



**Service Priorities and Programmes**  
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**PAY LESS, GET MORE: Commencement of Hemodialysis Center in Tseung Kwan O Hospital reduced Unnecessary Intensive Care Unit admissions**

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**Introduction**

Before commencement of hemodialysis center(HDC) in Tseung Kwan O Hospital(TKOH), patients suffering from end stage renal disease(ESRD) or acute kidney injury(AKI) requiring urgent hemodialysis(HD) were admitted to intensive care unit(ICU). HDC started service since 9/10/2012, provided chronic HD to ESRD patients but also supported acute HD to patients with AKI who otherwise did not require ventilatory support.

**Objectives**

We aimed to evaluate the HD service provided by HDC from 9/10/2012 to 8/2/2013 with cost effectiveness analysis.

**Methodology**

We compared the number of acute HD sessions provided by HDC during the study period with those HD sessions in ICU for patient who could be transferred out on the same day in the preceding 4 months, i.e. 9/6/2012 to 8/10/12.

**Result**

From 9/10/12 to 8/2/2013, HDC provided 157 sessions of chronic HD for 5 patients and 111 sessions of acute HD for 17 patients. Two patients admitted to ICU for urgent HD during the study period. One patient suffered from AKI complicated with severe lactic acidosis who was hemodynamically unstable and might need other organs support; the other patient admitted to ICU for urgent HD during weekend when HDC was out of service. HDC provide 98.2% (111/113) of acute HD service in TKOH in the captured period and 111 ICU admissions were reduced. There were 41 ICU admissions for acute HD support for 11 patients who could be transferred out on the same day in preceding 4months (from 9/6/2012 to 8/10/2012). As such, HDC provided 2.7 times increased in acute HD service. According to the information package of specialty cost in 2011/12, the average cost/patient-day in ICU was \$18,400 while the

in-patient cost/HD session was \$2,382. We estimated the duration for one HD session including preparation and aftercare in ICU was 8 hours, the cost would be \$6,133. Hence, the reduction in ICU admission solely for acute HD support resulted in a decrease in the cost of patient care by \$416,361  $[(\$6,133-\$2,382)\times 111]$ . In short, we can provide more HD sessions with less cost in HDC. In conclusion, commencement of HDC service in TKOH provides efficient hemodialysis service and was cost effective in reducing unnecessary ICU admission, leading to better allocation of ICU resources to the needed patients.