



Hospitalization of Nursing Home Residents: A Review of Clinical, Organizational and Policy Determinants

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Executive Summary

The decision to hospitalize a nursing home resident is a function of clinical, organizational, market and policy context factors. A conceptual model characterizing the inter-relationship of these diverse factors is posited as a heuristic to assist in organizing research results regarding the determinants of hospitalization. The proposed model views the policy context as having the most pervasive effect since state and federal policies (reimbursement and regulatory) influence the way in which market forces become manifest, the behavior of the nursing facilities, including the kinds of staff hired and the kinds of residents served. Since the nursing home industry is dominated by proprietary facilities, the competitiveness of the market and the presence of alternative long term care resources are known to influence the behavior of nursing facilities. The structural resources of the facility, ranging from staffing to arrangements for medical care, since they determine the kinds of clinical care possible in the home, also influence how decisions are made about whether to care for nursing home residents during acute or terminal events. Finally, the clinical condition of the individual resident as well as their preferences and those of their family, are also presumed to influence the decision to hospitalize the resident.

A systematic review of the published and unpublished literature regarding the rates of hospitalization of nursing home residents suggested that until early 1990 the rate of hospital use per resident was between .25 and .5 per year. There was nearly as much variability among the nationally representative studies as there was among studies based upon small samples of residents. A summary of the literature on the determinants of hospitalization of nursing home residents revealed a fairly consistent pattern with regard to residents' clinical characteristics. Poor physical functioning, symptoms of an acute condition, the presence of a diagnosis of congestive heart failure or respiratory disease were all positively related to being hospitalized, as was male gender. On the other hand demented residents, women and the oldest old residents were less likely to be hospitalized. Since there has been little literature examining the influence of organizational factors on hospital use it was not surprising that there was little pattern. The proprietary status of the facility was found to be related to increased hospital use in some studies and to be unrelated in others. The literature does support the contention that greater medical and professional nursing presence on site reduces hospital use. Finally, there is even less literature about the influence of policies on hospital

use, although the literature clearly suggests that the rates have changed over time, perhaps directly as a function of new policies or perhaps indirectly due the changes in the mix of residents served and the influence resident mix has on the overall hospitalization rate.

Analyses of resident assessment data (Minimum Data Set) on samples of between 5000 and 120,000 individuals in between 260 to over 2000 facilities located in up to 10 states were conducted to examine the effect of policy, organizational and individual resident characteristics as determinants of hospitalization. One analysis examined differences in rates of hospitalization in a prevalent resident sample located in 125 facilities in 5 states with low Medicaid reimbursement and 125 facilities in 5 states with relatively high Medicaid reimbursement. Controlling for numerous resident characteristics, residents in states with low reimbursement rates have significantly lower rates of hospital use. Another set of analyses using MDS data merged with Medicare claims history files examined the organizational characteristics of nursing facilities' related to hospital use in the last 90 days of life in the population of Medicare decedents who had been in any nursing home in one of five states. Controlling for numerous clinical characteristics of the decedents in their last months of life, the level of medical resources available, particularly the presence of a nurse practitioner or physician assistant, significantly reduced the likelihood of hospitalizing terminally ill patients. State policy effects were also suggested in that residents of proprietary facilities in New York had significantly higher rates of hospital use than did those in not for profit homes. Since New York's (but none of the other states' in this study) Medicaid reimbursement system relies on a case-mix adjustment system, the perceived financial losses associated with increases in resident acuity may not be tolerated by proprietary facilities. Finally, selected analyses were performed of the pattern of hospital use in the last months of life among residents in nursing facilities that had established a relationship with a home based hospice as opposed to those that had not. Virtually no nursing home residents receiving hospice care in the nursing home were hospitalized whereas 30% of non-hospice decedents were hospitalized in the last 30 days of their lives.

The observed interaction between ownership and reimbursement level and method helps explain the contradictory findings in the literature regarding hospitalization of nursing home residents. It also suggests that the frequently noted countervailing effects of Medicare and Medicaid policies on the decision to discharge a resident to hospital may be quite significant. Since all states have a bed-hold policy to partially reimburse a facility for holding a Medicaid resident's bed while they hospitalized, depending upon the payment rate, facilities may do the financial calculus that it is to their benefit to hospitalize a patient whose clinical care needs increase. However, since dual eligible (Medicare and Medicaid) nursing home residents' hospital co-pay is paid by Medicaid, it is likely that state expenditures would be lower if hospitalizations could be avoided by paying for additional skilled resources in the home. While there have been some demonstrations that have sought to provide comprehensive medical managed care to nursing home residents, thereby reducing hospitalizations, since these studies have not incorporated Medicaid's costs, the savings to Medicare or the managed care company may be offset by increases in state Medicaid costs.

In summary, the literature and the new analyses presented in this monograph clearly point to the importance of facility resources and state Medicaid payment policies in determining the likelihood and duration or hospitalizations of nursing home residents. The policy "fix"

for this very prevalent phenomenon, however, will have to consider the costs and benefits of the hospitalization decision to the patient and family, to the facility, to the state Medicaid program and to the Medicare program since what is beneficial for one could be "harmful" for the other.