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Sepsis: Reducing occurrence, and optimizing clinical, pharmaceutical, staff expertise and cost-per-case outcomes

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Reduced Sepsis: Sepsis among the most severe challenges in healthcare globally with high mortality and cost consequences cost-wise alone, $36 billion annually, and $110,000 cost-per-case. Much Sepsis is "acquired" in hospital, so early identification of pre-Sepsis cases and initiation of prophylactic treatment are crucial to Sepsis averted. Traditional approaches have proven ineffective for this persistent problem. Earlier pre-Sepsis recognition and care were addressed through locally-developed Sepsis early warning systems (SEWs) adults and paediatric in every ward/unit. Implementation of the SEWs resulted in.

- 62.5% fewer Sepsis cases
- 95.1% less Time for early pre-sepsis identification and care initiation (from 571.2 to 28.7 minutes)
- 13.2% lower length of stay in intensive care units
- 73.3% decreased codes
- 30.3% decreased sepsis-related cardiac arrests
- $14.3 million (US$) cumulatively.

Improved Sepsis Care: Much of sepsis cannot be averted due to admissions or unavoidable in-hospital comorbidities. Traditionally cases are assigned to ICU due to clinical expertise. Can sepsis care be channeled outside of ICUs yet achieve better clinical outcomes, caretaker expertise and cost-per-case?

Guidelines were developed internally to classify sepsis patients by severity for triaging and assigning to non-ICU wards/units (medical/surgical (Med/Surg), sub-ICU) by severity, all guided and facilitated by seasoned expert. Caregivers underwent Sepsis Nurse Program. House-wide sepsis increased in volume and severity during the study. Regardless, results showed reduced ICU admissions/assignments with increase caseloads in Med/Surg and sub-ICU. Impacts

- 50.7% lower mortality house-wide, significantly in each care area
- 23.6% reduced ICU mortality
- 48.1% reduced patient days
- 74.96% reduced cost-per-case, equaling estimated $32 million additional annually
- Zero clinical complications experienced

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