



**Service Priorities and Programmes**  
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**Chronic Ventilator Service- towards a new paradigm of standards**

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Weaning success

Survival

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**Introduction**

WTSH has been designated to further manage chronic ventilator-dependent (CVD) patients from acute medical wards of the Kowloon clusters, as a COC (Medicine) annual plan programme funded under resource allocation exercise (RAE) for service enhancement since 2015; before then we have been running the service in 2004-2014 without any extra resources.

**Objectives**

Centralizing care of CVD patients in specialized, respiratory centre serves the purposes of i) alleviating burden of acute hospitals and ii) improving health outcomes.

**Methodology**

Adult patients requiring continuous, invasive mechanical ventilation for 60 days or more were eligible for admission to our centre. CVD patients assessed to have weaning/rehabilitative potentials are triaged for multi-disciplinary rehabilitation for further weaning attempt and/or preparing for home mechanical ventilation. Health outcomes of the RAE cohort (n=18) treated in 2015-17 are compared with our historic controls (n=43) in 2004-2014.

**Result**

There are no significant differences between the RAE cohort (n=18) and the historic controls (n=43); in gender, mean age and the mean & median days of mechanical ventilation before transfer. The mean age (SD) of the RAE cohort (10M, 8F) and historic controls (21M, 22F) are respectively 62.2 (15.8) and 73 (13.5); P=0.077. The mean (SD) and median number of ventilator days before transfer in the two groups

are 506.1(1123) & 105 versus 139.7 (136.5) & 97; P=0.19. There is no significant difference between the two groups in the distribution of disease categories attributed for ventilator dependency. Neuromuscular diseases were 22.2% vs 16.3%, CNS disorders 38.9% vs 16.3%, COPD/Asthma 27.8% vs 14.0%, and Post cardiac arrest 5.6% vs 7.0% in the two groups, with corresponding P-values of 0.593, 0.074, 0.232 and 0.899. 5.6% in the RAE cohort had interstitial lung disease and 46.5% in the historic controls had other diseases. There is significant increase in weaning success in the RAE cohort 2015-17, compared with the historic controls 2004-2014: 33.3% vs 7.0%; P=0.017. There are also significant reduction in the one year mortality (16.7% vs 69.8%; P=0.0002) and prevalence of long term mechanical ventilation cases (44.4% vs 83.7%; P=0.003) in the RAE cohort, compared with the historic controls. With funding to effect a multi-disciplinary rehabilitative approach, health outcomes of CVD patients including weaning success and survival can be improved.