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Cost Analysis of bedside Percutaneous Tracheostomy for effective resource Utilization in trauma intensive care unit: HMC experience

PROBLEM:

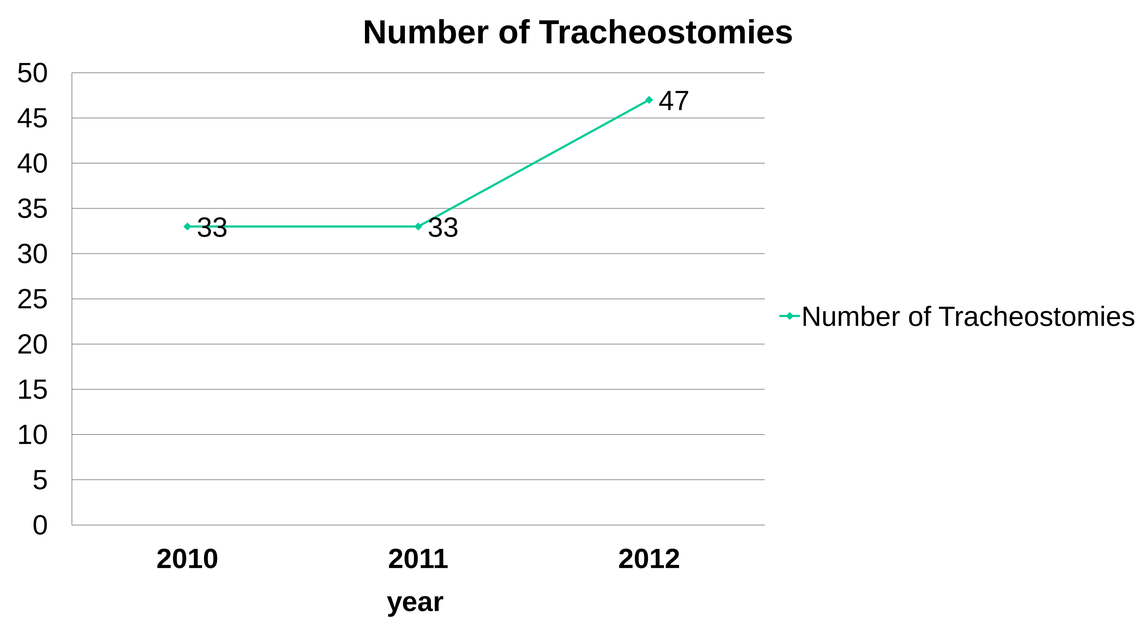
- Before the establishment of trauma services and critical care unit at HMC, all critically ill patients who required ventilator support underwent open tracheostomies to be done in the operating room by the surgical team.
- This always required transfer of critically ill patients from Intensive care unit (ICU) to the operating room which at times became very difficult.
- Therefore, these patients needed extended ICU stay (at least 2-3 days) till procedure could be performed in operation theater leading to extra cost and bed occupancy in ICU.
- Delays in transfer are associated with high hospital cost and bed occupancy.

AIM: We aim to analyze the cost effectiveness of bedside percutaneous tracheostomies at our trauma ICU. We anticipated that the performance of bedside procedure in the Trauma ICU saves hospital resources and length of stay in ICU.

INTERVENTIONS:

- Since 2010, we have started performing Percutaneous tracheostomies at the bedside in trauma ICU in our hospital.
- So, advanced airway management of critical ill patients is performed early in trauma ICU which eventually reduces the overall ICU length of stay and the associated cost.
- Therefore, no referral is needed for surgical team to perform open tracheostomies in the operating room which involves higher cost, less patient safety during transfer and higher waiting time as operation theaters are pre-occupied in a tertiary care hospital.

RESULTS: increasing number of bedside tracheostomies in our trauma ICU



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CONCLUSIONS:

- There is an increasing number of bedside tracheostomies in our trauma ICU [2011(n=33), 2012 (n=33) and 2013 (n=47)].
- If the open tracheostomy needs to be performed in the operating room it requires minimal 3 days of extended stay in ICU.
- For instance, one day cost of ICU stay is around US$5000 and an extended stay of 3 days will cost extra US$15000, if the open tracheostomy needs to be performed in the operation theater.
- Moreover, in Hamad hospital the cost of performing open tracheostomy in the operating room is around US$1400.
- Therefore, each bedside tracheostomy saves all these additional cost to the hospital.

NEXT STEPS:

- To achieve early bedside tracheostomies for further reduction in the length of stay and complications among Intensive Care Unit patients.