Reviewer’s report

Title: Pattern of Emergency Department Visits by Elderly patients: study from a Tertiary Care Hospital, Karachi

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Reviewer: Christian SWINE

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General comments

The originality of this paper is to address the question of the emergency department visit by elderly in a reference hospital in Pakistan. The rising phenomenon of older adults admitted to the ED is well studied in developed countries, but less in developing countries where the demographic aging is becoming a new challenge.

The data of 54588 ED patients aged more than 18 years admitted over a two years period were retrospectively analyzed, comparing those > 60 years old (elderly) with those below 60 regarding ESI triage category, mortality, ED LOS, hospital admission rate. The analysis is mostly descriptive, but add also an analysis of risk factors related to hospital admission and for dying in the ED in this population.

The strengths of the study are, the study context (ED Elderly visits in a Karachi tertiary hospital), the large number of visits analyzed, and the ESI data which are internationally used for triage in ED.

Major Compulsory Revisions

The results are interpreted by concluding that elderly ED users significantly differ from younger regarding these different characteristics and outcomes, and this is obvious. The authors also appropriately mention the need for a « system of dedicated geriatric care in ED ». It should be added in the interpretation (limitations) of the results that there are no data available regarding the geriatric profile of the ED elderly visitors in this study ((falls, delirium, other geriatric syndromes, n of drugs, dependency, cognitive problems..). The study is indeed not specifically addressed to geriatric patients, since the age range above 60Y is broad and heterogeneous in health and functional profile, but possibly includes a subgroup of patients with a geriatric pattern.

In that perspective, the authors should discuss the need for a specific geriatric triage process, as a prerequisite for further studies on elderly in the ED ( Salvi et al Intern Emerg Med 2007). Indeed ESI is appropriate for the acute management of unstable health problems in the ED, but not for early screening for the care needs in elderly.
- Minor Essential Revisions

Figure 1 refers to the evolving context of the study (trend of elderly ED visits over two years period of time). The legend do not clearly explain the columns (n of elderly each month between sept 2009 to sept 2011 ?) nor the significance of the digits (40065, 40126,.... ?). Should one understand that in the first half of the period the proportion of elderly was stable at ±20% and then increased to plateau at ± 25-30% during the second part ? Is there a change in the pattern of ED elderly in 2010-11 compared to 2009-10 ? What was the reason of this clear-cut increase ?

The term « expiry » or « expired » are not usual to mean « mortality » or « died » which seem more appropriate terms.

- Discretionary Revisions

The discussion could include a more in depth comparison with other countries. Informations on the organization care for elderly in Pakistan would be appreciated.

More country-specific demographic data and perspectives also (“Global burden of disease” series of papers in the Lancet 2012).

**Level of interest:** An article of importance in its field

**Quality of written English:** Needs some language corrections before being published

**Statistical review:** No, the manuscript does not need to be seen by a statistician.

**Declaration of competing interests:**

I declare that I have no competing interests'