



Care management of patients with complex health care needs

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based on a research synthesis by
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SUMMARY OF KEY FINDINGS

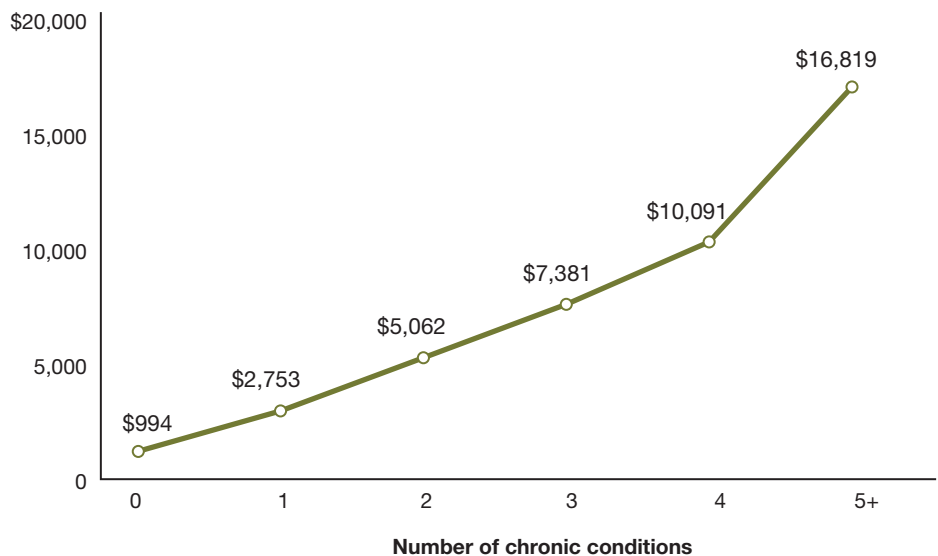
- > **Care management improves quality, but it may take time to see results.** Studies that followed patients for longer periods were more likely to show quality improvements.
- > **Care management programs targeting the hospital-to-home transition were the most successful in reducing costs.** Cost reduction was achieved through reduced readmissions.
- > **Successful care management programs include specially trained nurse care managers, in-person encounters and physician involvement.** The use of coaching has also proven to be an effective approach.
- > **Current payment policies do not support the adoption of care management.** Care management activities often are not reimbursed and successful care management programs may hurt hospitals financially by reducing readmissions.

Why is this issue important to policy-makers?

- A high percentage of health care expenditures are associated with a small proportion of the population.
- Health care spending for people with five or more chronic conditions is 17 times higher than for people with no chronic conditions (Figure 1).
- Care management is a delivery innovation that may be able to reduce costs while improving quality for people with multiple chronic conditions.

Figure 1: Average per capita spending by number of chronic conditions

Average per capita spending



Source: Anderson, 2007 (Reference 1)

What is care management?

Care management is a set of activities designed to assist patients and their support systems in managing medical conditions more effectively.

The goals of care management are to improve patients' functional health status, enhance coordination of care, eliminate duplication of services, reduce the need for expensive medical services, and increase patient engagement in self care (Reference 2).

How are patients identified for care management?

Identifying patients most likely to benefit is a critical component of care management. Care management is a relatively intensive and costly service. Offering care management to patients who are not expected to be high utilizers of hospital, specialty and emergency department care would not reduce costs. Similarly, care management for patients too sick to benefit is ineffective.

Care management improves quality,

CARE MANAGEMENT SETTINGS

Care management can take place in a number of settings, each with its own challenges and potentials for success.

Primary care. Primary care is a logical setting for care management because it is where many high-cost patients receive care. However, many primary care practices are small and lack the financial and organizational capacity to implement care management.

Vendor supported. Under the commercial disease management model, care management is performed by nurses remotely via telephone. This can be challenging, however, because the nurses do not have face-to-face encounters with their patients.

Integrated multispecialty groups. Some multispecialty groups have a separate care management department that coordinates with the patients' primary care physicians. While this may be an effective way to manage high-cost patients, only a small percentage of patients receive care through multispecialty groups.

Hospital-to-home. Care managers meet with patients prior to discharge and follow up with home visits and by telephone after discharge. This type of care management is limited to patients who have been hospitalized.

Home. Care managers provide all services in patients' homes, which is particularly important for home-bound patients.

A number of statistical models are quite accurate at predicting future health care costs.¹ Models that include diagnostic and medication information are better at predicting future costs than models limited to prior costs (Reference 3).

Does care management improve quality and reduce costs?

Costs and quality outcomes are interrelated. Patients who are experiencing poor quality outcomes often require more hospitalizations and emergency department visits. For this reason, utilization of high-cost services can be viewed as one marker of inadequate quality of care.

Most care management findings are from research-based programs. Research-based programs are generally well-funded, with specially trained care managers whose services are supported by grant funds. There are many examples of care management in real-world treatment settings, but they generally do not have a strong evaluation component.

There is strong research evidence that care management improves quality, but the effect on cost reduction is less consistent (Table 1). Hospital-to-home care management programs have had the most success in reducing costs.

Table 1: Summary of findings

Setting	Quality improvement	Cost reduction
Primary care	Strong evidence	Some evidence
Vendor-supported	Some evidence	Inconclusive
Integrated delivery systems	Strong evidence	Inconclusive
Hospital-to-home	Strong evidence	Strong evidence
Home	No evidence	No evidence

Care management in primary care improves quality, but research indicates it may take time to see results. Quality was measured by improvement in functional ability, mortality, bed disability days, and overall quality of life (Reference 6). Two studies that did not show quality improvement followed patients for one year or less (Reference 7).

Commercial disease management vendors have provided data demonstrating success, but methodological issues call into question these findings. The evidence demonstrating quality improvement is stronger than the evidence on cost reduction (Reference 8).

Care management within integrated multispecialty groups improves quality, but does not consistently reduce costs. The only study that showed a reduction in hospitalizations involved the use of geriatricians (Reference 9).

¹ For example, see the Charlson Comorbidity Index, the Chronic Disease Score, the Hierarchical Condition Category model, and the Adjusted Clinical Group algorithm.

but the effect on costs is less conclusive.

The most effective care management programs are those targeting patients discharged from hospitals. Studies found that care management programs targeting the hospital-to-home transition have reduced hospital readmissions and lowered costs (Reference 10). Successful hospital-to-home care management programs include follow up with patients once they are discharged. In-hospital discharge planning alone failed to reduce readmissions (Reference 11).

Thus far, home-based care management programs have failed to demonstrate improved quality or lower costs. Two systemic reviews did not find improvements in mortality, health status or service use for patients enrolled in home-based care management programs (Reference 12).

What are the keys to successful care management?

In-person encounters: Person-to-person encounters, including home visits, are necessary features of effective care management. Care management relying solely on telephone encounters has not shown success.

Training and personnel: Programs with specially trained care managers who have a relatively low workload are most successful (Reference 13). Most care managers are registered nurses (RNs) who work as part of a multidisciplinary team.

Physician involvement: Placing care managers with physicians in primary care practices may help facilitate physician involvement.

Informal caregivers: Patients with complex health care needs, particularly those with physical or cognitive functional decline, often need the assistance of informal caregivers to actively participate in care management.

Coaching: Coaching involves teaching patients and their caregivers how to recognize early warning signs of worsening disease.

What role do payment policies play in care management?

Fee-for-service payment policies do not support the adoption of care management programs. Fee-for-service payments reward utilization, which may be reduced if care management is successful. In addition, fee-for-service payments are generally made only to clinicians such as physicians, but most successful programs rely on registered nurses to provide care management services.

Care management programs that have had success outside of research settings are concentrated in organizations that do not use fee-for-service payments. Kaiser Permanente, Group Health Cooperative, and the Veterans Health Administration are some examples of organizations that have been early adopters of care management for high-cost patients.

FROM RESEARCH TO REAL WORLD

Research-based care management programs are an important tool for helping policy-makers find solutions to addressing the needs of patients with complex health care needs. However, these studies generally provide more resources and more qualified staff with better training than would be found in existing health care organizations. Perhaps most importantly, care management services in research-based programs are supported by grant funds.

Many health care organizations have implemented care management programs outside the research setting. While these programs may not have the benefit of rigorous evaluations, they can help policy-makers see how research translates to the real world.

Since 1999, Medicare has had several demonstration programs for patients with chronic illnesses. With a few exceptions, the Medicare demonstrations have failed to find consistent cost reductions or quality improvements, revealing the hazards of translating research findings into real-world settings (Reference 4).

Two hospital-to-home care management programs have successfully implemented their programs in real-world settings (Reference 5). Both programs found that significant modifications to the original protocol were needed in order to be successful.

Policy Implications

Patients with complex health care needs represent a small but growing sector of the population. They also represent an opportunity to control health care cost growth by better managing their conditions, reducing hospitalizations and avoiding emergency department visits. Care management offers the possibility of improving quality and controlling costs for patients with complex conditions. A number of lessons can be drawn from the literature on care management.

- > **Payment reform may improve the success of care management programs and provide incentives to implement them.** A global payment approach covering ambulatory care, emergency treatment and hospital care would provide an incentive for primary care practices, hospitals and integrated delivery systems to implement care management programs. Other options such as medical homes and accountable care organizations could also be effective.
- > **Absent a broad scale payment reform, a separate reimbursement could be created for RN care managers.** Fee-for-service payments are generally paid only to clinicians, not care managers. This results in care managers being an expense rather than a revenue source.
- > **Current Medicare payment policies provide a disincentive to reduce hospital readmissions.** Unplanned hospital readmissions cost the Medicare program \$17.4 billion in 2004 (Reference 14). Hospital-to-home care management programs that provide home visits and follow-up to recently discharged patients have shown great success in reducing readmissions. Hospitals are paid for each admission, however, including many unnecessary readmissions, providing little incentive to implement care management programs.

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