

# Perspectives in Primary Care: Implementing Patient-Centered Care Coordination for Individuals With Multiple Chronic Medical Conditions

Elizabeth A. Bayliss, MD, MSPH<sup>1,2</sup>

Bijal A. Balasubramanian, MBBS, PhD<sup>3,4</sup>

James M. Gill, MD, MPH<sup>5,6</sup>

Kurt C. Stange, MD, PhD<sup>7</sup>

<sup>1</sup> Kaiser Permanente Institute for Health Research, Denver, Colorado

<sup>2</sup> Department of Family Medicine, University of Colorado School of Medicine, Aurora, Colorado

<sup>3</sup> Department of Epidemiology, Human Genetics, and Environmental Sciences, University of Texas - School of Public Health, Dallas, Texas

<sup>4</sup> Harold C. Simmons Cancer Center, University of Texas Southwestern Medical Center, Dallas, Texas

<sup>5</sup> Delaware Valley Outcomes Research, Newark, Delaware

<sup>6</sup> Department of Family and Community Medicine, Jefferson Medical College, Philadelphia, Pennsylvania

<sup>7</sup> Departments of Family Medicine, Community Health, Epidemiology and Biostatistics, Sociology, and Oncology, Case Western Reserve University, Cleveland, Ohio

*Ann Fam Med* 2014;12:500-503. doi: 10.1370/afm.1725.

Starting in 2015, the Centers for Medicaid and Medicare Services (CMS) will offer physicians the opportunity to submit claims for monthly care coordination services for Medicare fee-for-service (FFS) patients with 2 or more chronic medical conditions.<sup>1,2</sup> This change reflects a significant step in ongoing efforts by CMS to support care for beneficiaries with multiple chronic medical conditions (MCC) and is part of a larger initiative by the Department of Health and Human Services focused on optimizing health and quality of life for individuals with MCC.<sup>3,4</sup> Although CMS already supports care coordination in the context of care transitions involving hospitalizations, home health care, and hospice care, the new care coordination benefit is unique in its explicit focus on

comprehensive outpatient, longitudinal primary care for MCC patients.<sup>5</sup>

In contrast with disease management which seeks to help patients prevent adverse disease-specific health outcomes, care coordination is designed to "facilitate the appropriate delivery of health care services marshaling personnel and other resources to carry out all required patient care activities, [through] the exchange of information among participants responsible for different aspects of care."<sup>6</sup> In a population in which the average Medicare fee-for-service (FFS) beneficiary sees between 3 and 11 physicians in a given year, and 69% have 2 or more chronic medical conditions, high quality care coordination can decrease care fragmentation and improve patient-centered care for complex patients.<sup>7-9</sup>

Stakeholders with an interest in improving care coordination range from patients with MCC, their caregivers and family members, to employers, clinicians, operational leaders in health care delivery systems, and third party payers. Patients see care coordination as a means to continuous care focused on their individual goals and priorities, while other stakeholders seek to increase efficiency, improve high value care delivery, minimize unnecessary utilization, and reduce cost.<sup>10-13</sup> It is unlikely that this new CMS benefit

---

*Conflicts of interest:* None of the authors have any conflict of interest to declare.

## **CORRESPONDING AUTHOR**

Elizabeth A. Bayliss, MD, MSPH  
Kaiser Permanente, Institute for Health Research  
Department of Family Medicine  
University of Colorado Denver  
10065 E. Harvard Ave., Suite 300  
Denver, CO 80231-5968  
elizabeth.bayliss@kp.org

will immediately meet the needs of all stakeholders. Certain evidence-based practices, however, should be systematically incorporated into MCC care coordination to optimize patient-centered outcomes:

- Establish patient-centered goals and care priorities.<sup>14-16</sup> Patient-centered care for MCC individuals requires that clinicians jointly acknowledge, and clinical endeavors reflect, goals articulated by patients. Because goals may vary over time with changes in health, social, and other contextual factors, care coordination must also include processes to periodically reassess patient priorities.
- Optimize information transfer during care transitions. Multiple studies support the value of coordinating information transfer between hospital, home, or other care delivery settings.<sup>17-19</sup> Because care transitions often prompt patients and families to reassess priorities, transferring information on these priorities may be as or more important as information on medication reconciliation and summaries of care.
- Develop a mutually acceptable communication process between patients, primary clinicians, and appropriate family members. CMS strongly recommends that care coordinators be embedded within practices, share electronic clinical data through an electronic health record (EHR), and follow written protocols implemented by midlevel practitioners.<sup>5</sup> When asked, patients articulate preferred communication strategies: some may prefer email, others telephone calls or periodic in-person visits, and others interpretation through family members.<sup>20</sup> Neglecting patient preferences for communication risks additional care fragmentation.
- Manage communication between specialty and primary care providers. Optimal specialist input requires that specific clinical questions from primary care clinicians be supported with detailed information (including patient goals) to accompany referrals.<sup>21</sup> Transparent and effective communication processes will reassure MCC patients—who are at particular risk for receiving conflicting instructions and information from different clinicians.
- Reassess priorities frequently. Failure to discontinue medications, failure to reassess priorities, and persistent attention to inappropriate disease-specific quality metrics increase the risk of adverse outcomes.<sup>22</sup> Such ‘clinical momentum’ is as much of a problem for MCC patients as is the clinical inertia of insufficient treatment intensification.<sup>23</sup>
- Support self-management by focusing on the overall care needs of the patient—regardless of the type and number of chronic conditions. The proposed CMS standards for care coordination include assistance in self-managing at least 1 chronic condition. Tradi-

tional disease-management goals, however, may be inappropriate for MCC individuals.<sup>24</sup>

- Link patients with community resources and services. Multimorbidity has a negative impact on quality of life and social support.<sup>25</sup> Not only do community resources supplement health care delivery to improve health and well-being, they decrease isolation and may improve engagement for persons with MCC.
- Be alert to changes in mood and emotional well-being. MCC individuals are at greater risk for depression than individuals without multimorbidity.<sup>26</sup> Untreated depression risks multiple adverse outcomes and impairs decision making.
- Maximize in-person delivery of care coordination. Care management programs most effective in improving patient outcomes include in-person contact, especially for patients with higher morbidity—possibly through better integration of care coordinators into care teams.<sup>19</sup> Embedding care coordinators in practices and as part of medical home or other team-based care models increases the potential for face-to-face contact and relationship building.

As with other episodes of service expansion, this new Medicare benefit provides a natural experiment to investigate unanswered questions—the answers to which will ultimately optimize care coordination for patients and other stakeholders. Priority questions that will inform ongoing implementation efforts include:

- Which populations and patients are likely to benefit from services? Although CMS inclusion criteria are broad (2 or more chronic conditions expected to last at least 12 months or more), care coordination programs are likely to be most effective when targeting specific populations with complex care needs.<sup>19</sup> To some extent, patients will answer this question themselves by agreeing to the Medicare monthly copay. This population should be described and we should evaluate patients’ understanding of the process. Specific analytic methods within rigorous observational studies and prospective randomized trials can help tease out which services work best for which patients.<sup>27,28</sup>
- What resources in payer support and personnel are necessary to make a care coordination model sustainable across the practice spectrum? Medicare FFS beneficiaries are a primary, but not the only, population in need of care coordination services. The prevalence of multimorbidity in adults aged <65 years is over 60% in some settings.<sup>29</sup> These individuals will also benefit from continuous integrated care. Other third party payers often follow the lead of CMS in covering services. Cost benefit and cost effectiveness analyses can inform broader care management reimbursement policies to meet the needs of all complex patients.

- Which administrative policies and procedures will need to be adopted in different practice settings to insure success? How will these policies and procedures accommodate differential uptake of care management services by patient subpopulations with different health care needs? Existing disease management programs and ongoing care coordination efforts will need to be effectively merged to avoid overwhelming patients and practices. In-depth investigations such as those used to evaluate new medical home initiatives and other forms of practice change may help us learn from the inevitably unpredictable process of expanding processes of care.
- How will we measure success? Measuring successful care coordination will not be easy.<sup>14,30</sup> Current disease-specific quality measures are necessary but insufficient for the complex patient population. Using them to measure success may result in adverse outcomes. While there is broad agreement on the general principles that represent high quality care for complex patients, there are no measures that assess multimorbidity-specific quality.<sup>31,32</sup> Although of interest to many stakeholders, utilization is not always a moveable target for populations that, by definition, use health care services. Leveraging the new benefit to systematically incorporate patient-reported goals and outcomes into electronic documentation, study the validity of these outcomes, and use this information to facilitate shared decision making will improve care quality for the MCC population.<sup>33-35</sup>
- How do we deliver effective care coordination to vulnerable populations? Vulnerable populations will require additional care management support above and beyond the CMS standards. Crucial elements of this additional support should be defined. Considerations range from issues of acculturation and literacy to adequacy of living conditions and managing sequelae of substance abuse and serious mental illness. Prospective mixed-methods investigations that engage members of (and advocates for) vulnerable populations as active participants in studying care coordination would provide valuable evidence for program development and expansion.

Integrated, continuous, patient-centered care is a foundational principle of family medicine. This new benefit is a step in creating payment reform that can support such high quality primary care. Although coordination of care is one of the fundamental tenets of primary care, this principle has been devalued by an overemphasis on disease management. Effective implementation of this new CMS benefit should provide an opportunity to truly engage patients and family members in setting and meeting meaningful care goals. Likewise this benefit may ensure that inte-

grated and informed care teams emphasize holistic and patient-centered chronic disease management. It remains to be seen whether the specific care coordination standards recommended by CMS will be effective in promoting effective patient-centered care for individuals with MCC.

**To read or post commentaries in response to this article, see it online at <http://www.annfammed.org/content/12/6/500>.**

**Key words:** patient-centered care; chronic disease; Centers for Medicare and Medicaid Services (U.S.); care coordination

Submitted September 19, 2014; submitted, revised, September 30, 2014; accepted October 6, 2014.

## References

1. Department of Health and Human Services; Centers for Medicare and Medicaid Services. Federal Register. 2014;79(133). <http://www.gpo.gov/fdsys/pkg/FR-2014-07-11/pdf/2014-15948.pdf>. Published Jul 11, 2014.
2. American Academy of Family Physicians. Summary of payment provisions within the 2015 proposed Medicare physician fee schedule. <http://www.aafp.org/dam/AAFP/documents/advocacy/payment/medicare/feesched/ES-OpenPayments-ProposedMPFS2015-071014.pdf>. Published Jul 16, 2014.
3. Parekh AK, Barton MB. The challenge of multiple comorbidity for the US health care system. *JAMA*. 2010;303(13):1303-1304.
4. Parekh AK, Kronick R, Tavenner M. Optimizing health for persons with multiple chronic conditions. *JAMA*. 2014;312(12):1199-1200.
5. Department of Health and Human Services; Centers for Medicare and Medicaid Services. Federal Register. 2013;78(237). <http://www.gpo.gov/fdsys/pkg/FR-2013-12-10/pdf/2013-28696.pdf>. Published Dec 10, 2013.
6. McDonald K, Schultz E, Albin L et al. Care coordination atlas Version 3 (Prepared by Stanford University under subcontract to Battelle on Contract No. 290-04-0020) AHRQ 11-0023-EF. <http://pcmh.ahrq.gov/citation/care-coordination-atlas-version-3-prepared-stanford-university-under-subcontract-battelle>. Published Dec 2010.
7. Pham HH, Schrag D, O'Malley AS, Wu B, Bach PB. Care patterns in Medicare and their implications for pay for performance. *N Engl J Med*. 2007;356(11):1130-1139.
8. Centers for Medicare and Medicaid Services. *Chronic Conditions Among Medicare Beneficiaries. Chartbook: 2012*. US Department of Health and Human Services; 2012.
9. Bodenheimer T. Coordinating care—a perilous journey through the health care system. *N Engl J Med*. 2008;358(10):1064-1071.
10. Bodenheimer T, Berry-Millett R. Follow the money—controlling expenditures by improving care for patients needing costly services. *N Engl J Med*. 2009;361(16):1521-1523.
11. Song Z, Sequist TD, Barnett ML. Patient referrals: a linchpin for increasing the value of care. *JAMA*. 2014;312(6):597-598.
12. Bayliss EA, Edwards AE, Steiner JF, Main DS. Processes of care desired by elderly patients with multimorbidities. *Fam Pract*. 2008; 25(4):287-293.
13. Stremikis K, Schoen C, Fryer A-K. A call for change: the 2011 Commonwealth Fund survey of public views of the U.S. health system. <http://www.commonwealthfund.org/publications/issue-briefs/2011/apr/call-for-change>. Published Apr 6, 2011.
14. National Quality Forum. Preferred Practices and Performance Measures For Measuring and Reporting Care Coordination: A Consensus Report. <https://www.aacvpr.org/Portals/0/about/NQFCareCoordinationandCR.pdf>. Published 2010.

15. Maeng DD, Martsolf GR, Scanlon DP, Christianson JB. Care coordination for the chronically ill: understanding the patient's perspective. *Health Serv Res.* 2012;47(5):1960-1979.
16. Craig C, Eby D, Whittington J. Care coordination model: better care at lower cost for people with multiple health and social needs. IHI Innovation Series white paper. Institute for Healthcare Improvement; 2011.
17. Coleman EA, Eilertsen TB, Magid DJ, Conner DA, Beck A, Kramer AM. The association between care co-ordination and emergency department use in older managed care enrollees. *Int J Integr Care.* 2002;2:e03.
18. Coleman EA, Parry C, Chalmers S, Min SJ. The care transitions intervention: results of a randomized controlled trial. *Arch Intern Med.* 2006;166(17):1822-1828.
19. Peikes D, Chen A, Schore J, Brown R. Effects of care coordination on hospitalization, quality of care, and health care expenditures among Medicare beneficiaries: 15 randomized trials. *JAMA.* 2009;301(6):603-618.
20. Kane B, Sands DZ. Guidelines for the clinical use of electronic mail with patients. The AMIA Internet Working Group, Task Force on Guidelines for the Use of Clinic-Patient Electronic Mail. *J Am Med Inform Assoc.* 1998;5(1):104-111.
21. Chen AH, Yee HF Jr. Improving the primary care-specialty care interface: getting from here to there. *Arch Intern Med.* 2009;169(11):1024-1026.
22. Zulman DM, Asch SM, Martins SB, Kerr EA, Hoffman BB, Goldstein MK. Quality of care for patients with multiple chronic conditions: the role of comorbidity interrelatedness. *J Gen Intern Med.* 2014;29(3):529-537.
23. Parchman ML, Pugh JA, Romero RL, Bowers KW. Competing demands or clinical inertia: the case of elevated glycosylated hemoglobin. *Ann Fam Med.* 2007;5(3):196-201.
24. Boyd CM, Darer J, Boulton C, Fried LP, Boulton L, Wu AW. Clinical practice guidelines and quality of care for older patients with multiple comorbid diseases: implications for pay for performance. *JAMA.* 2005;294(6):716-724.
25. Fortin M, Bravo G, Hudon C, et al. Relationship between multimorbidity and health-related quality of life of patients in primary care. *Qual Life Res.* 2006;15(1):83-91.
26. Egede LE. Major depression in individuals with chronic medical disorders: prevalence, correlates and association with health resource utilization, lost productivity and functional disability. *Gen Hosp Psychiatry.* 2007;29(5):409-416.
27. Maciejewski ML, Bayliss EA. Approaches to comparative effectiveness research in multimorbid populations. *Med Care.* 2014;52(Suppl 3):S23-S30.
28. PCORI (Patient-Centered Outcomes Research Institute) Methodology Committee. The PCORI methodology report. <http://www.pcori.org/assets/2013/11/PCORI-Methodology-Report.pdf>. Published Nov 2013.
29. Fortin M, Stewart M, Poitras ME, Almirall J, Maddocks H. A systematic review of prevalence studies on multimorbidity: toward a more uniform methodology. *Ann Fam Med.* 2012;10(2):142-151.
30. DuGoff EH, Dy S, Giovannetti ER, Leff B, Boyd CM. Setting standards at the forefront of delivery system reform: aligning care coordination quality measures for multiple chronic conditions. *J Healthc Qual.* 2013;35(5):58-69.
31. National Quality Forum. Multiple chronic conditions measurement framework. Washington, DC: National Quality Forum; 2012.
32. Boyd C, Fortin M. Future of multimorbidity research: How should understanding of multimorbidity inform health system design? *Public Health Rev.* 2010;32(2):451-474.
33. Jaén CR, Crabtree BF, Palmer RF, et al. Methods for evaluating practice change toward a patient-centered medical home. *Ann Fam Med.* 2010;8(Suppl 1):S9-S20, S92.
34. Scholle SH, Asche SE, Morton S, Solberg LI, Tirodkar MA, Jaén CR. Support and strategies for change among small patient-centered medical home practices. *Ann Fam Med.* 2013;11(Suppl 1):S6-S13.
35. Tomoia-Cotisel A, Scammon DL, Waitzman NJ, et al. Context matters: the experience of 14 research teams in systematically reporting contextual factors important for practice change. *Ann Fam Med.* 2013;11(Suppl 1):S115-S123.

## EDITORIAL

# Publishing Patient-Centered Outcomes Research

*Ann Fam Med* 2014;12:503-504. doi: 10.1370/afm.1723.

The still new Patient-Centered Outcomes Research Institute (PCORI) is changing the world of clinical research by bringing the voice of patients and other stakeholders into the design, conduct, and interpretation of research. PCORI is both championing and riding the wave of movements that combine rigor and relevance, carefulness and openness, expertise and inclusive participation. These movements challenge entrenched oligarchies. Now PCORI is seeking to add to the process of timely, accessible, transparent communication of research results to increase the credibility of patient-centered outcomes research.

Having just completed a public comment period, PCORI will soon declare a process for peer review and

public release of its sponsored research findings. The exact details still are being determined, but we know that the process must comply with the legal statutes that created PCORI as an independent, but federally funded organization. We also know that PCORI will be working to find the sweet spot between the needs and desires of researchers, scientific and lay publishers, and the diverse end users of patient-centered outcomes research.

The statutes call for:

- A process for peer review of primary research to assess scientific integrity and adherence to methodological standards
- Making research findings available to clinicians, patients, and the general public: