Age and Ageing 2001; **30-S3:** 19–23

Intermediate care—a challenge to specialty of geriatric medicine or its renaissance?

DOUGLAS MACMAHON

Camborne/Redruth Community Hospital, Barncoose Terrace, Redruth, Cornwall TR15 3ER, UK

Fax: 01209 881515.

Abstract

The specialism of geriatric medicine has developed considerably in the last half of the twentieth century. In Great Britain it has emerged from its sombre beginnings in Victorian poor law institutions to become one of the largest specialities in medicine encompassing a wide range of disciplines and interests. More recently, there has been a parallel development in 'intermediate care' a sweeping phrase that encompasses a wide diversity of practices in a plethora of venues. Although there is considerable attraction in minimising the duration of hospital stay by older people, there is a real risk of intermediate care being used as a euphemism for indeterminate neglect. For older people to benefit from appropriate treatment and care, the lessons learnt by earlier generations of geriatricians, and supported by the international evidence base should not be disregarded. Elderly people need a full multi-disciplinary assessment (comprehensive geriatric assessment) and continued involvement of skilled and trained personnel in their continuing care (geriatric evaluation and management). The recommendations of the British Geriatrics Society on intermediate care are commended and should be adhered to by all planners and providers of intermediate care. There is considerable logic in developing ways in which the two developments can be integrated to build upon the best features of both.

Introduction

The greying of the population is a demographic trend that is predicted to continue into the foreseeable future, with an anticipated increase of almost 300% in the very elderly in the next 50 years in the UK [1] (Figure 1). Elderly people are major users of hospital resources, and so it appears rather paradoxical that the last few decades have seen a dramatic reduction in hospital bed numbers. By extrapolation, Norman Vetter humorously concludes that the last hospital bed will close in 2014 and in that year will have had over 600 million patients through that bed [2]. Simultaneously, there has been a growth of interest in schemes that purport to be 'intermediate care' even though its definition is somewhat vague [3], and potentially misleading. The common theme is the avoidance or reduction of periods of hospitalization. However, this concept implicitly carries the danger of prejudice based upon ageism preventing elderly people access to appropriate diagnostic and therapeutic facilities, and hence the loss of opportunity to reverse pathology, and effect rehabilitation to allow return to independence. In this review, I shall examine lessons learned from the development of British geriatric medicine, review relevant parts of the international literature on the efficacy of interventions in elderly persons. Then, I shall speculate on the benefits of the development of intermediate care as an alternative to hospital treatment, and consider what the risks may be that compromise the proper care of older people. Finally, I will suggest the logic of developing ways in which the two developments can be assisted constructively to collaborate.

Phases of development of geriatric medicine in the UK

The early pioneers in the period before and shortly after second world war when the British National Health Service was founded had to work in isolated facilities, mainly in the workhouses that were the legacy of the Victorian era. Being frequently geographically and philosophically distanced from the general hospital, and later the emerging district general hospitals (DGH), they

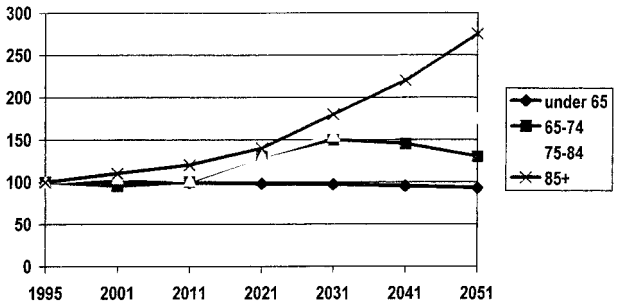

Figure 1. UK population projections indexed on 1995 (Royal Commission 1999).

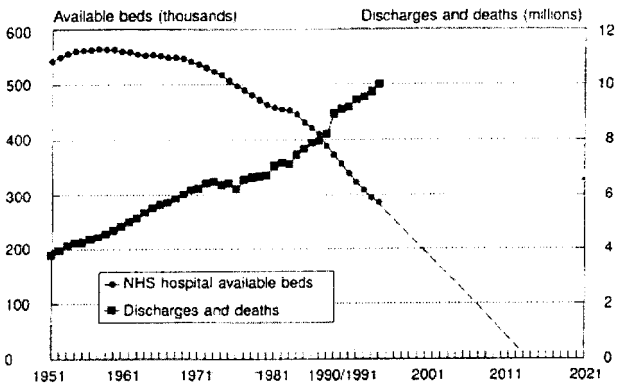

Figure 2. Number of hospital beds, discharges and deaths over the last 35 years (UK).

endured poor access to investigations and treatments, but developed commendable progress in the assessment and rehabilitation of the common problems of geriatric medicine.

Later phases of development in the 1960s and 1970s led to further development of progressive patient care, day hospitals, respite care (carer relief), and joint progress with other specialities such as orthopaedic surgeons and psychiatrists. Mostly, the acute intake was separate from general medicine, and even when at the DGH site, was usually age- or needs-related. Significant progress was made in the training of both the future specialists to staff the speciality, and also general physicians and general practitioners.

The move towards integration in the 1980s and 1990s certainly addressed the problems of DGH access, and junior doctors' working hours, but at a price. This price has become increasingly apparent with the strains caused by the apparently inexorable rise in the numbers of patients being seen on the acute intake, and the loss of rehabilitation resources and input into long term care.

From where has 'intermediate care' emerged? The term has no universally agreed definition. Andrea Steiner and Barbara Vaughan [3,4] have produced several. Perhaps this implies that none is totally satisfactory? By most usage, the term includes a number of scenarios, typified by the lack of need for consultant-led teams, and district hospital facilities. The catch is that who is in the best position to define that lack of need?

Some of these facilities pre-dated modern geriatric medicine, some have recently been created, and some are old ideas rebranded. The evidence of formal randomized trials is sparse, and so efficacy and efficiency are difficult to interpret. In contrast, there is accruing evidence, albeit late, of the efficacy of traditional methods of geriatric medicine—comprehensive geriatric assessment (CGA) and extensive support for its extension into longer term management (geriatric evaluation and management).

There has been controversy over the value of CGA. Regrettably, there is little published evidence from the UK. We have therefore to rely on evidence accruing in the US. A meta-analysis performed by Stuck [5] included 28 controlled trials comprising 4,959 subjects allocated to one of five CGA types and 4,912 controls. Multivariate logistic regression showed unequivocal value in inpatient geriatric evaluation and management units.

Hospital-home assessment services were also effective, albeit less equivocally, and home assessment services were the least effective, although benefit was still clearly evident, and statistically demonstrable. The study went on to use covariate analysis to show that programmes with control over medical recommendations and extended ambulatory follow-up were more likely to be effective. The authors concluded 'that CGA programmes linking geriatric evaluation with strong long-term management are effective for improving survival and function in older persons'.

Later, Stuck [6] also showed an impressive reduction in functional decline, in admissions to long-term nursing care in those offered CGA. However, in this study the cost of the intervention for each year of disability-free life gained was about £29,000.

Boult [7] describe the development and operation of a practical model of outpatient geriatric evaluation and management (GEM) for high-risk, community-dwelling older adults. Again, the GEM teams are interdisciplinary (geriatrician, gerontological nurse practitioner, nurse and social worker). This model of outpatient GEM provided 6 months of targeted intensive care at 'a reasonable cost'. The satisfaction ratings of patients and their primary physicians were high.

Reuben [8] failed to show value in CGA by a consultation team, with limited follow-up in hospitalized patients selected on the basis of screening criteria. In a more focused study in the community, Reuben (1999) [9] showed a single outpatient comprehensive geriatric assessment coupled with an intervention to improve physician and patient adherence prevented functional and health-related quality-of-life decline among community-dwelling older persons with specific geriatric conditions.

There is evidence that assessing patients has to be coupled with effective measures to ensure adherence to

the recommendations arising from the assessment by both patients and their primary care physicians [10].

CGA can be provided in a range of settings—in-patient, out-patient, at home, and in secondary or primary care. Gudmundsson and Carnes [11] investigated CGA in a primary care setting using at least three members: a physician, a nurse, and a social worker. Again, the authors conclude 'for optimal effectiveness, assessment must be coupled with a comprehensive therapeutic plan and long-term follow-up'.

Several American studies have based their programs on British experience—particularly the Day Hospital. Evans *et al.* [12] reportedly used the British day hospital as a model because 'it provides a comprehensive approach to care and a bridge between acute, home-based, and institutional long-term care.' With a gerontological nurse practitioner as care manager, clients received an intensive, individualized, time-limited programme of nursing, rehabilitation, mental health, social, and medical services in one setting several days each week. Additional geriatric services, such as primary care, are available in the same location when needed.

This concept has been further emulated in the PACE (program of all-inclusive care of the elderly) conceived originally on the On Lok facility in downtown San Francisco [13]. These intermediate care schemes take the day hospital facility one stage further by outreaching services, such as domiciliary support, ethnic catering, in addition to medical, nursing and therapeutic interventions. From the OnLok facility, designed primarily for the nursing home eligible Asian elderly population of urban San Francisco in 1971, it has now reached a considerable size, providing services to 800 participants by six distinct teams. The model has been further simulated and adapted in other parts of the USA [14].

Prevention and privation

There is growing knowledge of the value of health promotion for elderly people. Many studies have confirmed the value of measures to improve the health of the population as a whole, as well as for particular target groups with the main aim in later life to extend the disability free life expectancy (DFLE). The DFLE doubles from lowest to highest income group and also between genders [15]. These arguments suggest that GEM is likely to be most effective when it is directed at less advantaged groups, i.e. those from poor, deprived areas, and coupled with measures to improve housing and financial support. This approach is supported by recent Government initiatives such as 'better services for vulnerable people' and the white paper 'saving lives—our healthier nation' [16] that has explicit objectives for health promotion that extend into older ages. This is to be welcomed. This stresses responsibilities for individuals, local partnerships, and national government. Within the local partnership, there is a clear need for involvement of those clinicians in regular contact with the client group, and for this to be co-ordinated with those who have access to accurate information and expert advice.

Teamworking

Inpatient care is a complex matter. In one small study focused on in-patients admitted with Parkinson's disease (a common management problem in the elderly) to an assessment and rehabilitation facility, we monitored the interventions received over and above their general medical and nursing care. The range was wide—an average 4.5 (range 1–8), 96% had 2 or more, 46% had 5 or more 17 (Table 1).

Gerontological nurse practitioners may provide one solution to the manpower problem that would be generated by the implementation of these policies in practice.

The Australian experience with geriatric assessment teams (GAT) is widely recognized as an effective model of the introduction of clinical expertise into a community setting. Originally designed by the Australian Government with the aim of saving expenditure by reduction of unnecessary nursing home placements, their implementation differs between States, and different models of integration with primary and secondary health and social agencies exist across the country. A unified budget disguises the separate funding streams that underpin the services on which elderly antipodeans depend. Similarly, we and others have developed models of community assessment and rehabilitation teams (CARTS) which continues to evolve and develop as changes in the British health service with successive initiatives [18].

Team working in elderly care is a complex process. There is no single universal model. The range of purposes can be wide, but teams need to have specific roles, and goals that are regularly reviewed. A range

Table 1. Interventions received by in-patients with Parkinson's Disease (Campbell, Maguire, MacMahon 1998)

Intervention (by staff group)	% of patients referred and seen
PD Specialist Nurse	99%
Physiotherapy	75%
Occupational therapy	74%
Social Worker	50%
Dietician	25%
Mental Health Team	21%
Chiropody	18%
Speech & Language	18%
Other spec. nurses	15%
No other interventions	Nil

PD = Parkinson's disease.

of multidisciplinary skills and services is required. Standardized assessment processes and tools and IT support can be beneficial, for example, a shared database can reduce overlaps and duplicate assessments. Team education (training) is necessary, and should be a priority for supportive management.

Conclusion

The challenge in providing alternatives to hospital care is to ensure that they are safe, effective, and acceptable to the general public, the professions and politicians. Prediction is far from an exact science, and especially so at the interface between scientific and therapeutic advances, and social policy. One is reminded of the late Bernard Isaacs quotation 'The past is a rock, the present a shifting sand, the future a vaporous cloud' [19].

Despite evidence of undoubted success—geriatric medicine is now the largest specialism in general medicine—and the BGS has approaching 2000 members. Chairs have been established in each University, and training programmes are present in most departments for a range of staff. However the pressures from general management, audit, research, teaching, and with the rising tide of emergency admissions on the general medical intake all threaten the ability of geriatricians to undertake their more traditional roles.

Vague understanding of the work coupled with the loss of long term care responsibilities, and down-sizing of rehabilitation facilities has left British geriatrics unduly focused on acute care, whilst the void has left others to plan 'intermediate care' in apparent isolation from geriatric expertise.

British geriatric medicine could do much to help itself. Firstly, better definition of some of our central processes would help others, who are less familiar with the care of older people, better to understand our work. For example, the concept of 'reversibility' is a powerful one when considering an approach to this client group. The recent focus of our managers on finished consultant episodes (FCEs) has exacerbated the tendency towards the 'revolving door syndrome' in which patients seem to be perpetually readmitted to the same, or sometimes another facility. The national situation has improved, with interest rising in long-ignored areas e.g. 'rehabilitation', and in the present context 'intermediate care.' Unfortunately, the shelving of the report of the Royal Commission on long term care for the elderly is regrettable.

Intermediate care—the future?

The British Geriatrics Society, in its compendium has published some explicit guidelines [20]. Two of the key recommendations are:

> 'We would emphasise that elderly people should not be denied access to appropriate in-patient diagnostic or therapeutic facilities which are generally only available in secondary care hospitals, nor should they remain in hospital longer than they need.'
>
> 'We would also highlight that there is only a finite pool of resources (both financial and skilled human), and hence any diversion of such resources could disadvantage established hospital or community services.'

The first of these is a lesson learnt as geriatric medicine developed this last half century. It would be shameful if this was forgotten as we enter the third millennium. The second reminds us that services will need to change with circumstances, but we should hesitate before rushing to emulate innovations if in so doing we upset a complex system that is working effectively. There is a greater chance of a successful transition if careful, inclusive planning is observed, rather than a hasty rush to satisfy artificial short deadlines. To commission these services, primary and secondary health and social care commissioners and providers need to plan together in a constructive dialogue. These programmes must be integrated to be effective, and to prevent patients falling between the cracks [21].

Learning from experience elsewhere, I would suggest the following steps to reintegrate the separate strands of policy and practice development.

It is necessary for adherence to a single definition of the term or alternatively to abolish it.

The practice of discriminatory ageism must be outlawed, and similarly plans principally to divert older people from medical services that they need, have paid for most of their lives in the expectation of using when they needed are unacceptable. The acid test of a diversionary scheme is whether it is acceptable to patients or clients of any age. If not, then it must be discriminatory to apply it to just one age group.

Geriatric evaluation (incorporating comprehensive geriatric assessment—CGA) is now well proven to be an effective means of identifying medical problems especially when associated with strong long-term management.

For the specialty of geriatric medicine, we need to focus more selectively on 'reversibility' including the merits of CGA, and move on towards providing GEM, including focused rehabilitation. We must be more explicit in the training and development of team working.

It may be that geriatric medicine should be re-branded and re-packaged as part of a comprehensive range of services to elderly people including not just clinical, but also social services. However, these services must be firmly based on proven philosophies, skills, and successes of geriatric medicine and build further on those that have developed in primary care.

It would appear that hospital down-sizing may well continue until the point at which the burgeoning needs of the expanding population outstrip the ability of creative planners to develop alternatives to the proven benefits of hospital care, or find alternatives to the deprecatory use of the term 'geriatrics'.

Therefore, if intermediate care can adhere to, and further build upon these principles, then it could prove to be the renaissance of geriatric medicine in the UK. However, if on the other hand its development continues in isolation, flouting the lessons of the last half-century with the accruing evidence base of CGA and GEM, then its future looks bleak. That is the challenge to the planners of healthcare for older people in the new millennium.

Acknowledgements

The author gratefully acknowledges the award of a Sir Winston Churchill Travelling Fellowship 1998/9 which supported visits to several of the units quoted above, and the staff of those units for their patience and assistance in understanding their work.

References

1. Royal Commission on Long Term Care for the Elderly. London: The Stationery Office, 1999.

2. Vetter NJ. 'Hospitals, Jim, but not as we know them.' Rev Clin Gerontol 1997; 7: 195–7.

3. Steiner A. Intermediate Care. A conceptual framework and review of the literature. London: King's Fund, 1997.

4. Steiner A, Vaughan B. Intermediate Care. A discussion paper arising from the King's Fund Seminar held on 30th October 1996. London: King's Fund, 1997.

5. Stuck AE, Siu AL, Wieland GD, Adams J, Rubenstein LZ. Comprehensive geriatric assessment: a meta-analysis of controlled trials. Lancet 1993; 342: 1032–6.

6. Stuck AE, Aronow HU, Steiner A *et al.* A trial of annual in-home comprehensive geriatric assessments for elderly people living in the community. N Engl J Med 1995; 333: 1184–9.

7. Boult C, Boult L, Morishita L, Smith SL, Kane RL. Outpatient geriatric evaluation and management. J Am Geriatr Soc 1998; 46: 296–302.

8. Reuben DB, Borok GM, Wolde-Tsadik G *et al.* A randomized trial of comprehensive geriatric assessment in the care of hospitalized patients. N Engl J Med 1995; 332: 1345–50.

9. Reuben DB, Frank JC, Hirsch SH, McGuigan KA, Maly RC. A randomized clinical trial of outpatient comprehensive geriatric assessment coupled with an intervention to increase adherence to recommendations. J Am Geriatr Soc 1999; 47: 269–76.

10. Shah PN, Maly RC, Frank JC, Hirsch SH, Reuben DB. Managing geriatric syndromes: what geriatric assessment teams recommend, what primary care physicians implement, what patients adhere to. J Am Geriatr Soc 1997; 45: 413–9.

11. Gudmundsson A, Carnes M. Geriatric assessment: making it work in primary care practice. Geriatrics 1996; 51: 55–65.

12. Evans LK, Yurkow J, Siegler EL. The CARE Program: a nurse-managed collaborative outpatient program to improve function of frail older people. Collaborative Assessment and Rehabilitation for Elders. J Am Geriatr Soc 1995; 43: 1155–60.

13. Eng C. The On Lok/PACE model of geriatric managed care: An interdisciplinary approach to vare of frail elderly. Curr Concepts Geriat Mngd Care 1996; 2: 4–24.

14. Eng C, Pedulla J, Eleazer P, McCann R, Fox N. Program of all-inclusive care for the elderly (PACE): An innovative model of integrated geriatric care and financing. J Am Ger Soc 1997; 45: 223–32.

15. Wilkins R, Adams OB. Changes in mortality by income in urban Canada from 1971 to 1986. Am J Pub Hlth 1983; 73: 1073–80.

16. Department of Health. Saving Lives—Our Healthier Nation. London: The Stationery Office, 1999.

17. Campbell S, Maguire R, MacMahon DG. The multidisciplinary needs of hospital in-patients with parkinsonism. Third European Parkinson's Disease Association Conference, Barcelona, Spain, 1998.

18. MacMahon D, McKee C, Buckingham K. Assessment and Rehabilitation Teams in the Community: The Cornwall Experience. In Challis, Darton, Stewart (eds) Community Care, Secondary Health Care and Care Management. Aldershot: Ashgate, 1998: 73–88.

19. Isaacs B. The Challenge of Geriatric Medicine. Oxford: Oxford University Press, 1992.

20. The British Geriatrics Society Compendium 'Intermediate Care': Medical Guidance for Purchasers and Providers. CITY: PUBLISHER, 1998.

21. Boult C, Boult L, Pacala JT. Systems of care for older populations of the future. J Am Ger Soc 1998; 46: 499–505.