Implementation and evaluation of an electronic minimum dataset for nursing team leader handover in the intensive care: An interventional study

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Introduction: Miscommunication during handover has been linked to adverse patient events and is an international priority. There is widespread use of clinical information systems in intensive care units (ICU) however, evidence-based electronic handover tools are limited.

Study objectives: The aim was to implement and evaluate an evidence-based electronic minimum dataset (eMDS) for ICU nursing team leader (TL) shift-to-shift handover using the Knowledge-to-Action (KTA) framework.

Methods: The study was conducted in a 21-bed medical/surgical ICU, at a Queensland tertiary referral hospital. Consenting nurses involved in TL handover were recruited. Four phases of the KTA (barriers and facilitators, tailored interventions, monitor knowledge use and evaluate outcomes) guided the research. Pre-implementation, the barriers and facilitators to eMDS use were assessed via a survey; three months post-implementation a practice audit and survey identified uptake and TL perceptions of the eMDS. Results are summarised using descriptive statistics.

Results: On the pre-implementation survey (n = 39) nurses identified a time-consuming tool that contained too much information as the most common barrier and a user-friendly tool that saved time and contained relevant information as the most common facilitator. Findings informed strategies employed (education, champions, reminders, ad-hoc audit and feedback) to implement the eMDS. Post-implementation, audit results showed 42 of 49 (86%) TLs used the eMDS for handover and communication of patient plans increased. Key eMDS items were absent and additional documentation was required alongside the eMDS. Survey findings identified benefits to eMDS use such as patient content, suitability for short-stay patients, decreased time updating and printing the tool. But, almost half the participants found the eMDS contained irrelevant information, reported difficulties navigating and locating specific information and important content was missing.

Conclusion: Adequate infrastructure is required to facilitate eMDS use. The design needs to flexible, modifiable, seamless to navigate and contain content that promotes succinct and informative handovers.