

Use of a 'virtual ward' model of care does not reduce hospital readmissions, risk of death

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In a trial involving patients at high risk of hospital readmission or death, use of a virtual ward model of care (using some elements of hospital care in the community) after hospital discharge did not significantly reduce the rate of readmission or death up to a year following discharge, according to a study in the October 1 issue of *JAMA*.

Hospital readmissions are common and costly, and no single intervention or bundle of interventions has reliably reduced readmissions. The virtual ward model of care is a way of providing care to patients with complex needs who are not hospitalized. This model takes many elements of [hospital care](#) that are appreciated by patients or clinicians (e.g., an interprofessional team, a daily team meeting, a single point of contact for patients, etc.) and incorporates them into community-based care, with a goal of improving health outcomes and patient experience while also providing better value for money. Despite the virtual ward's conceptual appeal and its increasingly common implementation, it has not been rigorously evaluated, according to background information in the article.

Irfan A. Dhalla, M.D., M.Sc., of the University of Toronto and St. Michael's Hospital, Toronto, and colleagues randomly assigned 1,923 high-risk adult hospital discharge patients in Toronto to either the virtual ward (n = 963) or usual care (n = 960). Patients assigned to the virtual ward received care coordination plus direct care provision (via a combination of telephone, home visits, or clinic visits) from an interprofessional team for several weeks after [hospital discharge](#). The

interprofessional team met daily at a central site to design and implement individualized management plans. Patients assigned to usual care typically received a structured discharge summary, prescription for new medications if indicated, counseling from the resident physician, arrangements for home care as needed, and recommendations, appointments, or both for follow-up care with physicians as indicated.

The researchers found no significant between-group difference for the primary measured outcome for the study: within the 30-day period following discharge, 24.6 percent of patients assigned to usual care and 21.2 percent of patients assigned to the virtual ward had been readmitted to hospital or died. There were 47 deaths in the usual care group and 40 deaths in the virtual ward group (4.9 percent vs 4.2 percent).

By 90 days after discharge, 38.0 percent of patients assigned to usual care and 37.1 percent of patients assigned to the virtual ward had been readmitted to a hospital or died. There were no significant between-group differences in any of the outcomes (including nursing home admission and emergency department visits) at 6 months or 1 year.

The authors write that although their data are not inconsistent with a small absolute benefit at 30 days, outcome data at 90 days suggest that any benefits were not sustained. "As a consequence, given the per-patient costs of our intervention, it is highly unlikely that a virtual ward model of care structured similarly to ours would represent an efficient use of [health care resources](#)."

"The rigorously conducted trial by Dhalla et al adds important data that contribute to advancing the understanding of determining optimal approaches to improve postdischarge transitions for high-risk patients," writes Peter A. Boling, M.D., of Virginia Commonwealth University, Richmond, in an accompanying editorial.

"An important aspect of their report, however, was that the authors identified real-world obstacles including incompatible electronic health records, clinician discontinuity, difficulties integrating with primary care, and lack of contact with patients in [hospital](#). These observations may be useful in the development of future trials designed to improve care transitions and reduce readmissions. Moreover, it is still likely that in this era of exponential development of technologically supported solutions to complex problems, elements of the 'virtual ward' may have a place, perhaps linked with more robust in-home care delivery."

More information: [DOI: 10.1001/jama.2014.11492](https://doi.org/10.1001/jama.2014.11492)
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