

# Joint efforts of emergency medicine specialists and geriatricians in managing old-age-home elderly who attended the Accident and Emergency Department of a regional hospital

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## ABSTRACT

**Background.** A significant proportion (69%) of old-age-home elderly attending the Accident and Emergency Department of the Queen Elizabeth Hospital were admitted, and they are at risk of potential complication of hospitalisation.

**Methods.** We evaluated the effect of 'Intensive Geriatrics Intervention', through the joint efforts of emergency medicine specialists and geriatricians at the Accident and Emergency Department of the Queen Elizabeth Hospital, in reducing unnecessary hospitalisation.

**Results.** From February 2006 to January 2007, 619 corresponding patients were managed by 'Intensive Geriatrics Intervention' at the Accident and Emergency Department. We achieved a 32% absolute reduction in the overall admission rate, and a shorter average length-of-stay (1.4 days) in comparison to usual care.

**Conclusion.** 'Intensive Geriatrics Intervention' at the Accident and Emergency Department was effective in avoiding unnecessary admission, thus reducing potential complications of hospitalisation.

**Key words:** Aged; Emergency service, hospital; Hospitalization; Patient readmission

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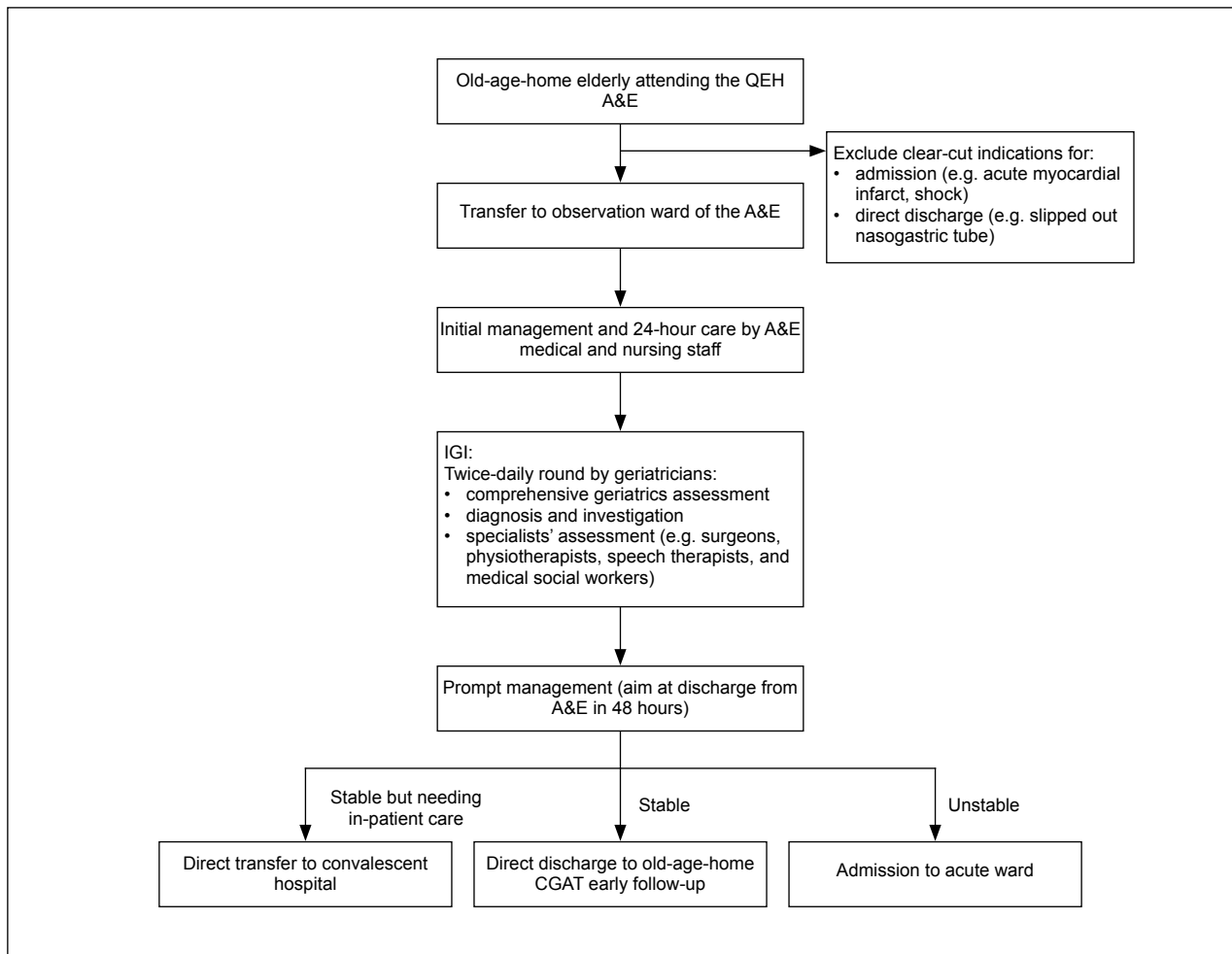
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## INTRODUCTION

With the ageing of our society, the geriatric population constitutes a significant workload to the health care system. In Queen Elizabeth Hospital (QEH), 48% of the 2005/06 bed-days entailed patients aged 65 years or above. In the Kowloon Central Cluster (KCC), 14% of the population was aged 65 years or above and yet 'occupied' 60% of the bed-days in the Cluster hospitals during 2005/06.<sup>1</sup>

In 2006, there were around 110 old-age homes

(subvented and private) with a total capacity of around 12,000 in the KCC catchment area. All these old-age homes are served by the QEH Accident and Emergency Department (A&E). Over the past year (February 2006 to January 2007), a total of 12,212 individuals from these old-age homes attended the QEH A&E, 69% of whom were admitted. In all, 82% of these patients were admitted to medical wards, and 44% were discharged home or transferred to convalescent hospitals within 3 days (QEH statistical data). The latter 44% constitutes the group with the potential to be directly discharged back to their



**FIGURE 1. Workflow of ‘Intensive Geriatrics Intervention’ (IGI)**

\* QEHA&E denotes the Accident and Emergency Department of the Queen Elizabeth Hospital, and CGAT community geriatric assessment team

old-age homes or be transferred to convalescent hospitals after initial management and stabilisation in the A&E.

Old-age-home patients are especially prone to complications associated with hospitalisation, such as bed sores, pneumonia, etc. Thus, avoiding unnecessary hospitalisation can reduce associated complications as well as related health care costs.

This was therefore a pilot project aiming to provide ‘Intensive Geriatrics Intervention’ (IGI) to old-age-home patients who attended the QEHA&E. The IGI was a joint effort of emergency medicine (EM) specialists and geriatricians in providing comprehensive geriatric assessment and management to such patients, with a view to avoid unnecessary admission and associated complications.

**METHODS**

Eligible old-age-home patients attending the QEHA&E were selected by EM colleagues and transferred to EM ward, after exclusion of those with a clear-cut indication (e.g. myocardial infarction, shock) for admission.

Salient components included: (1) joint input with twice-a-day rounds by EM specialists and geriatricians; (2) specialist geriatric nurses working in close collaboration with EM nurses; (3) prompted diagnosis and management of geriatric syndromes; (4) following appropriate management and stabilisation, directly discharge from the EM ward to old-age homes with corresponding community geriatric assessment team (CGAT) early back-up; (5) patients requiring in-patient care were directly transferred to convalescent hospitals; and (6) those with

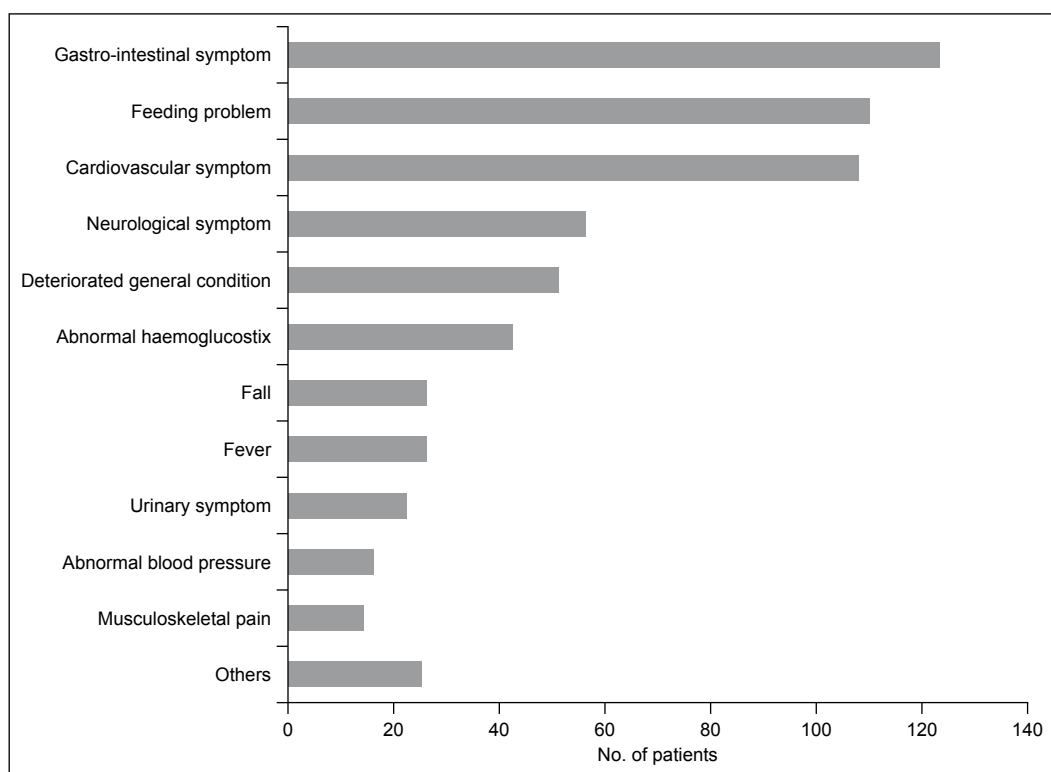


FIGURE 2. Chief complaints of patients cared by 'Intensive Geriatrics Intervention' over 1 year

unstable medical conditions were admitted to acute wards according to usual practice (FIG 1).

## RESULTS

From February 2006 to January 2007, 619 old-age-home patients (presenting with a variety of symptoms) were managed according to the joint team approach (FIG 2). The IGI included: (1) investigation—(a) basic work-up such as blood test, X-ray, cultures, etc, (b) bedside ultrasonography, and (c) computed tomographic scans of the brain; and (2) treatment—(a) oral or intravenous medication, such as antibiotics, (b) intravenous fluid replacement, and (c) transfusions.

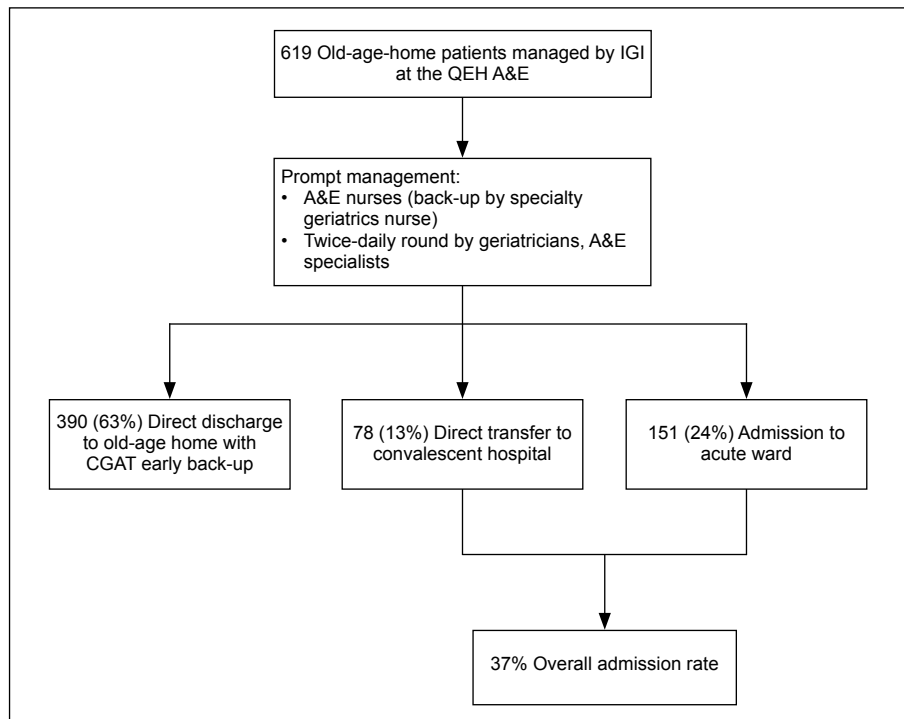
Specialty assessment included: (a) surgical consultations, (b) physiotherapist assessment and treatments, (c) speech therapist assessment and treatments, and (d) medical social worker interventions.

After appropriate management in the EM ward, 63% were directly discharged back to old-aged home without admission, whereas 13% were directly transferred to convalescent hospitals. Only 24%

required acute ward admission (FIG 3). Overall, the hospitalisation rate (to acute and convalescent beds) was only 37%, the 7-day re-admission rate was 8.6%, and the mean length-of-stay in EM ward was 1.4 days.

## DISCUSSION

Compared to usual A&E practice, IGI was effective in facilitating multidisciplinary input from EM specialists, geriatricians, surgeons, nurses, physiotherapists, speech therapists, and medical social workers. It ensured continuity of care while geriatrics input at the A&E was followed by CGAT back-up in old-age homes. The overall admission rate following IGI was only 37%, compared to 69% admission for those receiving usual A&E care. This amounted to a 32% absolute reduction in admission rate. 'Intensive Geriatrics Intervention' also achieved a shorter average length-of-stay (1.4 days vs 5.3 days) when compared with old-age-home patients discharged from QEH medical department. These data show that IGI was effective in reducing unnecessary hospitalisation of old-age-home patients attending the A&E, as well as in reducing health care cost.



**FIGURE 3. Results of 'Intensive Geriatrics Intervention' (IGI) over 1 year from February 2006 to January 2007**

\* QEH A&E denotes the Accident and Emergency Department of the Queen Elizabeth Hospital, and CGAT community geriatric assessment team

## CONCLUSION

'Intensive Geriatrics Intervention', through the joint efforts of EM specialists and geriatricians, was effective in providing quality care to old-age-home A&E attendees. It ensured 'right care for the right patient at the right place'. Unnecessary admission

was avoided, as were potential complications of hospitalisation and related health care costs.

## Reference

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