An Acute Geriatric Care Model to Meet Population Needs

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Purpose

The purpose of this paper is to propose an enhancement of future acute geriatric care to meet the needs of an ageing population.

Introduction

2. It is almost 30 years since the establishment of a specialist service in Hong Kong to deal with the health care needs of elderly patients. Geriatric medicine originated in the United Kingdom 60 years ago out of a reaction to neglect and apathy of elderly patients thought not to be amenable to medical treatment and thus obliged to spend their last years in chronic infirmaries. Since Marjory Warren showed that many elderly patients had conditions from which they could often be cured or rehabilitated, the specialty of geriatric medicine has continued to grow and an impressive knowledge base has been accumulated. This, combined with increasing expertise in the multidisciplinary treatment and assessment of elderly patients and in ensuring that health and social services work in a coordinated fashion, has improved the care of ill elderly people. For the past 30 years, over 100 specialists in geriatric medicine have been trained up in Hong Kong to meet the local service needs.

3. The Hong Kong elderly population aged 65+ is projected to grow from 816,319 in 2004 to 900,487 in 2010, an increase of 10%. The corresponding growth for the population aged 75+ is even steeper at 30%, from 339,339 to 442,014. The hospital bed-days consumed for the 65+ age group is estimated to rise from 4,103,000 to 5,556,000 (an increase of 35%) from the year 2001 to 2010, and the corresponding rise for the 75+ age group is from 2,543,000 to 3,974,000 (an increase of 56%). It is projected that by 2010, the 65+ age group, will consume 51.8% of the patient-days in public hospital.

The Scope of Geriatric Medicine and Evidence for its Effectiveness

4. Demographic trends and the age-distribution of illness make it unrealistic for one specialty, geriatric medicine, to look after all elderly people. What kind of elderly people, therefore, should geriatricians ideally manage? The best definition of a **geriatric patient** is one who exhibits the features of **biological ageing**. The term “biological ageing”, in contrast to “chronologically ageing”, is emphasised because not all patients age at the same rate. Such biologically aged patients are characterised by frailty and complexity. **Frailty** is a failure to integrate responses in the face of stress, so that, functions that require integration of higher brain processing, such as maintaining balance, walking, intellect are more likely to fail when stressed by diseases, resulting in falls, immobility, confusion or incontinence – the **“geriatric**

giants". The consequences of biological ageing are complex but the most important clinically relevant aspects are: atypical presentation of disease, multiple pathology, disabilities, and adverse social factors.

5. **Who to target?** Thus, geriatricians should target their skills on the biologically aged patients. The **acute geriatric patient** can be defined on a **need-related** basis as: residents of residential care homes for the elderly (signifying a degree of physical and/or mental frailty); acute presentation with confusion, poor mobility, falls or incontinence; long-standing confusion, poor mobility, falls or incontinence; presenting with specific conditions requiring intensive rehabilitation e.g. stroke; multiple pathologies and thus multiple medications; those previously under the care of a geriatric specialist. Such patients consume significant hospital resources, with prolonged hospital stay because of their associated disabilities and need for rehabilitation.

6. The response to the complex situation of the biologically aged ill person must be correspondingly complex. It is not sufficient to identify acute illnesses and deal with them medically in a narrowly defined sense. The **essence of management in frailty** is to embrace the complexity of the patients and their needs for care. We have complex patients (i.e. those with multiple diseases, multiple needs, and a multifactorially determined state) on whom we apply a complex intervention (comprehensive geriatric assessment and multidisciplinary care) to achieve a variety of ends. Although these ends roughly can be summarised as lessening pain, improving function and delaying death, they have many manifestations, which also require a complex measurement tool.

7. The **essence of geriatric medicine** as a specialty is to assess and treat the medical and rehabilitative needs of older people. Every ill person deserves a diagnosis. This is carried out through a process known as **Comprehensive Geriatric Assessment**. When this is combined with a co-ordinated package of health and social care delivered by a **multidisciplinary team, led by a geriatrician**, there is **evidence** that the outcomes for older people with multiple pathologies and functional problems are improved in terms of: reduced risk of mortality, greater chance of cognitive improvement, greater chance of physical function improvement, improved likelihood of living at home, and reduced hospital readmissions.

8. Analysis has also to be made on the differential utilization of the 3 phases of progressive care (acute(A)/rehabilitation®/long-term(L)) of the target elderly population, whereby the case-mix interacts with the skill mix to make streams of discharge behaviour that flow through A, R and L (infirmary) beds. More relevant outcome measure indicators in geriatric medicine include improved or preserved function, home as discharge destination (previous accommodation), and quality of care from the patient's perspective.

9. **Whose responsibility?** Because of the reasons mentioned above, the care of a geriatric patient will require a multidisciplinary team led by a geriatrician, involving not only doctors and nurses but also therapists and social workers, working closely together, and tight coordination between hospital-based and community-based resources.

10. **Where to treat?**

(i) **Designated acute geriatric wards and beds with progressive care** to rehabilitation and long-term care:

The kind of organization of services as described under paragraph 7 is rarely found in acute medical or surgical wards where the emphasis is, understandably, on the management of acute illness based on single organ resuscitative treatments and single interventions. The integrated medicine and geriatrics model would not work unless geriatricians had access to more geriatric beds, preferably in designated wards. Pooled or scattered beds would not be the answer, as this would fragment the multidisciplinary team and undermine the close working relationships that are essential to the kind of care geriatric patients require.

(ii) **Interface with A&E:**

Local survey revealed that 91% of 75+ age group with falls, stroke, delirium and RCHE residents are admitted to hospital via A&E compared with the overall average of 49% in-patient admissions via A&E. Specialist geriatric involvement at A&E can help in early identification of reversible cause of ill health or functional loss and avoidance of rejecting elders who need hospitalization. Elders who would not benefit from being admitted to an acute hospital bed can be directed appropriately back home with or without additional support. The diagnostic and therapeutic processes can continue once the patient has seen a geriatric specialist in the A & E.

(iii) **Interface with other hospital specialties:**

Geriatric patients present in many other settings than medical wards: a successful geriatric service should be able to reach patients in non-medical wards (orthopaedics, surgical, neurosurgical, gynaecological, psychogeriatrics) to provide problem-focused (rather than solely organ-focused) services (e.g. falls and fracture service, memory service, stroke service), to improve diagnostic accuracy and need assessment, to reduce polypharmacy and avoid iatrogenesis, and to ensure smooth discharge.

(iv) **Interface with community**

- Geriatric Day Hospital
- Geriatric specialist assessment prior to entry to RCHE
- Geriatric support for frail elders living at RCHE
- Geriatric support for frail elders living at home

11. While attempts have been made in recent years to enhance the knowledge of general practitioners on primary care of elders via formal and informal

training programmes, there remains a pressing need to enhance the training of family medicine trainees in the module of geriatric medicine to meet the population challenge. Currently, the regulations of the Diploma of Geriatric Medicine(Glasgow) of the Royal College of Physicians and Surgeons of Glasgow stipulate that, to be eligible to sit for the examination, candidates have to complete at least 4-month full-time training (or part-time equivalent) in a department of geriatric medicine.

Current Issues of Concern

12. The recommended principles of the Task Force on Provision of Geriatrics Services under the COC(Med) of HA in 1994 are:

(i) Acute geriatric care should be non-discriminatory on account of age

(ii) There should be shared facilities between medical and geriatric patients

(iii) Junior medical officers should rotate between geriatric and medical units

(iv) Admission should be age and need related and there should be single point of contact so that there would be fewer transfers between units

(v) There should be designated beds for geriatricians to look after their patients

13. A survey in July 2004 of 14 acute hospitals in HA showed that while principles (i) to (iii) have been achieved for all, there are wide variation in the number of designated acute geriatric beds available to practise acute geriatric medicine (Table 1).

14. Only 2 hospitals have adequate designated acute geriatric beds allowing direct admission from A&E to geriatric wards. For the remaining 12 hospitals, ill elderly patients are admitted into medical wards with scattered, floating or no geriatric beds. There are a number of issues of concern.

(i) **Service**

Frail elderly patients requiring specialist care are spread in different general medical wards, and thus a designated setting for geriatric practice (multidisciplinary team, geriatric nursing, disability-free environment) is lacking. This also hinders a timely response by geriatricians to meet their medical (early detection of diseases despite atypical presentations) and rehabilitative needs. Other specialty wards (e.g. infectious disease ward) also find difficulty in managing frail elderly patients with multiple pathologies & disabilities. Revolving door phenomenon occur because of premature discharge to homes/RCHE without appropriate support, and there is lack of continuity of care. Inappropriate transfers to rehabilitation/ convalescent settings also occur (too acute, no diagnostic workup, not benefiting from rehabilitation).

(ii) **Manpower** (Table 2)

Some new hospitals do not have geriatric teams. Traditional core skills of a geriatrician are often underused: number of full time equivalent (FTE) geriatric specialists is reducing and they spend more time on general care rather than on geriatric specialist care.

(iii) **Training**

There is concern on the lack of acute geriatric ward to train geriatric nurses/ nurse specialists. The environment for training specialists and generalists in geriatric medicine is suboptimal. The numbers of new trainees and fellows in geriatric medicine are declining.

Conclusion

15. Elderly patients should have access to the particular skills & experience of a physician trained in geriatric medicine and special services of a multi-disciplinary team. More physicians and nurses should be trained to meet the rising need.

16. Early access to geriatric care in the acute phase could help reduce morbidity and optimize use of hospital resources. For an effective, efficient service and continuity of care, a structural and functional geriatric service is essential. The service should be led by geriatricians and supported by a multi-disciplinary team. There should be dedicated geriatric wards for the acutely hospitalized high risk frail elderly patients. A targeted approach to providing acute geriatric care (e.g. RCHE residents, elders presenting with falls, stroke, confusion, etc) is desirable

17. Implementation of the proposed acute geriatric care model would be cost-neutral to start with, by striking a balance between geriatric commitments and non-geriatric commitments of geriatricians. There is potential for cost saving in terms of optimal use of hospital resources; improving flow between the acute, rehabilitation, and long-stay compartments; reducing iatrogenesis and multiple medication problems; reducing disability; and reducing institutionalization.

18. These are some of the issues that must be confronted if we are to improve our present medical care of biologically aged patients and successfully negotiate the coming demographic changes. Or else, more and more patients might be hived off into residential care homes where they will spend their days in precisely the way that Marjory Warren in the 1940's found patients in the chronic sick wards and which stimulated her to advocate the development of the specialty of geriatric medicine.

Table 1. Acute geriatric beds of 14 acute hospitals in HA as at July 2004

Cluster	Hospital	Number of designated acute geriatric beds	Number of designated acute geriatric wards
HKE	RHTSK	152	4
	PYNEH	6	0
HKW	QMH	0	0
KE	TKOH	10	0
	UCH	108	3
KW	PMH	12	0
	KWH	15	0
	CMC	0	0
	YCH	0	0
KCC	QEH	16	0
NTW	TMH	34	1
NTE	PWH	0	0
	NDH	0	0
	ANHN	0	0
	Total	**353**	**8**

Table 2. Manpower (current and 2006 projected needs) in specialists in geriatric medicine based on return from HA geriatric units (#) and referenced to UK (RCPL, BGS 2004) recommended ratios (*)

Year	2004				2006 (projected)		
Cluster	Geri sp #	FTE of Geri sp #	FTE reqd for Geri sp per 75+ pop =1:4,000*(deficit)	FTE reqd for Geri sp per pop =1:50,000* (deficit)	FTE of Geri sp #	FTE reqd for Geri sp per 75+ pop =1:4,000* (deficit)	FTE reqd for Geri sp per pop =1:50,000* (deficit)
HKW	4	2	7 (5)	11 (9)	10	8	11
HKE	23	11	12 (1)	17 (6)	19	13	17
KW	32	17	26 (9)	37 (20)	21	28	38
KC	8	5	7 (2)	10 (5)	12	8	10
KE	14	10	10 (0)	15 (5)	19	11	16
NTW	8	4	9 (5)	21 (17)	8	10	21
NTE	11	5	14 (9)	29 (24)	7	16	29
Overall	100	54	85 (31)	139 (85)	96	94	142