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Transfer of Residents from Long-Term Nursing-Care Institutions to General Hospitals

Netta Bentur ✦ Alona Falach ✦ Irit Laxer ✦ Pinhas Berkman

The study was funded by the Israel National Institute for Health Policy Research

RESEARCH REPORT

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Abstract

Background

Acute changes in the medical condition of elderly residents in long-term nursing-care institutions (LNCI) may lead to a decision to transfer them to hospitals. Studies conducted in different countries have found that the rate of transfers ranges from 9% to 59% of all LNCI residents.

In recent decades, there has been a growing trend to reduce the number of transfers of elderly patients from LNCIs to general hospitals and to increase medical treatment in the LNCIs. In-depth interviews with directors of LNCIs and the Ministry of Health (MOH) have revealed that some transfers are unnecessary and can be prevented by providing the appropriate medical treatment, usually IV antibiotics, in the institutions. Until now, no study in Israel has provided a comprehensive picture of the extent of transfers from LTCI to general hospitals and there has been no attempt to identify the characteristics of LTCIs associated with the transfers.

The study provides a nationwide picture of the extent of transfers of residents from LNCIs to general hospitals and identifies the characteristics of institutions with a greater tendency to do so.

Study Method

The data were drawn from the Computerized Geriatric Division, which regularly updates the administrative and individual information on all residents of LNCIs that have at least one long-term care ward (nursing or mentally frail) and sell nursing care to the MOH (using a nursing "code"). The data were collected between mid-2014 and mid-2015 on residents of 234 LNCIs. To calculate the annual rate of transfers a complex variable was constructed expressing the number of transfers per year divided by the number of code beds in each institution.

Main Findings

- The annual average of transfers from LNCI to hospital, that bore a bed code was 0.42 (SD=0.26), and ranged from 0 to 1.69 – i.e., one transfer per year for every 2.38 LNCI beds.
- The annual average of transfers bearing a bed code from LNCIs licensed to provide intravenous infusions was lower than the average for unlicensed LNCIs.
- The potential saving from expanding the use of IV infusions to all LNCIs is some 1,000 transfers per year.
- The average annual of transfers, bearing a bed code, from LNCIs that, as well as nursing wards, also have with an active geriatric department (where there is a physician present 24/7) was lower than that of LNCIs without an active geriatric department.

Conclusion

It is both feasible and important to reduce the transfer of elderly patients in an acute condition from LNCIs to general hospitals. Since the presence of a physician at an LNCI throughout the day and night increases the capability of providing critical care onsite and reducing transfers, steps should be taken to increase the number of hours that a physician is present at LNCIs and to remunerate the institutions accordingly. LNCIs should also be encouraged to provide IV infusions in acute situations. It is also worth broadening the scope of this study in order to examine how the characteristics of the elderly residents of the institutions and members of their families could affect the decision to hospitalize.

Executive Summary

Background

Many elderly residents of long-term nursing-care institutions (LNCI) suffer from multiple illnesses and functional and cognitive limitations that require full-time supervision. An acute change in the medical condition of an elderly person in LNCI may lead to a decision to transfer the patient to a hospital, since the care offered in LNCIs mostly focuses on managing the residents' condition rather than on curing acute illnesses. Studies in Western countries have shown that residents of LNCI are frequently transferred to general hospitals. According to different studies, the annual rate of transfer of LNCI residents to hospital ranges from 9% to 59% of the all institutionalized residents.

However, in the recent years, there has been an increased trend worldwide toward reducing the number of transfers from nursing homes to general hospitals and expanding the care provided by the LTCI. This trend appeared in the wake of studies that showed that hospitalization of LNCI residents is expensive and often unnecessary. Moreover, general hospitals are often unprepared for the complex medical problems and special needs of nursing elderly. Following transfer, their condition may deteriorate, and they may be increasingly exposed to infection, falls, functional and cognitive decline, pressure sores and mortality.

In Israel, according to reports by LTCI and Ministry of Health (MOH) directors, many transfers to hospitals take place due to infections with high fever resulting from pneumonia, urinary tract infections, and end-of-life situations. Transfers due to other causes, such as falls with possible fractures, acute coronaries or other acute events are much less frequent. This has led to the understanding that some of the transfers are unnecessary, and are preventable through the provision of suitable medical treatment, mostly IV antibiotics.

To examine which steps should be taken in order to reduce transfers to hospitals, there is a need to obtain data on the extent of transfers, the reasons for hospitalization, and the main factors affecting the decision to transfer patients. The topic has been studied by health systems in many countries. In Israel, despite its importance, no study to date has provided a comprehensive picture of the extent of transfers from LTCI and there has been no attempt to identify the characteristics of LTCIs that affect the number of transfers.

This study provides a comprehensive picture of the extent of transfer of elderly patients from LNCIs to general hospitals and identifies the characteristics of the institutions that have a greater tendency to transfer patients than others.

Study Design

The data were drawn from the Computerized Geriatric Division, which regularly updates the administrative and individual information on all the elderly patients in the LNCIs that have at least one LTC ward (nursing or mentally frail) and are supervised by the MOH Department of Geriatrics. Data were collected from mid-2014 to mid-2015 regarding residents of 234 LTCIs receiving a monthly payment from the MOH that is based on a set price for "a standard bed," known as a "code"

(hereinafter: code bed), according to the number of occupied beds. The transfer from institution to hospital was identified by the status of "bed kept" at the institution, comprising every instance of hospitalization and its duration. "Transfer for admission to general hospital" was defined as "bed kept" for up to seven days and on condition that the patient did not die within a month of her/his return to the institution. In total, the study encompassed 18,219 LNCI beds for nursing and mentally frail patients (hereinafter: nursing beds), 60% of them under private ownership. To calculate the rate of annual transfers, a complex variable was constructed expressing the number of transfers per year divided by the number of code beds in each institution.

Main Findings

The annual average of transfers from LNCI to hospital that bore a bed code was 0.42 (SD=0.26) and ranged from 0 to 1.69 – i.e., one transfer per year for every 2.38 LNCI beds. Of the LNCIs receiving MOH funding, 31% were licensed to provide intravenous (IV) infusions (mostly, larger institutions) and of these, 63% utilized their license. The annual average for transfers, bearing bed code, from LNCIs licensed to provide intravenous infusions was lower than the average for unlicensed institutions (0.392 vs. 0.439 respectively – not statistically significant). The potential savings from extending the use of IV infusions to all LNCIs is some 1,000 transfers per year.

At the time of the study, 15 out of all the LNCIs had an active geriatric department with physicians on hand 24/7, which greatly facilitated the provision of IV infusions onsite. The average annual transfers, bearing a bed code, from LNCIs having an active geriatric department was lower than that of LNCIs without an active department (0.267 vs. 0.435 respectively – statistically significant). A multivariate linear regression found that the presence of an active geriatric department in an LNCI showed a statistically significant, independent correlation with fewer transfers, whereas the fact of having an IV license showed no statistical correlation. Examination of the institutional characteristics found no correlation between transfers and the scale of staffing at the institution, nor did it find any correlation between the transfers and the district in which the institution was located.

Implications for Policymakers

It is both feasible and important to reduce the transfer of elderly patients in an acute condition from LNCIs to general hospitals. The presence of a physician at an LNCI throughout the day and night increases the capability of providing critical care onsite and reducing transfers. Providing IV infusions in the LNCI also reduces transfers. Consequently, steps should be taken to increase the number of hours that a physician is present at LNCIs and to remunerate the LNCIs accordingly. LNCIs should also be encouraged to provide IV infusions in acute situations. These activities would improve the quality of care of elderly LNCI patients, reduce suffering caused by deterioration in their condition following hospitalization, and decrease health expenditure. It is also worth broadening the scope of this study in order to examine the part played by the characteristics of institutionalized patients and their families. For it is not only the structural character of the institution that affects the decision to transfer patients, but also the preferences of the patients and their families to remain in the LNCI, in order to prevent a change that could endanger them and cause unnecessary suffering.

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