Implementation of infection prevention and control strategies to decrease ventilator associated pneumonia (VAP) cases in LTCU3 ventilator chronic long term care unit 2014-2016 : Rumailah hospital

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Abstract

Goal: To implement infection prevention and control strategies in preventing hospital acquired VAP in LTCU 3 ventilator long term care unit during 2014-2016.

Aim: To decrease incidence of VAP cases in LTCU 3 ventilator chronic long term care unit by implementing infection control strategies and establish a multidisciplinary team for preventing hospital acquired ventilator associated pneumonia.

Background:

- VAP is a common infection among ventilated patients and associated with poor prognosis, however it is preventable and reduction of VAP cases are achievable.
- Implementation of VAP bundle can reduce VAP and evidence proved that some benefits are derived even with certain degree of low compliance.
- The challenges in the unit are plenty, most or all of the patient are bedbound and with co-morbidities. Prolong use of devise are observed due to difficult weaning and thereby prolong hospital stay.
- some of the challenges the unit experienced are taking care of patient who developed an episode of vomiting, taking care of scoliosis patient, and maintaining compliance with infection control practices.

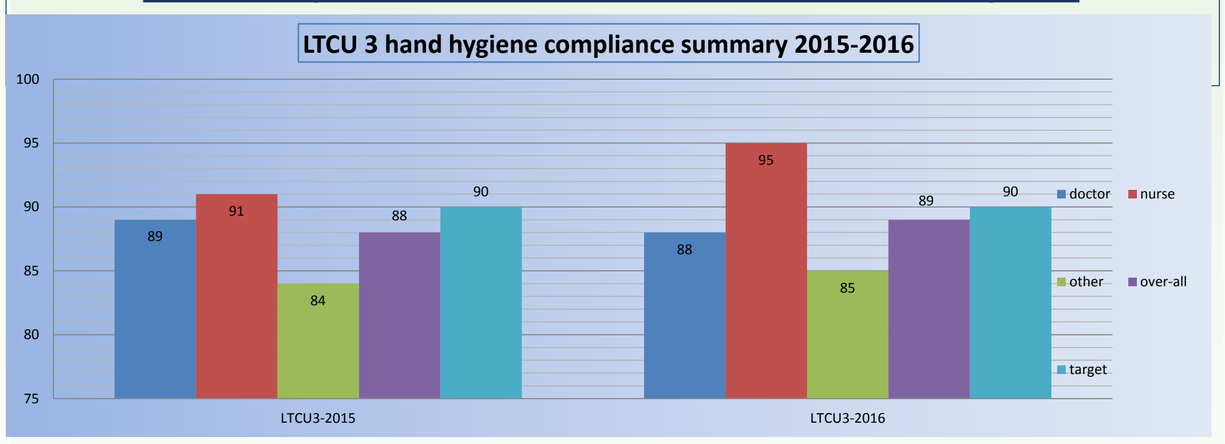
Methods:

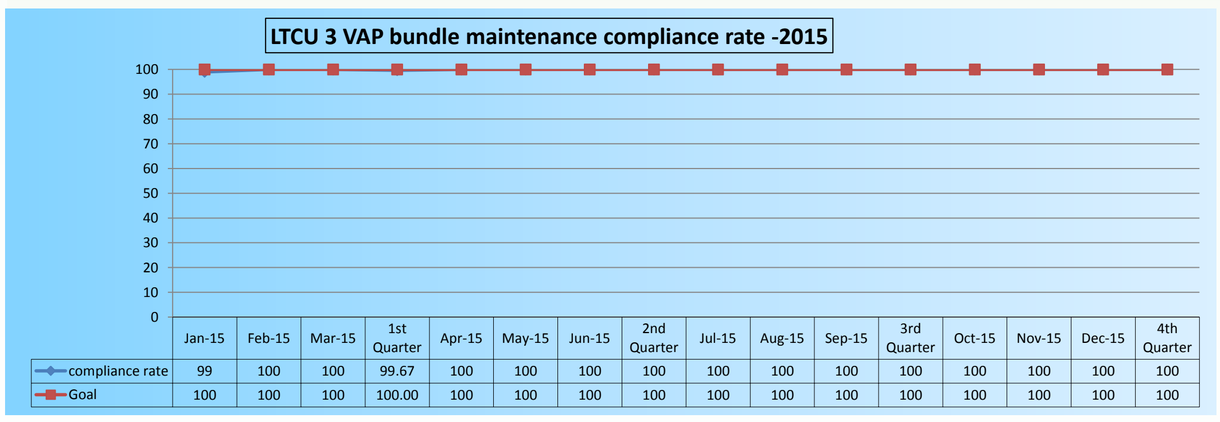
- All patients that are tracheostomized and ventilated are followed up prospectively.
- VAP surveillance using the NHSN CDC PNEU VAP classification are utilized for classification purposes.
- Tracheostomy operation are done in HGH and VAP maintenance bundle are filled up by staff.
- VAP prevention startegies and maintenance bundle education are conducted in the unit by Infection control coordinator and repeated for new staffs.
- Data collection included cerner based report and microbiological culture.
- collaboration with multidisciplinary team involving physician, nurses, and allied health professionals for discussion of confirmed and suspected VAP cases are held on a weekly basis.
- Infection control and prevention strategies such as hand hygiene, aseptic technique, VAP bundles, and other quality improvement work such as aspiration prevention are incorporated , implemented to prevent VAP ,and improve patients quality of life.
- Dental consultation are also done for proper oral care of patients.

Results:

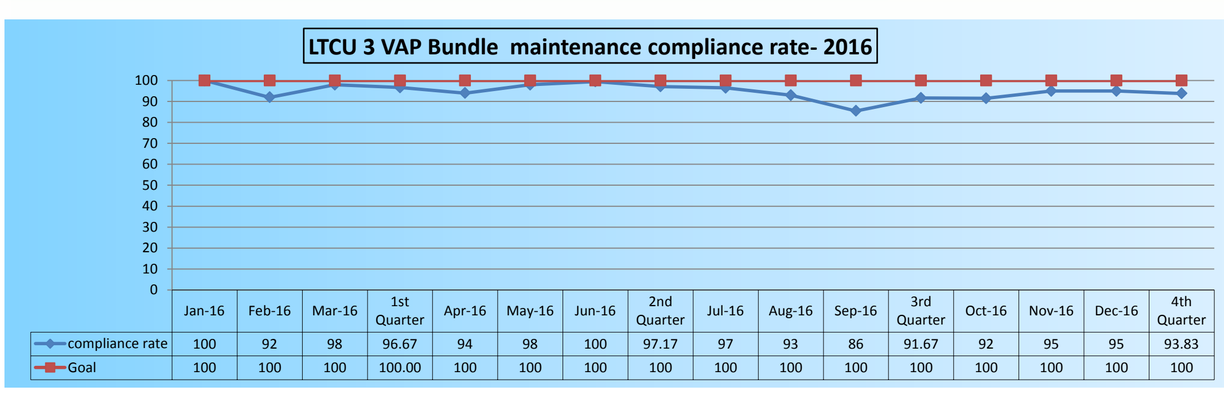
- During the fiscal year 2014-2015 the unit documented 4 cases of confirmed hospital acquired VAP.
- Fiscal year 2016 sustained zero cases of hospital acquired ventilator associated pneumonia.
- Hand hygiene compliance target goal was set to 90%. The unit compliance rate increase from 88% to 89% overall rate for 2016.
- Maintenance bundle was constant from 92 % to 100 %, the head elevation for some patient was not achievable due to severe form of kyphoscoliosis and some elements such as peptic ulcer and deep venous thrombosis prophylaxis are not applicable.

Infection prevention and control surveillance reports

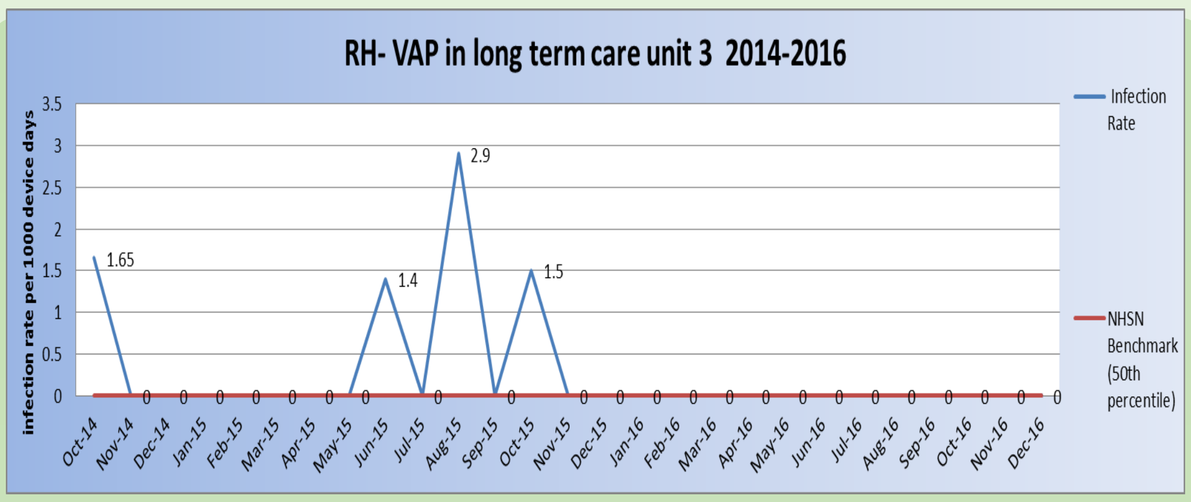




	Jan-15	Feb-15	Mar-15	1st Quarter	Apr-15	May-15	Jun-15	2nd Quarter	Jul-15	Aug-15	Sep-15	3rd Quarter	Oct-15	Nov-15	Dec-15	4th Quarter
compliance rate	99	100	100	99.67	100	100	100	100	100	100	100	100	100	100	100	100
Goal	100	100	100	100.00	100	100	100	100	100	100	100	100	100	100	100	100



	Jan-16	Feb-16	Mar-16	1st Quarter	Apr-16	May-16	Jun-16	2nd Quarter	Jul-16	Aug-16	Sep-16	3rd Quarter	Oct-16	Nov-16	Dec-16	4th Quarter
compliance rate	100	92	98	96.67	94	98	100	97.17	97	93	86	91.67	92	95	95	93.83
Goal	100	100	100	100.00	100	100	100	100	100	100	100	100	100	100	100	100



Discussion/Conclusion:

- The awareness campaign implemented to refreshed staff's knowledge about strategies on how to apply infection prevention and control greatly improved staffs knowledge and prevented incidence of VAP .
- The cooperation of the multidisciplinary team to discussed cases proved beneficial for exchanges of innovative thoughts and ideas for prevention of VAP.
- The effective implementation of core infection control practices and the unit's implementation of quality improvement works to prevent aspiration pneumonia have synergistically improved the unit's performance in preventing hospital acquired pneumonia.

Future Plan

- To continue active surveillance and raising awareness among staffs regarding bundle compliance.
- Provide inservice education for new staff.
- To pro-actively involved family and visitors for the proper infection prevention and control practices such as hand hygiene.
- Current plan is to develop a new maintenance bundle specific for long term care patients.

Team members

Executive sponsor:

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References:

1. NHSN CDC VAP- Jan 2016
2. Clinical policy 7246: Infection control practice
3. A care bundle approach for prevention of ventilator associated pneumonia: Clin. Microbiol Infect 2013: 19: 363-369
4. Bundles to prevent ventilator associated pneumonia: how valuable are they? Current opinion in infectious disease april 2009-vol 22 isue 2 pp 159-166