The Role of Specialized Geriatric Services in Acute Care Hospitals

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In Canada, the sustainability of the health care system is a major issue that has led to two commissions which are currently addressing the future of health care.\textsuperscript{(1,2)} Improving technology and changes in the delivery of health care have led to major restructuring of the system. Acute hospital beds and the length of hospital stays have decreased with the concomitant expansion of ambulatory services. The aging population, which is increasing dramatically in Canada particularly with regard to the oldest old, is a major priority policy issue in these discussions.\textsuperscript{(3)} However, the current management of the elderly in acute hospitals is of concern. In the United Kingdom, an enquiry into the care of older people in acute wards in general hospitals entitled “Not because they are old” found that problems existed with older patient and relatives’ dissatisfaction with the care, numerous deficiencies in physical environments, clear evidence of staff shortages, and concerns about nutrition.\textsuperscript{(4)} Problems were also identified with preserving dignity, interactions with staff, insufficient training, discharge planning and with the accessibility of services in the community. In addition, a recent study by Health Canada on unmet needs for health care showed a marked increase in concern, with an estimated 7% of Canadians or about 1.5 million reporting having had unmet health care needs during the previous year.\textsuperscript{(5)}

The acute hospitals are the most costly sector of the health care system with the 65+ now having the highest rate of hospitalization, the longest length of stay with the greatest risk of functional decline and of nursing home placements.\textsuperscript{(6)} In 1995/96, two thirds of all hospital in-patient days in British Columbia were taken by patients over 65.\textsuperscript{(7)} In spite of this, the acute hospitals function more for the needs of the providers than for those of their major clients, the frail elderly. Indeed, acute hospitals may provide a “hostile environment” to the frail elderly.\textsuperscript{(8)} Poor design can lead to minimized function, social isolation and increased delirium.\textsuperscript{(9,10)} Functional decline occurs which leads to “a cascade to dependency”.\textsuperscript{(11)} Approximately one third of older patients lose independent functioning by discharge in one or more activities of daily living (ADL).\textsuperscript{(12)} This functional decline is not related to acute illnesses but to the adverse effects of modern therapy and current hospital practices which are designed for younger people but which cause the loss of function and independence in the elderly.

Iatrogenic complications, adverse drug reactions and nosocomial infections, are common results of hospitalization of the elderly.\textsuperscript{(13,14)} Polypharmacy is the most consistent and powerful predictor of adverse drug reactions.\textsuperscript{(15)} Nosocomial infections contribute to increases in hospital morbidity including cost and length of stay. Older adults suffer a disproportionate burden of hospital acquired infections accounting for half of all cases.\textsuperscript{(16)}
Delirium is another common problem faced by the frail elder in acute hospitals. Prospective studies have shown a prevalence of delirium of 15-22%. Under nutrition and malnutrition are other common issues.

Acute hospitals must respond to the challenge of the current needs and the above mentioned problems of the elderly and also to the future needs of an aging population. The role of specialized geriatric services in acute hospitals is a major factor in meeting this challenge. The fundamental premise of such services is that much of the disease, disability and dependence in old age is preventable, treatable or manageable. Seniors with complex health problems have unique needs and present specific challenges for accurate diagnosis and assessment. Inaccurate diagnosis may result in inappropriate treatment leading in turn to further unnecessary loss of health and independence, premature placement and unnecessary long lengths of stay in acute care.

In Ontario, this challenge has been met by the establishment of five regional geriatric programs based on the five university health science centres in the Province. These programs provide a well coordinated comprehensive range of specialized geriatric assessment and short term treatment and rehabilitation services provided by interdisciplinary teams with expertise in the care of the elderly across the continuum of care including acute, long-term care and community care. In the acute hospitals, there are geriatric assessment units, internal consultation teams, specialized clinics and geriatric day hospitals, with outreach programs to the community. Geriatric rehabilitation units may be in the acute hospitals or in other facilities. Such services have been shown to decrease the percentage of beds occupied by patients waiting for long term care. A controlled trial of geriatric consultations showed that the intervention group had improved six months survival, an improved Barthel index score at one year and a trend towards decreased admission to the hospital or nursing home in the one year of follow up. A survey of Ontario geriatric rehabilitation units showed that their patients experienced considerable medical co-morbidity. Currently, the value of the Regional Geriatric Programs cannot be extended to the whole Province of Ontario without enhanced funding. Problems are compounded by the serious shortfall of geriatricians since there are currently only 68 in the Province compared to the 170 indicated by the standards for the British Geriatric Society and the 190 indicated by benchmarks arising from the Ontario Delphi Consensus Process. Recruitment and retention of geriatricians are a major problem due to, amongst other issues, poor remuneration. Recruitment is also a problem in the United States where a shortfall of 25,000 geriatricians is predicted by 2030, according to a report from the Alliance for Aging Research entitled “Medical Never-Never Land: 10 Reasons why Americans are not ready for the coming age boom.” The title is based on the term “Peter Pan Medicine” coined by Butler to describe age denial in health and medical education. Reasons given for this include marginalization of older patients, lack of public awareness, scarcity of academic leaders, lack of an academic infrastructure, geriatric medicine not being valued, inadequate reimbursement, lack of coordination within medicine, clinical trials not including older patients and little research into the aging process.
In the United Kingdom, facilities for the acute medical care of the elderly have been provided in new District General Hospitals and Teaching Hospitals. There are several models. One is needs related where admissions are based on clinical needs related to the major geriatric problems. The second is aged based, where all cases over a certain age, usually 75 are admitted to the geriatric service, and the third is an integrated model where geriatricians serve as members of multi-consultant medical teams. All these models aim to ensure that the elderly have access to geriatricians and multidisciplinary teams, combined with access to appropriate investigations and treatment. In a British Geriatric Society survey carried out in 1993, 27% of respondents operated a needs related model, 54% age defined and 19% an integrated model.(28)

In the United States, attention has been focused on the development of units for Acute Care of Elders (ACE). They are designed to prevent the dysfunctional syndrome caused by acute hospital admissions. In this concept the physical environment is modified to enhance the patients’ independent functioning. Care is patient centered with multidimensional assessments and guidelines combined with interdisciplinary team rounds and discharge planning. A randomized clinical trial was conducted to test the hypothesis that patients admitted to the ACE Unit would be more independent in ADL at discharge than patients receiving usual care. In patients discharged from the hospital ADL function was better at discharge than on admission in 34% of ACE patients compared to 24% of usual care patients. Fewer ACE patients were discharged for the first time to institutional long-term care. Previous work had shown the benefits of geriatric evaluation units(GEU). In one study, 123 veterans older than 65 years in age had been randomly assigned to a GEU after one week or more of acute hospitalization. At one year follow up, GEU patients had fewer deaths and hospital days, with lower cost of care and improved functioning and morale. In another study of 155 functionally impaired older patients who were at risk of nursing home placement, while recovering from acute medical illnesses, patients randomly assigned to the geriatric assessment unit in a rehabilitation hospital had improved functioning and lower rates of institutionalization compared to other patients. A meta-analysis of comprehensive geriatric assessment controlled trials found that geriatric programs linking geriatric evaluation with strong long term management were effective in improving survival and function in the elderly. A more recent randomized trial at eleven Veterans Affairs Medical Centres showed significant reductions in functional decline with inpatient geriatric evaluation and management and improvement in mental health with outpatient geriatric evaluation and management with no increase in costs. There was however, no significant effects on survival. In an Australian study, it was found that even though the patients on an acute geriatric medical unit were significantly older than other units, the acute geriatric unit had fewer long stay elderly patients. In an accompanying editorial it is stated that acute geriatric units hold the key to better health for an aging population.

The value of specialized geriatric services in acute hospitals is therefore very important for a target population of frail seniors with complex multiple health problems, particularly “the Giants of Geriatrics”. Such services lead to increased independence and quality of life, improved patient outcomes and increased clinical efficiencies in acute

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care and enhance the capacity of physicians and other health care providers to assess and treat the health care problems of the elderly.

Specialized geriatric services in acute hospitals provide direct patient care to only a minority of the elderly and therefore specialized geriatric services have a very important role, through consultation and education, in influencing the rest of the services in acute hospital to become senior sensitive. The concept of developing an Elder Friendly Hospital has been identified as a means of addressing this issue. Such a hospital needs to move away from focusing on the needs of the administrators and health care professionals to focus on the needs of its major client group, the frail elderly. The physical environment envisaged for Acute Care of the Elderly Units needs to be the norm for the entire hospital, with appropriate lighting, design of rooms and bathrooms, and appropriate aids and the avoidance of clutter, with appropriate signage. All hospital departments need to be aware of the common medical problems of the frail elderly, and of their prevention. Patients at high risk of functional decline can be identified by using the hospital admission risk profile (HARP). The approach and design of specialized geriatric services to reduce the deconditioning effects of bed rest and immobility and other hazards of hospitalization need to be extended to the rest of the acute hospital.

Guidelines need to be implemented to decrease adverse drug reactions in seniors. One such set of guidelines comes from the Canadian Medical Association. Recommendations to reduce nosocomial infections include following universal precautions for all patients, limiting the use of urinary catheters, nasogastric tubes, steroids, and the use of certain antibiotics associated with greater risk of C.difficile infection, and also limiting the use of intravenous lines, and preventing pressure sores with appropriate skin care techniques. Adequate hydration and nutrition should be maintained and aspiration precautions instituted in susceptible patients. Falls can be decreased by attention to the environmental aspects already mentioned and those to prevent functional decline. The use of sedating medication and those used intravenously which may limit mobility should be minimized. Promotion of patient mobility needs to become an integral part of the hospital culture. All hospital staff should be aware of the importance of physical activity for maintaining functional abilities. A key component is the re-enforcement of patient motivation and of family education. Multifactorial interventions have been successful in decreasing the rate of falls. Joint Guidelines for the prevention of falls are available from both the British Geriatric Society and the American Geriatric Society.

The risk factors for delirium have been well defined and a delirium screening instrument, the confusion assessment method, has been developed. Delirium has a complex multifactorial etiology. Adequate treatment involves addressing these multiple factors simultaneously. Non-pharmacological approaches are recommended with medications being reserved for patients who pose a threat to themselves or others. Medications may be prevented through a targeted risk factor approach. Guidelines for this have been developed by the British Geriatric Society.
Emergency Departments are a common pathway of entry to mainstream hospitals and a preoccupation with keeping older people away from acute hospitals is not healthy. Emergency Departments need to address the specific needs of the frail elderly in a better and more efficient manner. One such way is by the placement of a geriatric nurse clinician to work in the Emergency Department to assist in the management and to link the patients with the appropriate specialized geriatric service. The Geriatric Emergency Medicine Task force of the Society for Academic Emergency Medicine have produced a textbook to address this issue. Specialized Geriatric services help maintain the elderly in the community by direct intervention through community outreach teams which visit patients in their homes. Geriatric Departments can support a much broader geographical area through distance consultation and knowledge transfer through such means as videoconferencing.

Geriatricians also need to play a major role in advocating for comprehensive strategies to ensure fair, high quality integrated health and social services for older people, such as have been introduced in the United Kingdom in the National Service Framework for Older People. This Framework sets out evidence based standards which address issues such as age discrimination, patient centered care, stroke, falls, mental health in older people and promotion of health and active life in older age. A National Framework on Aging has been recommended for Canada but no action has as yet been taken other than the development of a policy guide.

In summary, the acute hospital currently provides a less than ideal environment to the frail elderly patient. Specialized geriatric services, however, play a major role in specifically and successfully addressing their needs. These services must be enhanced so that they are readily available to all those who would benefit from them. In addition, the same approach needs to be adopted by the rest of the hospital, if the pressures placed on health care systems by the aging population are to be appropriately and efficiently met. These efforts need to be supported by a National Framework on Aging.
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