% of primary care physicians in the state. Physicians are eligible for up to 20% increased evaluation and management fees for their office visits if they meet certain PCMH standards and achieve cost and quality targets, and they can also bill for care management. The program also finances pilot projects. For the period 2009-2011, the authors found a 1.1% decrease in PMPM spending over controls, though of note they did not account for the administrative costs of the program. Participating practices achieved the same or better performance on eleven of fourteen quality measures evaluated. There was no significant reduction in hospital spending.

*Edwards ST, Landon BE. Medicare's chronic care management payment – payment reform for primary care. N Engl J Med. 2014;371(22):2049-51.*

*Basu S, Phillips RS, Bitton A, Song Z, Landon BE. Medicare chronic care management payments and financial returns to primary care practices: A modeling study. Ann Intern Med. 2015;163(8):580-8.*

The Medicare Chronic Care Management (CCM) payment began in 2015 as an additional \$40 PMPM fee for beneficiaries with multiple chronic conditions (close to 2/3 of beneficiaries). For practices to be eligible, they must use an EHR, coordinate transitions of care, develop comprehensive care plans, and spend at least 20 minutes monthly on care coordination outside of visits. Edwards and Landon anticipate problems, including higher patient copays for many, equity issues around who receives these services, and the lack of support for PCMH infrastructure building. Basu et al's modeling study suggests that practices would need to enroll at least half of their eligible patients to recoup costs if a full time nurse care manager were hired. (Practices could lose net revenue if physicians provided the bulk of care management.) It is unknown if CCM payments will lead to savings through decreased utilization.

*Kiran T, Kopp A, Moineddin R, Glazier RH. Longitudinal evaluation of physician payment reform and team-based care for chronic disease management and prevention. CMAJ. 2015;187(17):E494-502.*

This study evaluates process outcomes in a natural health policy experiment in Ontario, where a majority of practices have transitioned to PCMHs and about half receive payments through blended capitation (with a subgroup given additional funds for team-based care) and close to half through enhanced FFS. The enhanced FFS group is paid by 15% capitation, 80% FFS, and 5% incentives and bonuses. The capitation groups are paid by 70% capitation, 20% FFS, and 10% incentives and bonuses. Patients under the capitated groups were more likely to have recommended testing for diabetes and screening for breast and colon cancer; this difference was more pronounced in the group that received additional team-based care funds. There was no difference found in cervical cancer screening.



## *Paying for Integrated Behavioral Health*

*Kathol RG, Kunkel EJ, Weiner JS, et al. Psychiatrists for medically complex patients: bringing value at the physical health and mental health/substance-use disorder interface. Psychosomatics. 2009; 50(2):93-107.*

*Melek S, Norris D. Chronic Conditions and Comorbid Psychological Disorders. Seattle, WA: Milliman; 2008.*

Kathol et al review evidence and conclude that concurrent behavioral and physical health problems are common and often untreated, associated with worse physical health outcomes, lead to high health care utilization, generally improve with evidence-based treatment, and show improvement of these outcomes when both their physical and behavioral problems are treated in a medical setting. Melek and Norris evaluate the costs of comorbid depression with 10 common chronic conditions and find the average associated cost increase is \$505 PMPM, with \$400 of that cost from medical (rather than behavioral) care. They project that in the absence of effective physical and behavioral health integration, patients with these comorbid disorders will incur annual costs that may exceed \$300 billion.

*Hublely SH, Miller BF. Implications of healthcare payment reform for clinical psychologists in medical settings. J Clin Psychol Med Settings. 2016;23:3-10.*

*Ader J, Stille CJ, Keller D, Miller BF, Barr MS, Perrin JM. The medical home and integrated behavioral health: advancing the policy agenda. Pediatrics. 2015;135(5):909-17.*

Behavioral health carve-outs, where the administration of behavioral health reimbursement is done through independent payment systems (though still under FFS), have created significant barriers to integrated care such as not reimbursing primary care clinicians for mental health diagnoses or behavioral health clinicians for team-based care coordination. In some instances, behavioral health clinicians are unable to bill for their services because payers will not reimburse for the same service rendered in two different settings on the same day. Such barriers can limit the ability to hire on-site behavioral health clinicians. Ader et al argue that carve-outs must be eliminated and the physical and mental health agencies consolidated to allow for coordinated, whole-person care. Bundled payment and global budget models currently being tested show promise for financing integrated behavioral health.

*Miller BF, Gilchrist EC, Ross KM, Wong SL, Green LA. Creating a culture of whole health: Recommendations for integrating behavioral health and primary care. February 2016.*

This report notes that there is no single payment pathway through which integrated behavioral health has been operationalized and makes suggestions for alternative payment method strategies: (1) add a PMPM payment for behavioral health and (2) establish a framework for creating financial models for population-based payment with behavioral health. As in other areas of primary care services, the authors highlight the inadequacy of FFS; in the case of behavioral health, it often forces behavioral health providers to operate separately and limits their accessibility to patients.

*Kathol RG, DeGruy F, Rollman BL. Value-based financially sustainable behavioral health components in patient-centered medical homes. Ann Fam Med. 2014;12(2):172-5.*

The authors make recommendations regarding integrated behavioral health implementation to guarantee it is value-based, including targeting high cost patients and/or those with chronic conditions and hiring behavioral health providers with appropriate training in evidence-based psychotherapy. Payment for behavioral health providers should be part of the total PCMH budget, and the entire care team is responsible for overall health outcomes.

*Wallace NT, Cohen DJ, Gunn R, et al. Start-up and ongoing practice expenses of behavioral health and primary care integration interventions in the Advancing Care Together (ACT) program. J Am Board Fam Med. 2015;28 Suppl 1:S86-97.*

In this study of integrating behavioral health in a variety of practices, the start-up costs averaged \$20,000 (\$44,000 including existing resources), and ongoing expenses averaged \$4.50 PMPM (\$40 PMPM including existing resources). The authors conclude the overall cost of integrated care is relatively modest for the health system but may pose significant barriers at the level of the practice, particularly when the costs of redirected existing resources are taken into account, as these would generally not be recognized under FFS.

*Solberg LI, Crain AL, Maciosek MV, et al. A stepped-wedge evaluation of an initiative to spread the collaborative care model for depression in primary care. Ann Fam Med. 2015;13(5):412-20.*

A statewide initiative, Depression Improvement Across Minnesota – Offering a New Direction (DIAMOND), provided a 6-month intensive training program and monthly payments to practices to implement the collaborative care model for depression. The study team found improved patient satisfaction scores but no change in depression remission rates, which contrasts with at least 79 randomized controlled trials that have shown improved outcomes. The authors conclude that this demonstrates the difficulties of widespread implementation of evidence-based practices that require significant changes, questioning if they saw no difference in outcomes because in clinical trials the research team provided close guidance for major changes or because the usual care of depression in Minnesota is already of high quality, leaving less room for improvement.

*Bao Y, Casalino LP, Ettner SL, Bruce ML, Solberg LI, Unutzer J. Designing payment for Collaborative Care for Depression in primary care. Health Serv Res. 2011;46(5):1436-51.*

Using data from IMPACT, a large randomized controlled trial of the collaborative care for depression model, the authors find that incentives are best aligned by using either an episode payment adjusted by number of months receiving treatment under the model, or a monthly payment adjusted by the ordinal month. They also note the importance of nonfinancial tools to align incentives such as accreditation systems.

### *Paying for Integrated Public Health*

*Primary Care and Public Health: Exploring Integration to Improve Population Health. Washington, DC: Institute of Medicine; 2012.*

Convened by the Institute of Medicine, the Committee on Integrating Primary Care and Public Health, developed a set of principles for successful public health and primary care integration: the shared goal of population health improvement, community engagement to define and address health needs, aligned leadership that reduces fragmentation and has the capacity to manage change, sustainability of commitments and funding, and the collaborative use of data. Several provisions of the ACA provide opportunities to promote integration, including increased funding for Community Health Centers, the National Health Service Corps, and Teaching Health Centers; the establishment of the National Prevention, Health Promotion and Public Health Council, ACOs, CMMI, Community Transformation Grants, and the Primary Care Extension Program; the requirement for tax-exempt hospitals to perform Community Health Needs Assessments; and the option for states to increase coverage for Medicaid Preventive Services.

The report notes that funding for public health has generally lacked an overarching strategy to target population health needs and the flexibility to allow for innovative programs and partnerships. Furthermore, the predominant FFS system does not adequately incentivize or provide for care that focuses on improving population health. Grants from different federal agencies may overlap and create competing funding streams rather than encouraging cooperation.

The committee provides recommendations for CDC, HRSA, and HHS to work together to support these principles: (1) link staff, funds, and data by coordinating funding and inventory health care databases, and create opportunities for relationship building with one another and local stakeholders; (2) establish common research and learning networks that evaluate models of integration and diffuse best practices; (3) develop the workforce necessary for integration by bolstering curricula and linking training programs; (4) capitalize on opportunities for integration in existing programs in organizations such as CMMI, AHRQ, and the NIH through the direction of the secretary of HHS; (5) create a national strategy and implementation plan from all of the agencies within HHS to integrate primary care and public health.

*Walshe K, Coleman A, McDonald A, Lorne C, Munford L. Health and social care devolution: The Greater Manchester experiment. BMJ. 2016;352:i1495-1500.*

Aiming to improve health and reduce health inequalities, the United Kingdom national government announced in 2015 plans to devolve control of health and social care spending (\$9 billion) in Greater Manchester to a new strategic partnership board, consisting of local authorities, National Health Service trusts, and clinical commissioning groups. As opposed to the current centralized system, which is viewed as fragmented and siloed, this devolution is purported to allow for collective action and integration of varied health and social services. This integration could produce savings in at least two key ways: (1) eliminating the waste inherent to a fragmented system and (2) reducing downstream spending through a more proactive approach to health and wellbeing. The authors note potential obstacles, including difficulty in reaching consensus across various stakeholders with vested interests in the status quo. They question if health care providers would be willing to allow resources to be shifted towards other public services at their disadvantage in the benefit of greater societal good.

*See also McCarthy D, et al; Fillmore H, et al, Jones C, et al; and Sandberg SF, et al under Paying for the PCMH.*

### *Bundled Payment*

*de Bakker DH, Struijs JN, Baan CB, et al. Early results from adoption of bundled payment for diabetes care in the Netherlands show improvement in care coordination. Health Aff (Millwood). 2012;31(2):426-33.*

*Wesselink SFO, Lingsma HF, Ketelaars CAJ, Mackenbach JP, Robben PBM. Effects of government supervision on quality of integrated diabetes care: A cluster randomized controlled trial. Med Care. 2015;53:784-791.*

Starting in 2010, a bundled payment model for diabetes, chronic obstructive pulmonary disease, and vascular risk management has been implemented nationwide in the Netherlands. Insurers pay a single fee to a “care group” of multiple health care providers to cover all elements of primary care for patients with specific chronic disease. These bundled payments have led to better collaboration and adherence to protocols but also a larger administrative burden and difficulty in assigning patients to a particular bundle group when they have multiple chronic diseases. de Bakker et al conclude that bundled payment could potentially be a step towards risk-adjusted capitated payments for multispecialty groups. Wesselink et al examined the effects of the program in 2011-2012 and found no significant improvement in quality of care, though they questioned if that may have been related to positive spillover effects on the control group or the short time interval since implementation.

Wojtak A, Purbhoo D. *Perspectives on advancing bundled payment in Ontario's home care system and beyond. Healthc Q. 2015;18(1):18-25.*

Wojtak and Purbhoo review the evidence regarding bundled payments and conclude that this model is more likely to be successful when providers are centralized and integrated, there is strong patient continuity, episodes and bundles are clearly defined with clear start and end dates, and there is a mechanism for managing the shared payment. They suggest a shift of focus from bundled payment to a larger strategy for integrating care across providers to enable a collaborative approach, particularly for complex patients.

Hussey PS, Ridgely MS, Rosenthal MB. *The PROMETHEUS bundled payment experiment: Slow start shows problems in implementing new payment models. Health Aff (Millwood). 2011;30(11):2116-2124.*

The authors evaluate the initial testing of the PROMETHEUS bundled payment model, which included bundles for both procedures and chronic conditions, and find none of the 3 pilot sites were able to execute a bundled payment contract after 3 years, which they attribute to the complexity of the payment model and the fact that it builds off of a FFS system. Issues included identifying which services were included in or excluded from the bundle, setting the “case rate” payment, determining accountability, and measuring and assuring quality to avoid inappropriate underutilization of care or “cherry picking” patients.

### *Shared Savings and Accountable Care Organizations*

Hayen AP, van den Berg MJ, Meijboom BR, Struijs JN, Westert GP. *Incorporating shared savings programs into primary care: from theory to practice. BMC Health Serv Res. 2015;15(1):580.*

The authors describe 5 building blocks of a shared savings program: (1) definition of scope with regard to what patients and what services will be included; (2) calculation of provider expenditures, often as annualized patient health care expenditures and obtaining a weighted average based on length of enrollment; (3) construction of the benchmark, mostly commonly a blend of risk-adjusted historical performance with national or regional trends; (4) assessment of savings by determining minimum thresholds of difference between provider expenditures and the benchmark; (5) creation of rules for shared savings, including the sharing rate, setting a shared savings payment maximum, and determining the dimensions of quality that must be met to be eligible to receive shared savings. These building blocks are used as a framework to outline a pilot program of a large Dutch health insurer and a national chain of primary care providers, who subcontract with other providers (e.g. dieticians). In the Netherlands, all citizens are registered with a PCP and longitudinal relationships are the norm; this lends itself to easier patient assignment and monitoring. Results from this pilot are expected mid-2016. The authors conclude that minimizing risk and uncertainty is key within a shared savings model to encourage a whole-system approach to care.

*Barnes AJ, Unruh L, Chukmaitov A, van Ginneken E. Accountable care organizations in the USA: Types, developments and challenges. Health Policy. 2014;118:1-7.*

The authors describe ACOs in the current programs under Medicare and the private insurance market. Within Medicare, ACOs are eligible for up to 50% shared savings if in a one-sided risk model and up to 60% if in the two-sided risk model, based on meeting quality targets. In addition to the Medicare Shared Savings Program, provider groups are also eligible to form ACOs under the Pioneer ACO model if they already had ACO capabilities in place and the Advanced Payment Model for smaller or rural ACOs. Nearly a third of the Pioneer ACOs dropped out of the model after the first year and joined the Medicare Shared Savings Program to bear less financial risk. Private ACOs have more flexibility to experiment with the model and include more varied approaches. Hospital systems were initially the predominant sponsor of ACOs; starting in 2013 they were surpassed by physician groups. The authors review challenges associated with ACOs, including overcoming incentives to inappropriately underprovide care, collecting meaningful quality data, and rewarding meaningful quality improvement rather than simply volume reduction.

*\*Nelson L. Lessons from Medicare's demonstration projects on value-based payment. Washington, DC: Congressional Budget Office, 2012.*

*Colla CH, Wennberg DE, Meara E, et al. Spending differences associated with the Medicare Physician Group Practice Demonstration. JAMA. 2012;308(10):1015-1023.*

Physician Group Practice (PGP) was a Medicare demonstration project that implemented shared savings with one-sided risk in 10 large provider groups from 2005-2010 (the groups subsequently transitioned to another demonstration). All of the groups initiated or expanded care coordination or disease management programs. Evaluations suggest they improved quality of care on some pre-selected measures compared to control groups by a small amount (1-5%). Nelson highlights a concern that practices may have changed their coding practices to increase their risk-adjusted payments. He reports the demonstration had little or no net effect on Medicare expenditures after controlling for bonuses paid to physician groups. Colla et al find that there was large variation in savings between and within group patient populations, with significant savings achieved only in the higher risk beneficiaries dually eligible for Medicare and Medicaid.

*Sandberg SF, Erikson C, Owen R, et al. Hennepin Health: A safety-net Accountable Care Organization for the expanded Medicaid population. Health Aff(Millwood). 2014;33(11):1975-1984.*

Hennepin Health is a county-based safety-net ACO based in Minneapolis, started in 2011. The organization is a partnership between the local medical center, county health department, a federally qualified health center, and a nonprofit HMO plan. The care model is centered on interdisciplinary care coordination teams based in primary care clinics. Flexibility of capitated PMPM funds under the global budget has been used to address a greater set of patients' needs, including non-medical services. Medical providers are reimbursed on a FFS basis. Early results suggest care an impact on shifting

care from inpatient to outpatient settings and decreased expenditures, with approximately \$2.4 million in savings reinvested into the program.

*Song Z, Rose S, Safran DG, Landon BE, Day MP, Chernew ME. Changes in health care spending and quality 4 years into global payment. N Engl J Med. 2014;371:1704-14.*

Blue Cross Blue Shield of Massachusetts implemented the Alternative Quality Contract (AQC) in 2009 with several provider organizations, paying a risk-adjusted global budget with two-sided risk. Quality bonuses are given based on process, outcome, and patient experience measures. For 2009 to 2011 incentive payments exceeded savings. In 2012, this pattern reversed and there were net savings from the program, primarily through decreased procedures, imaging, and tests. Participating practices improved on quality process metrics over the study period more than the national and regional average.

*Lazaroff A. Using risk contracting to reduce service use, improve quality, and strengthen primary care. Chest. 2013;144(4):1368-75.*

Lazaroff describes an independent practice association (IPA) that contracts under Medicare Advantage and the Pioneer ACO program for risk-adjusted global capitation payments where the financial risk lies with the IPA. He argues that such an arrangement achieves the scale that makes risk contracting financially and administratively feasible so that there is enough pooled risk and actuarial protection. The IPA assists with practice transformation, EHR acquisition, ensures access to care managers and social workers, regular quality improvement feedback, and hospital care transitions. Physicians are paid via a mix of FFS, payment based on panel size, and bonuses for quality and cost-effectiveness.

*Goroll AH, Schoenbaum SC. Payment reform for primary care within the Accountable Care Organization: A critical issue for health system reform. JAMA. 2012;308(6):577-578.*

In this commentary, Goroll and Schoenbaum lament that many ACOs are continuing to use FFS as the predominant method of paying for primary care. They cite barriers to removing FFS such as inertia deriving from having a well-established administrative infrastructure centered in FFS, resistance by specialists who have profited from FFS, and beliefs that productivity could falter without volume-based incentives. To support payment reform for primary care, they suggest a staged phase-in of new models and development of validated risk-adjustment models for global payment.

*Edwards ST, Abrams MK, Baron RJ, et al. Structuring payment to medical homes after the Affordable Care Act. J Gen Intern Med. 2014;29(10):1410-3.*

The authors describe the PCMH and ACOs as complementary approaches to reformed care delivery, recommending coordination of payment incentives within the ACO to support a foundation in primary care and the PCMH. ACOs have the opportunity to provide resources to primary care outside of FFS, such as through explicit practice transformation payments and support, payment to physicians via risk-adjusted salaries

with bonuses for quality, and support for common infrastructure and health information technology.

*Albright BB, Lewis VA, Ross JS, Colla CH. Preventive Care Quality of Medicare Accountable Care Organizations: Associations of Organizational Characteristics With Performance. Med Care. 2016;54(3):326-35.*

The authors examine ACO performance on disease prevention and wellness screening measures and find that better performance was associated with participation in the Advanced Payment Model (includes an upfront investment given to rural ACOs to assist in formation) and having more Medicare ACO beneficiaries per PCP. Better disease prevention performance was also associated with inclusion of a hospital, greater EHR capabilities, and fewer minority beneficiaries. ACOs at workforce extremes (either few PCPs or many specialists) performed worse on preventive care measures. In their first year, Medicare ACOs failed to match the performance rates of Medicare PPOs on 4 out of 5 measures.

*Goldsmith J. Accountable care organizations: the case for flexible partnerships between health plans and providers. Health Aff (Millwood). 2011;30(1):32-40.*

Goldsmith provides a critique of ACOs, anticipating problems such as cost shifting onto private insurers accelerated by increasing hospital market share size and lack of ability for significant change because the shared savings are superimposed on a FFS model that still rewards volume over value. He proposes an alternate payment structure consisting of three categories: low-intensity longitudinal care delivered by PCPs, unscheduled episodic care both inpatient and outpatient, and specialty care around major clinical interventions. In his model, longitudinal primary care is paid for via risk-adjusted capitation; unscheduled care, by FFS with patient cost sharing; and specialty care by severity-adjusted payments per episode. Separating out unscheduled care protects PCPs from the risk of more unpredictable costs.

### Traditional Capitation

*Zuvekas SH, Cohen JW. Paying physicians by capitation: Is the past now prologue? Health Aff (Millwood). 2010;29(9):1661-1666.*

*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;16:250-256.*

In the 1980s and 90s, capitation grew as a payment method within managed care to control costs. (It is important to note, however, that managed care and capitation are not one and the same; managed care organizations may control costs by means outside of capitated payments to providers.) Under capitation, providers are paid via a fixed PMPM fee based on the average cost of care, shifting financial risk to physicians; this can have the unintended consequences of disincentivizing caring for complex patients and



underproviding care. Managed care mechanisms to control costs such as prior authorization and gatekeeping led to a consumer backlash related to limited choice and specialist access. Subsequently, HMOs precipitously declined in the early 2000s. The additions of risk-adjustment and loss limits such as “stop-loss” clauses to pure capitation have the potential to protect providers from undue risk and mitigate inappropriate underutilization of services.

*Miller RH, Luft HS. Does managed care lead to better or worse quality of care? Health Aff (Millwood). 1997;16(5):7-25.*

*Miller RH, Luft HS. HMO plan performance update: An analysis of the literature, 1997-2001. Health Aff (Millwood). 2002;21(4):63-86.*

*Berwick DM. Payment by capitation and the quality of care. New Engl J Med. 1996;35(16):1227-1231.*

These reviews of the evidence regarding the outcomes of capitation find mixed results on both costs and quality, with most studies suggesting lower costs and resource use but others demonstrating little difference; of note, there is evidence of positive “spillover” effects of HMOs on resource use by the rest of the insurance market. Most studies but not all demonstrate lower patient satisfaction in capitated HMOs compared to FFS. Miller and Luft find roughly equal numbers of statistically significant positive and negative results for capitated HMO performance compared to FFS.

*See also Landon BE et al under What are the Effects of Financial Incentives on Physician Behavior?*

### *Comprehensive Primary Care Payment*

*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;22:410-415.*

Goroll and co-authors propose a risk/needs-adjusted comprehensive primary care payment that includes all monies necessary in an “advanced medical home” for salaries, infrastructure, care coordination, an interoperable EHR, and other practice expenses. This comprehensive payment differs from previous capitation models, which typically consolidated RBRVS visit payments, by reducing financial risk on practices, adequately risk-adjusting payments, and including a P4P mechanism to avoid withholding of necessary care. They suggest 15-25% of the comprehensive payment be linked to performance and outcomes.

*Siegel M. Risk-adjusted base payments can support the move to value. Healthc Financ Manage. 2015;69(1):38-41.*

Traditional risk adjustment models for capitation were based on age and gender and did not adequately account for the great variability in health and illness within age groups. A risk-adjusted base payment is meant to more precisely reflect the complexity of a provider's patient panel. A relative risk score can be used as a multiplier for PMPM payments. Such payments could help promote proactive care while avoiding "cherry picking" patients based on their medical needs. Siegel cites a pilot by a regional health plan in New York that began using risk-adjusted base payments in 2009; after the first year, they saw a decrease in PMPM costs by \$32, ED visits by 9%, and hospitalizations by 24% while overall PCP compensation increased.

Ash AS, Ellis RP. *Risk-adjusted payment and performance assessment for primary care. Med Care. 2012;50:643-653.*

Ash and Ellis conceptualize a comprehensive payment model to appropriately risk-adjust expected primary care activity levels (PCAL) and performance measures; this model explains 72% of practice-level variation, outperforming many prior scoring systems.

Vats S, Ash AS, Ellis RP. *Bending the cost curve? Results from a comprehensive primary care payment pilot. Med Care. 2013;51(11):964-9.*

In a PCMH initiative, a New York health plan piloted comprehensive primary care payments with 63% as a risk-adjusted base, 27% as bonus, and 10% FFS (based off of the proposals of Goroll and Ash and Ellis, see above annotations). In an analysis of a small sample from 3 participating practices, the authors find their "most credible model" demonstrates a 6-8% reduction in health care spending growth.

Fernandopulle R. *Learning to fly: Building de novo medical home practices to improve experience, outcomes, and affordability. J Ambulatory Care Manag. 2013;36(2):121-125.*

Fernandopulle R. *Breaking the Fee-For-Service addiction: Let's move to a comprehensive primary care payment model. August 17, 2015. Health Affairs Blog. <http://healthaffairs.org/blog/2015/08/17/breaking-the-fee-for-service-addiction-lets-move-to-a-comprehensive-primary-care-payment-model/>. Accessed March 3, 2016.*

Real Results. Iora Health. <http://www.iorahealth.com/real-results/>. Accessed March 3, 2016.

Fernandopulle describes the Iora Health model with 3 main components: (1) a different payment model, with 10% of total health care spending going to primary via fixed risk-adjusted fees per patient and eliminated co-payments; (2) a redesigned care delivery model, with shared care plans, personalized health coaching, open access, and proactive outreach and follow-up; and (3) a self-made IT platform to adequately allow for patient engagement, population health management, and data gathering. In the Health Affairs blog, Fernandopulle notes that for this model to work well in a practice, it is necessary to break from FFS completely and pay providers differently –via salary, and not tied to

RVUs. Iora Health's website cites better than national average control of diabetes and hypertension, higher patient satisfaction and patient engagement. Pilot data has additionally shown reduced racial disparities and decreased total health care spending.

### Direct Primary Care

*Huff C. Direct Primary Care: Concierge care for the masses. Health Aff (Millwood). 2015;34(12):2016-2019.*

In DPC, patients pay a monthly fee around \$25-\$85 for their primary care needs, with minimal or no additional out of pocket costs. This is completely separate from any insurance billing, however patients are encouraged to have an insurance plan in the case of needed hospitalizations or surgeries. Reduced administrative costs allow providers to typically see a panel of 600-800 patients rather than at least 2,000 in a typical practice. Concerns about the limitations of DPC include potential for high cost sharing by patients for any non-primary care needs and the worsening of primary care physician shortages as panel sizes are decreased. DPC differs from concierge care by not billing insurance at all and charging lower fees. Larger groups are contracting with insurance companies or employers for the monthly fees. Huff cites a 2015 survey that 10% of doctors reported working in DPC or planning to transition to it.

*\*Wu WN, Bliss G, Bliss EB, Green LA. Practice profile. A direct primary care medical home: the Qliance experience. Health Aff (Millwood). 2010;29(5):959-962.*

*\*Von Drehle D. Medicine is about to get personal. Time. December 22, 2014.*

*Direct Primary Care Model Delivers 20 Percent Lower Overall Healthcare Costs, Increases Patient Satisfaction and Delivers Better Care. PRNewswire. January 15, 2015. <http://www.prnewswire.com/news-releases/new-primary-care-model-delivers-20-percent-lower-overall-healthcare-costs-increases-patient-satisfaction-and-delivers-better-care-300021116.html>. Accessed March 2, 2016.*

The *Health Affairs* article and *Time* narrative describe Qliance, a DPC practice in Seattle, WA. According to the Qliance press release, they have achieved approximately 20% savings per patient per year through decreased ER, inpatient, specialist, and advanced radiology utilization. At the same time, they have been in the 95<sup>th</sup> percentile for patient satisfaction as measured by CAHPS surveys.

*\*McCorry D. Direct primary care: an innovative alternative to conventional health insurance. <http://www.heritage.org/research/reports/2014/08/direct-primary-care-an-innovative-alternative-to-conventional-health-insurance>. Accessed March 3, 2016.*

McCorry provides an analysis of the benefits and costs of DPC, including associated legal obstacles and policy recommendations for its successful implementation. Among the obstacles, at the state level there is a lack of consensus on whether DPC providers should be licensed and regulated as insurers. At a federal level, there are not clear criteria for which DPC plans qualify for health insurance exchanges and there are barriers to the use of Health Savings Account (HSA) funds for purchasing DPC. In addition, a Medicare

balance billing provision prohibits DPC providers from using monthly fees for services already covered by Medicare unless they drop out of the program. McCorry counters the concerns about worsening primary care physician shortages by noting that DPC makes the field more appealing to new graduates and may keep others from choosing to retire early.

*Saultz JW, Brown D, Stenberg S, et al. Access assured: a pilot program to finance primary care for uninsured patients using a monthly enrollment fee. J Am Board Fam Med. 2010;23(3):393-401.*

*Saultz JW, Heineman J, Seltzer R, Bunce A, Spires L, Devoe J. Uninsured patient opinions about a reduced-fee retainer program at academic health center clinics. J Am Board Fam Med. 2011;24(3):304-12.*

The authors studied patient interest in and financial viability of Access Assured, a safety-net program in 2 academic family medicine practices for uninsured populations. The program used a monthly retainer payment system with an additional sliding scale fee for each visit. The retainer fee was \$25 per month, for a minimum of 6 months (minimum of \$150 total), in order for the program to develop and offer expanded clinical services to patients, including a 24-hour triage phone line and secure e-mail access to providers. The program expanded services to 600 previously uninsured patients and was financially viable, with a higher estimated revenue at 12-months (\$42.88 per RVU) when compared with Medicare (\$38 per RVU) and Medicaid (\$34 per RVU). The authors felt a retainer system could be a plausible payment model for uninsured populations, though they cautioned that over half of the patients in Access Assured were found to have incomes at least 400% of FPL. In a qualitative study, patients reported that they valued continuity and felt respected in the program, though they expressed concerns about quality of care but had no other options for access.

## What are the Effects of Incentives on Physician Behavior?

*Jain SH, Cassel CK. Societal perceptions of physicians: Knights, knaves, or pawns? JAMA. 2010;304(9):1009-10.*

The authors cite the British economist Julian Le Grand's hypothesis that public policy is founded in the view of people as either "knights" motivated by virtue, "knaves" that act only in self-interest, or "pawns" that are passive victims of circumstance and extend this framework to a discussion of how physicians are represented in public discourse. When physicians are envisioned as knights, professional autonomy is of the utmost importance and the role of policy is to respect their decisions as guided by the needs of patients. When seen as knaves, physicians value their financial well-being over their patients, and the role of policy is to regulate them and protect the public. If conceived as pawns, policy must guide physicians' behavior because it will be shaped by their contexts. In both Britain and the US, perspectives on physicians have shifted over time from being knights to knaves in the setting of inappropriate variation in care and significant waste. The challenge put forth by the authors is to manage to not undermine those motivated by professionalism while protecting against those motivated by self-interest.

*Emanuel EJ, Ubel PA, Kessler JB, et al. Using behavioral economics to design physician incentives that deliver high-value care. Ann Intern Med. 2016;164(2):114-119.*

Noting that there has been little use of behavioral economics in designing physician payment schemes, the authors review the most applicable principles and make recommendations for physician incentives. It is important to avoid overloading physicians with too many options and recognize that more transparent information alone is not sufficient for change. Providing physicians with individual performance data compared to their peers can be a powerful motivator for change. To mitigate inertia (also known as status quo bias) and the limits of willpower, EHR order sets and alerts along with team-based protocols can make high-value care the default. When financial incentives are provided, they can be more effective if they are (1) salient, through timely payment that is separate from other lumped payments; (2) reflective of loss aversion risk, by providing bonuses up-front that can only be kept if the provider meets certain targets; and (3) incremental rather than all-or-nothing, to incentivize poorer performers who may feel they are unable to reach a target threshold.

*Atherly A, Mortensen K. Medicaid primary care physician fees and the use of preventive services among Medicaid enrollees. Health Serv Res. 2014;49(4):1306-28.*

The ACA aimed to increase the provision of preventive services through several different methods, including by temporarily increasing Medicaid reimbursement rates (on average 66% that of Medicare rates for primary care services) to match Medicare from 2013 through 2014. This study tested the thinking that increasing physician payments for preventive services would consequently increase rates of preventive services rendered. The authors found that neither increasing Medicaid enrollments nor increasing Medicaid primary care payment rates increased the use of 5 USPSTF recommended screenings

(cervical cancer, colorectal cancer, breast cancer, cholesterol, blood pressure screening). These findings suggest that incremental increases alone in reimbursements for preventive services are not a strong motivator to increase the provision of those services.

*Kantarevic J, Kralj B. Risk selection and cost shifting in a prospective physician payment system: evidence from Ontario. Health Policy. 2014;115(2-3):249-57.*

Ontario implemented a large financial incentive payment to physicians to care for complex and vulnerable patients that was made available only for the first year of enrollment; the authors studied physician behavior after the first year to see if those practicing in a capitated model reacted to the subsequent financial impetus “dump” high cost patients after the incentive ended. The capitated model in Ontario is unique in that it includes an ex-post fund that penalizes when patients seek care outside of their enrolled physician’s office; however, this penalty is limited and thus provides physicians with a degree of risk insurance and the opportunity to shift costs to other providers. In the 12 months after the incentive period ended, there was no difference in patient enrollment or cost shifting compared to providers under a FFS system. The authors concluded that patient selection may be less important when physicians have limited financial risk, and cost shifting may be limited in practice by professional ethics.

*Iezzi E, Lippi Bruni M, Ugolini C. The role of GP's compensation schemes in diabetes care: evidence from panel data. J Health Econ. 2014;34:104-20.*

This study examined the impact of an Italian primary care intervention for patients with diabetes with “low-powered” incentives (i.e. reimbursing for participation in quality improvement activities, as opposed to “high-powered” incentives in which reimbursements are tied to the attainment of assigned benchmarks). Over a 2-year span, the authors demonstrated that physicians receiving low-powered incentives had significantly less avoidable hospitalizations for their diabetic patients, when compared to providers not receiving any incentives. In the context of findings that high-powered incentive programs, such as P4P, do not consistently lead to improved outcomes, the authors speculate that low-powered incentives may allow providers to participate in quality improvement in a manner befitting their practice and patient population. Furthermore, they argue that targeting a smaller population than an entire patient panel may facilitate more targeted, effective approaches.

*Waddimba AC, Burgess JF Jr, Young GJ, Beckman HB, Meterko M. Motivators and hygiene factors among physicians responding to explicit incentives to improve the value of care. Qual Manag Health Care. 2013;22(4):276-92.*

*Commonwealth Fund, Henry J. Kaiser Family Foundation. Primary Care Providers' Views of Recent Trends in Health Care Delivery and Payment. Findings from the Commonwealth Fund/Kaiser Family Foundation 2015 National Survey of Primary Care Providers. Issue Brief (Commonw Fund). 2015;24:1-13.*

This study used a self-reported survey to examine factors affecting provider attitudes during practice transitions from FFS to outcomes-based payment. Factors associated with dissatisfaction included larger than average patient panels, decreased sense of autonomy, and beliefs that quality incentives hindered patient care. Meanwhile, satisfied physicians were more likely to have smaller patient panels, less complex patients, and a higher sense of autonomy. Waddimba et al recommend protecting provider autonomy during practice payment transformation periods to minimize dissatisfaction. The Commonwealth Fund report authors find that 50% of surveyed physicians believe increased utilization of quality metrics to measure performance is having a negative impact on quality of care.

*Friedberg MW, Chen PG, White C, et al. Effects of health care payment models on physician practice in the United States. RAND Corporation, Santa Monica, CA; 2015.*

This qualitative study was designed to describe the effects of alternative payment models on physicians and practices. To adapt to new payment models, many practices have merged with hospitals or other larger organizations. Practices serve as intermediaries between changes in the health care marketplace and individual providers. In some cases, this means the translation of external financial incentives into internal nonfinancial incentives; in others, practices shield providers from an overwhelming array of metrics and provide a condensed set of quality targets. Individual physicians frequently find themselves in the “two-canoe” problem of having one foot in FFS and the other in an alternative payment model; many providers continue to have the majority of their compensation dependent on productivity through FFS while they try to meet less well-reimbursed targets to contain the costs of care.

*Landon BE, Reschovsky JD, O'Malley AJ, Pham HH, Hadley J. The relationship between physician compensation strategies and the intensity of care delivered to Medicare beneficiaries. Health Serv Res. 2011;46(6pt1):1863-82.*

*Landon BE, O'Malley AJ, McKellar MR, Reschovsky JD, Hadley J. Physician compensation strategies and quality of care for Medicare beneficiaries. Am J Manag Care. 2014;20(10):804-11.*

Using administrative data from Medicare and the Community Tracking Study Physician Survey on PCP compensation methods, this study demonstrated that prospective, capitated systems yielded the lowest risk-adjusted spending per beneficiary, and lower intensity of care provided, even when compared against salaried physicians. Physician-owners (as opposed to physician-employees) demonstrated higher rates of spending per patient, with increased spending on physician services and lower spending on non-physician costs, such as lab testing. They found that physicians paid under productivity arrangements (i.e. incentives to see more patients or provide more intensive services, sometimes coupled with incentives to achieve quality benchmarks) delivered higher quality of care as measured by provisions of diabetes monitoring, age-appropriate cancer screening, and pneumococcal vaccination, when compared to those receiving fixed salaries or capitated payments. Capitated models did not deliver superior quality of care.

## How Do We Scale Effective Payment Models?

*Mostashari, F. The paradox of size: How small, independent practices can thrive in value-based care. Ann Fam Med. 2016;14:5-7.*

Mostashari suggests that for PCPs in small, independent practices must band together to benefit from economies of scale to survive in a healthcare landscape increasingly favoring consolidation. He concludes with recommendations for federal policy to support competition and not unduly burden small practices with regulations.

*Takach M, Townley C, Yalowich R, Kinsler S. Making multipayer reform work: what can be learned from medical home initiatives. Health Aff (Millwood). 2015;34(4):662-72.*

Noting that practice and system-level change is enabled by common expectations across payers, the authors describe lessons learned on multipayer reform from early initiatives. Challenges include convening stakeholders, setting criteria for provider participation, determining payments, and measuring performance. With regard to payment, multipayer groups balance standardizing to reduce administrative burden with maintaining flexibility to innovate. Fears that requiring a new payment system could discourage provider participation led medical home initiatives to build off a FFS model. As different payer models have proliferated, multipayer collaboration has become increasingly complex, requiring more negotiation and compromise. Involving the state and/or federal government as a convener, stakeholder, or payer plays a key role.

*Baron RJ. New pathways for primary care: an update on primary care programs from the innovation center at CMS. Ann Fam Med. 2012;10(2):152-5.*

In reviewing the demonstration projects created by the CMMI, Baron highlights that they all depend on collaboration between multiple stakeholders invested in improving patient care. He notes such collaboration is vital to allow for any practice transformation, which is hindered by current fragmented, uncoordinated payments by different insurers. The Secretary of HHS has the ability to expand any successful initiatives within Medicare, Medicaid, and CHIP without further authorization from Congress, creating a pathway for widely scaling models.

*Geyman JP. Beyond the Affordable Care Act: Alternate futures for family medicine. Fam Med. 2016;48(2):95-9.*

Geyman notes that while the ACA has led to some improvements in insurance coverage and short-term increases in primary care reimbursement, we are now facing increasingly narrow networks, higher patient cost-sharing, and continued uncontained overall health care costs. He argues that the only sustainable alternative to our current system is national health insurance, with primary care at the center of health care. It would relieve administrative hassles from dealing with different insurance companies, and small group practices would be more feasible again.