Long-Stay Patients: Who is more likely to go home?

MANITOBA CENTRE FOR HEALTH POLICY

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based on the report:
*Discharge Outcomes
for Long-Stay Patients
in Winnipeg Acute
Care Hospitals,* by
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Does length of stay influence whether long-stay patients are more or less likely to be sent home? Do patients who receive home care before being admitted have a greater chance of not being sent home? These questions, among others, are the topic of a new report by the Manitoba Centre for Health Policy.

MCHP released a report in 2000 showing that long-stay patients—those who stay in hospital for more than 30 days—in Winnipeg hospitals account for only 5% of hospitalizations yet consume 40% of hospital days. We also found that contrary to common perception, not all long-stay patients were waiting to be transferred to a nursing home. In fact only 13% went to nursing homes. Of the remainder over half were sent home, 20% died, and the rest were transferred to another hospital.

As the Winnipeg Regional Health Authority plans and co-ordinates health services within the city, and with long-stay patients placing demands on hospital resources and budgets, think how useful it would be to be able to predict in advance their outcomes—to determine which patients are likely to be discharged home, become institutionalized or die in hospital.

Knowing the likely outcomes for these patients would help WRHA determine the appropriate types and amounts of care needed—whether home care, long term care or palliative care. For instance, arrangements for suitable support services for those likely to return home could begin earlier and be in place on their dis-charge, patients requiring transfer to a more suitable environment could have those arrangements made earlier also, and patients likely to die could receive end-of-life care according to their preferences.

With this in mind we carried out this follow-up study. Our aims were to identify the characteristics of long-stay patients with different discharge outcomes. Since discharge home is the most desirable outcome, we especially wanted to know if there were characteristics that would help identify patients who were most likely to go home after a long stay.

We also looked more closely at those patients who were discharged home. We asked: What happened to this group of patients one year after discharge? Did they remain at home, were they readmitted to a hospital or nursing home, or did some patients die?

What we did

All adult (those aged 18 or older) long-stay patients with a medical or surgical diagnosis in Winnipeg acute care hospitals from 1993/94 to 1999/2000 were studied. Psychiatric and obstetric patients were excluded as were patients in designated long term care beds within acute care hospitals and patients transferred from nursing homes or long term care institutions.

Overall 32,452 long-stay patients were hospitalized during this time period, however, after the exclusions the study was reduced to 22,698 long-stay patients. Approximately one-quarter of the patients

were 85 years or older, one-third were persons 75 to 84 years old, one-fifth were 65 to 74, and another one-fifth 18 to 64.

Four possible discharge outcomes were reported for these patients:
❒ Discharge home
❒ Discharge to a nursing home
❒ Transfer to another institution (acute or chronic care hospital)
❒ Died in hospital

Based on the findings of other researchers and the advice of the Working Group established for this project, three main types of characteristics—or risk factors—were identified:
❒ Pre-hospital sociodemographic—for example, gender, neighbourhood income level
❒ Pre-hospital health status—for example, type of diagnosis, presence of stroke, evidence of cognitive impairment, receipt of home care, comorbidity (other conditions existing alongside the condition requiring hospitalization)
❒ Hospital care characteristics—like whether the patient had a medical or surgical diagnosis, dialysis treatment, length of stay

What we found
Consistent with our first report we found that 50% of patients went home. Another 16% were transferred to a nursing home, 14% were transferred to another institution, and 20% died. As might be expected the proportion of long-stay patients who went home decreased with age: 70% of patients under 65 went home, but only 38% of those aged 85 or over.

It was found that patients were less likely to go home if they received home care prior to being admitted—home care identified patients who were particularly frail—or if they were hospitalized for more than 90 days. Patients with a stroke diagnosis, cognitive impairment, or who were older and from a low-income neighbourhood were more likely to go to a nursing home. Patients living out of Winnipeg were more likely to be transferred to another institution. Patients with cancer or multiple comorbidities were more likely to die (see box).

These risk factors were found statistically to be common across all age groups and inde-

pendent of one another. For example, the increased risk of discharge to a nursing home for persons with previous home care use could not be explained by the presence of comorbidities or hospital length of stay.

> ## Risk Factors for Non-Home Discharge
>
> Previous use of home care is the most consistent predictor of not being discharged home.
>
> Patients were more likely to go home if their length of stay was 90 days or less.
>
> A diagnosis of cancer is the strongest predictor of dying in hospital.
>
> Both stroke and cognitive impairment increase the likelihood of going to a nursing home.
>
> Low-income elderly patients or those living outside of Winnipeg are less likely to be discharged home after a long-stay.

At-Risk patients who went home
This is not to suggest that none of the at-risk patients were discharged home. A substantial proportion of those patients did go home eventually despite having risk factors.

The characteristics of these patients were examined to determine if there were any commonalities that would help health care providers to predict which patients are most likely to return home after a long stay. The common characteristics were:
❒ The overwhelming majority had few comorbidities, with the exception of persons with cancer.
❒ The majority were hospitalized for less than 90 days (persons discharged home with cognitive impairment had longer stays).
❒ The majority of patients who did go home even with the risk factor of a stroke diagnosis, cancer or cognitive impairment had not received home care prior to hospitalization.

No Event 38%

Died 20%

Nursing Home 8%

Rehospitalized 34%

One-Year Outcomes of Patients Discharged Home
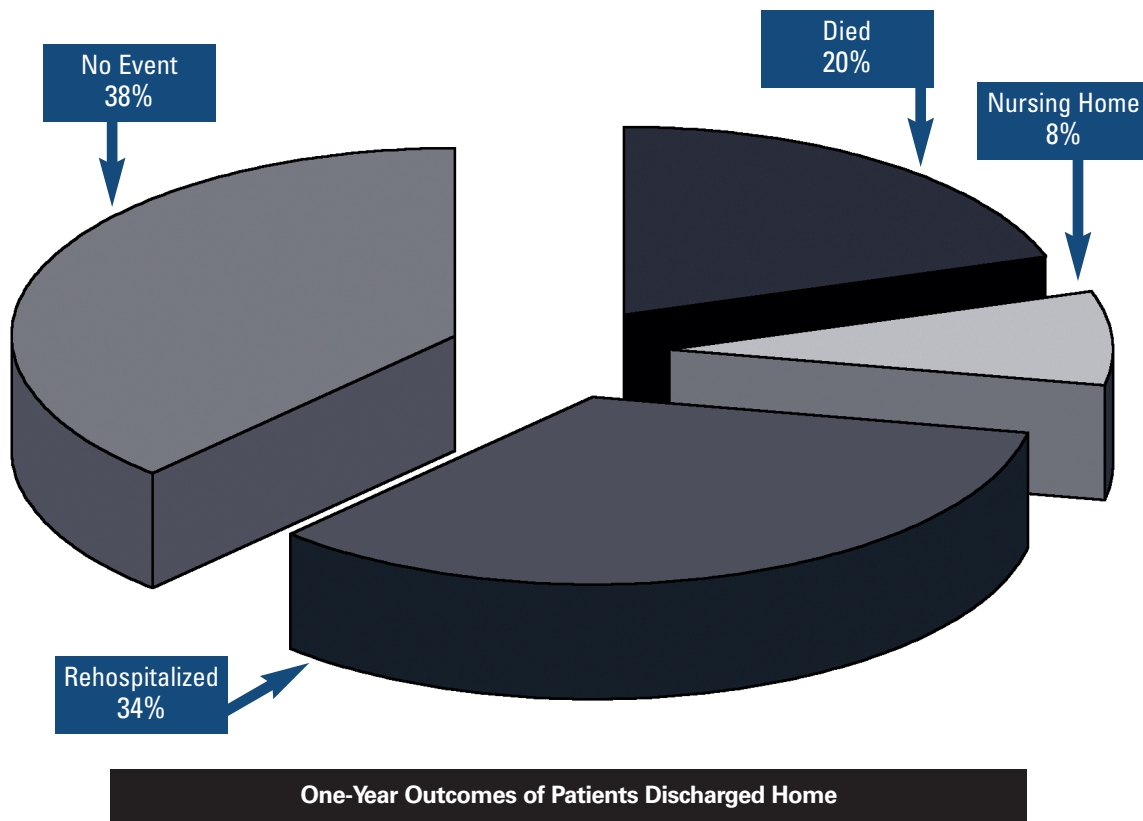
One year follow-up

What happens to patients who go home after long hospitalizations?

It is reassuring to find that, within a year of discharge, almost 40% of patients were able to remain at home. Nevertheless, 20% of these patients had died, 8% were admitted to a nursing home or long term care institution, and 34% were rehospitalized from home (figure).

While 20% of patients discharged home did receive home care, 80% did not. Our data however cannot tell us if higher levels of home care could prevent readmissions or institutionalizations.

What have we learned?

Long-stay patients though few in number consume a lot of hospital days and use up hospital resources. Our findings suggest ways to identify earlier which patients are more likely to go home, to require institutionalization, or to die. Armed with this information, health care providers and hospital managers may be able to improve the discharge planning process.

Information on previous use of home care—the most consistent predictor of not being discharged home—could be obtained at the time of admission. Use of home care indicates a group of patients already in frail health. Thus programs to prevent or reverse functional declines in hospital and to promote independent living would likely be beneficial.

Every effort should be made to send patients home as early as possible, with enhanced home care services if necessary. The longer they stay in hospital the less likely it is they will eventually go home. This is true regardless of other risk factors. Of course not every patient will be able to go home; some will require long term care in a nursing home or chronic care hospital and some will die. Nevertheless, continued hospitalization can result in a loss of independence and increases the risk of an adverse event, lessening the opportunity for home discharge.

Three diagnoses stand out as risk factors for patients not being discharged home: cancer, stroke and cognitive impairment. For many of

these patients the acute care environment may not be the most suitable. Not surprisingly a diagnosis of cancer is the strongest predictor of dying in hospital. Yet the hospital setting is often not where patients prefer to receive end-of-life care. Transfer to a hospice program or transfer home with palliative care should be supported if this is the choice of the patient. Since December 2002, Manitoba Health has covered the cost of drugs for palliative care patients dying at home; this plan should ease the burden on those patients who have made this choice.

Both stroke and cognitive impairment increase the likelihood of institutionalization. In fact, patients who were cognitively impaired were the least likely to be discharged home after a long hospital stay. However those who were discharged home tended to have long hospital stays. So the appropriate discharge planning for these patients can be a fine balancing act: if the decision is made too early to transfer cognitively impaired patients to a nursing home, some might be institutionalized who could have gone home.

From our data it is not clear how much the hospitalization contributes to the cognitive impairment. The hospital setting itself may contribute to the anxiety and confusion of those already cognitively impaired prior to admission. Hospitalization of these patients should be avoided if possible. This might mean providing more respite care to relieve the stress that informal caregivers—chiefly family members—experience when caring for a cognitively impaired loved one at home.

Since 60% of stroke patients become institutionalized, it is heartening that WRHA has already planned a stroke program to prevent, treat and rehabilitate these patients. Early rehabilitation has been found to increase the amount of recovery that stroke patients experience, so hopefully WRHA's program will decrease the proportion of stroke patients requiring institutionalization. While it may be argued that rehabilitation will not shorten hospital stays, fewer acute care resources would most likely be used if patients were transferred to a Stroke Unit focusing on rehabilitation.

While sociodemographic factors did not influence the outcomes as much as one might have expected, nevertheless, older low-income patients were less likely to be discharged home. Research suggests that low-income people are less likely to have somebody at home to care for them. Targeting them for home care services post-discharge could offer a solution. WRHA's plan to develop more supportive housing programs may be of particular benefit to this group.

One year after discharge, two out of every five long-stay patients had been readmitted to hospital or to a nursing home, and one out of five had died. Twenty per cent of patients discharged home did receive home care, however a large proportion did not. While our data cannot tell us if higher levels of home care could prevent some of these readmissions it is certainly an area worth exploring further.

Since hospital readmission occurred on average within 100 days, this period can present timely opportunities for intervention. The kinds of home supports these patients need vary by age. Our data indicate that younger patients would more likely need supports directed at disease management while seniors may need more help with the activities of daily living to prevent institutionalization.

The unfortunate reality is that many people remain in hospital as long-stay patients when there may be more suitable environments for their treatment and care. While there are many reasons for this, our results offer some predictions about these patients' likely outcomes and offer some guidelines on how to prepare them for eventual transfer or discharge. As well as freeing up hospital resources and assisting with health care planning we may be able to provide those patients with even better care.

Who knows, some day that patient might be you or someone you know. Perhaps it already is.