Healthcare Organization Commitment

Contact Details

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Position
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Commitment Details

Commitment Name
Reducing ICU VAP rate by 20% in 1 year at LHG-UMC

Participants
Antoine Saab

What Patient Safety Challenge does your Commitment address?
Challenge 2D - Ventilator-associated pneumonia (pedVAP/PVAP)

Commitment Start Date
How Many Hospitals Will This Commitment Represent

1

Commitment Summary
In our 8 bed ICU, we have recently implemented a systematic benchmarkable data collection on incidence of VAP, CLABSI and CAUTI. According to our latest infection control report (second semester 2018), the rate of VAP is significantly above the average range in the literature, which indicates a need to put in place a specific action plan to address this issue and decrease its impact on patient safety. Current Length of Stay in the ICU is around 8 days, which is a factor that contributes to the development of VAP and increases its impact on morbidity and mortality. Also, presence of Pseudomonas and Acinetobacter germs in ICUs in Lebanon (including ours) is relatively common, which contributes to the exacerbation of the gravity of the issue.

Commitment Description & Detail
VAP data are collected by our ICU staff, and analyzed by our Infection Control Team, who classifies the cases and elaborates the rate of VAP. Further to the analysis of data by the Infection Control Committee in the last trimester in 2018, the issue was analyzed to identify the contributing factors and to set a specific action plan to address the problem. The main strategy to decrease the level of VAP in our ICU relies on: 1) Increase awareness about the problem and conformity to hand hygiene for all ICU healthcare workers (intensivists, consultants, medical students, nurses, inhalation therapists, practical nurses, visitors and family...) 2) Observe current clinical practices pertaining to intubated patients and which may contribute to the risk of VAP 3) Identify practices with high-risk of contamination and measure the gap between current practices and evidence-based practices (EBP) including the VAP bundle 4) Review the patient file to optimize documentation and encourage implementation of daily EBP goals 5) Continue data collection and measurement of VAP rates and rates of conformity to EBP to engage staff and assess results

Action Plan
1) Increase awareness about the problem and conformity to hand hygiene - Present the problem and the VAP rates to ICU staff - Increase awareness of the importance of hand hygiene through training - Monitor hand hygiene compliance through daily observation and regular audits 2) Observe current clinical practices pertaining to intubated patients and which may contribute to the risk of VAP - Identify the procedures with the highest infection risk pertaining to the ventilated patient - Observe a sample of these practices by a multidisciplinary team including infection control specialists 3) Identify practices with high-risk of contamination and measure the gap between current practices and evidence-based practices (EBP) including the VAP bundle - Identify key procedures with gaps in infection control - Audit the current application of the VAP bundle to ensure best patient care Prevent aspiration of body secretions, following these protocols: - Maintain elevation of
head of bed (HOB) between 30-45 degrees - Avoid gastric overdistention - Prevent unplanned, uncontrolled extubation - Patient self extubation - Accidental extubation - Use cuffed endotracheal tube with in-line or subglottic suctioning - Maintain the endotracheal tube cuff pressure at greater than 20 cmH2O - Encourage physical or occupational therapy to help patients get moving - Before patients are extubated, ensure they: Are conscious and responsive Have undergone readiness testing and weaning Decrease duration of ventilation: - Conduct “sedation vacations” - Assess readiness to wean from ventilator daily - Conduct spontaneous breathing trials - Reduce colonization of aero-digestive tract: - Use non-invasive ventilation methods when possible (i.e., CPAP, BiPap) - Use oro-tracheal over naso-tracheal intubation - Perform regular oral care with an antiseptic agent - Reduce opportunities to introduce pathogens into the airway - Prevent exposure to contaminated equipment: Use sterile water to rinse reusable respiratory equipment Remove condensation from ventilator circuits Change ventilator circuit only when malfunctioning or visibly soiled Store and disinfect respiratory equipment effectively - Measure adherence to VAP prevention practices and consider monitoring compliance: Hand Hygiene Daily sedation vacation/interruption and assessment of readiness to wean Regular antiseptic oral care Semi-recumbent position of all eligible patients—head up to 30 degrees Monitor ventilated patients for: Positive cultures Temperature chart/log Pharmacy reports of antimicrobial use Change in respiratory secretions 4) Review the patient file to optimize documentation and encourage implementation of daily EBP goals - Incorporate in the ICU daily surveillance sheet and in the medical prescriptions the listing of the daily EBP goals (including VAP bundle) - Implement a review of the VAP bundle in the daily multidisciplinary round - Audit the conformity of use of the new ICU patient record 5) Continue data collection and measurement of VAP rates and rates of conformity to EBP to engage staff and assess results - Engage staff and use data to find areas for improvement - Create an education plan for physicians and nurses to cover key curriculum about the prevention of VAP - Encourage continuous process improvement through the implementation of: Quality process measures and metrics A monthly display of data results through a dashboard Encourage each unit to monitor and perform an event analysis on each VAP infection using a multidisciplinary approach to engage all unit staff - Complete a full root cause analysis (RCA) for any VAP that is identified—through event analysis—to be associated with patient death - Implement—and share—all learnings from the RCA

Commitment Timeline
A follow up on this project will be done in April 2020, with measurable elements.

Impact Details

Lives Saved

Lives Spared Total = 0.11519999999999998
For reporting purposes, the number has been rounded up to the nearest whole number.

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