Effectiveness of Outpatient Case Management for Adults

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The Agency for Healthcare Research and Quality (AHRQ) conducts the Effective Health Care Program as part of its mission to organize knowledge and make it available to inform decisions about health care. A key clinical question based on the AHRQ Effective Health Care Program review is presented, followed by an evidence-based answer and an interpretation that will help guide clinicians in making treatment decisions. For the full review, clinician summary, consumer summary, and CME activity, go to http://effectivehealthcare.ahrq.gov/index.cfm/search-for-guides-reviews-and-reports/?productid=1677&pageaction=displayproduct.


**CME** This clinical content conforms to AAFP criteria for continuing medical education (CME). See CME Quiz Questions on page 447.

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**Key Clinical Issue**

Does outpatient case management for adults with medical illness and complex care needs improve patient-centered outcomes, quality of care, or resource utilization?

**Evidence-Based Answer**

Compared with usual care, case management does not reduce mortality in patients with multiple chronic diseases. (Strength of recommendation [SOR]: A, based on consistent, good-quality patient-oriented evidence.) Case management improves patient satisfaction with care for congestive heart failure and cancer, and increases patient perception of care coordination. It improves the quality of care for patients with complex illnesses. (SOR: B, based on inconsistent or limited-quality patient-oriented evidence.) Case management interventions showed mixed results in improving patient quality of life and functional status. For caregivers of patients with dementia, targeted case management programs improve levels of stress, burden, and depression. The effects of case management on health care resource utilization and on costs of care are minimal. (SOR: B, based on inconsistent or limited-quality patient-oriented evidence.)

**Practice Pointers**

Chronic conditions can become medically complex, and the patient can develop special needs, both of which can quickly overcome the usual capabilities of physicians in the outpatient setting. Case management is one strategy to optimize care for patients with medically complex chronic diseases. The Case Management Society of America defines case management as the collaborative process of assessment, planning, care coordination, evaluation, and advocacy for services to meet patients’ comprehensive health needs through communication and available resources to promote quality, cost-effective outcomes. Case management programs vary considerably in their design, goals, personnel, and resources.

This Agency for Healthcare Research and Quality (AHRQ) review focused on nonpsychiatric, medically complex care in the outpatient setting. Case management was defined as a “supplemental service, in which a person, usually a nurse or social worker, takes responsibility for coordinating and implementing a patient’s care plan, alone or in conjunction with a team of health professionals.” Almost all of the studies evaluated compared case management with usual care.

Case management did not reduce mortality in the patients with multiple chronic diseases or in populations with specific diseases. However, it improved disease-specific functioning and quality of life when these measures were specifically targeted by the intervention. Measures of global function and quality of life were not generally improved by case management.

Disease-specific health outcomes were inconsistently impacted by case management. For instance, pain was reduced in patients with cancer. While there is heterogeneity in the outcomes for HIC, the results of eight studies taken together suggested that case management improved glucose control. Case management was effective at improving self-management behaviors (e.g., medication compliance). When receipt of a specific health service was an explicit
### Clinical Bottom Line: Effectiveness of Outpatient Case Management for Adults

**Programs that serve patients with multiple chronic diseases (specifically older patients)**

**Patient experience**

Increased the perception of patients that their care was better coordinated.  

**Clinical outcomes**

Did not improve functional status or overall mortality.  

**Resource utilization**

Were more effective for preventing hospitalizations when case managers had greater personal contact with patients and physicians.  

Were more effective for reducing hospitalization rates among patients with greater disease burden.  

Did not reduce overall hospitalization rates.  

Did not reduce Medicare expenditures.  

**Programs that serve frail elderly patients**

**Clinical outcomes**

Did not affect mortality.  

**Resource utilization**

Did not reduce nursing home admissions or acute-care hospitalizations.  

**Programs that serve patients with dementia**

**Patient experience**

Reduced caregiver depression at two years and caregiver burden at one year.  

**Quality of care**

Increased adherence to clinical guidelines for dementia care when focused on those guidelines.  

**Clinical outcomes**

Delayed nursing home placement of patients with dementia who had in-home spouse caregivers when program duration was longer than two years.  

Did not result in significant delays in nursing home placement if the programs had durations of two years or less.  

Did not lower mortality rates.  

Did not result in changes in behavioral symptoms of patients.  

**Resource utilization**

Did not result in reduction of total health care expenditures at one year.  

**Programs that serve patients with congestive heart failure**

**Patient experience**

Increased patient satisfaction.  

**Quality of care**

Increased patient adherence to recommended disease self-management behaviors.  

Were more effective in improving patient outcomes when case managers were a part of a multidisciplinary team of health care professionals.  

**Clinical outcomes**

Improved quality of life but did not affect mortality.  

**Programs that serve patients with diabetes mellitus**

**Clinical outcomes**

Improved glucose control.  

Did not improve management of lipids or weight/body mass index.  

Were not effective at reducing mortality.  

**Resource utilization**

Were not effective at reducing hospitalization rates.  

**Programs that serve patients with chronic infection**

**Quality of care**

Improved rates of successful treatment for tuberculosis in vulnerable populations who were in short-term programs that emphasized medication adherence.  

**Clinical outcomes**

Did not improve survival among patients with human immunodeficiency virus infection.  

**Programs that serve patients with cancer**

**Patient experience**

Improved patient satisfaction with care.  

**Quality of care**

Were effective in increasing the receipt of appropriate (guideline-recommended) cancer treatment.  

Were more effective when the intensity and duration of the intervention were greater, the program was integrated with patients’ usual health care professionals, and the interventions were structured through preintervention training and care protocols.  

**Clinical outcomes**

Were effective in improving selected cancer-related symptoms and functioning (physical, psychosocial, and emotional) but did not improve overall quality of life or survival.  

**Resource utilization**

Had little effect on overall health care resource utilization and cost of care.  

**Programs that serve patients with other clinical conditions**

**Resource utilization**

Reduced emergency department visits among patients with chronic obstructive pulmonary disease and among the homeless population.  

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**Strength of evidence scale**

High:  There are consistent results from good-quality studies. Further research is very unlikely to change the conclusions.  

Moderate:  Findings are supported, but further research could change the conclusions.  

Low:  There are very few studies, or existing studies are flawed.  

Insufficient:  Research is either unavailable or does not permit estimation of a treatment effect.  

goal, case management was effective at increasing receipt of that health service, but did not improve adherence to guideline-recommended care in general.³

Overall, case management was associated with improved satisfaction in patients with multiple chronic diseases, congestive heart failure, or cancer, and with increased satisfaction of caregivers of patients with dementia. This increase in satisfaction was mostly because of improved coordination among clinicians.³ Burden and depression were improved in caregivers of patients with dementia who have case management interventions.⁴

Case management did not reduce overall resource utilization or hospitalization rates. It had mixed effects on emergency department use—some studies showed reduced emergency department use in patients who had case management, whereas others showed no effect. There were also variable results on the number of clinic visits for patients with case management services.³

The setting (outpatient, home health, or integrated health system) did not impact effectiveness, nor did the experience, training, or skills of the case managers studied. Case management interventions may be more successful when protocols or scripts are used, and when the case manager works with a physician or health care team.³

Although the AHRQ review does not suggest a single proven formula for building an effective case management program, it provides some broad principles. A case management intervention is more likely to work if it has a narrow focus and defined objectives. Case managers should have preintervention training, utilize protocols or scripts, and work closely with clinicians. Whether a case management intervention succeeds seems to depend on numerous factors, many of which will be unique to the individual program. Given this uncertainty, it would be wise to conduct a formal evaluation of effectiveness locally for any new case management program.

EDITOR’S NOTE: American Family Physician SOR ratings are different from the Agency for Healthcare Research and Quality Strength of Evidence (SOE) ratings.

The views expressed in this article are those of the authors and do not reflect the policy or position of the U.S. Army Medical Department, Department of the Army, Department of Defense, or the U.S. government.

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REFERENCES