

Chronic Care Improvement in Medicare FFS: Cosmetic or Transforming?

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As part of the Medicare Modernization Act of 2003, Congress mandated development of “Voluntary Chronic Care Improvement Programs under Traditional Fee-For-Service.” These programs represent an ambitious new federal attempt to reduce quality failings under the Medicare fee-for-service (FFS) plan cost-effectively and on a large scale. CCI programs cannot be expected to rescue Medicare from current cost pressures or from the perverse incentives inherent in FFS provider reimbursement. These programs may, however, reduce health risks, yield savings, and foster progress toward system integration on behalf of some major subgroups of chronically ill beneficiaries who need added support to manage their health effectively.

The Medicare FFS plan, with its 35 million beneficiaries and more than \$250 billion in annual costs, is massively impacted by current deficiencies in chronic care. Those deficiencies include highly fragmented medical care and little support for beneficiary self-care.¹ They contribute to disease progression, complications and acute care crises that can be debilitating and very costly.

With these problems in mind, Congress included several provisions in the Medicare Prescription Drug, Improvement and Modernization Act of 2003 (MMA) that are designed to improve chronic care.² The most ambitious is Section 721, “Voluntary Chronic Care Improvement under Traditional Fee-For-Service.” It calls for development and testing of approximately 10 regional chronic care improvement (CCI) programs that will serve a total of about 150,000-300,000 beneficiaries for 3 years. The CCI programs will offer eligible beneficiaries guidance and support in managing their health and help them coordinate their medical care. After the 3-year pilot phase, successful CCI programs (or components) are to be expanded, possibly nationwide.³

This new strategy is intended to allow the federal government to channel substantial new funds into innovative quality improvement activities without increasing net Medicare costs. In other words, the purpose of the CCI initiative is not simply to evaluate the effectiveness of various beneficiary or provider-focused interventions. The goal is to create a financially sustainable means of catalyzing private sector efforts to improve chronic care, recognizing that if the strategy works, CCI interventions will evolve dynamically over time.

The CCI initiative is fundamentally different from any previous Medicare FFS disease management, case management or care coordination initiative. For the first time, the federal government will use its Medicare FFS claims data to identify subgroups of beneficiaries whose health risks are significant and modifiable. Eligible beneficiaries will be contacted directly by Medicare and encouraged to participate in the CCI programs in their areas. Medicare will provide the CCI organizations with historical claims data on eligible beneficiaries to use in assessing beneficiary health risks.⁴ Also for the first time, Medicare and the CCI organizations will set performance improvement goals for the target populations, including population-based measures of clinical quality, costs, and beneficiary and provider satisfaction. If a CCI organization fails to meet its agreed-upon goals, it will be required to repay some or all of its CCI fees.⁵

Mandating this new CCI initiative was a bold move by Congress, especially given that no population-based program of this type has ever been tried under the Medicare FFS plan. This paper discusses why Congress decided to proceed with the CCI initiative on such a large scale and what it is likely to achieve.

CONGRESSIONAL SUPPORT FOR CCI

Sources close to the MMA negotiations point to three reasons why the CCI initiative was approved. First, it was viewed as a way to increase adherence to evidence-based care guidelines while reducing Medicare costs. Second, it was politically palatable because it did not challenge long-held principles of Medicare FFS program design. Third, it had a well-placed Congressional champion.

Improving Quality While Reducing Medicare Costs

Most members of Congress apparently did not see the CCI initiative as a big gamble, despite its groundbreaking nature and large scale. The Institute of Medicine and others had been urging policymakers to address fragmentation of care and lack of self-care support for Medicare FFS beneficiaries.⁶ AARP, commercial health insurers, large employers, and others supported the CCI initiative.⁷ It was likened to disease management programs in the private sector, which Congress knew to be widespread.⁸ Adding CCI programs fit the concept of modernizing Medicare.

From a quality perspective, the worst-case scenario seemed to be that if the CCI programs failed to meet their goals, they would nonetheless have provided valuable health coaching to many chronically ill beneficiaries and caregivers. Republicans could support the initiative as a way to help chronically ill beneficiaries stay healthier and reduce Medicare inefficiencies. Democrats could support it for the same reasons. The “pay for performance” feature of the CCI program design added to its appeal. Many former Medicare administrators from both parties and other experts had been urging Congress to pursue this new contracting approach.⁹

The bigger question was savings potential. Congress was confronting the enormous costs of adding prescription drug benefits to Medicare, compounding pressures posed by an aging population, dramatic increases in chronic disease prevalence, and the medical technology boom. The possibility that CCI programs might yield savings was attractive. The upside savings potential was portrayed as being significant because the CCI programs would be focused on some of Medicare’s most costly beneficiary populations (e.g., subgroups of beneficiaries with chronic conditions such as congestive heart failure, diabetes, chronic obstructive pulmonary disease).¹⁰ But Dan Crippen, former Director of the Congressional Budget Office, and others had warned that the cost-effectiveness of such programs was not certain.¹¹

Hence, the drafters of Section 721 built in financial protections. They divided program rollout into two phases to allow pilot testing. They capped total spending in the pilot phase at \$100,000,000, net of savings. They required that CCI organizations refund to the government any excess in their total CCI fees compared to savings in their target populations over 3 years. Congress also specified that randomized controlled trials should be conducted to evaluate CCI program results. These protections gave Congress some confidence that Medicare’s financial exposure would be minimal.

Avoiding Controversy

The CCI initiative drew little attention because it was a minor consideration in the overall scheme of the MMA and avoided stirring partisan controversy. It did not challenge long-held Medicare FFS principles, such as beneficiary choice of healthcare providers and

physician sovereignty in managing patient care. The benefit package and provider reimbursement methods were left untouched. The voluntary nature of the CCI programs was emphasized even in the Section 721 title. As Jonathan Oberlander points out in *The Political Life of Medicare*, it is possible to bring about significant reforms in Medicare with little notice if they enjoy bipartisan support.¹² Such appears to have been the case with the CCI initiative.

Congressional Champion

The most critical factor of all was sponsorship by Nancy Johnson, Chairwoman of the House Ways and Means Subcommittee on Health. She authored Section 721 with input from many quarters and shepherded it through the House and conference committee negotiations. She was in an excellent position to serve as its champion because her support for the MMA was so important. Her advocacy was key in shaping the CCI initiative and making it a priority in Congressional plans for Medicare modernization.

PROSPECTS FOR CCI PROGRAM SUCCESS

Whether or not the CCI programs will be successful in improving quality and reducing claims costs remains to be seen. As Sophocles said in 400 B.C., “You must know by doing the thing, for though you think you know it, you have no certainty until you try.”¹³

At this early stage, the prospects for success seem favorable. The CCI initiative enjoys strong support from federal health officials. Many private sector organizations seem interested in participating. The target populations selected for the pilot programs appear to have health risks and claims costs that could be modified within the 3-year timeframe set by Congress for program evaluation, and the CCI programs will have flexibility to customize their interventions to individual participants’ support needs. The area of least clarity and possibly greatest opportunity seems to be the extent to which physicians will make use of CCI programs to support and improve their chronic care practices.

COMMITTED FEDERAL LEADERSHIP

The Secretary of the Department of Health and Human Services (DHHS) has discretion over so many aspects of CCI program design and management that ongoing leadership support for the initiative will be critical to its fate. The Secretary determines the beneficiary eligibility criteria, regions, contractor selection criteria, contract terms, and expansion priorities. The initiative also requires Centers for Medicare and Medicaid Services (CMS) to take on building a new CCI program management and contracting framework, program support functions, and private sector partnerships at a time when the agency is also confronting a host of other MMA implementation priorities.

Current federal health leaders have expressed strong commitment to the CCI initiative. At the press conference announcing it, Tommy Thompson, DHHS Secretary, endorsed it enthusiastically saying, “This initiative will help hundreds of thousands of seniors and disabled Americans stay healthier and receive higher quality care.” Mark McClellan, CMS Administrator, characterized the initiative as a shift in focus from paying for treatment of acute exacerbations of chronic disease to preventing them. He described it as a creating a “new business platform” for encouraging innovation in chronic care.¹⁴

Regardless of the outcome of the elections in the fall of 2004, federal leadership support for the CCI initiative seems likely to remain solid. Both parties recognize the urgency of improving performance of the Medicare FFS plan, which serves nearly one in seven Americans.¹⁵

PRIVATE SECTOR WILLINGNESS TO BUILD AND OPERATE CCI PROGRAMS

The CCI program design presumes that private sector organizations will be willing to develop CCI programs and take fee risk guaranteeing results. That assumption appears to be well founded. A number of commercial health insurers, disease management companies, HMOs, provider organizations and regional consortia have expressed interest in participating.¹⁶

Some programmatic constraints may limit the number of CCI program applications for the pilot phase. For example, large target populations are needed (15,000-30,000 beneficiaries) to obtain statistically significant findings about differences in costs between the experimental and control groups. Small organizations are not likely to have adequate capacity unless they form alliances. Another constraint is geographic. CMS does not want to interfere with evaluation of ongoing Medicare demonstrations in several regions. A third limitation is the statutory requirement for randomized controlled trials. Some provider organizations have indicated they cannot randomize patients because their CCI interventions affect all patients in the practices of participating physicians. Permitting evaluation through matched controlled trials in such instances would remove this barrier.

For many reasons, competition for CCI program awards is likely to be intense. Medicare is a huge potential customer. The revenue potential from pilot programs and future expansion is tantalizing. The risk is limited. CCI programs will not have to assume any insurance risk, even for drugs.¹⁷ Applicants can propose their region(s) and interventions. They can stratify their target populations and customize interventions to match individual beneficiary needs. They also have some pricing flexibility because CMS intends to evaluate proposed fees in relation to proposed interventions and savings targets, not necessarily favoring low cost bidders.¹⁸

HEALTH RISKS AND MEDICARE COSTS IN CCI TARGET POPULATIONS

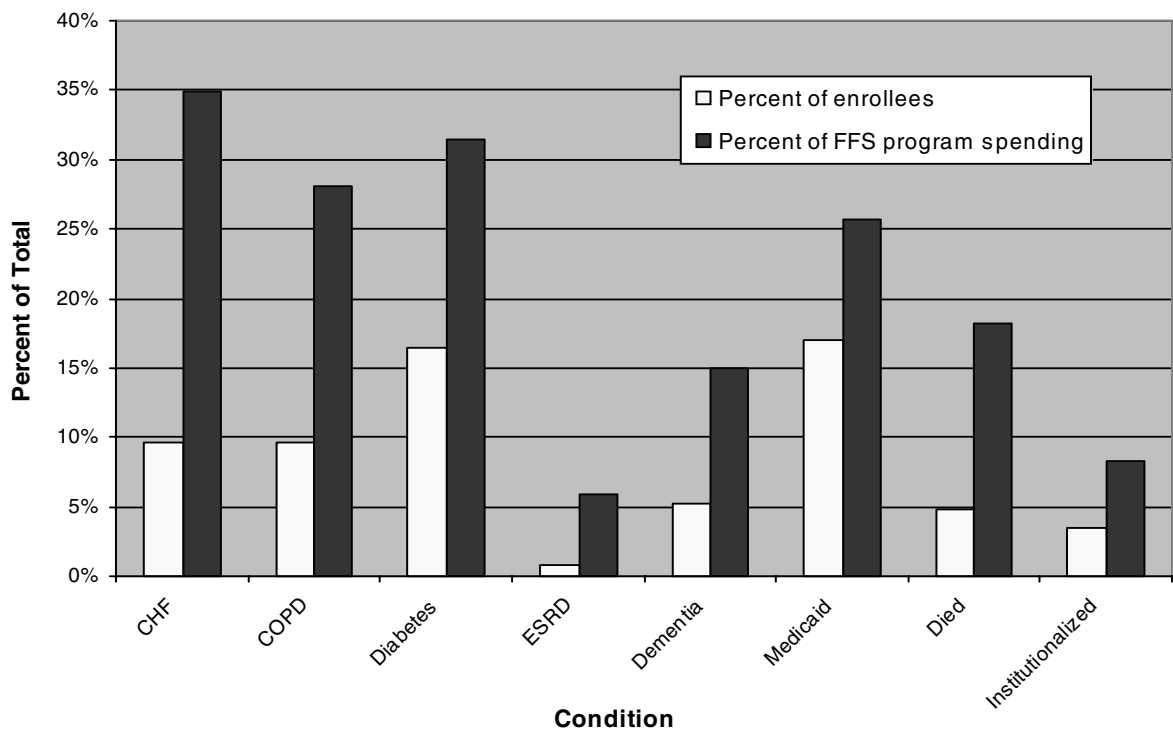
Congress set a 3-year timeframe for evaluating results of the CCI pilot programs. To have a chance of being successful in that timeframe, CCI programs will need to serve target populations whose health risks and claims costs are substantial and modifiable in the short term.

The CCI target populations selected by the Secretary seem to fit these requirements. In most of the pilot programs, the target populations will be a mix of beneficiaries who have threshold conditions of congestive heart failure (CHF), diabetes or both. In one or two programs, the target populations may be beneficiaries who have chronic obstructive pulmonary disease (COPD). Many beneficiaries with these threshold conditions have multiple co-morbid conditions. For example, 50% of individuals with Type 2 diabetes have hypertension.¹⁹

Quality failings for such chronically ill individuals have been well documented.²⁰ Their health risks are tied tightly to how well they manage their self-care and medical care, yet they typically receive little professional guidance in personal health management or in coordinating their medical care. They may receive written self-care instructions, but analysts estimate that more than 50% of American adults have serious difficulties understanding written materials on health and medical topics.²¹ Adding to these concerns, some beneficiaries do not speak or understand English well, some cannot afford their prescribed drugs, and many who are chronically ill have depression as a co-morbid condition. Given all these risk factors, it is no wonder that many chronically ill individuals have difficulty managing their chronic diseases effectively and knowing when to seek medical services.

There appear to be many opportunities for savings as well as quality improvements in the CCI target populations. Medicare spending is disproportionately high among beneficiaries who have CHF, diabetes or COPD (Figure 1). Hospital admission rates for all causes are high in these subgroups (Figure 2). In theory, the CCI programs should be able to reduce

FIGURE 1
Percent Medicare FFS Enrollees and Spending for Enrollees
with Selected Conditions or Characteristics, 2002



Source: C. Hogan and R. Schmidt, "Applying Disease Management to Medicare: Data Analysis for Fee-For-Service Enrollees," (presentation at the MedPAC Public Meeting, Washington, DC, March 18, 2004)

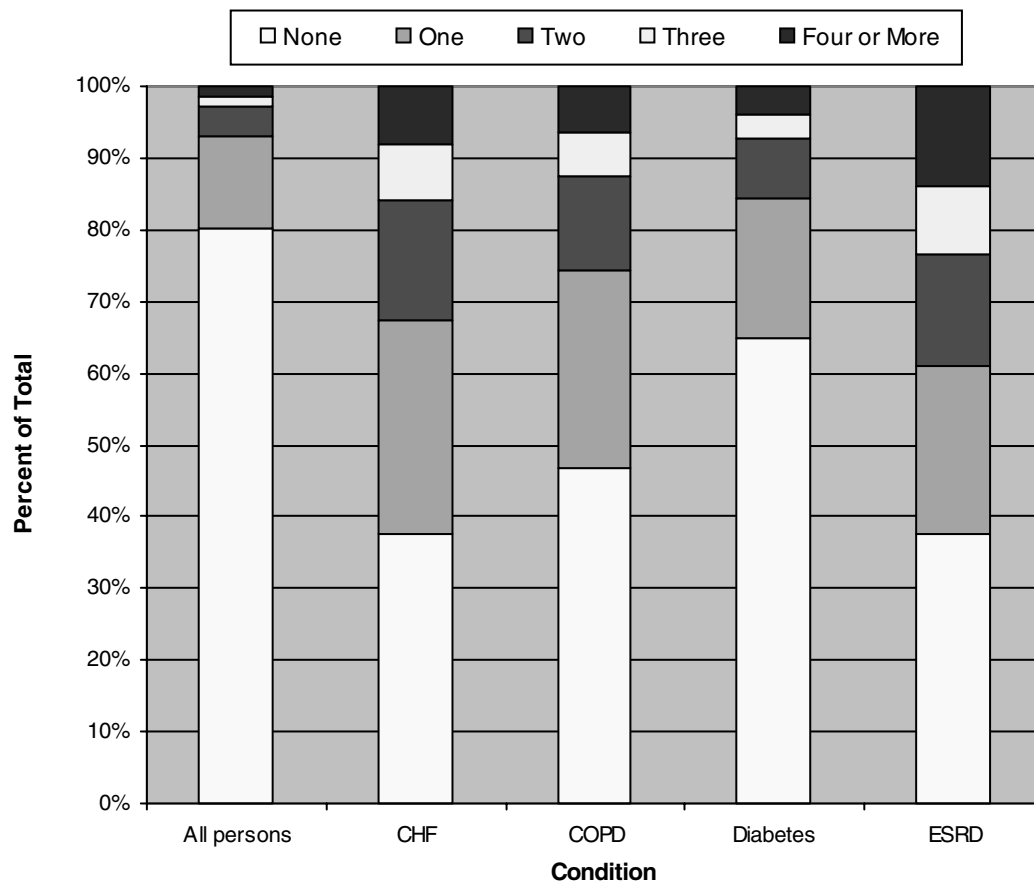
Note: Findings are based on analysis of a representative sample of Medicare FFS enrollees and all their claims. Enrollees may be in multiple categories. Spending is for all claims costs, including treatment of enrollees' co-morbid conditions.

hospital admission rates and average Medicare costs by helping eligible beneficiaries and their providers adhere more closely to evidence-based treatment guidelines. The CCI target populations are likely to have even higher hospital admission rates and average claims costs than the subgroups profiled in Figures 1 and 2 because CMS will apply additional exclusion criteria (e.g., excluding low risk beneficiaries).²²

Multiple Targets for Quality Improvement and Savings

The statute calls for CCI organizations to help beneficiaries manage their co-morbid conditions as well as their threshold conditions. CCI programs stand a much better chance of meeting their savings targets by taking this holistic approach. For example, return on investment from diabetes management alone tends to be long term, but private

FIGURE 2
Distribution of Annual Number of Hospitalizations among Medicare FFS Enrollees with Selected Conditions, 1996–2002.



Source: C. Hogan and R. Schmidt, "Applying Disease Management to Medicare: Data Analysis for Fee-For-Service Enrollees," (presentation at the MedPAC Public Meeting, Washington, DC, March 18, 2004).

Note: Findings are based on analysis of a representative sample of Medicare FFS enrollees and all of their claims. Bars reflect the distribution of average annual number of hospitalizations for all causes over the period 1996-2002.

sector experts report that they have been able to achieve substantial health risk reductions and savings in “diabetes populations” in the short term by promoting flu shots, aspirin use, blood pressure monitoring, and depression screening and management.²³

Another high profile opportunity for program impact in the short-term relates to helping individuals manage CHF after hospital discharge. Heart failure is the leading diagnosis related group for Medicare hospital admissions.²⁴ Re-admission rates and emergency visit rates among Medicare beneficiaries for CHF are very high for several calendar quarters after discharge (Figure 3). Research findings suggest that it may be possible to reduce

FIGURE 3
Hospital re-admission, emergency visits,
and death rates for Medicare beneficiaries
after CHF discharge

Quarter	ER visits	Hospital admits	Deaths	Sample size*
1	0.65	0.63	0.18	1265
2	0.44	0.46	0.09	931
3	0.42	0.46	0.10	745
4	0.48	0.39	0.08	553

Source: C. Hogan, Medicare Current Beneficiary Survey 1997-1999 pooled, admissions, ER visits and deaths after Congestive Heart Failure discharge alive.
Note: Analysis starts from day following first discharge alive for CHF (DRG 127) by quarter post-discharge.

**Number of person-months.*

readmission rates in this cohort dramatically and rapidly through self-care support programs, including helping beneficiaries monitor their weight to detect fluid build-up around the heart early enough to adjust their medications on an outpatient basis.²⁵

Realistic Expectations for CCI Programs

CCI organizations will have strong incentives to pursue all potential opportunities for impact. Their performance will be tracked on a range of quality and satisfaction measures. Also, each CCI organization will be required to guarantee at least 5% savings in its target population over 3 years.²⁶ This savings requirement is not as low as it seems because savings will be calculated by comparing claims costs *plus* CCI fees in the intervention group to claims costs alone in the control group.

If the CCI pilot programs achieve their performance goals and are rolled out nationally, the annual savings to Medicare at the 5% level would be billions of dollars; however, the savings would pale in comparison to Medicare's projected cost increases. Medicare expenditures are projected to increase 8.2% in 2004 alone, prior to implementation of the new drug benefits.²⁷ By contrast, assuming the CCI target populations account for about 30% of Medicare FFS spending and the CCI programs save 5% of Medicare claims costs within these target populations annually, savings from the CCI programs would equate to only 1.5% of Medicare FFS annual expenditures.

This simple calculation illustrates why CCI programs are not likely to play a large role in relieving Medicare cost pressures. Similarly, the CCI programs are not structured to counter incentives for over-utilization of services that are inherent in FFS provider reimbursement methods. The programs will not in any way restrict beneficiary access to care or provider reimbursement for services rendered. A more realistic expectation of the CCI programs seems to be that they may significantly reduce health risks and claims cost across carefully selected target populations of chronically ill beneficiaries who are now in jeopardy of debilitating and costly complications and acute care episodes that could be avoided.

FLEXIBILITY IN CCI INTERVENTIONS

CCI programs will only be successful if they can effectively identify and engage eligible beneficiaries in their target populations whose health risks are modifiable. One of the greatest strengths of the CCI program design is that Congress did not dictate the types and combinations of patient and provider interventions that CCI organizations can employ.

In drafting Section 721, Congress sidestepped earlier debates over whether disease management (DM) or case management approaches better suit Medicare needs.²⁸ Instead, Congress chose to hold CCI organizations accountable for improving population outcomes, and delegate to them the task of tailoring support services to participants' needs.

This flexibility is critically important to prospects for CCI program success. The ability to customize CCI interventions to individual circumstances of participating beneficiaries and their physicians and caregivers greatly increases the likelihood that CCI staff will be able to gain and retain the trust and cooperation of beneficiaries who could benefit greatly from assistance. The ability to experiment, learn and refine program operations also augurs well for increasing program effectiveness over time.²⁹

Many private sector organizations are investing heavily in new predictive modeling techniques, beneficiary risk stratification systems, beneficiary and provider outreach and CCI intervention methods.³⁰ Although a growing body of research indicates that patient education and self-care support interventions of various kinds can have significant positive effects on disease control, little research has been done comparing the effectiveness of various types and combinations of interventions or determining their cost-effectiveness.³¹ Similarly, we know very little about the comparative utility of various predictive modeling techniques to identify participants at points in time when they will benefit from added support services.³² Innovation and experimentation should be expected and encouraged. The CCI pilot programs will offer a rich opportunity to gain experience and knowledge concerning how to assist at-risk Medicare FFS beneficiaries and their physicians and caregivers reducing health risks cost-effectively.

PHYSICIAN COLLABORATION

Predictably, physicians have a wide range of views concerning the prospect of Medicare launching CCI programs. On one end of the spectrum, an alarmed physician wrote that the new CCI programs will “compete” with private sector physicians. He warned that, “Disease management is just another form of rationing by proxy in the Medicare healthcare monopoly.” More moderate critics question the wisdom and value of adding another stovepipe program to the healthcare delivery system.³³

However, some physician leaders argue that disease management (DM) programs and the CCI programs can be structured to complement and support physician practices. In this more optimistic vein, Janet Wright, MD, Chair of the Disease Management Committee of the American College of Cardiology, wrote, “As DM models evolve to support and enhance the patient-physician relationship, and as physicians embrace opportunities to contribute to the design of DM programs, this approach to chronic care delivery becomes not only acceptable, but possibly indispensable.”³⁴

Some of the ways CCI programs could add value for physicians include: helping beneficiaries understand and comply with their care plans, prompting patients to seek needed medical services, reducing schedule disruptions related to urgent care, alerting physicians when patient problems require their attention, and giving physicians access to more integrated and timely data on patient health status and treatment by other providers. The programs could also pay physicians for their cooperation.³⁵

To date, private sector DM programs have not had great success in integrating and coordinating their services with treating physicians.³⁶ However, Medicare’s involvement in sponsoring CCI programs may change this dynamic. Physician leaders may determine that helping to shape the CCI programs is worth their effort given the volume and regional concentration of Medicare beneficiaries to be served.

CCI PROGRAMS: COSMETIC OR TRANSFORMING?

Although the CCI initiative is not going to solve Medicare’s financial problems, it could mark the beginning of a potent new public-private sector collaboration to improve chronic care nationally. As the CCI programs take shape, one of the most intriguing questions to consider is how physician leaders might use CCI programs as a vehicle for transforming chronic care delivery.

There appears to be a groundswell of interest and commitment among physician leaders to transform chronic care from a visit-based system of care. As George Isham, MD, Chief Health Officer at HealthPartners, put it: “If we confine ourselves to an office-based system, we consign ourselves to mediocre care.”³⁷ The Future of Family Medicine Project Leadership Committee recently released an historic consensus document calling for new models of chronic care that enhance teamwork, communications, and use of health information technology to help their patients reduce their health risks.³⁸ This new system is envisioned as one with far greater continuity of care and more extensive use of clinical information systems to improve adherence to evidence-based practice guidelines. Conceivably, CCI programs could contribute to that transformation.

Three longer-term scenarios seem plausible. One is that CCI programs might stay focused primarily on personal health coaching. They would be largely complementary to the health care delivery system. Second, they might also increasingly serve as “infomediaries”. In this role, they would collect and synthesize beneficiary information from many sources and make it available to participants and their physicians on demand, either web-based or conceivably by funneling patient data directly to beneficiaries’ electronic medical records, per beneficiary instructions. A third scenario is that CCI programs might become obsolete, replaced by widespread interconnectivity of healthcare information users and better methods for assuring that all Medicare FFS beneficiaries receive the personal health coaching and coordination of care they need in a cost-effective manner. Any of these three future scenarios would be a welcome alternative to present circumstances.

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ENDNOTES

¹ Institute of Medicine, *Crossing the Quality Chasm: A Health System for the Twenty-first Century* (Washington, DC: National Academies Press, 2001).

² The text of H.R. 1, Medicare Prescription Drug, Improvement and Modernization Act of 2003, is available online at <http://thomas.loc.gov>. The noted sections are: Voluntary chronic care improvement under traditional fee-for-service (Title VII, Subtitle C, Section 721); Chronically ill Medicare beneficiary research, data, demonstrations strategy (Title VII, Subtitle C, Section 723); Medicare health care quality demonstrations (Title VI, Subtitle D, Section 646); and Medicare care management performance demonstration (Title VI, Subtitle D, Section 649).

³ Medicare Prescription Drug, Improvement, and Modernization Act of 2003, Conference Report to accompany H.R. 1, Title VII, Subtitle C, Section 721, 282–289.

⁴ Medicare will give eligible beneficiaries an opportunity to decline to participate. The CCI organizations will be given beneficiary-specific data only on individuals who are willing to be contacted by the CCI organization in their area.

⁵ Center for Medicare and Medicaid Services, “Medicare Program; Voluntary Chronic Care Improvement Under Traditional Fee-For-Service Medicare,” CMS-5004-N, April 2004, accessed at <http://www.cms.hhs.gov/medicarereform/ccip/solicitation.pdf> on May 4, 2004.

⁶ Institute of Medicine, 8; see also testimony of Gerard Anderson, Director, Partnership for Solutions John Hopkins University before the House Ways and Means Committee, Subcommittee on Health, U.S. House of Representatives, hearing on Promoting Disease Management in Medicare, April 16, 2002, accessed May 10, 2004, at <http://www.partnershipforsolutions.org/solutions/index.cfm>.

⁷ John Rother, Director of Legislative Research and Public Policy, AARP, personal communication with author, April 13, 2004; see also AAHP/HIAA Press Release, “Health Care Leaders Emphasize Importance of Disease Management Programs,” November 6, 2003; accessed at <http://www.aahp.org/PrintTemplate.cfm?Template=/ContentManagement/ContentDisplay.cfm&ContentID=10726> on May 4, 2004.

⁸ Medicare Prescription Drug, Improvement, and Modernization Act (MMA) of 2003, Conference Report to accompany H.R. 1, Joint Explanation Statement of the Committee of Conference, Title VII, Subtitle C, 725.

⁹ D. M. Berwick *et al.*, “Paying for Performance: Medicare Should Lead,” *Health Affairs*, 22, no. 6 (November/December 2003): 8–10. Specifically, the law provides that fees paid to CCI organizations will be adjusted if they fail to meet prospectively set performance goals for their assigned target populations.

- ¹⁰ D. L. Crippen, "Congressional Budget Office Testimony before the United States Special Committee on Aging, Disease Management in Medicare: Data Analysis and Benefit Design Issues," September 19, 2002, accessed at www.cbo.gov/showdoc.cfm?index=3776&sequence=0 on May 4, 2004, 9.
- ¹¹ Crippen testimony, 10.
- ¹² J. Oberlander, *The Political Life of Medicare* (Chicago: The University of Chicago Press, 2003), 106.
- ¹³ E. Rogers, *Diffusion of Innovation*, 5th ed. (New York: Free Press, 2003), 168.
- ¹⁴ DHHS News Release, "HHS Announces New Initiative to Improve Quality of Care for Medicare Beneficiaries with Chronic Illnesses," April 20, 2004, accessed at <http://www.hhs.gov/news/press/2004pres/20040420.html> on April 21, 2004.
- ¹⁵ Kaiser Family Foundation, "Medicare at a Glance: Medicare Fact Sheet," March 2004, accessed at <http://www.kff.org/medicare/1066-07.cfm> on May 10, 2004.
- ¹⁶ N. Super, "Medicare's Chronic Care Improvement Pilot Program: What Is Its Potential?" *NHPF Issue Brief* (forthcoming), 9. Some provider organizations have also indicated they would need to be evaluated through matched controlled trials comparing practices, rather than through randomized controlled trials as called for in the statute. Also, a few provider systems have expressed disappointment that the minimum program size is too large for them to handle. Large sample sizes are needed to get statistically significant findings about differences in costs between the experimental and control groups.
- ¹⁷ Awardees for the Medicare disease management demonstration under the Benefits Improvement and Protection Act of 2000 were required to offer drug benefits and assume the associated insurance risk.
- ¹⁸ CMS, Solicitation, 21–24, 31, 45.
- ¹⁹ A. A. Rothman and E. G. Wagner, "Chronic Illness Management: What is the Role of Primary Care?" *Annals of Internal Medicine* 138, no. 3 (February 2003): 256.
- ²⁰ L. Casalino *et al.*, "External Incentives, Information Technology, and Organized Processes to Improve Health Care Quality for Patients with Chronic Diseases," *Journal of the American Medical Association* 289, no. 4 (January 2003): 434–441; E.A. McGlynn *et al.*, "The Quality of Health Care Delivered to Adults in the United States," *New England Journal of Medicine* 348, no. 26 (June 2003): 2635–2645; E. S. Fisher *et al.*, "The Implications of Regional Variations in Medicare Spending, Part 1: The Content, Quality, and Accessibility of Care," *Annals of Internal Medicine* 138, no. 4 (February 2003): 273–287; E. S. Fisher *et al.*, "The Implications of Regional Variations in Medicare Spending, Part 2: Health Outcomes and Satisfaction with Care," *Annals of Internal Medicine* 138, no. 4 (February 2003): 288–298.
- ²¹ "Health Literacy: How Many Patients are Left Behind," *Medicine & Health*, 58, no.16 (April 19, 2004): 7.
- ²² Beneficiaries with Hierarchical Coexisting Conditions (HCC) risk scores that are lower than 1.34 will not be eligible to participate in the CCI pilot programs. For detailed information on the CCI inclusion and exclusion criteria, see <http://www.cms.hhs.gov/medicarereform/ccip/#Seeno4>.
- ²³ Patrick O'Connor, Assistant Medical Director, HealthPartners, telephone conversation with author, February 27, 2003; Sandeep Wadhwa, Vice President of Government Services, McKesson Health Solutions, telephone conversation with author, June 12, 2003.
- ²⁴ H. A. Hunt, "ACC/AHA Guidelines for the Evaluation and Management of Chronic Heart Failure in the Adult: Executive Summary," *Circulation* (December, 11 2001): 2996–3007; see also MMA, Conference Report, 725, and S. M. Foote, "Population-Based Disease Management Under Fee-For-Service Medicare," *Health Affairs—Web Exclusive*, July 30, 2003, W3-351.
- ²⁵ Foote, W3-351.
- ²⁶ CMS, Solicitation, 63–64.
- ²⁷ Kaiser, Medicare at a Glance.
- ²⁸ Crippen testimony, 4.
- ²⁹ Section 721 (e)(2)(C)
- ³⁰ Risk stratifying beneficiaries is not like "cherry picking" in the sense of avoiding adverse insurance risk. The CCI organizations will not have insurance risk and they will be evaluated on outcomes for their entire assigned populations.
- ³¹ Rothman and Wagner, 259; see also S. R. Weingarten *et al.*, "Interventions Used in Disease Management Programmes for Patients with Chronic Illness—Which Ones Work? Meta-Analysis of Published Reports," *British Journal of Medicine* 325 (October 2002): 925–932.

³² V. Villagra, "Strategies to Control Costs and Quality: A Focus on Outcomes Research for Disease Management," *Medical Care* 42, no. 4 suppl (April 2004): III-24 – III-30.

³³ R. Taw, letter to the editor, in response to editorial by J. S. Wright ["The American College of Cardiology's Role in Disease Management," *Cardiosource* (February 25, 2004), accessed at <http://www.cardiosource.com/news/editorials> on May 4, 2004], *Cardiosource* (February 27, 2004), accessed at <http://www.cardiosource.com/news/editorials> on May 4, 2004.

³⁴ J. S. Wright, *Cardiosource* editorial.

³⁵ R. Kolock, "Physician Collaboration is Key to Successful Disease Management," *Managed Health Care Executive* 1 (November 1, 2003), accessed at <http://www.managedhealthcareexecutive.com> on November 14, 2003.

³⁶ V. Villagra, "Strategies to Control Costs and Quality: A Focus on Outcomes Research for Disease Management," *Medical Care* 42, no. 4 suppl (April 2004): III-24 – III-30.

³⁷ George J. Isham, Chief Health Officer, HealthPartners, personal communication with author, April 14, 2004; see also Rothman and Wagner, 260.

³⁸ N. B. Kahn *et al.*, "The Future of Family Medicine: A Collaborative Project of the Family Medicine Community," *Annals of Family Medicine* 2, supplement 1 (March/April 2004): S3–S31.