

Limited Effects of Care Management for High Utilizers on Total Healthcare Costs

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The disproportionate distribution of healthcare spending is well described and striking, with 5% of the population accounting for 50% of healthcare costs, and the most costly 1% accounting for 28% of the total.¹ Among patients with high healthcare costs, care management is widely recommended to both improve quality and reduce costs—a significant portion of which is believed to be unnecessary or avoidable. Although a variety of care management models exist, models focusing on high utilizers generally include a mechanism for identifying high-utilizing, high-need patients, and center on a multidisciplinary team of healthcare providers to address a complex interacting set of medical, psychological, behavioral, and social needs. Often led by a primary care manager, caseloads are usually relatively low, though they vary widely across models. Types of high-utilizing patients for whom intense care management is being directed or advocated include dual Medicare and Medicaid enrollees (“dual eligibles”),² emergency department (ED) high utilizers,³ Medicaid “super utilizers,”⁴ and patients at high risk of hospital readmission.⁵

Interest and investment in care management for high utilizers has exploded in recent years, with large demonstration trials by Medicare, CMS Innovations, and the Robert Wood Johnson Foundation.⁴ This interest has been fueled in part by reports of dramatic cost savings from intensive care management programs for high utilizers. For example, as reported in a 2013 informational bulletin from the Centers for Medicaid and Children’s Health Insurance Program Services: “Cooper University Hospital in New Jersey was awarded \$2.8 million to expand the Camden Coalition super-utilizer program to serve over 1200 patients with an estimated 3-year cost savings of \$6.2 million. Rutgers, the State University of New Jersey, was awarded \$14.4 million to test community-based super-utilizer models led by safety net provider organizations in Pennsylvania, Colorado, Missouri, and California, with an estimated 3-year cost savings of \$67.7 million.”⁴

Critical examination of the reports reveals, however, that the vast majority of studies describing substantial cost savings are not randomized trials; most often, they compare the costs of a single cohort before and after entering care management, or compare the costs of an intervention group with an arguably similar contemporaneous group. Among randomized trials, the picture is significantly different, with the effects of care management for high-utilizing patients on total costs demonstrated as limited or nonexistent. The sharp contrast between estimates of cost savings from randomized and nonrandomized trials has been remarkably underemphasized in the many publications and program promotions recommending “best practices” for high-utilizing patients.

A recent example illustrates the point well: in a review for The Commonwealth Fund by Hong and colleagues identifying best practices in care management for high-cost patients, care management practices from 18 models that demonstrated reduced costs and/or improved quality were described—4 of which were based on randomized trials.⁶ Among the 14 programs based on nonrandomized trials, reductions in costs of care by as much as 56% were reported. Even among the 4 randomized trials, total cost savings were described in the main tables and text of the report. However, in each randomized trial, cost savings were from selected subgroups only. In fact, in 3 of those 4 trials, total costs were not statistically significantly reduced (when including all patients),⁷⁻¹⁰ and in the fourth, only 1 out of 15 programs in a multi-site demonstration project showed sustainable total cost savings.¹¹

The introductory section of that same Commonwealth Fund report by Hong and colleagues includes the admission that “There is scant evidence of the effectiveness of primary care-integrated complex care management in reducing overall healthcare costs,” but the implications or reasons are not emphasized.⁶ Similarly, program descriptions³ and media reports¹² of care management programs for high utilizers usually state or strongly imply that they lead to total cost savings. In contrast, studies focusing mainly on results from randomized trials have consis-

tently found that in these trials, care management for high-risk groups has limited or no effect on the total costs of care.^{11,13} While this finding is not new, its underemphasis in descriptions of care management programs is striking.

Of the numerous potential reasons for the limited effects of care management for high-risk individuals on total costs, 3 will be highlighted here. First, most high-utilizing patients are transient high utilizers, as medical or mental health conditions or external circumstances combine to create a crisis point resulting in multiple ED or hospital admissions. In most, but not all cases, crisis conditions resolve after a few weeks or months regardless of programmatic interventions that have been mounted in the interim. While statisticians dryly refer to this phenomenon as regression to the mean, from a human-services point of view it is a powerful effect. Care management programs claim credit for the decline in costs of a targeted group of high utilizers over time, while in fact, during the observation period, a new group of patients assumes the position of high utilizers. Second, high utilizers are clinically heterogeneous, and they vary in responsiveness to interventions. High utilizers include persons experiencing catastrophic illnesses, the late stages of terminal diseases, or changes in social or support circumstances (eg, loss of housing, aggravation of a substance use disorder, loss of insurance) that result in transient loss of access to healthcare, as well as the relatively small cohort of longer-term high utilizers. Given this reality, tailoring the configuration and provider skill set for programs targeting high-utilizing patients is challenging. Finally, in many cases, appropriate care management leads to increased use of hospital or other healthcare, as previously unrecognized or neglected problems are identified and treated.^{14,15}

While it can be somewhat difficult to discern exactly why it is so challenging to lower total healthcare costs among high utilizers, even more befuddling are the reasons this fact is so underplayed in current discussions and in the development of care management programs for high utilizers. My own speculation is that it is the result of the confluence of at least 5 forces. First, the central priority of lowering total healthcare costs now has traction across a wide range of constituents—including government and private payers, as well as providers—so any promising solution seems attractive. Second, new reimbursement schemes that reward systems for lowering total costs (eg, accountable care organizations) have

Take-Away Points

Estimates of total cost savings from care management in randomized trials are consistently low or none, in contrast to many current explicit or implied claims to the contrary. Therefore, it can be observed that:

- Much of the current literature and promotional materials based on nonrandomized studies dramatically overestimates total cost savings from care management for high-utilizing patients.
- Healthcare organizations implementing care management programs should expect low or no total cost savings.
- Care management programs whose objectives include lowering total costs should adopt practices of demonstrated effectiveness from randomized trials when available.
- Funders and researchers should promote randomized trials of care management for high-cost patients.

made development of nonbilling care management programs more financially viable. Third, the dramatically disproportionate healthcare costs of a small portion of patients presents a psychologically compelling case that targeting these few patients should make a difference in overall costs. Fourth, powerful success stories among some patients from innovative programs that focus on sound principles (eg, relationship-centered care, care that accounts for the social determinants of health) lead to discussions among like-minded individuals to develop increasingly better programs to help many of our nation's most vulnerable persons. Finally, these 4 factors combine to create a market opportunity for companies providing care management, who are motivated to selectively emphasize evidence favoring the cost-reducing effects of care management programs from nonrandomized trials.

Moving forward, several lessons seem compelling. Funders should support randomized trials where possible, and facilitate dissemination of the overall results as well as results from negative trials among payers and providers. While fraught with challenges, randomized trials among vulnerable populations are possible, and they should be encouraged by large funding agencies.

Among providers building or expanding care management programs that target high utilizers, the results of randomized controlled trials should weigh most heavily in estimating the effects of interventions on total costs of healthcare at their institutions. Second in line should be nonrandomized studies that measure total population costs over time rather than just costs of intervention and nonrandom comparison groups.¹⁴ Also, in developing budgets for organizations that are implementing care management programs modeled after programs tested in nonrandomized trials, providers should expect effects on total costs to be either nonexistent or significantly smaller than those reported.

For care management programs focusing on high-utilizing patients, it is crucial to select patients with long-term utilization patterns that are driven by the factors most conducive to change. Given the very limited direct evidence suggesting how to accomplish this, care management programs are best served by being kept small and focused on the highest-need patients, who may not necessarily be current high utilizers. This will run counter to the current tendency to expand care management to broader and broader populations, and it will have the effect of excluding from enrollment some patients who appear deserving to referring clinicians and care managers. Interventions chosen should be based on best evidence of best practices, including those from nonrandomized trials, since to date these reports represent our best guess about practices most likely to lower total costs of care.

Discussions and reports describing nonrandomized trials should be placed in the context of the results, strengths, and limitations of randomized trials, as with any other medical intervention. This should lead to explicit analyses of how, and by how much, the reported trial may overestimate effects on total costs.

Care management models implemented by health systems, providers, and payers should be better informed by the last 20 years of evidence related to care management and less driven by uninformed promises of quick savings and simple solutions. As they do so, effects on total healthcare costs should be expected to be modest. By keeping this fact in mind, care management can be most effectively implemented, and its effects measured, to improve health, avoid decline, and limit avoidable costs among our most vulnerable patients.

Acknowledgments

Dr Williams wishes to thank Larry McMahon for helpful comments and suggestions on the manuscript.

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Source of Funding: None.

Author Disclosures: Dr Williams serves as medical director for the University of Michigan Complex Care Management Program.

Authorship Information: Concept and design; drafting of the manuscript; critical revision of the manuscript for important intellectual content; administrative, technical, or logistic support.

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