A STUDY OF THE CLINICAL IMPACT OF CLINICAL PHARMACISTS’ INTERVENTION ON THE INCIDENCE OF INAPPROPRIATE ACID SUPPRESSION THERAPY IN PATIENTS POST ADULT INTENSIVE CARE UNIT (AICU) STAY

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Introduction
The majority of patients who are admitted to AICU are prescribed with acid suppression therapy (AST). This is mostly as stress ulcer prophylaxis (SUP) for patients carrying risk factors for stress-induced ulcers, such as mechanical ventilation and coagulopathy. According to overseas studies and our local pilot study conducted in 2012, 35% to 60% of SUP cases continued AST after discharge from AICU without indication and some even discharged home with AST. This not only incurs extra cost burden and increases chance of potential drug interactions, but may also be linked to an increase in incidence of pneumonia and Clostridium difficile infections.

Objectives
To examine the impact of clinical pharmacists’ intervention on inappropriate AST post AICU stay.

Methodology
This was a prospective, historic-controlled, open study (from Jan to Dec 2014). All AICU patients discharged to general wards without apparent indication would be assessed for the appropriateness of continuing AST according to pre-defined criteria. If appropriate indications were not apparent, clinical pharmacists would intervene, either on discharge from AICU or on general wards with advice to prescribers to stop AST. Clinical pharmacists would follow-up to see if AST has been discontinued within 48 hours after intervention done. The primary outcomes included (1) estimated total money saved (estimated 1-year expenditure if AST not stopped on hospital discharge);
(2) number of inappropriate AST stopped; (3) percentage of doctor’s acceptance. The secondary outcome is the comparison of the incidence of pneumonia and Clostridium difficile infections in patients with clinical pharmacist's intervention and historical control (age- & sex-matched patients on AST in 2012) during the 6-month period post hospital discharge.

**Result**

In total, 183 out of 697 cases (26%) with inappropriate AST on AICU discharge were identified. Thirty four interventions were made for discontinuation of AST and 24 cases (71%) were stopped. The estimated saving was $5179 per year. Up to the end of January 2015, with 75% (18/24) of patients followed-up, no incidence of pneumonia and Clostridium difficile infection was detected.