



**Service Priorities and Programmes**  
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**Implementation of collaborative nursing interventions and Pointing and Calling for checking and delivering ventilation parameters of invasive mechanical ventilator**

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**Introduction**

Invasive mechanical ventilator (IMV) is designed for pumping air in and out of the lung while it is connected to instrument, such as endotracheal tube and tracheostomy tube, to bypass the upper airway. The ventilator is an advanced respiratory device that requires precise setting of parameters to achieve the therapeutic effect, however, the prescription of settings is so complex that not easy for nursing staff to set and follow. In order to improve the safety and quality of nursing service provided, pointing and calling (P&C), which has been implemented in the Department of Medicine and Geriatric (M&G) of the United Christian Hospital (UCH) since 2016, for checking parameters was introduced to designated area of respiratory ward of M&G of UCH.

**Objectives**

a) Enhance quality of patient care by delivering prescribed parameters to patient on IMV and reducing human error. b) Ensure a comprehensive and precise prescription of parameters by P&C and early identifying of problem. c) Enhance nursing staff's confidence in setting the parameters correctly by P&C.

**Methodology**

a) Set parameters by two nurses with at least one senior nurse following P&C whenever any parameters are modified by doctor, b) Check and record the parameters by two nurses with at least one senior nurse following P&C every shift on specified nursing care report. c) Check and record the parameters by nurse during charting the ventilator chart whenever patient is on IMV support. d) Encourage junior nurse to seek advice from senior nurse whenever in doubt with the prescribed parameters. e) Clarify with doctor when in physician with the prescribed parameters if necessary. f) Senior coverage by competent specialty nurse to junior nurse on IMV patient care.

## **Result**

Result: The specified nursing care report and ventilator chart were recorded as required, that was indicating that prescribed parameters were delivered accordingly. Nursing staff reported that the use of P&C enhanced their alertness and accuracy of setting of parameters. Moreover, doubtful prescribed parameters were clarified with physician. No case of belated clarification of prescribed parameters with physician was reported. Junior nurse reported that enhanced confidence and self-efficacy in setting parameters and caring patient with IMV. Conclusion: No incidence related to discrepancy between prescribed IMV parameters and actual parameters given was reported, which indicating that the implementation of collaborative nursing interventions and P&C improved patient safety. In addition, competency in caring complex IMV patient case of junior nurse was enhanced.