

# Intensive care unit outcome in the elderly

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Worldwide, intensive care units (ICUs) are experiencing a burgeoning crisis: not enough beds for apparently endless needs.<sup>1,2</sup> Every day intensivists must make hard choices. This triage task is truly daunting; how does one choose which patient to admit or reject from a dizzying melange of elective and emergency cases, all manner of medical and surgical diseases, the gamut of clinical severity from stable to near death, and an age spectrum from teenager to centenarian?

In making these choices, age must be one of the implicit or explicit factors. On the one hand, increasing elderly ICU demand reflects many factors: changing demographics, increased expectations of patients and their family, more aggressive and successful medical and surgical procedures in the elderly, and strong ethical and political advocacies against age discrimination. On the other hand, the elderly may have less capacity to benefit from intensive care, often suffer poor quality of life and infirmity, may be demented or otherwise cognitively impaired, and strain the health-care budget to a point where other age-groups are compromised.

Many publications have recently focused on the elderly and ICU: what proportion of patients are elderly, what resources they consume, and what their outcome is.<sup>3–6</sup> The retrospective study by Shum et al<sup>7</sup> published in this issue is the first Hong Kong study to analyse the outcomes of elderly ICU patients. A reader would not be surprised that findings are broadly consistent with those of other studies: the elderly constitute an increasing proportion of patients, they have a greater disease severity and burden of co-morbidity, and they have significant in-hospital and post-discharge mortality rates. On the flip side, the hospital/180-day survival rates for the 60–79 years' age-group were 82.8%/74.5% and for the ≥80-years' age-group they were 71.7%/62.2%... perhaps better than expected! Resource utilisation was considerable, however. The overall ventilation rate was 50.6% and the use of renal replacement therapy was 15.0%. Although the ICU length of stay (LOS) for survivors was only 3.7 (standard deviation, 5.5) days, the hospital LOS was 22.1 (62.9) days. Convalescent hospital care was required for 23.6% of survivors.<sup>7</sup>

As a single-centre study, the question arises whether these findings are representative of Hong

Kong ICUs in general. An examination of the data reveals a unit that has good standardised mortality outcomes, a broad mix of sources of admission and attending specialties, and a range of admission diagnoses. What is not so clear is the reason why even though 39.6% were postoperative admissions, 83.8% of all elderly admissions were emergencies. There is no information on what triage guidelines may have been used, and there are no demographic or outcome data on those patients that were refused admission. Also missing are any data from age-groups other than these two elderly cohorts. The extent of withdrawal or limitation of therapy is unknown. Importantly, the quality of life of survivors is also unknown.

This study<sup>7</sup> helps to fill a gap in the available information about ICU care of the elderly in Hong Kong. The authors acknowledge that missing information limits the ability to draw inferences, and conclude that further investigation is indicated.<sup>7</sup> So what further questions could guide research?

First, what is the attitude of Hong Kong intensivists regarding their imposed role as agents to ration limited resources? Triage is only avoidable if one strictly adopts a 'first come, first served' decision-making rule. Is it fair to expect doctors to trade off their duty to individual patients against their duty to society?<sup>8</sup> The ethical dilemmas and practical problems posed by triage for intensive care are well described.<sup>9–11</sup>

Second, what do they understand and believe about the ethics of health-care rationing, in particular whether the 'women and children first' moral code of the lifeboat dilemma applies to ICU. If one believes younger lives are more valuable, one would also adhere to the principles behind the 'complete lives system' or economic rationalism.<sup>12–14</sup> On the other hand, these beliefs have been rejected.<sup>15,16</sup>

Third, the quality of life of patients both before and after hospitalisation is important. Formerly, it may have been an important predictor of both life expectancy and the likelihood of benefit of care.<sup>17,18</sup> More recently the results of studies on the quality of life after ICU admission have been conflicting and there are no data for Hong Kong.<sup>19,20</sup>

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