

Editorial

Emergency department overcrowding

急症室的過度擠擁

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Editor-in-Chief

For the past two decades in Hong Kong, serious misuse of the service and high volumes of attendance had resulted in critical overcrowding in emergency departments (ED). With the introduction of charges in 2002 and the Severe Acute Respiratory Syndrome (SARS) epidemic in 2003, temporary improvement of the problem occurred. Cheng et al showed that charging the ED visits resulted in a significant drop (19.1%) in total attendance, and 81.9% of the drop was accounted for by Category 4 (semi-urgent) and Category 5 (non-urgent) patients, which was also statistically significant.¹ However, it seems that the issue of ED overcrowding has now resurfaced, aggravated by the restructuring of hospital beds to meet infection control requirement in the post-SARS era which mandates a space of at least 3 feet in-between hospital beds (Table 1).² The recent prolonged surge in influenza-like illness (ILI) in Hong Kong have stretched hospital beds in medical departments beyond their limits, as admitted febrile patients with ILI symptoms have to be cleared of influenza A and SARS virus before discharge.³ In the New Territories East Region, "trolley-wait" for patients requiring admission has become a new form of ED overcrowding. Once again, the quality and timeliness of the emergency

service are affected, placing both patients and staff at risk.⁴

Underlying causes of ED overcrowding include both external and internal factors.⁵⁻¹¹ The most cited causes were increasing patient acuity, aging population, high patient volume, hospital bed shortage or closure, and workforce shortage. Internal factors such as poor operations and hospital processes like consultant delays, laboratory delays, inadequate examination spaces, and avoiding hospitalisation through extensive therapy in the ED may be partially responsible. Less amenable external factors include government regulations, managed care, reimbursement decreases, access barrier to primary care, increased number of indigent or uninsured patients using ED as their primary source of care, poor coordination between home care services and primary care physicians, increasing prevalence of AIDS, substance abuse and psychiatric disease.

ED overcrowding is undesirable and risky. Adverse effects include long waits, prolonged pain and suffering, patient dissatisfaction, additional procedures, increased length of hospitalisation, increased revisit, increased permanent disability, increased mortality rates, ambulance diversion, decreased physician productivity, increased staff frustration and increased violence.^{6,10-13}

Many solutions have been suggested. One of which includes screening examination and redirection by the triage nurse.^{9,14} The implementation of home

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Table 1. Annual accident & emergency (A&E) statistics, Hong Kong

Year	2001	2002	2003	2004
Population	6,724,900	6,787,000 (+0.9%)	6,803,100 (+0.2%)	6,841,900 (+0.6%)
A&E first attendance	2,410,686	2,324,791 (-3.6%)	1,813,081 (-22.0%)	1,980,610 (+9.2%)
Attendance/1000 population	358.5	342.5 (-4.5%)	266.5 (-22.2%)	289.5 (+8.6%)
Total A&E admission	539,220	518,511 (-3.8%)	435,370 (-16.0%)	483,222 (+11.0%)
Average A&E waiting time (min)	42	44	42	49

hospitalisation programs or disease management programs has been shown to reduce hospitalisations and cost.⁷ In addition, reallocation of hospital beds with more beds given to the medical service, more outpatient and short-stay surgery and a managed admission system should also be seriously considered.⁴

The Canadian Association of Emergency Physicians and the National Emergency Nurses Affiliation published a position statement on ED overcrowding: "the cause of ED overcrowding generally lies outside the ED. Efforts to maximize the ED efficiency are important, but overcrowding is a symptom of system failure."¹⁵

References

- Cheng B, Wong TW, Choy YH. The impact of charging of emergency department visits on the pattern of utilization. 3rd Asian Conference of Emergency Medicine; 2004 Oct 7-10; Hong Kong, China.
- Infection Control Committee, New Territories East Cluster. Isolation Policy 2004 [cited 2005 Jun 10]. Available from: <http://ntec.home/Clinical/Icn/pdf/A1%20-%20%20isolation%20policy.pdf>
- 23 院舍爆發流感。蘋果日報。二零零五年六月十一日; A12。 [23 institutional outbreaks of influenza. Apply Daily. 2005 Jun 11; p. A12.]
- Feferman I, Cornell C. How we solved the overcrowding problem in our emergency department. CMAJ 1989; 140(3):273-6.
- Richards JR, Navarro ML, Derlet RW. Survey of directors of emergency departments in California on overcrowding. West J Med 2000;172(6):385-8.
- Derlet RW, Richards JR. Emergency department overcrowding in Florida, New York, and Texas. South Med J 2002;95(8):846-9.
- Rutschmann OT, Vermeulen B. Can ambulatory networks solve emergency department overcrowding? [French] Rev Med Suisse Romande 2003;123(2):109-12.
- Gallagher EJ, Lynn SG. The etiology of medical gridlock: causes of emergency department overcrowding in New York City. J Emerg Med 1990;8(6):785-90.
- Grumbach K, Keane D, Bindman A. Primary care and public emergency department overcrowding. Am J Public Health 1993;83(3):372-8.
- Velianoff GD. Overcrowding and diversion in the emergency department: the health care safety net unravels. Nurs Clin North Am 2002;37(1):59-66.
- Derlet RW. Overcrowding in emergency departments: increased demand and decreased capacity. Ann Emerg Med 2002;39(4):430-2.
- Miro O, Antonio MT, Jimenez S, De Dios A, Sanchez M, Borrás A, et al. Decreased health care quality associated with emergency department overcrowding. Eur J Emerg Med 1999;6(2):105-7.
- Derlet RW, Richards JR. Overcrowding in the nation's emergency departments: complex causes and disturbing effects. Ann Emerg Med 2000;35(1):63-8.
- Derlet RW, Nishio D, Cole LM, Silva J Jr. Triage of patients out of the emergency department: three-year experience. Am J Emerg Med 1992;10(3):195-9.
- Canadian Association of Emergency Physicians, National Emergency Nurses Affiliation. Joint position statement on emergency department overcrowding [Position statement]. Can J Emerg Med 2001;3(2):82-4.