ORIGINAL RESEARCH

Inadequate Reimbursement for Care Management to Primary Care Offices

Jodi Summers Holtrop, PhD, MCHES, Zhehui Luo, MD, PhD, and Lynn Alexanders, MSN, RN, FNP

Background: **Care management in primary care can be effective in helping patients with chronic disease improve their health; however, primary care practices are often challenged to identify revenue to pay for it. This study explored the impact of direct reimbursement on the provision of care management in a primary care physician organization.**

Methods: **Using data on expenses and health plan reimbursement during the initial 16 months of care management implementation at 5 practices, we calculated the percentage of related costs that were covered by payments. Qualitative data from interviews with practice members were used to identify their perceived barriers to care management reimbursement and the impact of current reimbursement strategies on service delivery.**

Results: **Direct reimbursement for care management covered only 21% of the costs. Reimbursement varied by care manager background, patient diagnoses, insurer, and indication for the visit. Barriers to gaining reimbursement included patient resistance to copay, clinician hesitation to bill for care management visits (for fear the patient may receive a bill), differential reimbursement policies of insurers, and general lack of reimbursement for care management in many cases. Although practice-level quality improvement incentives were an alternative means of supporting care management, because these incentives were not directly tied to the service of care management, they were used for other activities ultimately supporting patient care.**

Conclusions: **This study highlights the need for sufficient reimbursement to initiate and maintain care management for patients in primary care as proposed for service reforms under the Affordable Care Act. (J Am Board Fam Med 2015;28:271–279.)**

Keywords: **Case Management, Health Policy, Practice Management, Primary Health Care**

Many patients in primary care have chronic conditions such as diabetes,[1–3] and many others have health habits and risk factors such as tobacco use or dietary habits that contribute to the development of chronic disease.[4,5] Patients offered self-management support in the form of guidance and coaching from a care manager (often called a case manager, disease manager, or health coach[6,7]) show improvement in their disease management and reductions in their risk for complications.[8–10] Despite evidence demonstrating the benefits of care managers embedded in primary care, most practices do not have care managers available as part of their patient care teams.[11–13] A key barrier to broader use of care managers is the lack of reimbursement to the practice. If there are monetary savings at the practice level resulting from patients' participation in care management, these typically do not accrue back to the practice in a fee-for-service payment structure.[14–16]

In Michigan, some insurers have taken steps to reimburse primary care practices for care management.[17] In this study, we examined whether these reimbursement mechanisms were sufficient to sup-

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From the Department of Family Medicine, University of Colorado Denver, Aurora, CO (JSH); Department of Epidemiology and Biostatistics, Michigan State University, East Lansing, MI (ZL); Department of Nursing, Sienna Heights University, Adrian, MI (LA).
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Corresponding author: Jodi Summers Holtrop, PhD, MCHES, Mail Stop F496, Academic Office 1, 12631 East 17th Ave, Aurora, CO 80045 (E-mail: jodi.holtrop@ucdenver.edu).

port the costs of care management services and explored issues related to perspectives of providers and staffs related to billing and payment for care management. Specifically, the current study describes the ability of a physician organization (PO) to obtain direct reimbursement sufficient to cover the cost of care management and the perspective of the primary care practices regarding the financial barriers to care management delivery. These perspectives are important because primary care operational and clinical leaders are the key decision-makers determining whether care management is offered. Even if care management is cost-effective from the perspective of the payer or society in general, if it does not maintain budget neutrality or demonstrate appreciable revenue to the practice or practice organization, it will be challenging to implement.

Methods

The current study was part of a larger evaluation of processes, outcomes, and sustainability of chronic illness care associated with the implementation of the chronic care model (CCM)[18] for adults with diabetes and diabetes risk factors in primary care. The CCM is a model for organizing primary care such that the model elements (self-management support, decision support, delivery system design, and clinical information systems) work within community contexts to produce prepared proactive practice teams and informed, activated patients who can effectively work together to manage a patient's chronic condition. A PO in Southeast Michigan partnered with the researchers, and 10 adult primary care practices were randomly assigned to the CCM intervention or usual care. For the 5 practices randomized to the intervention, the PO implemented CCM with a focus on practice-based care management and electronic clinical information systems supporting care management as the key elements to implementing CCM. Three larger practices were assigned either a full-time care manager or a combination of care managers equaling full-time, and 2 smaller practices were assigned a part-time care manager. Care managers had training in nursing (LPN and RN), social work (MSW) and dietetics (RD). The payer mix for the 5 practices was 24% Medicare, 5% Medicaid or local primary care low-income insurance, 38% commercial insurance (non-managed care), 32% managed care commercial insurance, and 1% no insurance/patient self-pay. Six practices were family medicine and four general internal medicine. Institutional review board approval was sought and received at Michigan State University and the University of Michigan.

Identifying and Tracking Expenses

The CCM intervention costs were placed into a cost center so that all expenses and revenues could be tracked, accounted for, and analyzed. Although grant funds supported some initial implementation costs, the actual costs and revenues to the PO were tracked as if there were no grant funding. Only incremental costs that were directly attributable to the care manager intervention were included. Salary costs for individuals with significant time contributions to care management (including care manager time, care manager supervisors, and IT staff) were included proportional to their time involved in care management. Physician and medical assistant patient volume did not change in the period after the intervention; therefore, their costs were not included.

Identifying and Tracking Revenue

The process of identifying opportunities for reimbursing care management was initiated by the PO clinical director and insurance specialists. On the basis of their review of policies of the insurers that held contracts with the PO, 2 types of opportunities for reimbursement or support of care managers were identified: 1) reimbursement for activities in which the care manager was directly involved (direct reimbursement), and 2) organizational reimbursement for achievement of performance benchmarks for quality care that could be influenced by the provision of care management. Direct reimbursement for care management was tracked in detail. Table 1 describes the direct reimbursement options.

Direct reimbursement opportunities often were specific to the characteristics of the service provider and were reviewed according to the discipline of each care manager. For example, billing was available for nutrition counseling through Medicare for dietitians, but that same billing was not available for other educational backgrounds. Diagrams describing reimbursement opportunities were distributed to care managers who were responsible for charge entry and receptionists who had a verification role. Diagrams and reimbursement options in each practice were discussed with physicians and clinical teams.

Table 1. Direct Reimbursement Revenue Opportunities for Care Management

Opportunity	Description	Issues
Care manager evaluation and management as an independent provider	"Incident to" care of a provider. Allows certain care manager types to bill evaluation and management codes for care manager work in conjunction with the care of a primary care physician	• Only certain professional types are allowed to use this option, for example, RD and Master of Social Work since they are considered independent providers
Nurse or other provider visit (99211)	Office visit for the evaluation and management of an established patient that may not require the presence of a physician	• Does not pay that well for a visit that often lasts a long time
T-codes	Encounter-based billing that allows specified allied health professionals phone or in person visits for disease management for patients with specified chronic conditions	• Only some insurers have and pay on t-codes • Often involves patient copay • Allows phone or in-person visit
Medical nutrition therapy (MNT) provided by a registered dietitian (RD)	Nutrition counseling provided by an RD	• Only used by an RD • Limited number of visits (3 hours total first year) • Must have specific diagnosis (diabetes or chronic kidney disease)
Per member per month fee payment	Usually paid for an entire population, set amount paid to the practice whether care management is given or not	• May be difficult to correctly attribute the amount needed for the practice population; some arrangements are based on performance metrics achieved
Medicare wellness	Completion of wellness visit as specified by Medicare	• Must be enrolled in Medicare anytime in first year • Visit requirements for assessment and prevention plan

RD, registered dietician.

All care manager patient contacts were tracked via the electronic medical record and practice management system. Care managers and other office staff were trained to standardize billing processes for every encounter (telephone or in person). Checkout options were put into the care manager's work flow so that encounter time and event type were accounted for, and both care managers and reception staff could select the appropriate billing code. After every care manager visit, an option for billing was selected and submitted. If an insurer did not reimburse for care management services generally or did not cover a specific service, a dummy code was used to capture a charge for the encounter and a bill was not initiated to the patient. Each direct billing opportunity was tracked separately by care manager, practice, and payer.

Qualitative Data Collection and Analysis

In addition to the revenue and expense data being collected and reviewed, qualitative data were collected and analyzed regarding the overall implementation of care management, from which financial aspects of the care management implementation emerged. These data were collected via individual interviews with key practice members representing roles involved with care management (per practice: 1–2 physicians, 1–2 medical assistants, the practice manager, a reception clerk, and the clinical supervisor) at baseline and 2 time points during the intervention, as well as monthly interviews with each of the care managers during the initial 6 months of the intervention. In addition, field notes were taken during care manager implementation meetings held at the PO, which included all the care managers and the director of clinical quality improvement. Interviews and observations were conducted primarily by the Principal Investigator (JSH), 1 of 2 qualitatively trained research assistants, and occasionally another qualitative coinvestigator. These data were transcribed and coded with a series of a priori and emergent codes that identified key factors related to the care management implementation using the qualitative analytic software Atlas.ti (www.atlasti.com). Three coders coded the data and produced quotation outputs for the key themes; and after the 3 separate analysts completed their individual coding and theme development, they com-

Table 2. Care Management Direct Reimbursement Revenue Billed and Collected

Opportunity	Code and Per-Unit Revenue	Billed	Collected
Care manager evaluation and management billing	variable	$66,393	$38,276.01 (58%)
Allied professional visit	99211, $35	$25,168	$15,186.15 (60%)
T-codes	1015, $70 1019, $35 per 15 minutes with a maximum of 2	$37,158	$34,413.60 (93%)
Registered dietitian medical nutrition therapy	97802, $35 97803, $32	$3,420	$2,287.15 (67%)
Per member per month fee payment	Not applicable	$0	$0
Medicare wellness visit	G0402, $191; G0438, $208; G0439, $137	$0	$0
Total		$132,139	$90,162.91 (68%)

pared their findings and interpretations to derive a consensus. Financial reimbursement issues emerged as a key factor and were further analyzed during regular team meetings of the qualitative analysis team.[19,20] Member checking was used with key practice and organizational members to determine the appropriateness of the themes identified.

Results

Costs and Sources of Reimbursement for Care Management

The study period for this article was the 16 months in which the intervention was active from March 2011 through June 2012. Expenses included care manager salary and fringe, supervisor (10%) and IT support (5%), salary and fringes, and supplies and equipment. The total was $427,026 or $85,405 per practice or $604.85 per enrolled patient. The expenses included the intervention preparation time during which the practices and care managers were attending training, determining work flows, and developing resources. Thus, $44,475 of the total cost, which accounts for the first 2 months of salary and fringes, was attributed to this start-up period. Revenue results are reported in several ways: Table 2 reports the reimbursement based on allowable billing codes of each of the options for supporting care management; Table 3 reports the reimbursement by care manager type.

The results indicate that care management was insufficiently supported by direct reimbursement, with actual revenue received covering only 21% of the cost of the care management intervention. Just more than 68% of billed services were actually collected with the highest reimbursement associated with t-codes at 93% collected and the worst being the care manager evaluation and management (E & M) at 58%. Therefore, the larger the practice, the greater were the gaps in reimbursement. Services provided by the registered dietitian were more likely to be reimbursed than services provided by care managers with other professional backgrounds. Services provided to patients with diagnoses of diabetes were the most likely to be reimbursed, while services for patients with diabetes risk factors such as obesity but no diabetes diagnosis were frequently not reimbursable.

Themes Identified from Qualitative Interviews

Patient Copayment, Coinsurance, and Deductible Issue

Interview participants frequently noted that they often did not know at the time of the care manager visit

Table 3. Care Management Direct Reimbursement by Care Manager Type

Care Manager Type	Nurse (LPN and RN) 2.45 Full-Time Equivalent (FTE)	Social Work 0.6 FTE	Registered Dietitian 0.9 FTE
Care manager evaluation and management	0	$5,870.16	$32,405.85
Allied professional visit	$12,662.26	$1,790.28	$733.61
T-codes	$16,420.06	$2,268.39	$15,725.15
Medical nutrition therapy	0	0	$2,287.15
Total revenue collected	$29,082.32	$9,928.83	$51,151.76
Per FTE	$11,870.33	$16,549.72	$56,835.29
Per patient enrolled	$69.24	$84.86	$302.67

LPN, licensed practical nurse; RN, registered nurse; FTE, full-time equivalent.

whether the patient would need to pay a copayment or how much that copayment would be. More generally, the complexity of insurance reimbursement rules and the variations among payers on coding created a confusing system of verification of covered services for office administrators and care managers, and this confusion in some cases limited access to the service. Copayment amounts varied from zero to US $30 per visit, with the average being US $20. The variable amounts were related to the type of patient insurer, the level of coverage, and overall purchased plan design. A few providers refused to have their patients billed directly for care management services because they believed that such billing would negatively impact patient satisfaction with the practice. Patient copayments clearly were a barrier in 2 practices serving a higher proportion of low-income patients, and care managers reported that some patients either refused services or discontinued care management due to the associated out-of-pocket costs. Care managers speculated that patients may perceive care manager visits differently than visits with the physician and therefore may not be willing to pay for services seen as less important than a physician visit. Table 4 lists salient quotations from interviews with practice members illustrating these points.

Lack of Reimbursement for Primary Prevention

Reimbursement opportunities were available in some cases for patients with established chronic

Table 4. Issues Due to Cost of Care Management

Issue	Illustrations
Patients not willing to pay for care manager services	Care manager: "Well, all of a sudden she got a bill for like a $120 … and that was the end of that. She told me that she would come back and see me when she got that bill paid off, but I don't look for her to call me up. … so that was one of my success stories you know that I was really kind of clicking along with her, and I was seeing regularly."
	Care manager: "And frankly I don't think that patients yet get that a nurse visit is worth any money. Now you and I know that a nurse visit can be packed with a lot more information, support, training, motivation than a provider visit, but the patients don't get that. They're not used to thinking in terms of paying a nurse for anything, so they don't value it."
Physicians not referring to care managers due to concern about payment from the patient	Interviewer: "So you were getting actual feedback from the patient saying I can't afford this?"
	Physician: "Or a phone call where they called the front staff and they said patient cancelled visit due to cost. Yeah so I mean even if we have like 2 or 3 insurances that are on board, and say we want to get these people all the help they need because they cost us less money when their diabetes is well-controlled. Then we'll say fine."
	Receptionist: "I think [the patient] saw [care manager], and we billed for the visit. It was like $212 or $230 and [the patient] ended up getting the bill, and he was really upset about it … so I think that may have affected referrals. The [providers] are hesitant to refer because they really, our patient population down here isn't, you know we have a lot of Medicaid, a lot of indigent patients. So they're really hesitant to refer if they think the patient's going to get stuck with the bill."
Problems of uncertainty about payment and what can be billed	Physician: "First thing they want to know though is how much is this going to cost?" Interviewer: "And then what do you say?" Physician: "I don't always know because I don't know what kind of copay they're going to have or what is covered. What isn't covered? And I can tell them I don't know, but my front desk will try to help find that out."
	Care manager: "I think that the whole money thing needs to be a little more clearcut from the beginning. A patient needs to know up front whether there's going to be a charge, how much of a charge there's going to be. When they're expected to pay it? In this state of the economy, people don't like surprises, and when the front desk staff says well we'll have to submit it and see what they pay. People don't want to know that."
	Receptionist: "Who qualifies for what? What insurance pays for what? What codes get done? What does [the care manager] bill? How does she bill it? If she doesn't bill it, is the patient going to get this? Do they have to pay a copay? Can they be seen 2 visits in 1 day? That's a disaster. If they have a blood draw the same day as [the care manager], [the care manager's] the rendering, which she's not an MD, so she can't order blood. She can't order micro albumin, so then it has to have 2 encounters which link together, and then it has to be processed backwards, and it's a nightmare."

disease (such as diabetes or kidney disease) but were lacking for patients without established disease (such as obesity). At the time of the study, there were only limited codes for treatment of obesity as a primary diagnosis; generally, the only codes that actually paid were those provided by the RD and only for patients who actually had diabetes or chronic kidney disease. Since that time, there are payable codes such as Medicare Intensive Behavioral Therapy for Obesity.[21]

Care Manager Staffing

As noted above, care managers with different educational backgrounds were eligible for different reimbursement opportunities. Licensed social workers are viewed by insurers as independent providers who could bill separately and at a higher level than registered nurses. They could bill separate E & M codes as providers when meeting the "incident to" requirements. For dietitians, there are dedicated medical nutrition therapy codes for the services they perform. Interviewees noted that care must be taken in properly scheduling patient visits to meet billing requirements. For example, if the patient had Medicare, they could see the care manager and their primary provider the same day, but if the patient had another type of insurance, they had to receive services on 2 separate days to qualify for reimbursement of both encounters. Respondents noted that nurses and social workers were only able to bill under the t-code or nursing code mechanisms at a substantially lower reimbursement rate than what would be received if the service were delivered by a physician. An advantage of t-code or an E & M code was that these codes could be used the same day as a physician visit, allowing the care managers to see patients right before or after a physician visit, providing convenience for the patient and facilitating team care.

Implementation Success and Reimbursement Capture

Implementation of care management can be affected by many issues including organizational changes such as mergers, leadership, and staffing changes; electronic medical record upgrades; and organizational factors such as provider support for care management. Care managers who had a relationship with the practice before changing job functions generally were able to launch a caseload in a shorter time than those new to the practice. The delay in filling a schedule also had an impact on the ability to realize full revenue if slots were left open. The patient response to care management also greatly impacts how well the care manager is used. This patient response then has an impact on the funding of the service because of the number of patients that use it. In this study, interview data highlighted these issues and the resultant differential uptake of the care manager intervention by practice, which affected the care manager panel size and ultimately impacted reimbursement.

Organizational Reimbursement Opportunities

Although this study focused on direct reimbursement opportunities, mechanisms for primary care practices to capture revenue from quality improvements that are the result of the presence of a care manager may be available. The PO may decide to attribute some or all these funds to covering the costs of care managers. Generally, these fall into 3 categories: uplifts to all payments based on meeting designation as a patient-centered medical home, base payments for achieving quality metrics, and additional payments for achieving benchmarks related to service delivery and clinical values. In this study, the PO received uplift in E & M coding of 20% for achieving a patient-centered medical home designation through 1 insurer. They also received incentive payments in incremental levels for having a provider's panel of patients achieve service benchmarks such as the percentage of patients with diabetes receiving an A1c test or reaching a certain percentage of the patients with diabetes with an A1c under 8.0—all benchmarks that are typically more successful among patients receiving care management.[22–26] However, the PO participating in the current study used these funds in other ways (ie, supporting IT development) rather than to cover the cost of care managers. Because some of these incentives are likely to improve with the use of care managers, but do not require a care manager, many POs choose not to hire them. This is not to diminish the importance of these quality-improvement payments or the ultimate benefit they provide to improving patient care. By unloading this financial hit from practices, the POs are able to invest in other resources. Examples of organizational reimbursement opportunities are outlined in Table 5.

Table 5. Organizational Revenue Opportunities Potentially Attributable to Care Management

Opportunity	Description	Issues
Per-unit quality incentives for service provision	Money per person for completing testing or services recommended, eg, $10 per member for each health plan member who has diabetes and has annual eye exam	• Patients may not participate in services for reasons unrelated to the primary care physician or the care management services are not effective in encouraging this participation • Requires ability to capture population-based data and report • Only some insurers do this
Per-unit quality incentives for meeting clinical benchmarks	Money per person for meeting clinical benchmarks, eg, $50 per member for each health plan member who has blood pressure <140/80 at last physician visit of the year	• Requires patient to make health behavior changes, and they may be unable or unwilling to do so or the care management services may be ineffective in encouraging these changes • Requires ability to capture population-based data and report • Only some insurers do this
Patient-centered medical home designation	10% uplift in evaluation and management billing for all services if designated	• Only occurs yearly • Designation line conveys "in" or "out" of designation and difficult to attribute to care management services only to meet designation • Requires up-front investment • Only one insurer pays for this at present

Discussion

The results of this study reveal that direct billing fell far short of care manager costs during the initial 16 months of implementation of this intervention. Payment for care management to primary care commensurate with its benefits to practice efficiency and patients are a must if care management is to continue.[27] Primary care physicians and their organizations already earn less relative to their specialty partners, thus further burden is untenable.[28] An extensive literature search identified little information regarding mechanisms for funding care managers, although the need to do so is recognized.[29–31] Initiatives such as the Michigan MiPCT Demonstration Project (www.mipct.org)[32] and the Comprehensive Primary Care Initiative (http://innovation.cms.gov/initiatives/comprehensive-primary-care-initiative/) are exploring avenues for payment, but established mechanisms as yet generally do not exist within the fee-for-service payment system.

Additional research is needed in other settings with other insurance situations as well as with other disease conditions and using different care management models. Vertically integrated health care systems have the potential to reap the benefits of savings "down the line," benefitting from patient's improved disease management; however, in a fee-for-service environment where primary care practices receive reimbursement for the services they provide and not a financial benefit for savings to other parts of the health care system, there must be other mechanisms to provide coverage for the costs incurred for care management at the primary care level. The findings from this study also suggest that direct reimbursement for care management visits rather than simply quality improvement incentives to the organization are needed. Since the completion of this study, health insurers are testing out per member per month payment for care management, which may prove a more productive vehicle for payment to primary care for this aspect of population management.[33] The new Centers for Medicare and Medicaid Services billing code for care management to be released in 2015 may be an avenue to reimbursement for primary care.[34,35]

Another area that may deserve exploration is related to productivity. For example, shifting some of the work of the physician to the care manager so that the physician has the time to see (and bill for) more patients.[16] This option has existed for some time and has not taken hold, suggesting that it is not a reasonable solution; however, it may be particularly useful for primary prevention issues such as weight loss and smoking cessation. We were disappointed to find few options for direct reimbursement for patients with a primary diagnosis of obesity in the absence of other chronic conditions.

Yet, patients are highly desirous of weight loss and exploration of the primary care practice as an avenue for weight loss is something for which some patients may be interested in paying out of pocket.

Limitations

The current study was completed in 1 PO in 1 state, and the payment policies for the insurers described here may not represent those of other geographic areas. Although this PO had a variety of insurers and insurance options, it was largely a fee-for-service system with limited managed care. Another limitation of the current study is that only direct billing options were tracked. Although organizational revenues were available for quality improvement, the PO for this study did not consider organizational incentive reimbursement as directly attributable to the care manager intervention, and we suspect that this PO is typical in that more general PO incentives for quality improvement are likely insufficient to incentivize practices to use sufficient numbers of care managers. Because the current study included only 5 practices and 5 care managers, results may be different in other environments, even if market constraints are similar. However, the detailed costing and qualitative interview data from the current study make an important contribution to how best to promote care management under health care reform. We believe this to be an example of an effective intervention, given patient results indicating clinical improvement.

Conclusions

Our results supported the widely held perception that care management reimbursement is inadequate to fully cover the costs of implementation at the practice level in a fee-for-service payment system. Careful thought and likely policy changes are needed so that this important aspect of patient care can be implemented and sustained in primary care practices.

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References

1. Wu SY, Green A. Projection of chronic illness prevalence and cost inflation. Santa Monica (CA): RAND Corporation; 2000.
2. National Center for Chronic Disease Prevention and Health Promotion. Chronic disease overview. Available from: http://www.cdc.gov/chronicdisease/overview/index.htm. Accessed November 19, 2013.
3. Hoffman C, Rice D, Sung HY. Persons with chronic condition: their prevalence and costs. JAMA 1996; 276:1473–9.
4. Behavioral risk factor surveillance system survey data. U.S. Department of Health and Human Services, Centers for Disease Control and Prevention; 2007. Available from: http://apps.nccd.cdc.gov/brfss/index.asp. Accessed May 11, 2007.
5. Schoenborn CA, Adams PF, Barnes PM, Vickerie JL, Schiller JS. Health behaviors of adults: United States, 1999–2001. Vital Health Stat 10 2004:1–79.
6. Center for Health Care Strategies Inc. Care management definition and framework. 2007. Available from: http://www.chcs.org/usr_doc/Care_Management_Framework.pdf. Accessed November 19, 2013.
7. Bodenheimer T, Macgregor K, Sharifi C. Helping patients manage their chronic conditions. Oakland (CA): California Healthcare Foundation; 2005.
8. Stellefson M, Dipnarine K, Stopka C. The chronic care model and diabetes management in US primary care settings: a systematic review. Prev Chronic Dis 2013;10:E26.
9. Franek J. Self-management support interventions for persons with chronic disease: an evidence-based analysis. Ont Health Technol Assess Ser 2013;13:1–60.
10. Sutherland D, Hayter M. Structured review: evaluating the effectiveness of nurse case managers in improving health outcomes in three major chronic diseases. J Clin Nurs 2009;18:2978–92.
11. Bodenheimer T. Interventions to improve chronic illness care: evaluating their effectiveness. Dis Manag 2003;6:63–71.
12. Krause DS. Economic effectiveness of disease management programs: a meta-analysis. Dis Manag 2005;8:114–34.
13. Dorr DA, Wilcox A, Burns L, Brunker CP, Narus SP, Clayton PD. Implementing a multidisease chronic care model in primary care using people and technology. Dis Manag 2006;9:1–15.
14. Bodenheimer T. Coordinating care: a major (unreimbursed) task of primary care. Ann Intern Med 2007;147:730–1.
15. Terra SM. What can claims data tell the case manager? Prof Case Manag 2008;13:195–208; quiz 209–10.
16. Dorr D, Wilcox A, McConnell J, Burns L, Brunker CP. Productivity enhancement for primary care providers using multicondition care management. Am J Manag Care 2007;13:22–8.
17. Blue Cross Blue Shield of Michigan. Models of Care: Provider-Delivered Care Management. 2013. Available from: http://www.bcbsm.com/providers/value-partnerships/physician-group-incentive-prog/models-of-care/provider-delivered-care-management.html. Accessed November 19, 2013.

18. Wagner EH, Austin BT, Von Korff M. Organizing care for patients with chronic illness. Milbank Q 1996;74:511–44.
19. Borkan J. Immersion/crystallization. In: Crabtree B, Miller, WL, editors. Doing qualitative research. 2nd ed. Thousand Oaks (CA): Sage Publications, Inc; 1999. p. 179–94.
20. Crabtree B, Miller, WL. Using codes and code manuals: a template organizing style of interpretation. In: Crabtree B, Miller, WL, editors. Doing qualitative research. 2nd ed. Thousand Oaks (CA): Sage Publications, Inc; 1999. p. 163–77.
21. Centers for Medicare and Medicaid Services. Intensive behavioral therapy (IBT) for obesity 2012. Available from: http://www.cms.gov/medicare-coverage-database/details/nca-decision-memo.aspx?&NcaName=Intensive%20Behavioral%20Therapy%20for%20Obesity&bc=ACAAAAAAIAAA&NCAId=253&. Accessed November 19, 2013.
22. Gibson TB, Mahoney J, Ranghell K, Cherney BJ, McElwee N. Value-based insurance plus disease management increased medication use and produced savings. Health Aff (Millwood) 2011;30:100–8.
23. Calman NS, Hauser D, Weiss L, et al. Becoming a patient-centered medical home: a 9-year transition for a network of Federally Qualified Health Centers. Ann Fam Med 2013;11(suppl 1):S68–73.
24. Egginton JS, Ridgeway JL, Shah ND, et al. Care management for type 2 diabetes in the United States: a systematic review and meta-analysis. BMC Health Serv Res 2012;12:72.
25. Sochalski J, Jaarsma T, Krumholz HM, et al. What works in chronic care management: the case of heart failure. Health Aff (Millwood) 2009;28:179–89.
26. Taliani CA, Bricker PL, Adelman AM, Cronholm PF, Gabbay RA. Implementing effective care management in the patient-centered medical home. Am J Manag Care 2013;19:957–64.
27. Peikes DN, Reid RJ, Day TJ, et al. Staffing patterns of primary care practices in the comprehensive primary care initiative. Ann Fam Med 2014;12:142–9.
28. Leigh JP, Tancredi D, Jerant A, Romano PS, Kravitz RL. Lifetime earnings for physicians across specialties. Med Care 2012;50:1093–101.
29. Taylor EF, Machta RM, Meyers DS, Genevro J, Peikes DN. Enhancing the primary care team to provide redesigned care: the roles of practice facilitators and care managers. Ann Fam Med 2013;11:80–3.
30. Porter ME, Pabo EA, Lee TH. Redesigning primary care: a strategic vision to improve value by organizing around patients' needs. Health Aff (Millwood) 2013;32:516–25.
31. Bindman AB, Blum JD, Kronick R. Medicare payment for chronic care delivered in a patient-centered medical home. JAMA 2013;310:1125–6.
32. Harcus A. MiPCT: The nation's largest patient-centered medical home project. Mich Med 2011;110:10–1.
33. Agency for Healthcare Research and Quality. Section 5: selecting a care management program model. Available from: http://www.ahrq.gov/professionals/systems/long-term-care/resources/hcbs/medicaidmgmt/medicaidmgmt5.html. Accessed July 7, 2014.
34. Centers for Medicare and Medicaid Services. PFS federal regulation notices. Available from: http://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/PhysicianFeeSched/PFS-Federal-Regulation-Notices.html. Accessed July 7, 2014.
35. Centers for Medicare and Medicaid Services. Medicare Program; Revisions to Payment Policies Under the Physician Fee Schedule, Clinical Laboratory Fee Schedule, Access to Identifiable Data for the Center for Medicare and Medicaid Innovation Models & Other Revisions to Part B for CY 2015. Item G: Chronic Care Management. Available from: https://www.federalregister.gov/articles/2014/07/11/2014-15948/medicare-program-revisions-to-payment-policies-under-the-physician-fee-schedule-clinical-laboratory#h-108. Accessed January 22, 2015.