Summary

This literature review is part of the project "Medical Payment Models Alignment with Practices of Lifestyle Medicine." The aim of this project is to understand which alternative payment models and organizational models best align with the practices of lifestyle medicine in order to further the discussion on future advocacy for lifestyle medicine. It should be noted that a complete assessment of which models best align with the practices of lifestyle medicine requires a multi-faceted approach that involves looking at various stakeholders - physicians, payers, patients, hospitals, and other affected entities, including an analysis on the impact on rural vs. urban health providers, practice size, scalability of models and the use of non-financial incentives.

This project focuses on physicians and the interaction of physicians with nine models. The project is broken down into two phases. The first phase involves (1) a literature review that identifies existing published evidence on the prevalence and effects on physician practice outcomes with the models and (2) matrices that look at the various models against the key competencies of lifestyle medicine, as identified by the American College of Lifestyle Medicine. The literature review and matrices are designed to review the various models through the lens of the lifestyle medicine competencies identified by the American College of Lifestyle Medicine. It should be noted that the competencies are defined at the physician level and the majority of the literature on the models is addressed to the practice level.

The nine models addressed are capitation, episode-based and bundled payment, shared savings, pay for performance, retainer-based, accountable care organizations, patient-centered medical homes, value-based payments, group medical visits (including shared medical appointments and group medical nutrition therapy). Some of these models are stand-alone alternative payment models (capitation, episode-based and bundled-payment, retainer-based); others are enhancements that are primarily applied in addition to existing payment systems (shared savings and pay-for-performance); and the last set are organizational structures (accountable care organizations, patient-centered medical homes, group medical visits).

For purposes of the literature review, the nine models are presented separately and analyzed individually - to the extent possible. However, these models are not mutually exclusive and are both currently combined (e.g. shared savings and accountable care organizations) and can be combined to create different operational structures and incentives. In fact, it may be that a combination of options best suits the furthering of lifestyle medicine.

Based on the literature research, capitation and episode-based bundled payment are models that do not substantially align with the physician competencies of lifestyle medicine. Pay-for-performance and shared savings alignment with the physician competencies of lifestyle medicine depend on how the measures and plan are structured. The same is true for accountable care organizations. Retainer-based care, patient-centered medical home and the use of group visits are the most closely aligned with the physician competencies of lifestyle medicine.

Methodology

To identify literature, searches were performed in PubMed for combinations of the following search terms: alternative payment models, capitation, episode-based and bundled payment, shared savings, pay for performance, retainer-based, accountable care organizations, patient-centered medical homes and value-based payments; prevalence, geographic distribution in the US; studies on numbers or occurrence within the US; trends in the US; effects on physician practice outcome; incentives to practice; organizational structural effects; impacts to physician compensation; effectiveness in delivery of services; costs of transitioning to the alternative payment model; capital investments associated with the alternative payment model, reimbursement and group visits, shared medical appointments, and group nutritional therapy.

The result list was reviewed and articles relevant to the objective of this review were identified. As appropriate, additional articles were identified from the reports, papers, and articles reviewed. The landscape of alternative payment models today is one of constant evolution and final research was conducted in December 2019.

Given the differences in regulatory framework between countries, only articles focused on the US were included. Additionally, the constantly changing nature of payment models and regulatory landscape, in which “payment policy today is a bubbling cauldron of experimentation”[1] fueled in part by CMS’ innovation center and the ACA, mean that more recent articles are the most useful for this analysis. Consequently, this review focuses on articles in the past 10 years, with a hard cut off at 20 years (1999-2019).

Two articles on lifestyle medicine and various payment models (see the discussion below) were identified. For additional research, articles focused on primary care, chronic care, and prevention were prioritized given their closer relationship with the practice of lifestyle medicine. Therefore, articles involving the effect of the models on dentistry, pharmaceutical services, academic health centers and hospitals were not

included. Additionally, articles on the location of delivery - outpatient vs. home were not included. The efficacy of the alternative payment model (whether it works to control healthcare costs while increasing quality) is not the focus of the review. Therefore, articles focused on the efficacy of the model were not included.

This literature review also looked for literature on the prevalence of the model - the geographic distribution and the use of the model in Medicare and private payer programs. While those are not determinative of the direction that ACLM may want to take, an understanding of the distribution is important to understand the familiarity and that providers and physicians may have with the model and the extent of investments already made. Additionally, the literature review attempts to separately discuss the costs and/or investments associated with a practice transitioning to a given model.

Background / Context

Physician Practice

Recently studies show that physician practice size is moving away from smaller (especially solo) practices to larger practices.[2] Ownership of practices by physicians is also declining. In 2018 54% of physicians work in practices wholly owned by physicians.[3] However, data on primary care from the CDC indicated that "the majority of primary care offices are owned by a physician or physician group. Approximately 56% of primary care physicians are full or partial owners of their practices. A smaller percentage (41%) of primary care physicians are employees, of which 15% are employed in physician-owned practices and 26% are employed in non-physician owned practices. A small percentage of primary care physicians (2%) are independent contractors."[4]

Of all provider types, physicians are involved with the most number of varying payment methods.[5] In a 2018 meeting on advancing primary care through the use of alternative payment models (APMs), speakers indicated that there isn't much evaluation of APMs and how they support primary care or on APMs and their impact to increase primary care provider satisfaction (and reduced burnout) via increased flexibility, reducing administrative burdens, and greater reliance on teams.[6]

Medicare, Medicaid and CMS

CMS is a significant force on the movement into APMs. Sylvia Burwell, when she was Health and Human Services Secretary announced a target of having "30% of Medicare payments tied to quality or value through alternative payment models by the end of 2016, and 50% of payments by the end of 2018.[7] While exact approaches and targets may have changed with new administrations, the overall emphasis on moving towards APMs and innovative organizational structures continues. Major public initiatives involving the models reviewed here are included in each models section.

Value-Based Payments

Broadly, value-based payments (VBP) is an umbrella term that encompasses payment models based on quality incentive programs that reward providers. Examples are pay-for-performance and shared savings - both of which are discussed in more

detail later. Incentives created by VBPs are dependent on the underlying structure - e.g. the definition of a performance measure, the benchmark against which a shared savings program is set. The effectiveness of a VBP system in creating intended incentives requires an understanding of behavioral economics, including how the intrinsic (professional) motivation of physicians may be impacted when increasing their extrinsic (monetary) motivation. (see below)

Physician Compensation and Professionalism

Since incentives form a large part of the discussion involving alternative models and organizational structures, it is important to understand some of the research on physicians' professionalism.

The research area of behavioral economics helps parse out motivations - that financial incentives may undermine intrinsic professionalism and that non-financial incentives (such as reporting and public recognition of physician performance[8]) may be more effective for intrinsic motivation.[9] In fact, professionalism may decrease when physicians perceive that VBP programs focus on unimportant measures, are unnecessarily complex, or incentivize inappropriate care.[10] Therefore, the types of measures and the way they are defined are extremely important to creating appropriate incentives. There isn't much work on incentives healthcare organizations use with their physicians.[11]

Fee-For-Service will continue to be dominant payment to physicians

While healthcare payment models continue to evolve and expand in application, the literature makes it clear that fee-for-service (FFS) continues to be the primary payment model at the practice and physician level.[12] So, for example, an ACO may receive capitated payments, but a practice (or physicians within a practice) may be paid on a FFS basis.[13]

In 2018, an average of 70.3 percent of practice revenue came from FFS compared to only 29.7 percent from APMs.[14] These shares have remained the same since 2012.[15] Additionally, the various alternative payment approaches in Medicare are generally built on a FFS foundation.[16] Therefore, any advocacy involving APMs, including for lifestyle medicine, will need to address the use of FFS.

Lifestyle Medicine and Alternative Payment Models

Two articles were found on lifestyle medicine and payment systems.[17] [18]

The first article by Beckman in 2018 sets out an Actuarial Patient Value model to "encourage the practice of lifestyle medicine through the use of cash financial incentives based on actual patient outcomes."[19] Beckman argues that the current measures in value-based reimbursement methods are not structured to incentivize lifestyle medicine practices because the measures address care process and not outcomes. Instead, the author argues that creating measures that "provide a clear and objective view of patient health" and associating "the actual values of these measures with the health care cost date for individual patients" as the basis for an incentive payment to physicians creates the appropriate incentives for physicians to focus on lifestyle changes for their patients.[20]

The second article in 2017 by Bramam[21] identifies four common business approaches for implementation of lifestyle medicine practices: cash payment, direct primary care (DPC), traditional fee for service, and concierge care (CC) and different methods of maximizing reimbursement under the current system (coding/billing, group visits).

Capitation

Description - Capitation

At its core, capitation is a payment model in which a fixed payment per patient is paid to a physician or practice for all services provided within a specified time period. Once a patient is attributed, the contracted amount can be paid. The provider assumes the financial risk of providing care to the patient. If a patient uses more services than the capitated payment covers, the provider bears the cost and if the patient uses fewer services than the payment covers, the provider keeps the difference.

Capitation payments may be adjusted for patient risk[22] or limit the services covered by the capitation payment. Current capitation approaches include some provider accountability for quality where "quality" tends to be measured by broad population-level metrics, such as patient satisfaction, process compliance, and overall outcomes such as complication and readmission rates.[23] Capitation payments are difficult to adjust to reflect each patient's overall health risk or to appropriately adjust for this risk across a large population.[24] All of these modifications affect the level of risk assumed by a provider, but do not change the fact that all forms of capitation require the provider to assume some level of financial risk for providing care to their patient population.[25] Therefore, for the purpose of assessing capitations against lifestyle medicine physician compentencies, the nuances of a capitation model are not critical.

Capitation is a payment model that has been used for several decades. Its usage peaked in the 1990s with the rate of capitation highest (around 16%) in 1996-1998 and then declined.[26] This decline was due, in part, to the fact that capitation was not adjusted for risk, forcing the assumption of large amount of risks that had adverse affects.[27] [28] Since 2014, the use of capitation has been stable.[29]

Distribution - Capitation

Use of capitation varies geographically and by area of practice. Capitation is more prevalent on the West Coast[30] and is more common for primary care [31]. In 2015 46% of primary care practices participated in at least one capitation contract.

In the public payer arena, Medicare's Pioneer and Next Generation accountable care organization models use optional capitation.

Incentives and Challenges - Capitation

There is a fair amount of literature on the incentives and challenges created by capitation. Capitation was developed as a response to the FFS pressure to increase the volume of services. Capitation has been called one of the worst ways to pay physicians because it "rewards the denial of appropriate services, the dumping of the chronically ill, and a narrow scope of practice that refers out every time-consuming patient".[32]

Since the provider bears the all of the risk of providing services, capitation creates a financial incentive for providers to lower costs by controlling "the number of episodes of care as well as the cost of individual episodes."[33] At the same time, capitation also creates an incentive to avoid patients who have multiple or expensive to treat conditions because the provider bears the financial risk of providing care to these patients.[34] Payments made in a capitation model "are not aligned with better or efficient care for each patient's particular condition. Instead, capitation puts the focus on limiting the overall amount of care delivered without tying the outcomes back to individual patients or providers."[35]

However, when applied at the organizational level, organizations tend to put in place policies and procedures to insulate physicians from delivering too few services.[36] Additionally, literature on capitation and prevention indicates that capitation is associated with a modest decrease in the amount of time physicians spend with their patients and, at the same time, with increased receipt of preventive and health counseling services. This is true for physicians who receive capitated payment predominantly.[37] A 2013 study looking at the effects of practice payment on patient education during office encounters also concluded that "[p]atients are more likely to receive education if their primary care providers receive primary capitated payments."[38]

While capitation does not prevent the use of out of office contacts such as email, phone or telemedicine and a care team, a 2017 analysis suggests "that high levels of capitated payment might be necessary to ensure that providing team- and non-visit-based care is financially sustainable for primary care practices."[39]

A capitation health system may create incentives for the system to deliver all the care within its system, because contracting for outside services reduces net revenue and results in underutilization of existing internal capacity known as "avoiding leakage". To control for this leakage, health systems encourage or require patients (and their referring doctors) to use in-house providers by charging patients extra fees when they go outside the system.[40]

When looking at physician compensation through the lens of economic agency theory, capitation creates a selection mechanism that attracts physicians who prefer a narrow scope of practice and an incentive mechanism that encourages physicians to natter their practice scope continually…Capitation may even convert primary care physicians into triage agents, for whom the only significant task is deciding which specialist till receive the referral for which patient."[41]

Some of the pure capitation incentives to hold back on quality of care could be mitigated by combining capitation payments with pay-for-performance quality incentives on top of a risk-adjusted prospective capitation payments.[42]

Transition to Capitation

A search of the literature did not return any articles on transitioning a practice to capitation. However, capitation is contract based, and, in addition to expenses related to calculating the capitation payment(s), would include costs related to negotiating and implementing a new contract and payment structure.

Episode-based and bundled payment model (EBBP)

Description - EBBP

An episode-based and bundled payment (EBBP) model is a single payment for a defined clinical 'episode of care' that covers all care provided by multiple providers(e.g. hospital and post-acute care over a given period of time instead of paying for each service separately. This model is designed to encourage collaboration among various providers involved in the treatment of medical episodes. Under EBBP, providers assume the risk within the episode (e.g. for their performance) but not on the volume of care.[43] This model is not the same as diagnostic related groups (DRGs) in that DRGs do not cover the full episode and do not necessarily cover support services.[44]

This defined 'episode of care' can be reimbursed either with a single payment or via standard FFS payments with a reconciliation against the 'episode of care' predetermined target at the end of the episode.[45] If the cost is kept below the target price, the provider receives a portion of the shared savings, if the target is exceeded, a financial penalty may result.[46]

The majority of the defined episodes to date deal with surgical procedures involving inpatient treatment.[47] Therefore, the majority of the literature on EBBP is on these types of episodes. Bundled payments are also common for services that patients pay for directly, such as Lasik eye surgery, plastic surgery, and in vitro fertilization.[48]

Disease-based (or patient-based) bundled payment remunerates providers on a per person (or enrolled member) per month (or year) level for a given patient care pathway (e.g., for type 2 diabetes or ischemic heart disease). This may include check-ups, specialist appointments, and related diagnostic tests for a chronic condition for a specified time. Payment is predetermined based on historical costs, best practices, or clinical guidelines.[49]

One study was identified that looked at cost and quality improvements in five chronic medical conditions (congestive heart failure, pneumonia, chronic obstructive pulmonary disease, sepsis, and acute myocardial infarction).[50] One article was identified on designing a bundled case rate for Collaborative Care for Depression (CCD) to align incentives with evidence-based depression care in primary care.[51]

EBBP generally have quality measures associated with the episode both to control for quality and allocate payment.

No studies were identified on the use of EBBP and primary care practice or prevention, which is not surprising given the historical use of EBBP and the fact that EBBP is based on the identification of a defined clinical episode. However, bundled payment models are "beginning to emerge for primary and preventive care for well-defined segments of patients with similar needs. Each primary care segment—such as healthy children, healthy adults, adults at risk for developing chronic disease, and the elderly—will need a very different mix of clinical, educational, and administrative services, and the appropriate outcomes will differ as well."[52]

One of the key aspects of EBBP, as related to lifestyle medicine, is that the model does not address whether a procedure/clinical episode is needed, only the performance within the clinically defined episode of care.[53]

Distribution - EBBP

While there are both commercial and public payers working with EBBP, the majority of the studies have looked at the Medicare bundled payment programs.[54] EBBP in Medicare began in the 1980s and has continued to expand through today. Some of the Medicare programs are voluntary and some are mandatory. Most recently, EBBP for mandatory cardiac bundles (a chronic condition) were cancelled by CMS in 2018 and the role of EBBP in the future in Medicare continues to evolve. Time-based bundled payments for chronic care are emerging in other countries and with private payers.[55]

One of the largest Medicare programs is a voluntary program that allows physician practices to contract directly with CMS. The program began in 2013 - Medicare Bundled Payments for Care Improvement Program (BPCI) and has 4 payment models. Model 2 is the largest and forms the basis of commercial bundles.[56] The participants select the procedures to bundle - hip and knee replacements (surgical) and congestive heart failure (medical condition) are the most popular bundles. These bundles are all inpatient and post-acute.[57] Medicare operationalizes bundled payments by paying on a FFS basis, but reconciling the total cost after the episode ends.[58] [59]

Other Medicare programs include the Voluntary Acute Care Episode Demonstration program which began in 2009 and continued for three years and the Mandatory Comprehensive Care for Joint Replacement Medicare program began in 2016 and covers hip and knee replacements.

Several EBBP initiatives are addressed by the literature, including Prometheus, which began in 2006, and was designed to be used for a broad set of services for both acute and chronic treatment services. Early implementation of PROMETHEUS at three pilot sites from 2007 to 2011 was not successful given the challenges in EBBP discussed below. [60]

Interestingly, large employers are entering into contracts directly with providers to cover certain types of episodes of care using EBBP. For example, Lowes has partnered with Cleveland Clinic for coronary artery bypass graft surgeries and Lowes and Walmart have partnered with four health systems for hip and knee replacements[61]

The incentives on coordination and collaboration outcome have lead to discussions in the literature about the creation of integrated practice units (IPUs) centered around episode bundles. The IPUs combine all the relevant clinicians and support personnel in one team, working in dedicated facilities. IPUs address the low volume challenge of EBBP (see discussion below) by concentrating a volume of patients with a given condition in one place, allowing diagnosis and treatment by a highly experienced team.[62] Some examples are MD Anderson's Head and Neck Center and the Joslin Diabetes Center. [63]

Incentives and Challenges - EBBP

EBBP are designed to provide a financial incentive to efficiently manage and coordinate a patient's treatment for the entire episode of care, across multiple providers.[64] By not mandating a care pathway, EBBP also creates the flexibility for providers to decide which services should be provided within the defined episode (rather than being restricted by the services specifically authorized under fee-for-service) and the incentive and ability to eliminate any unnecessary services and control for risks within the episode.[65]

The limited reimbursement in EBBP also has encouraged standardization in clinical processes to reduce the costs of treatment within an episode[66] and means that EBBPs may have a lower administrative burden than some other payment models (since, generally no preauthorization is required within an episode).[67]

Despite the generally positive literature on the use of EBBP in acute care episodes, the literature consistently discusses the challenges facing designing and operationalizing EBBP. One of the biggest challenges facing EBBP is how to define the episode. How a bundle is designed affects the risk profile (risk assumed by providers) of that episode and is "a quagmire for all providers and payers".[68] There is the

potential risk of uncontrolled variation in the cost of care. While there are episode groupers that can assist with the definition of a bundle, the varying grouper models can suggest different definitions for episodes for similar medical conditions.[69]

Other challenges include establishing payment rates for and within an episode,[70] including whether they should be risk adjusted or flat fee;[71] and agreeing on a payment method and any quality metrics that may be a part of the bundle.[72] Providers must have a mechanism to evaluate the care of providers, allocate payment and make the payments—a challenge if hospitals, physicians, and other providers are not well integrated.

Given the infrastructure investment required for EBBP, making EBBP procedures financially viable is another challenge. Low volumes of bundled services can make providers vulnerable to high cost cases and taking on too much risk. A PricewaterhouseCoopers Strategy & Survey found that most (42 percent) of providers and hospital leaders ranked scaling the number of procedures or conditions as their top bundled payment challenge.[73] The model does not control for volume of procedures, and early studies of BPCI found modest increases in procedure volume.[74]

For chronic medical conditions, there are several challenges highlighted by a 2013 article by O'Byrne, including how episode reimbursement will cover the costs of care coordination for comorbid patients (e.g. diabetes and chronic renal failure)[75] and how to handle the transition from one condition to another.

A recent study of oncologists "supports the growing body of evidence that physicians have limited enthusiasm for bundled payments and raises the possibility that higher compensation may not overcome resistance to bundled programs among a substantial proportion of oncologists."[76]

Retainer-based practice (RBP)

Description - RBP

The literature on retainer-based practices (RBP)[77] identifies two emerging types of RBP - concierge care medicine (CC) and direct primary care (DPC).[78] For purposes of identifying literature to analyze the alignment with lifestyle medicine, the distinctions do not appear to make a difference.[79] However, for purposes of creating a strategy for lifestyle medicine, the distinctions may make a difference.

CC and DPC can be differentiated as follows:[80].

Concierge Care	Direct Primary Care
Generally a higher monthly rate (in addition to insurance)	Generally a monthly rate under $100
Often takes insurance	Does not take insurance
Smaller number of patients (<300)	Larger panels of patients (400-800)
Tend to focus on premium services, executive lab panels, extended office visits and sometimes accompanying patients to specialists	Focus more on saving money than offering premium services

In both CC and DPC, the patient panel is has fewer patients than in other typical practices and the practice size is small.[81]

According to a 2010 survey, most retainer physicians are in primary care and offer an in-depth annual physical that is an hour or longer and focuses on preventive care. The appointments tend to be longer and care tends to be personalized. For one practitioner, the time allotted for a physical increased from 30 minutes (non-retainer) to 90 minutes (retainer).[82] Patients tend to have increased access to their physician in a retainer practice and physicians tend to see patients for some services that they may have referred to a specialist in a non-retainer setting. If they do refer the patient to a specialist, physicians reported that they tended to be more involved.[83] A 2015 survey echoed these responses, specifically identifying email access, same day appointments, 24-hour access as types of practice amenities.[84]

The average monthly cost to patients in a DPC practice was identified in 2015 as $93.26 and, the average for a one-time enrollment fee, if the practice charged the fee, was $78.39.[85]

Distribution - RBP

Retainer based practices are a growing model. There were 500 to 600 direct primary care practitioners in the U.S. in 2015.[86] Philip Eskew, MD, in a speech, estimated 620 practices in April 2017 (up from 125 in June 2014) and projected approximately 2,000 practices by 2022.[87] The American Academy of Family Physicians estimated in 2017 that almost 3% of family physicians operated in a DPC practice.[88]

A 2005 survey of physicians in a retainer-based practice found that retainer physicians have much smaller patient panels; care for fewer African-American, Hispanic, or Medicaid patients. Most retainer physicians kept few of their former patients when they converted from non-retainer practices. However, most retainer physicians provide charity care and many continue to see some patients who do not pay retainer fees.[89]

2015 survey responses indicates that, compared to 2005 survey data, membership fees for direct primary care have decreased significantly and projections of patient panel size have increased significantly which suggests that DPC may be viable at a larger scale. The rate of insurance billing has decreased significantly, and the model is now predominantly family medicine.[90]

The role of the public health system with RBP is limited. The primary Medicare policy relating to retainer medicine is a 2005 memorandum issued by the Office of the Inspector General (OIG), Department of Health and Human Services, which clarifies that any extra charges by physicians must be for non-covered services.[91] The ACA allows for the use of the DPC to provide primary care.[92] DPC is explicitly mentioned in the Affordable Care Act (ACA) as an acceptable option for receiving medical care without insurance.[93]

Incentives and Challenges - RBP

The organizational structure of RBPs are centered on the physician and emphasize the direct relationship between the patient and the physician. Given the smaller number of patients in both types of practice, the length of visits can and is

longer and the patient generally has quick access to the physician with some physicians giving patients their direct cell phone numbers.[94] There is some empirical evidence that there are improved wait times under CC medicine.[95]

For many physicians' perspectives, concierge medicine means greater autonomy, a more manageable patient load with reduced administrative burdens (if they don't take insurance), and the chance to improve incomes.[96]

However, there are challenges to this type of practice. Several criticisms are leveraged against the model - concierge medicine is elitist and that widespread implementation will increase the shortage of primary care physicians.[97] [98] There are ethical considerations involving potential patient abandonment in transitioning to this type of practice. There is also legal ambiguity as to how these types of practices work in certain states. DPC may be treated differently by state. In some states, DPC may be regulated as insurance. While the ACA allows for the use of the model to provide primary care,[99] the ability of patients to use their HSAs for DPC payments has not been allowed and has been the subject of legislation (Primary Care Enhancement Act of 2017).[100] [101] Like other payment models, there are challenges in defining the services provided under the arrangement.

A final challenge to RBP involves scalability. A model that does not meet the needs of a disadvantaged population will probably not have a significant impact on the overall costs and outcomes of the US health care system.[102] Additionally, if the numbers of primary care practitioners continue to decrease, this model may become size limited.

There are several national organizations associated with the management of retainer practices including the transition to a retainer-based practice (MDVIP, Signature MD, Concierge Choice).[103]

Pay for Performance Contract (P4P)

Definition - P4P

Pay for performance (P4P) is a payment model in which financial rewards (or penalties) are made to individual providers or provider organizations based on their performance against pre-defined measures. The measures can focus on quality (processes and outcomes), spending, and/or patient experience.[104] The model is designed to vest providers in a patient's health and efficient care delivery. Pay for performance tends to be used in addition to other base payment models.[105]

There are 4 basic types of measures[106]:

- process (the performance of activities that have been demonstrated to contribute to positive health outcomes for patients)
- outcome (effects that care had on patients)
- patient experience (patients' perception of the quality of care they have received and their satisfaction with the care experience); and
- structural (the facilities, personnel, and equipment used in treatment).

P4P measures and programs vary based on the clinical setting in which they are used. "Clinical measures in the ambulatory setting focus heavily on preventive care and management of heart disease and diabetes, while in the hospital setting, the focus has been on heart attack, congestive heart failure, pneumonia, and surgical infection prevention."[107]

Distribution - P4P

The use is widespread across the health care sector.[108]

P4P has been used in Medicare in the Hospital Value Based Purchasing program which applies to almost all acute care hospitals in the country. The program, requires certain measurement reporting (process of care, patient experience and outcomes) and includes rewards for hospitals for both achievement and improvement.[109]

In the private sector, payers are combining P4P mechanisms that reward providers on quality and efficiency measures with other forms of population based payments. For example, Blue Cross and Blue Shield of Michigan has a Value Partnership program that rewards primary care physicians, specialists, and hospitals to

develop strong care coordination and population management capabilities while their Physician Group Incentive Program (PGIP) provides incentives for primary care physician organizations that develop patient-centered medical home capabilities.[110]

Incentives & Challenges - P4P

There are challenges to P4P both in the design and implementation phase. Those are discussed in more detail below. Designing and operationalizing P4P systems is influenced by the principles of behavioral economics "in which such factors as payment size, timing, and frequency are believed to have important influences on individual behavior."[111] Additionally, P4P and medical professionalism are closely linked.[112] In health care, though, there isn't strong empirical data to help determine the most successful incentive structure.[113]

In the design phase, the literature makes it clear that there are a myriad of considerations that must be taken into account. One issue is the type of measure used (e.g. process vs. outcome[114]) The use of outcome measures is particularly controversial in pay-for-performance because outcomes are often affected by social and clinical factors unrelated to the treatment provided and beyond the provider's control.[115] Certain aspects of health care are difficult to measure. For example, process measures (such as HEDIS suggestion for regular hemoglobin A1c tests for adults) are "easy to measure, often contained in a claim, and entirely within the control of the treating physician" while outcome measures (such as the percent of attributed adult diabetic patients who have they hemoglobin A1c controlled below 8%) "can be more nuanced, rely on patient adherence, and consider social determinants of health.[116] Secondly, measures in P4P programs may only measure narrow amount of physician activities.[117]

How the measure was created - specifically who was involved in creating the measure - is another challenge in designing a P4P program. The literature indicates that physician buy-in to a P4P plan and measures is critical. If earning these P4P bonuses requires a change to the clinicians' patient workflow, and the "frontline physicians are not included in the negotiation, do not think they have any room for improvement, are not willing to invest the time necessary, or do not agree with the standard metrics, they are unlikely to perform the activities necessary to improve their clinical outcomes."[118]

The organizational structure, including non-financial incentives, in which the measures operates must also be considered when designing a P4P program and "factors such as a strong infrastructure and public reporting may have a large influence."[119]

"The best combination of performance measures, organizational level of accountability, criteria for payment, and incentive size is not obvious, and unintended consequences are common."[120] "When designing incentive schemes, more attention needs to be paid to factors likely to produce unintended consequences."[121]

In addition to the design challenges, implementation of P4P systems holds additional challenges. With its emphasis on measures and linking monetary payments to attaining those measures, P4P favors large practices that have both the information technology and analytical ability to measure performance and track performance over time.[122] In addition to the IT requirements, there is increased administration in tracking activities related to the measure and the measures.

P4P programs take time, especially in primary care. The results of one survey indicated that "primary care physicians spent 3.9 hours per week dealing with quality measures, compared to 1.7, 1.1, and 3.0 hours for cardiologists, orthopedists, and physicians inmultispecialty groups, respectively. Primary care practices spent 19.1 hours of physician and staff time per physician per week dealing with quality requirements of external entities; cardiology, orthopedic, and multispecialty practices spent 10.4, 11.3, and 17.6 hours per physician per week, respectively."[123] The cost of measures was quantified in a 2016 article which concluded that US physician practices in four common specialties spent more than $15.4 billion dealing with the reporting of these measures.[124]

From an incentive perspective, P4P can penalize doctors for taking the sicker, more complex patients and exacerbate healthcare disparities.[125] In one study, "Californian physicians were more likely to express resentment about pay for performance and appeared less motivated to act on financial incentives, even in the program with the highest rewards. The inability of Californian physicians to exclude individual patients from performance calculations caused frustration, and some physicians reported such undesirable behaviors as forced disenrollment of noncompliant patients."[126]

However, despite the difficulties in designing and implementing P4P programs discussed above, one recent study on small primary care clinics in New York City showed that a tiered incentive structure with process and outcome measures showed greater improvements in both types of measures in the incentivized clinics.[127] Similarly, a well designed P4P program may incentivize harmonizing measures and incentives across care settings. For example, in EBBP the same set of incentives for hospitals, physicians, and the post-acute care settings they contract with can be used.[128]

Cost to transition to P4P

Both the increased IT requirements and the increased administrative requirements mean potentially a significant cost to transition to a P4P payment model (not including the time and effort involved in creating performance measures).

Shared Savings

Description

Shared savings is a payment strategy that gives providers an opportunity to capture a portion of savings achieved if their actual costs are below projections. The base payment tends to be fee-for-service and those FFS payments are periodically reconciled against a predetermined cost benchmark. The practice receives a share of identified savings, and, in some models, the practice may pay a penalty if costs exceed a predefined benchmark (shared risk). Therefore, providers are not necessarily at risk for their patient population, unless the model includes shared risk.

Shared savings can be applied to a variety of services[129], work with other base payment models, can include different patient populations[130], and can be used in both ACO and PCMH structures. Shared savings is a primary cost control mechanism in both private and public ACO models.[131] In 2016, about 61 percent of ACO contracts contained shared savings arrangements.[132] Given it's prevalence with ACOs, this literature review focuses on shared savings in the context of ACOs.

Distribution - SS/ACO

Medicare had a Physician Group Practice (PGP) Demonstration project (2005 to 2010) with ten participating physician groups across the U.S. that received their regular Medicare payments for services delivered to beneficiaries. If the participants met certain quality measures and exceeded a savings target of 2 percent, they could share in the savings generated. Penalties for excessive costs were not included in the PGP demonstration. Participants did well on meeting the quality metrics. However, only two of the participants were able to meet the 2 percent savings benchmark in all five years.[133]

The ACA utilizes the shared savings mechanism in both of its ACO models—the Medicare Shared Savings Program (MSSP) and the Pioneer ACO program.[134] In both models, providers are able to capture a portion of achieved savings if they meet a cost reduction benchmark; they are also subject to losses if their costs exceed the benchmark.

In 2015 about 44 percent of primary care practices were participating in an ACO[135] and about 44 percent of physicians were in practices participating in at least one type of ACO.[136]

Incentives - SS/ACO

Shared savings is designed to incentivize providers to reduce spending by offering a percentage of net savings.[137] Since shared savings is paid at the practice level the incentives appear at that level. Approximately 30% of physicians in a recent survey were not aware of whether their practice received payments via a shared savings arrangement.[138]

A review of the Medicare Shared Savings Program found that “ACOs that planned to distribute greater than 50% of shared savings to PCPs and specialists were associated with a higher probability of generating savings compared with those that did not (39% vs 22%; P = .001).[139]

Like P4P, shared savings requires a large investment in information technology to track any quality measures and address patient risk (Fangmeier 2013) Since the current models do not tie patients to a particular provider, patient attribution model determination is also needed. (Fangmeier 2013) In order to influence physician behavior via this model, the ability to push information to physicians is a key to ACO success (Sandlot Solutions 2012) however, there are no research studies to verify the impact of this model on physician behavior.

The shared savings payment model minimizes disruptions to patients (Fangmeier 2013). Additionally, it doesn’t require a change to the underlying payment structure. However, it does require determining cost targets.

See the next section on ACOs for additional information.

Accountable care organizations

Description/definition - ACO

An accountable care organization (ACO) is an organizational structure (virtual or real) that includes providers across different practices (primary care, specialty, hospitals, etc) who voluntarily enter into a contract with a payer to manage the health care needs of an attributed patient population against quality and cost targets. There are both 'shared savings' (in which providers are eligible for bonuses on meeting targets) and 'shared risk' (in which the providers can get both bonuses and pay penalties based on meeting or not meeting targets), as described in the Shared Savings section above.[140]

An ACO is not tied to a particular payment model and should have the capability to manage both the cost and quality of health care services under a range of payment systems, including fee-for-service, episode payments, and full and partial population-based prepayment (capitation).[141] As discussed above, ACOs often have a form of shared savings also.

Literature has described the ACO model as a "steps toward capitation" in which the ACO earns bonuses or penalties on the basis of how the total FFS charges for year compare to historical charges.[142] As such, improvement is rewarded at the population level but individual patient's circumstances are not the focus.[143]

Primary care physicians are given a key role in ACOs, in particular by attributing beneficiaries largely on the basis of which physician provided the most services within a given time period.[144]

ACOs, with their focus on population health management, depend on the tenets of strong primary care, such as coordinated, comprehensive, patient-centered care. Strong primary care also depends on the larger system to meet its full potential. [145]

Distribution - ACO

There are Medicare, Medicaid and private ACOs. For purposes of evaluating ACOs in the context of lifestyle medicine, no distinction is made between Medicaid, Medicare and commercial ACOs but it is important to note that this organizational form is visible in all parts of the current landscape of healthcare systems.

At the end of 2017 there were 923 active public and private ACOs covering over 32 million lives.[146] There was a net increase of 2.2 million covered lives during that same period.[147] This growth in ACOs has been relatively rapid given that in 2011 less than 5 million lives were covered.[148] The percent of population covered by ACO varies by state from 2% (Wyoming and W. Virgina) to 30% (Rhode island and Maine).[149] The majority of ACO covered lives were under commercial ACO contracts, 37% under Medicare and 10% under Medicaid. However, in terms of the actual number of ACO contracts, commercial ACOs were 48%, Medicare 46% and Medicaid 5%.[150]

In 2018 over 53% of physicians were in practices that were part of at least one of the three types of ACOs (commercial, medicare, medicaid) and some physicians participated in all three types.[151]

Physician participation in ACOs is lower in places with vulnerable populations than in more affluent communicates.[152] However, the first national survey of ACOs found that physicians are playing strong leadership and ownership roles.[153]

Practice ownership also appears to correlate with whether the practice participates in an ACO. Recent physician survey indicates that participation in ACOs was higher with hospital owned practices compared to physician owned practices. Practices with primary care physicians are more likely to be hospital-owned.[154]

A 2012 article looked at where ACOs have formed and identified regional factors that are predictive of ACO formation. The Northwest didn't have many ACOs while the Northeast and Midwest had many. The regional factors identified as associated with ACO formation include a greater fraction of hospital risk sharing, larger integrated hospital systems and primary care physicians practicing in large groups.[155]

Incentives and Challenges - ACO

ACO's bring a variety of providers under a single construct. This has both positive and negative aspects.

One of the most important positive aspects of ACOs, as they relate to lifestyle medicine, is the resulting focus on coordination of care and primary care, including preventative care. Having various providers under one room encourages coordination of care with a focus on prevention (to reduce costs by keeping patients healthy).[156] ACOs with primary care practices may help improve the uptake of preventive care services among their attributed patients because health care providers working within

ACO contracts have greater incentives than under traditional fee-for-service to prevent disease and improve health.[157] Both hospital-led ACOs and physician-led ACOs built on advanced primary care models performed better.[158] Helping to focus on preventative care, CMS offers a relatively high reimbursement rate for annual wellness visits compared to most other primary care services.[159]

However, performance of ACOs in preventative areas is dependent on factors such as provider composition, initial investment and organizational structure, (depending on the of preventative measure).[160] A higher proportion of primary care physicians in ACOs is associated with better quality and cost outcomes.[161] Interviews suggest that mechanisms such as shared savings, care management programs, physician performance measurement, and closing care gaps (through reminders, for example)—are important for delivering preventive care services.[162]

Among those interviewed, the motivations for ACOs to engage in preventive care activities were a combination of doing what is best for patients and meeting business priorities including risk adjustment scores and meeting quality targets. Therefore, payers should be aware that the choice of how to structure payments and what quality measures to use can have significant implications for ACO behavior. Additionally, more consideration should be given to non-financial motivators such as timely publication of performance data or using patient-reported outcomes[163]

Challenges for ACOs are similar to those in some of the other models, such as attribution and benchmark issues.[164]

Additionally, aligning providers and the ACO is not an insignificant necessity. A 2017 article looking at physicians in Medicare ACOs found that the views of many physicians participating in these ACOs were not aligned with the ACO goals and the physicians were divided in their option of the effectiveness of the ACO model.[165] This means that, at least in the context of Medicare ACOs, ACOs need to engage physicians in furthering the ACO goals.

The relative newness of this structure is another challenge. Antitrust issues are unresolved for ACOs and depend on the market in which they operate.[166] Additionally, one study looked the differences between new partnership ACOs vs. ACOs formed from existing organizations. The new partnership ACOs, are very common: upwards of three-quarters of ACOs involve new partners and they have lower scores than existing organizations on some quality measures, particularly those measures focused on at-risk populations and preventive health.[167] “It is unclear what the future of ACO partnerships may be, and if partnership ACOs are a sustainable model on their own, or if instead partnership ACOs are an interim phase.”[168]

Transition Costs - ACO

Transitioning to an ACO structure is not a trivial endeavor. It requires capital investments in human resources and administrative alignment. For example, United Physicians of San Antonio, Texas, a 45-provider ACO that formed late in 2013, invested about $1 million by 2015.[169] This investment was for hiring nurses and social workers to serve as case managers, standardizing the EHR systems used by all of the providers, developing protocols for coordinating care among the providers and educating providers on the principles of evidence-based care, and establishing ties with two local hospital systems.[170]

Patient centered medical homes (PCMH)

Description - PCMH

A Patient Centered Medical Home (PCMH) is an organizational structure for care delivery in which a practice proactively manages patients' healthcare needs in a team-based environment and coordinates medical care across different entities. PCMHs are a coordinated approach to health care that rely on the sharing of electronic medical records (EMRs) among all providers on the coordinated care team.[171] In general, a PCMH practice engages patients in their own care and treats patients holistically. Patients may also have extended access to providers with a focus on quality and safety.[172] There are various credentialing organizations for PCMHs.

Joint principles of the PCMH were released in 2007. They described the following characteristics:

- personal physician, physician directed medical practice in which the personal physician leads a team of individuals who take responsibility for the ongoing care of patients;
- whole person orientation in which the personal physician is responsible for appropriately arranging care with other qualified professionals and care is coordinated and/or integrated across the health care system and the patient's community;
- quality and safety;
- enhanced access to care such as same day appointments, varying options for communication; and
- payment should reflect the value provided outside of the appointment (physician communication, care coordination, and the non-physician staff).[173]

Medical homes generally operate in a FFS environment, but may receive additional payments, including P4P and shared savings. PCMH may receive care management fees - which are set monthly payments on top of existing funding models to fund a coordinated team of primary care professionals via different modalities (e.g. phone, home visits, email communications, time to coordinate care, etc).[174] These fees may be paid in a capitated arrangement.[175] Medicare has a comprehensive primary care initiative which provides monthly amount per beneficiary on top of FFS.[176] Michigan Blue Cross Blue Shield's Provider Group Incentive Program (PGIP) offers higher reimbursements to PCMHs. Through PGIP the practice receives 25% more for every office visit for patients covered by Michigan BC/BS.[177] [178]

While PCMHs generally use FFS as the underlying payment methodology, that is not the only payment model that can be used. Patient-centered medical homes could overlap with time-based, episode-based payments for managing chronic disease. For an enrollee with a chronic disease, episode-based payment would cover all services associated with the chronic disease during a specified period, in contrast to capitated - PCMH payments that supplement fee-for-service payment.[179] Additionally, capitated payments with quality measures could be used.[180]

In 2011, Guidelines for Patient-Centered Medical Home Recognition and Accreditation Programs was released. Included in these guidelines are the incorporation of the joint principles of a PCMH, to ensure the incorporation of patient and family-centered care emphasizing engage of patients, their families and their caregivers, and care coordination within the medical neighborhood.[181]

There are four national organization - the Accreditation Association for Ambulatory Health Care, the Joint Commission, the National Committee for Quality Assurance, and URAC - that have PCMH-specific, published set of standards, and were used widely as a model PCMH.[182]

Distribution - PCMHs

In 2018, 32% of physicians were in medical homes - which represents a consistent increase from 2014 (23.7%) to 2016 (25.7%).[183] About 11% of physicians in a solo practice belonged to a medical home and participation in a medical home was higher when a practice had some primary care physicians. Physicians in hospital-owned practices (vs. physician-owned practices) were more likely to participate in a medical home.

A survey conducted by the American Academy of Family Physicians (AAFP) and Humana found that nearly half of family physicians (49%) are in a practice that is recognized as a medical home. Another 5% are in a practice that has submitted an application for medical home status.[184]

About 23% of physicians who's practice participated in a medical home were unaware of that fact.[185]

Some newer approaches to medical-home payment change physician incentives. For example, Medicare's Comprehensive Primary Care Plus Initiative pays larger monthly amounts than under the earlier initiative but pays lower rates for services under the Physician Fee Schedule. This blends fee-for-service payments with capitated

payment, and covers fixed costs with the capitation payment and variable costs through fee-for-service.[186]

Incentives and Challenges - PCMH

A strong primary care workforce including physicians, physician assistants, nurses, medical assistants, nutritionists, social workers, and care managers who are trained to provide care based on the elements of the PCMH is a critical element of the PCMH model.[187] Current fee for service payment policies, on which many practices still operate, are inadequate to fully achieve PCMH goals. Providers are not routinely compensated for care coordination or enhanced access, contributions of the full team are often not reimbursed, and there is no incentive to reduce duplication of services across the care continuum.[188] One of the biggest hurdles practices face in achieving PCMH status are: finding the money to pay for additional personnel such as care coordinators and non-physician practitioners; adopting electronic health records (EHRs) and using them to exchange information and analyze data; creating a practice culture that is patient-centered (where patient makes the decision; staff has to respect the patient); and engaging patients in their care.[189]

Transition - PCMHs

There are significant costs associated with converting traditional practices to medical homes and maintaining them over the long term. One analysis put the median one-time costs of transforming into a medical home at $30,991 per practice and the median ongoing costs at $147,573 per practice per year.[190] Care management activities accounted for over 60% of practices' transformation-associated costs and the per-clinician and per-patient transformation costs were greater for small and independent practices.[191]

Southeast Texas Medical Associates (SETMA) a 50-provider, 375-employee practice in Beaumont, Texas, has spent nearly $9 million on electronic health records and other IT equipment and software. The practice measures its performance by tracking 300 quality metrics on all its patients.[192]

The practice size may impact it's ability to put in place the structural capabilities of a PCMH. A limited study found that small to medium size practices may need "at least transitional financial support if not payment reform, attention to implementation and cultural change."[193]

Group Medical Visits, Shared Medical Appointments and Group Medical Nutritional Therapy

Description - GMVs

A group medical visit (GMV), also referred to as a shared medical appointment (SMA) or group medical appointment (GMA), is an extended clinical encounter (60 - 120 minutes) that allows a physician and his/her patients to exchange information regarding chronic disease management within a supportive group format. It is not a replacement to the individual visit.[194]

A group visit can occur in a variety of formats - Physicals Shared Medical Appointment, Cooperative Health Care Clinic, and Drop In Group Medical Appointment (DIGMA) (most common).[195] Though there are differences in the structure of these types, for the purposes of this review, no distinctions are made. Group visits have been used for many chronic conditions, including diabetes.[196] One systematic review of SMAs for chronic medical conditions in the US was found.[197]

Studies have demonstrated that SMAs improved patient access, enhanced outcomes, and promoted patient satisfaction.[198] There is data to support the effectiveness of group visits for improving patient and physician satisfaction, quality of care, and quality of life and in decreasing emergency department and specialist visits.[199]

Physicians report that, with GMVs, they can “finally practice the kind of caring, holistic medicine that inspired them to become doctors in the first place. Physicians also can realize savings in time, energy and money.”[200]

In addition to impacting clinical outcomes, group visits can also improve operational processes such as reduced appointment wait times, improved provider efficiency (ie, more patients seen with SMAs), high patient satisfaction, and improved adherence to recommended medical monitoring.[201] For example, since GMAs are generally reimbursed at the same rate as an individual consultative appointment, physicians can increase their productive time.[202] However, group visits are not treated in the same fashion by all payers. Medicare has disseminated general policy statements in support of reimbursement of group medical visits, but there is regional variation. Additionally, some insurers have policies for reimbursement of group visits affecting the ability to be reimbursed.

GMAs are not tied to a particular practice structure and can be implemented in many practice structures whether group or solo, insurance or cash, primary care or specialty, physician or dietician.[203]

Once example of a lifestyle/behavior modification based group visit is group medical nutrition therapy. Medical nutritional therapy (MNT), itself, is a nutrition care process provided by registered dietitians that is focused on the management of disease that involves in-depth individualized nutrition assessment and a duration and frequency of care to manage disease.[204] MNT focuses on behavior and lifestyle change by establishing goals, a care plan, and interventions along with plans for follow-up over multiple visits to assist with behavioral and lifestyle changes relative to each individual's nutrition problems and medical condition or disease(s).[205] MNT is covered for Medicare patients by Medicare in some circumstances (type 2 and type 2 diabetes, gestational diabetes, non-dialysis kidney disease, post-kidney transplants).[206]

Though there is literature on nutritional therapy and literature on group visits, not much literature was found on group medical nutritional therapy. One study was found on the efficacy of group medical nutritional therapy.[207]

Incentives and Challenges - GMVs

While group visits are have many positive aspects involving the physician patient interactions, the literature also addresses the challenges faced by practices with group visits. The challenges identified are operational in nature such as appropriately addressing the HIPPA/Confidentiality of patient medical information with regular documentation by the patient - either annually or at each group visit.[208] Another challenge involves billing and reimbursement. As discussed above, group visits are not treated in the same fashion by all payers.

From a physician's perspective, GMVs provide increased face-to-face time with patients, more efficient patient education, a process to support behavioral change and identify stressors, and a change in pace from a typical office visit.[209]

Using group visits is not a cost free endeavor. In addition to the administrative aspects discussed above, A group visit program requires 3 things to be successful: that the practice have an existing full practice panel; a meeting space that won't interfere with practice operations; and a skilled team (billable provider, educator, medical assistant, and a group visit administrator).[210] Additionally, time must be spent designing the group visit and the scope of group visits (either disease based or lifestyle/behavior modification based).[211]

"GMVs are not suitable for every provider or every patient, but they offer a potential option for follow-up medical management visits. A careful review must be made of the practice entity's patient mix, along with an analysis of the availability of resources and staff necessary to furnish SMAs effectively and safely."[212]

[1] Quinn, Kevin. “The 8 Basic Payment Methods in Health Care.” *Annals of Internal Medicine* 163, no. 4 (August 18, 2015): 300. https://doi.org/10.7326/M14-2784.

[2] Kane, CK. Updated data on Physician Practice Arrangements: For the First Time, Fewer Physicians are Owners Than Employees [Internet]. Chicago (IL): American Medical Association; 2019. (Policy Research Perspective 2019-3. Available from https://www.ama-assn.org/system/files/2019-07/prp-fewer-owners-benchmark-survey-2018.pdf

[3] Kane, CK. Updated data on Physician Practice Arrangements: For the First Time, Fewer Physicians are Owners Than Employees [Internet]. Chicago (IL): American Medical Association; 2019. (Policy Research Perspective 2019-3. Available from https://www.ama-assn.org/system/files/2019-07/prp-fewer-owners-benchmark-survey-2018.pdf

[4] Petterson S, McNellis R, Klink K, Meyers D, Bazemore A. The State of Primary Care in the United States: A Chartbook of Facts and Statistics. January 2018.

[5] Quinn, Kevin. “The 8 Basic Payment Methods in Health Care.” *Annals of Internal Medicine* 163, no. 4 (August 18, 2015): 300. https://doi.org/10.7326/M14-2784.

[6] Bazemore, Andrew, Robert L. Phillips, Richard Glazier, and Joshua Tepper. “Advancing Primary Care Through Alternative Payment Models: Lessons from the United States & Canada.” *The Journal of the American Board of Family Medicine* 31, no. 3 (May 2018): 322–27. https://doi.org/10.3122/jabfm.2018.03.170297.

[7] Burwell SM. Setting value-based payment goals—HHS efforts to improve U.S. health care. N Engl J Med.2015;372(10):897

[8] Berenson, Robert A., and Eugene C. Rich. “US Approaches to Physician Payment: The Deconstruction of Primary Care.” *Journal of General Internal Medicine* 25, no. 6 (June 2010): 613–18. https://doi.org/10.1007/s11606-010-1295-z.

[9] Conrad, Douglas A. “The Theory of Value-Based Payment Incentives and Their Application to Health Care.” *Health Services Research* 50 (December 2015): 2057–89. https://doi.org/10.1111/1475-6773.12408.

[10] Casalino, Lawrence P., and Dhruv Khullar. “Value-Based Purchasing and Physician Professionalism.” *JAMA* 322, no. 17 (November 5, 2019): 1647. https://doi.org/10.1001/jama.2019.14990.

[11] Casalino, Lawrence P., and Dhruv Khullar. “Value-Based Purchasing and Physician Professionalism.” *JAMA* 322, no. 17 (November 5, 2019): 1647. https://doi.org/10.1001/jama.2019.14990.

[12] Zuvekas, Samuel H., and Joel W. Cohen. “Fee-For-Service, While Much Maligned, Remains The Dominant Payment Method For Physician Visits.” *Health Affairs* 35, no. 3 (March 2016): 411–14. https://doi.org/10.1377/hlthaff.2015.1291.

[13] Zuvekas, Samuel H., and Joel W. Cohen. “Fee-For-Service, While Much Maligned, Remains The Dominant Payment Method For Physician Visits.” *Health Affairs* 35, no. 3 (March 2016): 411–14. https://doi.org/10.1377/hlthaff.2015.1291.

[14] Rama, A. Payment and Delivery in 2018: Participation in Medical Homes and Accountable Care Organizations on the Rise While Fee-for-Service Revenue Remains Stable [Internet]. Chicago (IL): American Medical Association; 2019. (Policy Research Perspective 2019-4). Available at https://www.ama-assn.org/system/files/2019-09/prp-care-delivery-payment-models-2018.pdf

[15] Rama, A. Payment and Delivery in 2018: Participation in Medical Homes and Accountable Care Organizations on the Rise While Fee-for-Service Revenue Remains Stable [Internet]. Chicago (IL): American Medical Association; 2019. (Policy Research Perspective 2019-4). Available at https://www.ama-assn.org/system/files/2019-09/prp-care-delivery-payment-models-2018.pdf

[16] Ginsburg, Paul B., and Kavita K. Patel. “Physician Payment Reform — Progress to Date.” *New England Journal of Medicine* 377, no. 3 (July 20, 2017): 285–92. https://doi.org/10.1056/NEJMhpr1606353.

[17] Braman, Marc, and Mara Edison. “How to Create a Successful Lifestyle Medicine Practice.” *American Journal of Lifestyle Medicine* 11, no. 5 (September 2017): 404–7. https://doi.org/10.1177/1559827617696296.

[18] Beckman, Ken. “A New Approach for Lifestyle Medicine Payment.” *American Journal of Lifestyle Medicine* 13, no. 1 (January 2019): 36–39. https://doi.org/10.1177/1559827618795410.

[19] Beckman, Ken. “A New Approach for Lifestyle Medicine Payment.” *American Journal of Lifestyle Medicine* 13, no. 1 (January 2019): 36–39. https://doi.org/10.1177/1559827618795410.

[20] Beckman, Ken. “A New Approach for Lifestyle Medicine Payment.” *American Journal of Lifestyle Medicine* 13, no. 1 (January 2019): 36–39. https://doi.org/10.1177/1559827618795410.

[21] Braman discloses that he is the founder/owner of Lifestyle Medicine Pro, a practice support network for lifestyle medicine practice implementation.

[22] Miller, Harold D. "From Volume To Value: Better Ways To Pay For Health Care." *Health Affairs* 28, no. 5 (September 2009): 1418–28. https://doi.org/10.1377/hlthaff.28.5.1418.

[23] Porter, Michael E, and Robert S Kaplan. "How to Pay for Health Care," Harvard Business Review (July-August 2016) [Internet] Available at https://hbr.org/2016/07/how-to-pay-for-health-care.

[24] Porter, Michael E, and Robert S Kaplan. "How to Pay for Health Care," Harvard Business Review (July-August 2016) [Internet] Available at https://hbr.org/2016/07/how-to-pay-for-health-care.

[25] Fangmeier, J. "Payment Strategies: A Comparison of Episodic and Population-based Payment Reform" 2013. Accesed 12/30/2019. Available at https://chrt.org/publication/payment-strategies-comparison-episodic-population-based-payment-reform/

[26] Zuvekas, Samuel H., and Joel W. Cohen. "Paying Physicians By Capitation: Is The Past Now Prologue?" *Health Affairs* 29, no. 9 (September 2010): 1661–66. https://doi.org/10.1377/hlthaff.2009.0361.

[27] Zuvekas, Samuel H., and Joel W. Cohen. "Paying Physicians By Capitation: Is The Past Now Prologue?" *Health Affairs* 29, no. 9 (September 2010): 1661–66. https://doi.org/10.1377/hlthaff.2009.0361.

[28] Berenson, Robert A., and Eugene C. Rich. "US Approaches to Physician Payment: The Deconstruction of Primary Care." *Journal of General Internal Medicine* 25, no. 6 (June 2010): 613–18. https://doi.org/10.1007/s11606-010-1295-z.

[29] Zuvekas, Samuel H., and Joel W. Cohen. "Paying Physicians By Capitation: Is The Past Now Prologue?" *Health Affairs* 29, no. 9 (September 2010): 1661–66. https://doi.org/10.1377/hlthaff.2009.0361.

[30] Zuvekas, Samuel H., and Joel W. Cohen. "Paying Physicians By Capitation: Is The Past Now Prologue?" *Health Affairs* 29, no. 9 (September 2010): 1661–66. https://doi.org/10.1377/hlthaff.2009.0361.

[31] Levine, D.M., Linder, J.A. & Landon, B.E. Characteristics and Disparities among Primary Care Practices in the United States. *J GEN INTERN MED* **33,** 481–486 (2018) doi:10.1007/s11606-017-4239-z

[32] Robinson, James C. "Theory and Practice in the Design of Physician Payment Incentives." *The Milbank Quarterly* 79, no. 2 (June 2001): 149–77. https://doi.org/10.1111/1468-0009.00202.

[33] Miller, Harold D. "From Volume To Value: Better Ways To Pay For Health Care." *Health Affairs* 28, no. 5 (September 2009): 1418–28. https://doi.org/10.1377/hlthaff.28.5.1418.

[34] Miller, Harold D. "From Volume To Value: Better Ways To Pay For Health Care." *Health Affairs* 28, no. 5 (September 2009): 1418–28. https://doi.org/10.1377/hlthaff.28.5.1418.

[35] Porter, Michael E, and Robert S Kaplan. "How to Pay for Health Care," Harvard Business Review (July-August 2016) [Internet] Available at https://hbr.org/2016/07/how-to-pay-for-health-care.

[36] Zuvekas, Samuel H., and Joel W. Cohen. "Fee-For-Service, While Much Maligned, Remains The Dominant Payment Method For Physician Visits." *Health Affairs* 35, no. 3 (March 2016): 411–14. https://doi.org/10.1377/hlthaff.2015.1291.

[37] Balkrishnan, Rajesh, Mark A Hall, Don Mehrabi, G John Chen, Steven R Feldman, and Alan B Fleischer. "Capitation Payment, Length of Visit, and Preventive Services: Evidence From a National Sample of Outpatient Physicians." *THE AMERICAN JOURNAL OF MANAGED CARE* 8, no. 4 (2002): 9.

[38] Pearson, W. S., D. E. King, and C. Richards. "Capitated Payments to Primary Care Providers and the Delivery of Patient Education." *The Journal of the American Board of Family Medicine* 26, no. 4 (July 1, 2013): 350–55. https://doi.org/10.3122/jabfm.2013.04.120301.

[39] Basu, Sanjay, Russell S. Phillips, Zirui Song, Asaf Bitton, and Bruce E. Landon. "High Levels Of Capitation Payments Needed To Shift Primary Care Toward Proactive Team And Nonvisit Care." *Health Affairs* 36, no. 9 (September 2017): 1599–1605. https://doi.org/10.1377/hlthaff.2017.0367.

[40] Porter, Michael E, and Robert S Kaplan. "How to Pay for Health Care," Harvard Business Review (July-August 2016) [Internet] Available at https://hbr.org/2016/07/how-to-pay-for-health-care.

[41] Robinson, James C. "Theory and Practice in the Design of Physician Payment Incentives." *The Milbank Quarterly* 79, no. 2 (June 2001): 149–77. https://doi.org/10.1111/1468-0009.00202.

[42] Conrad, Douglas A. "The Theory of Value-Based Payment Incentives and Their Application to Health Care." *Health Services Research* 50 (December 2015): 2057–89. https://doi.org/10.1111/1475-6773.12408.

[43] Fangmeier, J. "Payment Strategies: A Comparison of Episodic and Population-based Payment Reform" 2013. Accesed 12/30/2019. Available at https://chrt.org/publication/payment-strategies-comparison-episodic-population-based-payment-reform/

[44] Porter, Michael E, and Robert S Kaplan. "How to Pay for Health Care," Harvard Business Review (July-August 2016) [Internet] Available at https://hbr.org/2016/07/how-to-pay-for-health-care.

[45] Medicare Approach

[46] Glickman, Aaron, Claire Dinh, and Amol S Navathe. "The Current State of Evidence on Bundled Payments" University of Pennsylvania Leonard Davis Institute of Health Economics Issue Brief. October 2018.

[47] O'Byrne, Thomas J, Nilay D Shah, Douglas Wood, Robert E Nesse, Patrick J F Killinger, William J Litchy, Robert J Stroebel, and Amy E Wagie. "Episode-Based Payment: Evaluating the Impact on Chronic Conditions." *T. J.* 3 (n.d.): 21.

[48] Porter, Michael E, and Robert S Kaplan. "How to Pay for Health Care," Harvard Business Review (July-August 2016) [Internet] Available at https://hbr.org/2016/07/how-to-pay-for-health-care.

[49] Feldhaus, Isabelle, and Inke Mathauer. "Effects of Mixed Provider Payment Systems and Aligned Cost Sharing Practices on Expenditure Growth Management, Efficiency, and Equity: A Structured Review of the Literature." *BMC Health Services Research* 18, no. 1 (December 2018): 996. https://doi.org/10.1186/s12913-018-3779-1.

[50] Joynt Maddox, Karen E., E. John Orav, Jie Zheng, and Arnold M. Epstein. "Evaluation of Medicare's Bundled Payments Initiative for Medical Conditions." *New England Journal of Medicine* 379, no. 3 (July 19, 2018): 260–69. https://doi.org/10.1056/NEJMsa1801569.

[51] Bao, Yuhua, Lawrence P. Casalino, Susan L. Ettner, Martha L. Bruce, Leif I. Solberg, and Jürgen Unützer. "Designing Payment for Collaborative Care for Depression in Primary Care: Designing Payment for Collaborative Care." *Health Services Research* 46, no. 5 (October 2011): 1436–51. https://doi.org/10.1111/j.1475-6773.2011.01272.x.

[52] Porter, Michael E, and Robert S Kaplan. "How to Pay for Health Care," Harvard Business Review (July-August 2016) [Internet] Available at https://hbr.org/2016/07/how-to-pay-for-health-care.

[53] Ridgely, M. Susan, David de Vries, Kevin J. Bozic, and Peter S. Hussey. "Bundled Payment Fails To Gain A Foothold In California: The Experience Of The IHA Bundled Payment Demonstration." *Health Affairs* 33, no. 8 (August 2014): 1345–52. https://doi.org/10.1377/hlthaff.2014.0114.

[54] Glickman, Aaron, Claire Dinh, and Amol S Navathe. "The Current State of Evidence on Bundled Payments" University of Pennsylvania Leonard Davis Institute of Health Economics Issue Brief. October 2018.

[55] Porter, Michael E, and Robert S Kaplan. "How to Pay for Health Care," Harvard Business Review (July-August 2016) [Internet] Available at https://hbr.org/2016/07/how-to-pay-for-health-care.

[56] Glickman, Aaron, Claire Dinh, and Amol S Navathe. "The Current State of Evidence on Bundled Payments" University of Pennsylvania Leonard Davis Institute of Health Economics Issue Brief. October 2018.

[57] https://innovation.cms.gov/initiatives/bundled-payments/. Accessed 9/23/2019

[58] Glickman, Aaron, Claire Dinh, and Amol S Navathe. "The Current State of Evidence on Bundled Payments" University of Pennsylvania Leonard Davis Institute of Health Economics Issue Brief. October 2018.

[59] Glickman, Aaron, Claire Dinh, and Amol S Navathe. "The Current State of Evidence on Bundled Payments" University of Pennsylvania Leonard Davis Institute of Health Economics Issue Brief. October 2018.

[60] Fangmeier, J. "Payment Strategies: A Comparison of Episodic and Population-based Payment Reform" 2013. Accesed 12/30/2019. Available at https://chrt.org/publication/payment-strategies-comparison-episodic-population-based-payment-reform/

[61] Fangmeier, J. "Payment Strategies: A Comparison of Episodic and Population-based Payment Reform" 2013. Accesed 12/30/2019. Available at https://chrt.org/publication/payment-strategies-comparison-episodic-population-based-payment-reform/

Hussey, Peter S., M. Susan Ridgely, and Meredith B. Rosenthal. "The PROMETHEUS Bundled Payment Experiment: Slow Start Shows Problems In Implementing New Payment Models." *Health Affairs* 30, no. 11 (November 2011): 2116–24. https://doi.org/10.1377/hlthaff.2011.0784.

[62] Can also have “virtual” IPUs, where even separate practices and organizations actively collaborate across inpatient and outpatient settings to coordinate and integrate care.

[63] Joslin, for example, brings together all the specialists (endocrinologists, nephrologists, internists, neurologists, ophthalmologists, and psychiatrists) and all the support personnel (nurses, educators, dieticians, and exercise physiologists) required to provide high-value diabetes care.

[64] (Growth Of ACOs And Alternative Payment Models In 2017 David Muhlestein, Robert S. Saunders, Mark B. McClellan, Health Affairs Blog)

[65] Miller, Harold D. “From Volume To Value: Better Ways To Pay For Health Care.” *Health Affairs* 28, no. 5 (September 2009): 1418–28. https://doi.org/10.1377/hlthaff.28.5.1418.

Porter, Michael E, and Robert S Kaplan. “How to Pay for Health Care,” Harvard Business Review (July-August 2016) [Internet] Available at https://hbr.org/2016/07/how-to-pay-for-health-care.

[66] Hussey, Peter S, Andrew W Mulcahy, Christopher Schnyer, and Eric C Schneider. “Closing the Quality Gap: Revisiting the State of the Science (Vol. 1: Bundled Payment: Effects on Health Care Spending and Quality).” Agency for Healthcare Research and Quality, August 2012. https://doi.org/10.23970/AHRQEPCERTA208.1.

[67] Fangmeier, J. “Payment Strategies: A Comparison of Episodic and Population-based Payment Reform” 2013. Accesed 12/30/2019. Available at https://chrt.org/publication/payment-strategies-comparison-episodic-population-based-payment-reform/

[68] Ridgely, M. Susan, David de Vries, Kevin J. Bozic, and Peter S. Hussey. “Bundled Payment Fails To Gain A Foothold In California: The Experience Of The IHA Bundled Payment Demonstration.” *Health Affairs* 33, no. 8 (August 2014): 1345–52. https://doi.org/10.1377/hlthaff.2014.0114.

[69] Pham, Hoangmai H, Paul B Ginsburg, Timothy K Lake, and Myles M Maxfield. “Episode-Based Payments: Charting a Course for Health Care Payment Reform,” no. 1 (2010): 16.

[70] Pham, Hoangmai H, Paul B Ginsburg, Timothy K Lake, and Myles M Maxfield. “Episode-Based Payments: Charting a Course for Health Care Payment Reform,” no. 1 (2010): 16.

[71] Painter, Michael W, and Robert Wood Johnson Foundation. “BUNDLED PAYMENTS: THIS WAY TOWARD A CHALLENGING YET BETTER PLACE,” n.d., 16.

[72] Hussey, Peter S., M. Susan Ridgely, and Meredith B. Rosenthal. “The PROMETHEUS Bundled Payment Experiment: Slow Start Shows Problems In Implementing New Payment Models.” *Health Affairs* 30, no. 11 (November 2011): 2116–24. https://doi.org/10.1377/hlthaff.2011.0784.

[73] Jacqueline LaPointe, 3 Challenges Providers Face with Healthcare Bundled Payments 2017 referencing (https://www.strategyand.pwc.com/media/file Strategyand_BundledCare-OppsChallenges-Providers.pdf)

[74] Navathe, Amol S., Joshua M. Liao, Sarah E. Dykstra, Erkuan Wang, Zoe M. Lyon, Yash Shah, Joseph Martinez, et al. “Association of Hospital Participation in a Medicare Bundled Payment Program With Volume and Case Mix of Lower Extremity Joint Replacement Episodes.” *JAMA* 320, no. 9 (September 4, 2018): 901. https://doi.org/10.1001/jama.2018.12345.

[75] Berenson, Robert A., and Eugene C. Rich. “US Approaches to Physician Payment: The Deconstruction of Primary Care.” *Journal of General Internal Medicine* 25, no. 6 (June 2010): 613–18. https://doi.org/10.1007/s11606-010-1295-z.

[76] Murciano-Goroff, Yonina R., Anne Marie McCarthy, Mirar N. Bristol, Susan M. Domchek, Peter W. Groeneveld, U. Nkiru Motanya, and Katrina Armstrong. “Medical Oncologists’ Willingness to Participate in Bundled Payment Programs.” *BMC Health Services Research* 18, no. 1 (December 2018): 391. https://doi.org/10.1186/s12913-018-3202-y.

[77] Retainer-Based Physicians: Characteristics, Impact, and Policy Considerations Elizabeth Hargrave, Laura Summer, Jack Hoadley, Ayesha Mahmud, Kate Quirk March 2010

[78] Carlasare, Lindsey E. “Defining the Place of Direct Primary Care in a Value-Based Care System” 117, no. 3 (2018): 6.

[79] Terminology in this area is inconsistent, and includes ‘boutique medicine’, ’cash practice’ and ‘membership medicine’, without specific definitions of these terms.

[80] Lambert, Rob. “Difference between concierge and direct care”. Medical Economics. Feb 18, 2019. Accessed 12/30/2019. Available at https://www.medicaleconomics.com/med-ec-blog/difference-between-concierge-and-direct-care.

[81] Kyle Rowe, Whitney Rowe, Josh Umbeher, Frank Dong, Elizabeth Ablah, Direct Primary Care in 2015: A Survey with Selected Comparisons to 2005 Survey Data. Kans J Med 2017 Feb; 10(1): 3-6

[82] Hargrave, Elizabeth, Laura Summer, Jack Hadley, Ayesha Mahmud, Kate Quirk. “Retainer-Based Physicians: Characteristics, Impact, and Policy Considerations” 2010. Available at http://67.59.137.244/documents/Oct10_RetainerBasedPhysicians_CONTRACTOR_CB.pdf

[83] Hargrave, Elizabeth, Laura Summer, Jack Hadley, Ayesha Mahmud, Kate Quirk. “Retainer-Based Physicians: Characteristics, Impact, and Policy Considerations” 2010. Available at http://67.59.137.244/documents/Oct10_RetainerBasedPhysicians_CONTRACTOR_CB.pdf

[84] Kyle Rowe, Whitney Rowe, Josh Umbeher, Frank Dong, Elizabeth Ablah, Direct Primary Care in 2015: A Survey with Selected Comparisons to 2005 Survey Data. Kans J Med 2017 Feb; 10(1): 3-6

[85] Eskew PM, Klink K. Direct primary care: practice distribution and cost across the nation. J AM Board Fam Med. 2015;28(6): 793-801. doi:10.3122/jabfm.2015.06.140337.

[86] Infographic & Insight, 2017: the differences between DPC and concierge medicine. Direct Primary Care Journal, March 25, 2017. https://directprimarycare.com/2017/03/25/infographic-insight-2017-the-differences-between-dpc-and-concierge-medicine/ . Accessed September 10, 2019.

[87] Eskew PM. The future legal and regulatory landscape of direct care. Presented at: Hint Summit; April 28, 2017; San Francisco, CA https://summit.hint.com/talks/2017/keynote-phil-eskew . Accessed September 10, 2019

[88] AAFP applauds bill to ease direct primary care payment. AAFP News. January 24, 2017. https//www.aafp.org/news/government-medicine/20170124dpcbill.html. Accessed September 10, 2019

[89] Physicians in Retainer (“Concierge”) Practice A National Survey of Phusician, Patient and Practice characteristics. G. Caleb Alexander, Jacob Kurlander, Matthew K. Wynia; J Gen Intern Med 2005 Dec; 20(12): 1079-1083 doi: 10.111/j.1525-497.205.0233x

[90] Kyle Rowe, Whitney Rowe, Josh Umbeher, Frank Dong, Elizabeth Ablah, Direct Primary Care in 2015: A Survey with Selected Comparisons to 2005 Survey Data. Kans J Med 2017 Feb; 10(1): 3-6

[91] GAO-05-929 Physician Services Concierge Care Characteristics and Considerations for Medicare; August 2005. Available at https://www.gao.gov/new.items/d05929.pdf

[92] Duke Law J. 2017 Mar;66(6):1331-70. Health Care's Other "Big Deal": Direct Primary Care Regulation in Contemporary American Health Law. Chappell GE. Direct practices have become increasingly popular since Congress passed the Affordable Care Act (ACA). This growth has been driven by legislation in several states that resolves a number of legal questions that slowed the model’s growth and by the ACA’s recognition of the model as a permissible way to cover primary care in "approved" health plans. Yet legal scholars have hardly focused on direct primary care. Given the model’s growth, however, the time is ripe for a more focused legal inquiry. This Note begins that inquiry. After tracing the model’s evolution and its core components, this Note substantively examines the laws in states that regulate direct practices and analyzes how those laws address a number of potential policy concerns. It then analyzes direct primary care’s broader role in the contemporary American healthcare marketplace. Based upon that analysis, this Note concludes that direct primary care is a beneficial innovation that harmonizes well with a cooperative-federalism-based healthcare policy model.

[93] “Advantages and limitations of the direct primary care model.” Accessed 12/30/2019. Available at https://www.mgma.com/data/data-stories/advantages-and-limitations-of-the-direct-primary-c.

[94] Hargrave, E. Summer, L. Hoadley, J Mahmud A, Quirk, K. “Retainer-Based Physicians: Characteristics, Impact, and Policy Considerations” 2010. Accessed 12/30/2019. Available at Engl J Med 2013; 369:2079-2081 DOI: 10.1056/NEJMp1312287

[95] Gavirneni, Srinagesh, and Vidyadhar Kulkarni. “Concierge Medicine: Applying Rational Economics to Health Care Queuing.” *Cornell Hospitality Quarterly* 55, no. 3 (August 2014): 314–25. https://doi.org/10.1177/1938965514537113.

[96] Health Care Manag (Frederick). 2016 Jan/Mar;35(1):3-8.Concierge Medicine: A Viable Business Model for (Some) Physicians of the Future? Paul DP 3rd1, Skiba M.

[97] Health Care Manag (Frederick). 2016 Jan/Mar;35(1):3-8.Concierge Medicine: A Viable Business Model for (Some) Physicians of the Future? Paul DP 3rd1, Skiba M.

[98] J Health Life Sci Law. 2008 Apr;1(3):1, 3-38. Concierge medicine: legal issues, ethical dilemmas, and policy challenges. Portman RM1, Romanow K.

[99] Duke Law J. 2017 Mar;66(6):1331-70. Health Care's Other "Big Deal": Direct Primary Care Regulation in Contemporary American Health Law. Chappell GE. Direct practices have become increasingly popular since Congress passed the Affordable Care Act (ACA). This growth has been driven by legislation in several states that resolves a number of legal questions that slowed the model's growth and by the ACA's recognition of the model as a permissible way to cover primary care in "approved" health plans. Yet legal scholars have hardly focused on direct primary care. Given the model's growth, however, the time is ripe for a more focused legal inquiry. This Note begins that inquiry. After tracing the model's evolution and its core components, this Note substantively examines the laws in states that regulate direct practices and analyzes how those laws address a number of potential policy concerns. It then analyzes direct primary care's broader role in the contemporary American healthcare marketplace. Based upon that analysis, this Note concludes that direct primary care is a beneficial innovation that harmonizes well with a cooperative-federalism-based healthcare policy model.

[100] AAFP applauds bill to ease direct primary care payment. AAFP News. January 24, 2017. https//www.aafp.org/news/government-medicine/20170124dpcbill.html. Accessed September 10, 2019

[101] Eskew, Philip. "Direct Primary Care Business of Insurance and State Law Considerations." *The Journal of Legal Medicine* 37, no. 1–2 (June 2017): 145–54. https://doi.org/10.1080/01947648.2017.1303353.

[102] Cole, Evan S. "Direct Primary Care: Applying Theory to Potential Changes in Delivery and Outcomes." *The Journal of the American Board of Family Medicine* 31, no. 4 (July 2018): 605–11. https://doi.org/10.3122/jabfm.2018.04.170214.

[103] Retainer-Based Physicians: Characteristics, Impact, and Policy Considerations Elizabeth Hargrave, Laura Summer, Jack Hoadley, Ayesha Mahmud, Kate Quirk March 2010

[104] Berenson, Robert A., and Eugene C. Rich. "US Approaches to Physician Payment: The Deconstruction of Primary Care." *Journal of General Internal Medicine* 25, no. 6 (June 2010): 613–18. https://doi.org/10.1007/s11606-010-1295-z.

[105] Berenson, Robert A., and Eugene C. Rich. "US Approaches to Physician Payment: The Deconstruction of Primary Care." *Journal of General Internal Medicine* 25, no. 6 (June 2010): 613–18. https://doi.org/10.1007/s11606-010-1295-z.

[106] "Pay-for-Performance." Health Affairs Health Policy Brief, October 11, 2012. https://doi.org/10.1377/hpb20121011.90233.

[107] Damberg, Cheryl, Melony E. Sorbero, Susan L. Lovejoy, Grant Martsolf, Laura Raaen, and Daniel Mandel. "Measuring Success in Health Care Value-Based Purchasing Programs: Summary and Recommendations." Santa Monica, CA: RAND Corporation, 2014.

[108] (A. Mehrotra M. Sorbero, and C. Damberg. July 2010. *Using the Lessons of Behavioral Economics to Design More Effective Pay-for-Performance Programs.* American Journal of Managed Care 16(7): 497–503).

[109] Fangmeier, J. "Payment Strategies: A Comparison of Episodic and Population-based Payment Reform" 2013. Accesed 12/30/2019. Available at https://chrt.org/publication/payment-strategies-comparison-episodic-population-based-payment-reform/

[110] Fangmeier, J. "Payment Strategies: A Comparison of Episodic and Population-based Payment Reform" 2013. Accesed 12/30/2019. Available at https://chrt.org/publication/payment-strategies-comparison-episodic-population-based-payment-reform/

[111] Mendelson, Aaron, Karli Kondo, Cheryl Damberg, Allison Low, Makalapua Motúapuaka, Michele Freeman, Maya O'Neil, Rose Relevo, and Devan Kansagara. "The Effects of Pay-for-Performance Programs on Health, Health Care Use, and Processes of Care: A Systematic Review." *Annals of Internal Medicine* 166, no. 5 (March 7, 2017): 341. https://doi.org/10.7326/M16-1881.

[112] Qaseem, Amir. "Pay for Performance Through the Lens of Medical Professionalism." *Annals of Internal Medicine* 152, no. 6 (March 16, 2010): 366. https://doi.org/10.7326/0003-4819-152-6-201003160-00006.

[113] Mendelson, Aaron, Karli Kondo, Cheryl Damberg, Allison Low, Makalapua Motúapuaka, Michele Freeman, Maya O'Neil, Rose Relevo, and Devan Kansagara. "The Effects of Pay-for-Performance Programs on Health, Health Care Use, and Processes of Care: A Systematic Review." *Annals of Internal Medicine* 166, no. 5 (March 7, 2017): 341. https://doi.org/10.7326/M16-1881.

[114] Caveney, B. J. "Pay-for-Performance Incentives: Holy Grail or Sippy Cup?" *North Carolina Medical Journal* 77, no. 4 (July 1, 2016): 265–68. https://doi.org/10.18043/ncm.77.4.265.

[115] James, Julia. “Pay-for-Performance.” Health Affairs Health Policy Brief, October 11, 2012. https://doi.org/10.1377/hpb20121011.90233.

[116] Caveney, B. J. “Pay-for-Performance Incentives: Holy Grail or Sippy Cup?” *North Carolina Medical Journal* 77, no. 4 (July 1, 2016): 265–68. https://doi.org/10.18043/ncm.77.4.265.

[117] Berenson, R., Kaye, D. "Grading a Physician's Value - The Misapplication of Performance Measurement” 2013 Engl J Med 2013; 369:2079-2081. DOI: 10.1056/NEJMp1312287.

[118] Caveney, B. J. “Pay-for-Performance Incentives: Holy Grail or Sippy Cup?” *North Carolina Medical Journal* 77, no. 4 (July 1, 2016): 265–68. https://doi.org/10.18043/ncm.77.4.265.

[119] Kondo, Karli K., Cheryl L. Damberg, Aaron Mendelson, Makalapua Motu’apuaka, Michele Freeman, Maya O’Neil, Rose Relevo, Allison Low, and Devan Kansagara. “Implementation Processes and Pay for Performance in Healthcare: A Systematic Review.” *Journal of General Internal Medicine* 31, no. S1 (April 2016): 61–69. https://doi.org/10.1007/s11606-015-3567-0.

[120] Ryan, A, Werner, R. “Doubts About Pay-for-Performance in Health Care,” 2013. Accessed 12/30/2019. Available at https://hbr.org/2013/10/doubts-about-pay-for-performance-in-health-care.

[121] McDonald, R., and M. Roland. “Pay for Performance in Primary Care in England and California: Comparison of Unintended Consequences.” *The Annals of Family Medicine* 7, no. 2 (March 1, 2009): 121–27. https://doi.org/10.1370/afm.946.

[122] Miller, Harold D. “From Volume To Value: Better Ways To Pay For Health Care.” *Health Affairs* 28, no. 5 (September 2009): 1418–28. https://doi.org/10.1377/hlthaff.28.5.1418.

[123] Casalino, Lawrence P., David Gans, Rachel Weber, Meagan Cea, Amber Tuchovsky, Tara F. Bishop, Yesenia Miranda, et al. “US Physician Practices Spend More Than $15.4 Billion Annually To Report Quality Measures.” *Health Affairs* 35, no. 3 (March 2016): 401–6. https://doi.org/10.1377/hlthaff.2015.1258.

[124] Casalino, Lawrence P., David Gans, Rachel Weber, Meagan Cea, Amber Tuchovsky, Tara F. Bishop, Yesenia Miranda, et al. “US Physician Practices Spend More Than $15.4 Billion Annually To Report Quality Measures.” *Health Affairs* 35, no. 3 (March 2016): 401–6. https://doi.org/10.1377/hlthaff.2015.1258.

[125] Roberts, Eric T., Alan M. Zaslavsky, and J. Michael McWilliams. “The Value-Based Payment Modifier: Program Outcomes and Implications for Disparities.” *Annals of Internal Medicine* 168, no. 4 (February 20, 2018): 255. https://doi.org/10.7326/M17-1740.

[126] McDonald, R., and M. Roland. “Pay for Performance in Primary Care in England and California: Comparison of Unintended Consequences.” *The Annals of Family Medicine* 7, no. 2 (March 1, 2009): 121–27. https://doi.org/10.1370/afm.946.

[127] Bardach, Naomi S., Jason J. Wang, Samantha F. De Leon, Sarah C. Shih, W. John Boscardin, L. Elizabeth Goldman, and R. Adams Dudley. “Effect of Pay-for-Performance Incentives on Quality of Care in Small Practices With Electronic Health Records: A Randomized Trial.” *JAMA* 310, no. 10 (September 11, 2013): 1051. https://doi.org/10.1001/jama.2013.277353.

[128] Fangmeier, J. “Payment Strategies: A Comparison of Episodic and Population-based Payment Reform” 2013. Accesed 12/30/2019. Available at https://chrt.org/publication/payment-strategies-comparison-episodic-population-based-payment-reform/

[129] Bailit, M. Hughes, C. “Key Design Elements of Shared-Savings Payment Arrangements,” 2011. Commonweath Fund pub 1539, vol. 20.

[130] Bailit, M. Hughes, C. “Key Design Elements of Shared-Savings Payment Arrangements,” 2011. Commonweath Fund pub 1539, vol. 20.

[131] Fangmeier, J. “Payment Strategies: A Comparison of Episodic and Population-based Payment Reform” 2013. Accesed 12/30/2019. Available at https://chrt.org/publication/payment-strategies-comparison-episodic-population-based-payment-reform/

[132] Murray, Roslyn, and Suzanne F Delbanco. “The Evidence On Shared Savings: Do We Know Enough?,” n.d., 7.

[133] Fangmeier, J. “Payment Strategies: A Comparison of Episodic and Population-based Payment Reform” 2013. Accesed 12/30/2019. Available at https://chrt.org/publication/payment-strategies-comparison-episodic-population-based-payment-reform/

[134] Fangmeier, J. “Payment Strategies: A Comparison of Episodic and Population-based Payment Reform” 2013. Accesed 12/30/2019. Available at https://chrt.org/publication/payment-strategies-comparison-episodic-population-based-payment-reform/

[135] Levine, D.M., Linder, J.A. & Landon, B.E. Characteristics and Disparities among Primary Care Practices in the United States. *J GEN INTERN MED* **33,** 481–486 (2018) doi:10.1007/s11606-017-4239-z

[136] Rama, A. “Policy Research Perspective: Payment and Delivery in 2016: The Prevalence of Medical Homes, Accountable Care Organizations, and Payment Methods Reported by Physicians” American Medical Association Economic and Health Policy Research. 2017-4.

[137] Fangmeier, J. “Payment Strategies: A Comparison of Episodic and Population-based Payment Reform” 2013. Accesed 12/30/2019. Available at https://chrt.org/publication/payment-strategies-comparison-episodic-population-based-payment-reform/

[138] Rama, A. “Policy Research Perspective: Payment and Delivery in 2016: The Prevalence of Medical Homes, Accountable Care Organizations, and Payment Methods Reported by Physicians” American Medical Association Economic and Health Policy Research. 2017-4.

[139] Schulz, John, Matthew DeCamp, and Scott A Berkowitz. “Medicare Shared Savings Program: Public Reporting and Shared Savings Distributions.” *THE AMERICAN JOURNAL OF MANAGED CARE* 21, no. 8 (2015): 10.

[140] “Next Steps for ACOs, " Health Affairs Health Policy Brief, January 31, 2012. DOI: 10.1377/hpb20120131.782919

[141] "ACO or PCMH: Making a crucial decision for your practice”, February 4, 2015, Medical Economics. Accessed 12/30/2019. Available at https://www.medicaleconomics.com/health-law-policy/aco-or-pcmh-making-crucial-decision-your-practice.

[142] Porter, Michael E, and Robert S Kaplan. “How to Pay for Health Care,” Harvard Business Review (July-August 2016) [Internet] Available at https://hbr.org/2016/07/how-to-pay-for-health-care.

[143] Porter, Michael E, and Robert S Kaplan. “How to Pay for Health Care,” Harvard Business Review (July-August 2016) [Internet] Available at https://hbr.org/2016/07/how-to-pay-for-health-care.

[144] Ginsburg, Paul B., and Kavita K. Patel. “Physician Payment Reform — Progress to Date.” *New England Journal of Medicine* 377, no. 3 (July 20, 2017): 285–92. https://doi.org/10.1056/NEJMhpr1606353.

[145] Jabbarpour, Yalda, et. al. “Advanced Primary Care: A Key Contributor to Successful ACOs” 2018. Accessed 12/30/2019. Available at https://www.pcpcc.org/sites/default/files/resources/PCPCC%202018%20Evidence%20Report.pdf.

[146] Muhlestein, David, Robert S Saunders, and Mark B McClellan. “Growth Of ACOs And Alternative Payment Models In 2017,” (June 28, 2017) doi: 10.1377/hblog20170628.060719

[147] Muhlestein, David, Robert S Saunders, and Mark B McClellan. “Growth Of ACOs And Alternative Payment Models In 2017,” (June 28, 2017) doi: 10.1377/hblog20170628.060719

[148] Muhlestein, David, Robert S Saunders, and Mark B McClellan. “Growth Of ACOs And Alternative Payment Models In 2017,” (June 28, 2017) doi: 10.1377/hblog20170628.060719

[149] Muhlestein, David, Robert S Saunders, and Mark B McClellan. “Growth Of ACOs And Alternative Payment Models In 2017,” (June 28, 2017) doi: 10.1377/hblog20170628.060719

[150] Rama, A. Payment and Delivery in 2018: Participation in Medical Homes and Accountable Care Organizations on the Rise While Fee-for-Service Revenue Remains Stable [Internet]. Chicago (IL): American Medical Association; 2019. (Policy Research Perspective 2019-4). Available at https://www.ama-assn.org/system/files/2019-09/prp-care-delivery-payment-models-2018.pdf

[151] Rama, A. Payment and Delivery in 2018: Participation in Medical Homes and Accountable Care Organizations on the Rise While Fee-for-Service Revenue Remains Stable [Internet]. Chicago (IL): American Medical Association; 2019. (Policy Research Perspective 2019-4). Available at https://www.ama-assn.org/system/files/2019-09/prp-care-delivery-payment-models-2018.pdf

[152] Yasaitis LC, Pajerowski W, Polsky D, Werner R. “Physicians’ Participation In ACOs Is Lower In Places With Vulnerable Populations Than In More Affluent Communities” Health Aff(Millwood) 2016;35:13882-1390) doi:https://doi.org/10.1377/hlthaff.2015.1635

[153] Colla C., Lewis V. Shortell, S. Fisher, E. “First National Survey of ACOs Finds that Physicians are Playing Strong Leadership and Ownership Roles. Health Aff(Millwood) 2014;33:964-971. https://doi.org/10.1377/hlthaff.2013.1463.

Mostashari F, Sanghavi D, McClennan M Health reform and physician-led accountable care: the paradox of primary care physician leadership. JAMA 2014;311:1855-1856

[154] Rama, A. Payment and Delivery in 2018: Participation in Medical Homes and Accountable Care Organizations on the Rise While Fee-for-Service Revenue Remains Stable [Internet]. Chicago (IL): American Medical Association; 2019. (Policy Research Perspective 2019-4). Available at https://www.ama-assn.org/system/files/2019-09/prp-care-delivery-payment-models-2018.pdf

[155] Auerbach, David I., Hangsheng Liu, Peter S. Hussey, Christopher Lau, and Ateev Mehrotra. "Accountable Care Organization Formation Is Associated With Integrated Systems But Not High Medical Spending." *Health Affairs* 32, no. 10 (October 2013): 1781–88. https://doi.org/10.1377/hlthaff.2013.0372.

[156] Muhlestein, David, Robert S Saunders, and Mark B McClellan. "Growth Of ACOs And Alternative Payment Models In 2017," (June 28, 2017) doi: 10.1377/hblog20170628.060719)

[157] Briggs, Adam D. M., Taressa K. Fraze, Andrew L. Glick, Laura B. Beidler, Stephen M. Shortell, and Elliott S. Fisher. "How Do Accountable Care Organizations Deliver Preventive Care Services? A Mixed-Methods Study." *Journal of General Internal Medicine* 34, no. 11 (November 2019): 2451–59. https://doi.org/10.1007/s11606-019-05271-5.

[158] Jabbarpour, Yalda, et. al. "Advanced Primary Care: A Key Contributor to Successful ACOs" 2018. Accessed 12/30/2019. Available at https://www.pcpcc.org/sites/default/files/resources/PCPCC%202018%20Evidence%20Report.pdf.

[159] Briggs, Adam D. M., Taressa K. Fraze, Andrew L. Glick, Laura B. Beidler, Stephen M. Shortell, and Elliott S. Fisher. "How Do Accountable Care Organizations Deliver Preventive Care Services? A Mixed-Methods Study." *Journal of General Internal Medicine* 34, no. 11 (November 2019): 2451–59. https://doi.org/10.1007/s11606-019-05271-5.

[160] Albright, Benjamin B., Valerie A. Lewis, Joseph S. Ross, and Carrie H. Colla. "Preventive Care Quality of Medicare Accountable Care Organizations: Associations of Organizational Characteristics With Performance." *Medical Care* 54, no. 3 (March 2016): 326–35. https://doi.org/10.1097/MLR.0000000000000477.

[161] Jabbarpour, Yalda, et. al. "Advanced Primary Care: A Key Contributor to Successful ACOs" 2018. Accessed 12/30/2019. Available at https://www.pcpcc.org/sites/default/files/resources/PCPCC%202018%20Evidence%20Report.pdf.

[162] Briggs, Adam D. M., Taressa K. Fraze, Andrew L. Glick, Laura B. Beidler, Stephen M. Shortell, and Elliott S. Fisher. "How Do Accountable Care Organizations Deliver Preventive Care Services? A Mixed-Methods Study." *Journal of General Internal Medicine* 34, no. 11 (November 2019): 2451–59. https://doi.org/10.1007/s11606-019-05271-5.

[163] Briggs, Adam D. M., Taressa K. Fraze, Andrew L. Glick, Laura B. Beidler, Stephen M. Shortell, and Elliott S. Fisher. "How Do Accountable Care Organizations Deliver Preventive Care Services? A Mixed-Methods Study." *Journal of General Internal Medicine* 34, no. 11 (November 2019): 2451–59. https://doi.org/10.1007/s11606-019-05271-5.

[164] Ginsburg, Paul B., and Kavita K. Patel. "Physician Payment Reform — Progress to Date." *New England Journal of Medicine* 377, no. 3 (July 20, 2017): 285–92. https://doi.org/10.1056/NEJMhpr1606353.

[165] Schur, Claudia L., and Janet P. Sutton. "Physicians In Medicare ACOs Offer Mixed Views Of Model For Health Care Cost And Quality." *Health Affairs* 36, no. 4 (April 2017): 649–54. https://doi.org/10.1377/hlthaff.2016.1427.

[166] Kleiner, Samuel A., Daniel Ludwinski, and William D. White. "Antitrust and Accountable Care Organizations: Observations for the Physician Market." *Medical Care Research and Review* 74, no. 1 (February 2017): 97–108. https://doi.org/10.1177/1077558715627554.

[167] Lewis, Valerie A., Katherine I. Tierney, Carrie H. Colla, and Stephen M. Shortell. "The New Frontier of Strategic Alliances in Health Care: New Partnerships under Accountable Care Organizations." *Social Science & Medicine* 190 (October 2017): 1–10. https://doi.org/10.1016/j.socscimed.2017.04.054.

[168] Lewis, Valerie A., Katherine I. Tierney, Carrie H. Colla, and Stephen M. Shortell. "The New Frontier of Strategic Alliances in Health Care: New Partnerships under Accountable Care Organizations." *Social Science & Medicine* 190 (October 2017): 1–10. https://doi.org/10.1016/j.socscimed.2017.04.054.

[169] "ACO or PCMH: Making a crucial decision for your practice", February 4, 2015, Medical Economics. Accessed 12/30/2019. Available at https://www.medicaleconomics.com/health-law-policy/aco-or-pcmh-making-crucial-decision-your-practice.

[170] "ACO or PCMH: Making a crucial decision for your practice", February 4, 2015, Medical Economics. Accessed 12/30/2019. Available at https://www.medicaleconomics.com/health-law-policy/aco-or-pcmh-making-crucial-decision-your-practice.

[171] "What is Value-Based Healthcare?" 2017 NEJM Catalyst. Accessed 12/30/2019. Available at https://catalyst.nejm.org/doi/full/10.1056/CAT.17.0558.

[172] "ACO or PCMH: Making a crucial decision for your practice", February 4, 2015, Medical Economics. Accessed 12/30/2019. Available at https://www.medicaleconomics.com/health-law-policy/aco-or-pcmh-making-crucial-decision-your-practice

[173] "Joint Principles of the Patient-Centered Medical Home" 2007 by the American Academy of Family Physicians, American Academy of Pediatrics, American College of Physicians, American Osteopathic Association

[174] Muhlestein, David, Robert S Saunders, and Mark B McClellan. “Growth Of ACOs And Alternative Payment Models In 2017,” (June 28, 2017) doi: 10.1377/hblog20170628.060719

[175] Pham, Hoangmai H, Paul B Ginsburg, Timothy K Lake, and Myles M Maxfield. “Episode-Based Payments: Charting a Course for Health Care Payment Reform,” no. 1 (2010): 16.

[176] Dale SB, et. al. "Two-year Costs and quality in the Comprehensive Primary Care Initiative” NEJM 2016;374:2345-2356. DOI: 10.1056/NEJMsa1414953.

[177] "ACO or PCMH: Making a crucial decision for your practice”, February 4, 2015, Medical Economics. Accessed 12/30/2019. Available at https://www.medicaleconomics.com/health-law-policy/aco-or-pcmh-making-crucial-decision-your-practice

[178] Ginsburg, Paul B., and Kavita K. Patel. “Physician Payment Reform — Progress to Date.” *New England Journal of Medicine* 377, no. 3 (July 20, 2017): 285–92. https://doi.org/10.1056/NEJMhpr1606353.

[179] Pham, Hoangmai H, Paul B Ginsburg, Timothy K Lake, and Myles M Maxfield. “Episode-Based Payments: Charting a Course for Health Care Payment Reform,” no. 1 (2010): 16.

[180] Landon, Bruce E. “Structuring Payments to Patient-Centered Medical Homes.” *JAMA* 312, no. 16 (October 22, 2014): 1633. https://doi.org/10.1001/jama.2014.9529.

[181] “Guidelines for Patient-Centered Medical Home (PCMH) Recognition and Accreditation Programs” 2011 by the American Academy of Family Physicians, American Academy foPediatrics, American College of Physicians, American Osteopathic Association

[182] "ACO or PCMH: Making a crucial decision for your practice”, February 4, 2015, Medical Economics. Accessed 12/30/2019. Available at https://www.medicaleconomics.com/health-law-policy/aco-or-pcmh-making-crucial-decision-your-practice

[183] Rama, A. Payment and Delivery in 2018: Participation in Medical Homes and Accountable Care Organizations on the Rise While Fee-for-Service Revenue Remains Stable [Internet]. Chicago (IL): American Medical Association; 2019. (Policy Research Perspective 2019-4). Available at https://www.ama-assn.org/system/files/2019-09/prp-care-delivery-payment-models-2018.pdf

[184] American Academy of Family Physicians. Value-Based Payment Study. 2017. http://valuebasedcare.humana.com/wp-content/uploads/2018/02/2017-Value-Based-Payment-Study-External.pdf. cited in Advanced Primary Care A Key Contributor to Successful ACOs 2018

[185] Rama, A. Payment and Delivery in 2018: Participation in Medical Homes and Accountable Care Organizations on the Rise While Fee-for-Service Revenue Remains Stable [Internet]. Chicago (IL): American Medical Association; 2019. (Policy Research Perspective 2019-4). Available at https://www.ama-assn.org/system/files/2019-09/prp-care-delivery-payment-models-2018.pdf

[186] Ginsburg, Paul B., and Kavita K. Patel. “Physician Payment Reform — Progress to Date.” *New England Journal of Medicine* 377, no. 3 (July 20, 2017): 285–92. https://doi.org/10.1056/NEJMhpr1606353.

[187] "ACO or PCMH: Making a crucial decision for your practice”, February 4, 2015, Medical Economics. Accessed 12/30/2019. Available at https://www.medicaleconomics.com/health-law-policy/aco-or-pcmh-making-crucial-decision-your-practice

[188] "ACO or PCMH: Making a crucial decision for your practice”, February 4, 2015, Medical Economics. Accessed 12/30/2019. Available at https://www.medicaleconomics.com/health-law-policy/aco-or-pcmh-making-crucial-decision-your-practice

[189] "ACO or PCMH: Making a crucial decision for your practice”, February 4, 2015, Medical Economics. Accessed 12/30/2019. Available at https://www.medicaleconomics.com/health-law-policy/aco-or-pcmh-making-crucial-decision-your-practice

[190] Martsolf, Grant R., Ryan Kandrack, Robert A. Gabbay, and Mark W. Friedberg. “Cost of Transformation among Primary Care Practices Participating in a Medical Home Pilot.” *Journal of General Internal Medicine* 31, no. 7 (July 2016): 723–31. https://doi.org/10.1007/s11606-015-3553-6.

[191] Martsolf, Grant R., Ryan Kandrack, Robert A. Gabbay, and Mark W. Friedberg. “Cost of Transformation among Primary Care Practices Participating in a Medical Home Pilot.” *Journal of General Internal Medicine* 31, no. 7 (July 2016): 723–31. https://doi.org/10.1007/s11606-015-3553-6.

[192] "ACO or PCMH: Making a crucial decision for your practice”, February 4, 2015, Medical Economics. Accessed 12/30/2019. Available at https://www.medicaleconomics.com/health-law-policy/aco-or-pcmh-making-crucial-decision-your-practice

[193] Alidina, Shehnaz, Eric C Schneider, Sara J Singer, and Meredith B Rosenthal. “Structural Capabilities in Small- and Medium-Sized Patient-Centered Medical Homes.” *THE AMERICAN JOURNAL OF MANAGED CARE* 20, no. 7 (2014): 22.

[194] Patel Saxena, Shilpa. "Leveraging Time With Lifestyle-Based Group Visits." *American Journal of Lifestyle Medicine* 10, no. 5 (September 2016): 330–37. https://doi.org/10.1177/1559827616638018.

[195] Patel Saxena, Shilpa. "Leveraging Time With Lifestyle-Based Group Visits." *American Journal of Lifestyle Medicine* 10, no. 5 (September 2016): 330–37. https://doi.org/10.1177/1559827616638018.

[196] "Diabetes Self-Management Education and Support (DSMES) Toolkit by the Centers for Disease Control and Prevention. Available at https://www.cdc.gov/diabetes/dsmes-toolkit/reimbursement/medical-nutrition-therapy.html. Accessed December 27, 2019.

[197] Edelman D, McDuffie JR, Oddone E, Gierisch JM, Nagi A, Williams JW Jr. Shared Medical Appointments for Chronic Medical Conditions: A Systematic Review. VA- ESP Project #09-010; 2012.

[198] (Bartley KB, Haney R. Shared medical appointments: improving access, outcomes and satisfaction for patients with chronic cardiac diseases. J Cardiovasc Nurs.2010;25:13-1)

[199] Wellington M. Stanford health partners: rationale and early experiences in establishing physician group visits and chronic disease self-management workshops. J Ambul Care Manage. 2001;24(3):10-16

[200] Schmucker D. Group Medical Appointments: An Introduction for Health Professionals. Sudbury, MA: Jones & Bartlett; 2006:4.

[201] Pastore LM, Rossi AM, Tucker AL. Process improvements and shared medical appointments for cardiovascular disease prevention in women. J Am Assoc Nurse Pract. 2014;260:555-561.

[202] Schmucker D. Group Medical Appointments: An Introduction for Health Professionals. Sudbury, MA: Jones & Bartlett; 2006:104-105.

[203] Patel Saxena, Shilpa. "Leveraging Time With Lifestyle-Based Group Visits." *American Journal of Lifestyle Medicine* 10, no. 5 (September 2016): 330–37. https://doi.org/10.1177/1559827616638018.

[204] "MNT Versus Nutrition Education" by the Academy of Nutrition and Dietetics. Available at https://www.eatrightpro.org/payment/coding-and-billing/mnt-vs-nutrition-education. Accessed December 27, 2019.

[205] "Diabetes Self-Management Education and Support (DSMES) Toolkit by the Centers for Disease Control and Prevention. Available at https://www.cdc.gov/diabetes/dsmes-toolkit/reimbursement/medical-nutrition-therapy.html. Accessed December 27, 2019.

[206] Morris, S. F., and J. Wylie-Rosett. "Medical Nutrition Therapy: A Key to Diabetes Management and Prevention." *Clinical Diabetes* 28, no. 1 (December 1, 2010): 12–18. https://doi.org/10.2337/diaclin.28.1.12.

[207] Miller, Stephania T., Veronica J. Oates, Malinda A. Brooks, Ayumi Shintani, Tebeb Gebretsadik, and Darlene M. Jenkins. "Preliminary Efficacy of Group Medical Nutrition Therapy and Motivational Interviewing among Obese African American Women with Type 2 Diabetes: A Pilot Study." *Journal of Obesity* 2014 (2014): 1–7. https://doi.org/10.1155/2014/345941.

[208] Patel Saxena, Shilpa. "Leveraging Time With Lifestyle-Based Group Visits." *American Journal of Lifestyle Medicine* 10, no. 5 (September 2016): 330–37. https://doi.org/10.1177/1559827616638018.

[209] Eisenstat, Stephanie, Carlson, Karen and Ulman, Kahleen. Presentation"Putting Group Visits into Practice in the Patient Centered Medical Home" April 25, 2014. Accessed 12/30/2019. Available at https://www.sgim.org/File%20Library/SGIM/Meetings/Annual%20Meeting/Meetign%20Content/AM%2014%20handouts/WE04-STEPHANIE-EISENSTAT.pdf

[210] Patel Saxena, Shilpa. "Leveraging Time With Lifestyle-Based Group Visits." *American Journal of Lifestyle Medicine* 10, no. 5 (September 2016): 330–37. https://doi.org/10.1177/1559827616638018.

[211] Patel Saxena, Shilpa. "Leveraging Time With Lifestyle-Based Group Visits." *American Journal of Lifestyle Medicine* 10, no. 5 (September 2016): 330–37. https://doi.org/10.1177/1559827616638018.

[212] Hodorowicz, M. A. "Reimbursement for Shared Medical Appointments Incorporating Diabetes Self-Management Education/Training or Diabetes Medical Nutrition Therapy." *Diabetes Spectrum* 25, no. 2 (May 1, 2012): 84–90. https://doi.org/10.2337/diaspect.25.2.84.