A feasibility study of applying Casemix Information in the monitoring of drug consumption
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Introduction
The Hong Kong Hospital Authority’s (“HA”) drug consumption takes up approximately 10% of the total resource utilization in the public healthcare environment in Hong Kong. Closer monitoring of drug utilization can facilitate the understanding of individual hospital cluster’s consumption profile, enhance benchmarking and ensure the best use of public money. Prevailing drug utilization indicators mainly focus on the total drug expenditure per headcount or per prescription among clusters, or the percentage of headcount or drug expenditure of specific drugs; without taking into account of disease profile and complexity of patients.

Objectives
This paper explores the concept of Relative Drug Index (“RDI”), a Diagnosis Related Groups (“DRG”) based indicator developed for the monitoring of drug utilization, with adjustment for Casemix for acute in-patients in HA.

Methodology
Acute in-patient drug cost data of 2010/11 was extracted from HA’s Pharmacy Management System. The RDI measured the ratio of actual average drug cost to expected average drug cost after adjustment for treatment complexity with Casemix information. Besides benchmarking of overall drug consumption among hospital clusters, a study of RDI of a specific drug, intravenous immunoglobulin, was also conducted to test its applicability in benchmarking the utilization of this drug after adjustment for Casemix.

Result
The RDI of 7 clusters in HA were calculated. The variations in drug utilisation among clusters based on drug expenditure per headcount and RDI were shown. However, the application of RDI (with adjustments for Casemix) has its limitations in benchmarking of specific drug at departmental level due to variations in pharmacy prescription workflow, incompleteness of drug consumption information at patient level and inconsistency in clinical documentation. Better understanding in one’s drug consumption profile over time in relation to the expected allowed closer performance.
benchmarking among hospital clusters. This study provided insight to the development of drug indicators, with adjustment for Casemix, to facilitate management in resource planning, efficiency monitoring and ensuring the long term sustainability of the public healthcare system in Hong Kong. With the introduction of In-Patient Medication Order Entry system and the improved consistency in clinical documentation through the implementation of the Data Quality Monitoring Mechanism, it was anticipated that RDI would help to provide a fairer and more meaningful comparison among hospitals as an indicator in performance monitoring of drug expenditure.