Combating High In-patient Bed Occupancy Through Re-engineering With Expansion of Day Services

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Introduction
With aging population and addition of new services in different subspecialties of Medicine & Geriatrics (M&G) Department at Princess Margaret Hospital (PMH), increasing in-patient load and persistently high bed occupancy rate of over 110% in M&G wards became a ‘norm’ despite additional beds being reopened in recent years. Renal ward, as one of the M&G wards in PMH, was also being stressed with overwhelming in-patient burden that might compromise patient’s care and further stretching the current tight manpower. In order to combat the high bed-surge situation in in-patient renal ward, the unit management team endeavored to minimize admission and expedite discharge. One of the re-engineering strategies to reduce admission was by switching clinical cases admitted for intermittent peritoneal dialysis (IPD) to day care setting, to release in-patient overnight beds.

Objectives
To reduce admission by switching clinical cases admitted for intermittent peritoneal dialysis (IPD) to day care setting, in order to release in-patient overnight beds and ease the upsurge of in-patient bed situation.

Methodology
In 2015, it was found that over 80% of admissions in renal ward were clinical cases that included IPD patients. IPD patients might require 20-30 hourly cycles’ IPD treatment throughout day and night as in-patient, usually twice weekly IPD would be scheduled. Carefully selected patients from this group were considered suitable to be cared in the day care setting by cutting the number to IPD cycles to 10 with thrice weekly day treatment. Both management team and frontlines were involved in the re-engineering process with discussion of feasibility and possible impacts of the proposed changes. Other considerations and pre-requisite works included the development of patient selection criteria and treatment protocol, modification of spacing and setting for IPD in the Day Ward, adjustment of manpower and staffing schedule, emergency management and contingency plan development in Day Ward, and addition of extra medical supplies and related healthcare cost etc.

Result
To decrease clinical admissions and ward occupancy rate. After expanding the day services to tackle day IPD cases since 1 January 2016, a total of 710 sessions of day IPD were performed in Day Ward in whole year of 2016. This resulted in riddance of 473 IPD admissions to in-patient renal wards. Although the total number of admissions increased from 1,404 in 2015 to 1,517 in 2016 to 1844 in 2017, the proportion of clinical admissions was decreased from 83% to 58% to 52% respectively. The average occupancy rates in renal ward were decreased from 129% in December 2015 to 110% in December 2016, and to 112.5% in December 2017.