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Nurses' Perception towards the Use of Advanced Medical Devices in Critical Care Units

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Background: Advancements in technology cause traditional medical equipment to become more sophisticated in function and structure. When using these Advanced Medical Devices (AMD) critical care nurses may have both positive and negative perceptions towards patients, nursing care and the nursing profession.

Objectives: To examine nurses' perception towards the use of AMD in critical care units of four hospitals in Ratnapura district.

Methods: A quantitative descriptive cross-sectional study was conducted using critical care nurses (n=225) of intensive care units, coronary care units, neonatal intensive care units and emergency treatment units of four hospitals in Ratnapura district. Data were collected using a previously validated, pre-tested, self-administered questionnaire from voluntarily recruited nurses who were employed in critical care units for ≥ 2 years. Nurses' perception was assessed using a five-point Likert scale ranging from strongly agree to strongly disagree.

Results: The total of 165 nurses with a mean age of 34 years (SD=5.33) participated in the study (response rate-73.3%). Majority of the nurses in the sample were females (90%) and diploma holders (92%). A higher proportion of nurses had not undergone any formal critical care training (77%) or in-service education regarding the use of AMD (75.5%). Nearly all nurses (98.5%) accepted that the use of AMD may provide higher care effectiveness while 79% of the nurses agreed that they may provide higher patient safety through proper recognition of complications using AMD. Most of the nurses accepted that the use of AMD helps them to improve their knowledge and skills and leads to easy completion as well as faster completion of nursing duties. A considerable proportion of nurses thought that improper handling of AMD (66%) and misinterpretation of data (60%) may increase patient risks.

Conclusions: Though critical care nurses' perception towards the use of AMD was found to be desirable, appropriate measures are required to develop the nurses' perception towards a more positive direction and thereby to improve the quality of care provided by them.

Keywords: *Advance medical devices, Critical care nurses, Perception*