

Effect of a Practice-Level Depression Care Management Intervention on Mortality in Older Adults

Gallo JJ, Bogner HR, Morales KH, et al. The effect of a primary care practice-based depression intervention on mortality in older adults: a randomized trial. *Ann Intern Med* 2007;146:689–98.

Study Overview

Objective. To determine whether a standardized, algorithm-based intervention to improve depression care can affect mortality rates in older adults.

Design. Randomized controlled trial.

Setting and participants. 1226 patients aged ≥ 60 years from 20 primary care practices in New York and Pennsylvania. Practices were randomly assigned by coin flip to usual care, which consisted of physician education and notification of patient depression status; or the intervention, which consisted of education for physicians, patients, and patients' families, protocol-driven pharmacologic therapy, and assistance from depression care managers. Patients were distributed evenly between intervention and usual care practices.

Main outcome measure. All-cause mortality over a 5-year period.

Main results. At baseline, 396 patients had major depression, 203 had clinically minor depression, and 627 did not have depression. At a median follow-up of 52.8 months, 223 patients had died. Compared with patients at usual care practices, patients at intervention practices with major depression had a lower risk of death (adjusted hazard ratio [HR], 0.55 [95% confidence interval {CI}, 0.36–0.84]). There were no significant mortality differences for patients with clinically significant minor depression (adjusted HR, 0.97 [95% CI, 0.49–1.92]) or for those without depression (adjusted HR, 1.14 [95% CI, 0.84–1.53]). The survival benefit among patients with major depression at intervention practices appeared to be limited to a reduction in deaths from cancer (8.9% [95% CI, 3.9%–17.6%] vs. 20.6% [95% CI, 11.6%–34.1%] in usual care practices). There were no apparent differences in mortality due to other causes, and suicide was the cause of only 1 death.

Conclusion. A standardized primary care-based intervention for depression care may lower mortality rates for older adults with major depression. The mechanism for this mortality

benefit, which appeared to be limited to a lower risk of death from cancer, is unclear.

Commentary

Quality improvement in the care of chronic diseases has drawn increasing attention, with particular emphasis on the role of primary care practices as centers for service coordination and delivery [1]. Studies of innovations in the delivery of primary care services have shown improved outcomes in several important chronic conditions, including asthma, diabetes, congestive heart failure, and depression [2]. Despite increased mortality rates among the depressed elderly [3], no previous randomized controlled trial has evaluated the effects of a depression care intervention on mortality rates in this population.

The current investigation by Gallo and colleagues documents the mortality effects of an innovative approach to depression treatment in older adults. Significant new resources were supplied to primary care practices in the intervention arm, particularly the addition of a depression care manager to each practice. Health care payers and policy makers may wonder whether the costs of making similar investments on a wider scale would be justified by their health benefits. Thus, a full enumeration of the intervention's effects would be valuable. The current study showed lower mortality rates for patients with major depression, adding a "hard outcome" to earlier reports demonstrating lower rates of suicidal ideation and improvement in other depressive symptoms for patients in intervention practices [4].

Although this study provides important information, some limitations should be noted. The analysis appears to be underpowered to detect any effects on suicide rates. With just 1 suicide in the entire study population, it would be difficult to draw any conclusions about the intervention's effectiveness in suicide prevention. It is also unclear why a depression-targeted intervention would reduce cancer mortality, and the authors suggest that misclassification of cause of death derived from death certificates may be substantial. Finally, due to lack of variation in the intervention itself, it is impossible to know whether any 1 of its components—additional staff, education, and standardized medication

titration—was particularly effective in reducing mortality. The mortality benefit was confined to patients with major depression, which argues against a generalized nonspecific benefit of having extra staff. Given the dissimilar costs and scalability of these individual components, varying the intervention would be a useful direction for further research.

Applications for Clinical Practice

A targeted, multicomponent intervention based in primary care clinics reduces mortality rates for older patients with major depression. While the exact mechanism of this survival benefit remains unclear, similar innovations in the delivery of primary care should be considered.

—Review by Mark W. Friedberg, MD, MPP

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