



<b>Title</b>	<b>The prevalence of potentially inappropriate prescribing among Hong Kong older adults: a comparison among Beers 2003, Beers 2012, and STOPP/START criteria</b>
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## Elevation of low-profile and traditional percutaneous endoscopic gastrostomy replacement tube

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**Introduction:** Extra-abdominal part of percutaneous endoscopic gastrostomy (PEG) tubes is usually bulky. Life span of the placement tubes mainly depends on the water-filled balloon at the tip. Low-profile non-balloon type replacement tubes are developed to overcome these shortcomings. Recently, the safety of these low profile tubes is criticised.

**Methods:** This was a retrospective case-matched study of PEG clinic patients in Tung Wah Hospital from 1 January 2008 to 30 June 2014. All 17 patients receiving low-profile non-balloon type replacement tubes were recruited as study group. Another 34 patients receiving usual balloon type replacement tubes with matched demographics and causes of dysphagia were recruited as control group. Records were reviewed to identify complications leading to tube removal and life span of the replacement tubes.

**Results:** Three patients in the study group required tube removal due to buried bumper syndrome but only one patient in control group required tube removal due to exit site infection. There was no statistical significance of the incidence between these two groups ( $P=0.066$ ). The tube life span of the replacement tube in study group was extremely statistically significantly longer than control group (study group 395.20 days vs control group 173.80 days;  $P<0.0001$ ).

**Conclusion:** The safety of low-profile non-balloon type PEG replacement tube is still comparable with traditional balloon type replacement tube. However the statistical significance is only marginal. Furthermore, the reason for tube removal in study group patients were all due to buried bumper syndrome, which is a severe complication and may be life threatening. Caution about the daily care of the low-profile replacement tube should be emphasised to the patients and caregivers. With good aftercare, the low-profile replacement tube is much more durable, more cost effective, and comfortable.

## The prevalence of potentially inappropriate prescribing among Hong Kong older adults: a comparison among Beers 2003, Beers 2012, and STOPP/START criteria

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**Introduction/Objectives:** Inappropriate prescribing can lead to adverse drug events and older adults are at greater risk due to multiple chronic co-morbidities and multiple medications prescribed. Various criteria (eg Beers or STOPP [Screening Tool of Older Person's Prescriptions]) on medication usage have been developed to assess prescribing appropriateness. The objectives of this study were (1) to determine the prevalence of potentially inappropriate prescribings (PIPs) among Hong Kong older adults using 2003 Beers, 2012 Beers, and STOPP criteria, and (2) to evaluate the association between number of medications and PIPs.

**Methods:** A retrospective, observational, chart review study was carried out. All three criteria were used to assess PIPs and instances of PIPs were recorded.

**Results:** A total of 500 patients (246 males and 254 females; mean age  $\pm$  standard deviation [SD],  $81.45 \pm 8.61$  years) were recruited. Overall, 3997 medication items (mean number of medications per person  $\pm$  SD,  $7.99 \pm 4.53$ ) were reviewed; 233, 374, and 220 PIPs were identified by 2003 Beers, 2012 Beers, and STOPP criteria, respectively. 2012 Beers criteria identified more PIPs than the other two criteria ( $P<0.001$ ). There was an association between number of medications and PIPs (Spearman's  $\rho=0.335, 0.352, 0.384$  respectively; all  $P<0.05$ ).

**Conclusion:** This is the first local study that examines the prevalence of PIPs using Beers and STOPP criteria. Polypharmacy is common among the older adults. The 2012 Beers criteria appear to identify more PIPs than the other two criteria. This study reinforces that careful prescribing is necessary as more medications can increase PIPs which can lead to increased risk of adverse drug events.

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