

Improving Health Care and Patient Safety at the ICU by Using Innovative Medical Devices and ICT Tools: Examples from Bangladesh

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Abstract : Innovative medical technologies offer more effective medical care, with less risk to patient and healthcare personnel. Medical technology and devices when properly used provide better data, precise monitoring and less invasive treatments and can be more targeted and often less costly. The Intensive Care Unit (ICU) equipped with patient monitoring, respiratory and cardiac support, pain management, emergency resuscitation and life support devices is particularly prone to medical errors for various reasons. Many people in the developing countries now wonder whether their visit to hospital might harm rather than help them. This is because; clinicians in the developing countries are required to maintain an increasing workload with limited resources and absence of well-functioning safety system. A team of experts from the medical, biomedical and clinical engineering in Sweden and Bangladesh have worked together to study the incidents, adverse events at the ICU in Bangladesh. The study included both public and private hospitals to provide a better understanding for physical structure, organization and practice in operating processes of care, and the occurrence of adverse outcomes the errors, risks and accidents related to medical devices at the ICU, and to develop a ICT based support system in order to reduce hazards and errors and thus improve the quality of performance, care and cost effectiveness at the ICU. Concrete recommendations and guidelines have been made for preparing appropriate ICT related tools and methods for improving the routine for use of medical devices, reporting and analyzing of the incidents at the ICU in order to reduce the number of undetected and unsolved incidents and thus improve the patient safety.

Keywords : intensive care units, medical errors, medical devices, patient care and safety

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