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International Collaboration: Using Skype to Facilitate Research for a Doctor of Nursing Practice Capstone

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STTI Biennial Conference
October 31, 2011



Aga Khan University Hospital
Nairobi, Kenya



Distance from Baltimore to Nairobi:

7482.5 Miles

(12042 Kilometers / 6497.8 Nautical Miles)



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Ventilator-Associated Pneumonia in an Adult ICU at Aga Khan University Hospital

ZEENAT KHAN

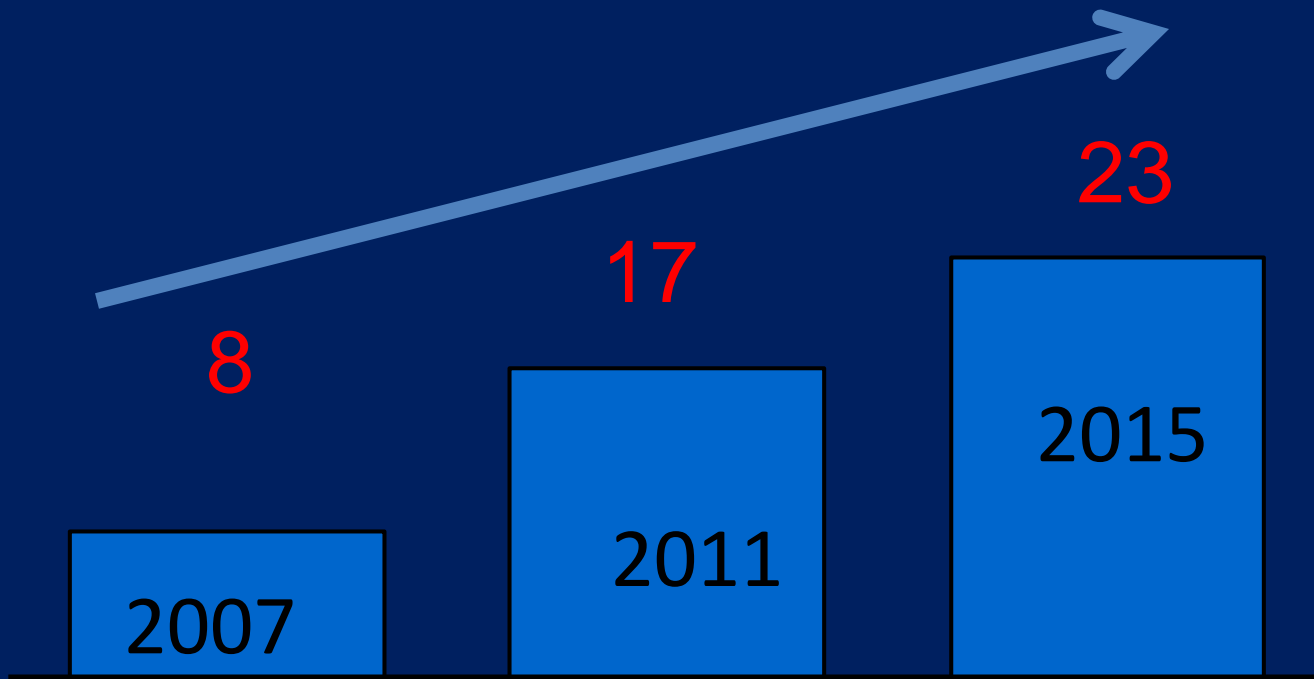
Mentor: Dr. V. Mun'gayi

Advisor: Dr. L. Costa

**Johns Hopkins School of Nursing
Capstone Project**

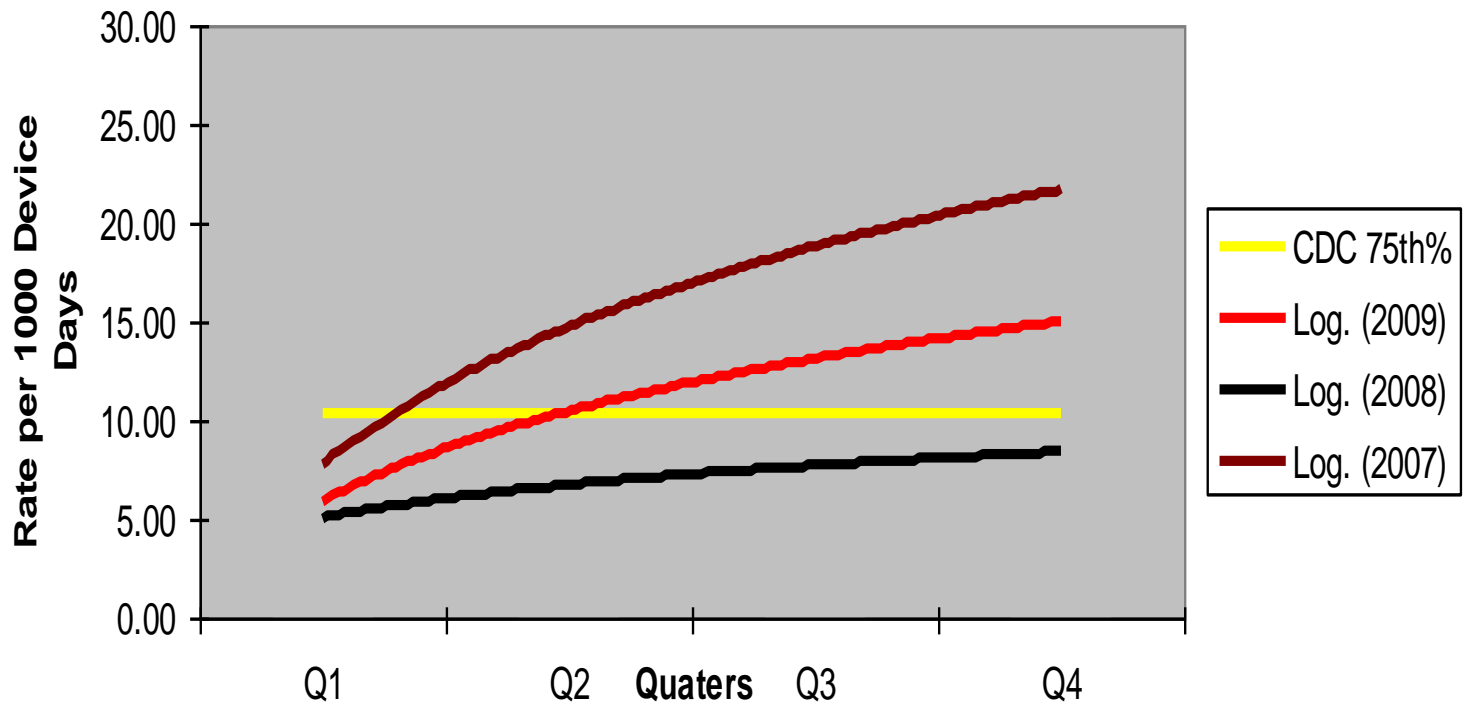


ICU Beds Growth at AKUHN



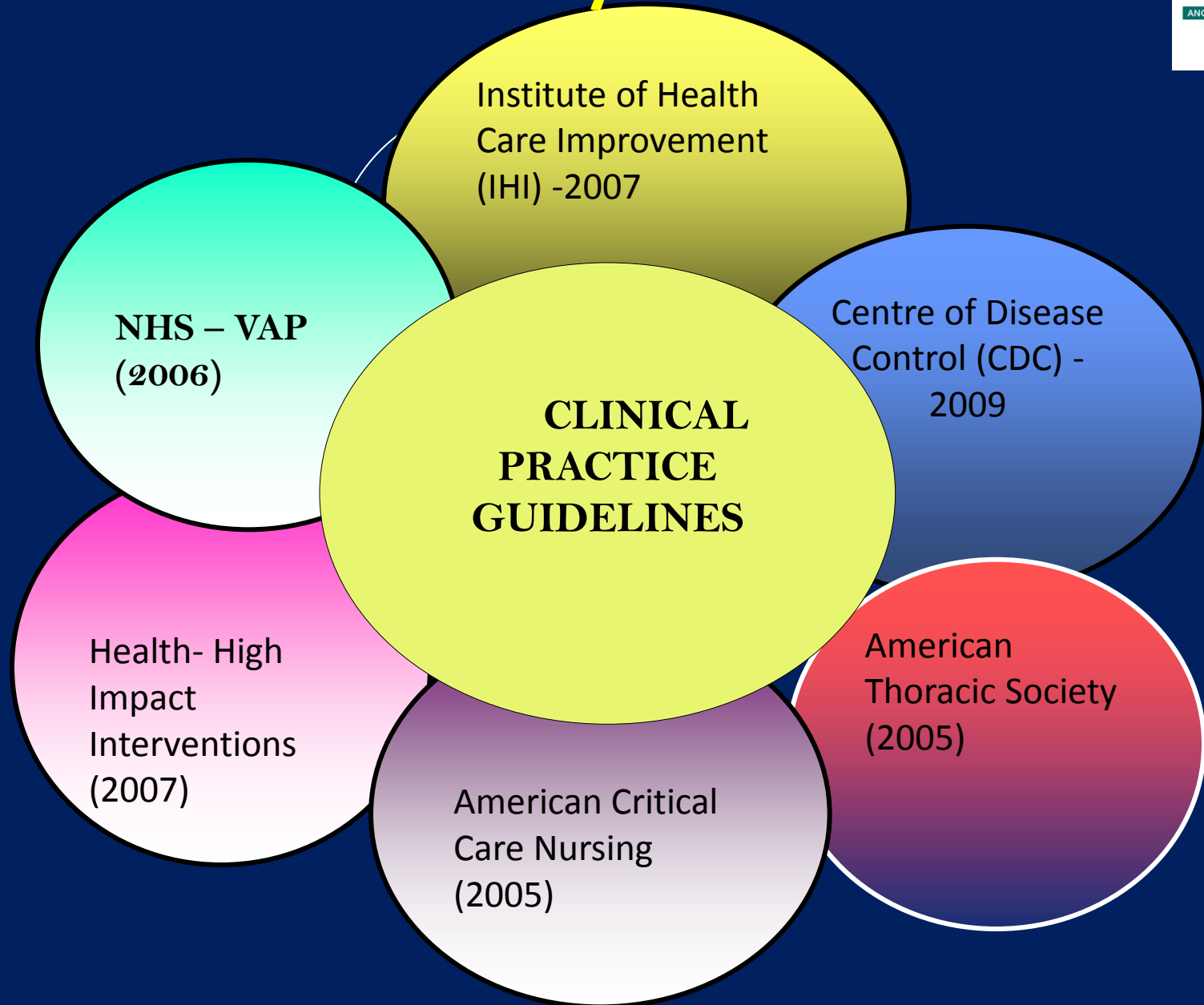
Health Problem: VAP

Trend of VAP Rates at AKUHN: 2007-2009





Evidence Synthesis



Translation of Guidelines

THE AGA KHAN UNIVERSITY HOSPITAL, NAIROBI

VENTILATOR ASSOCIATED PNEUMONIA (VAP)

VAP is an airway infection that develops more than 48 hours after the patient is intubated and ventilated.

VAP BUNDLES

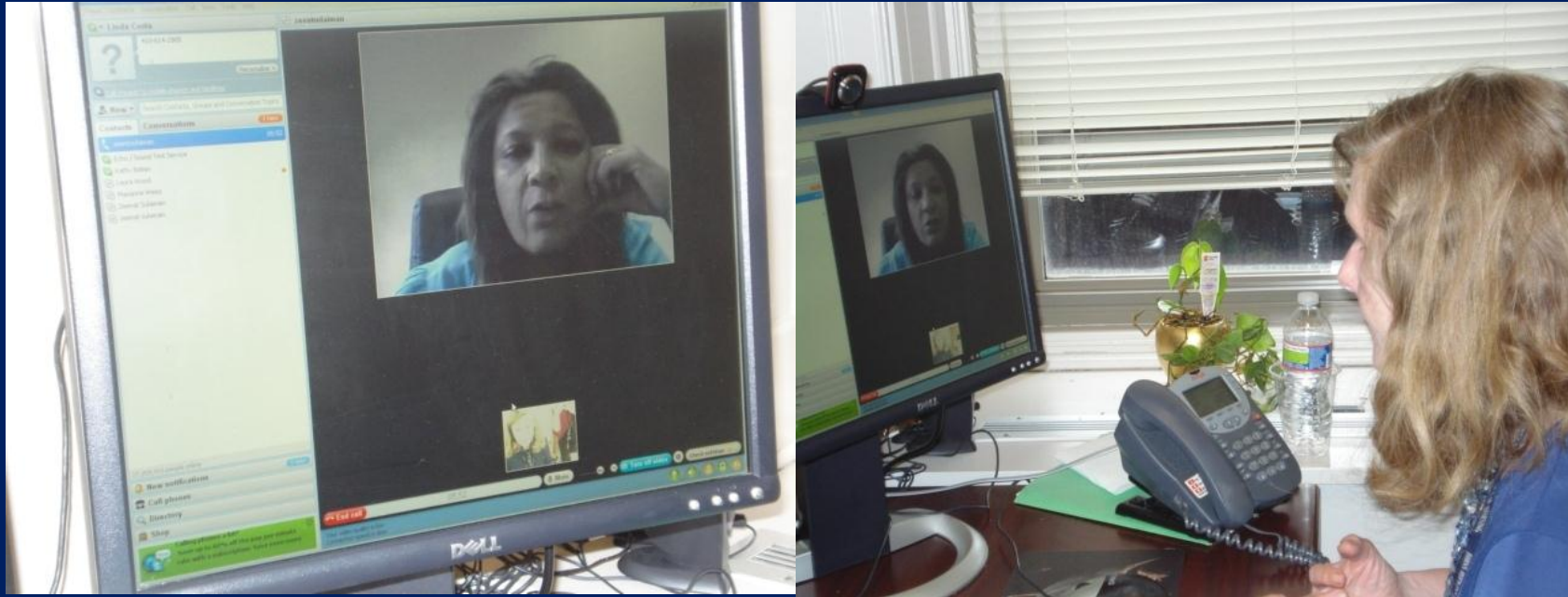
The Ventilator Bundle is a series of interventions related to ventilator care that must be implemented together.

- Hand Hygiene
- Elevation of the Head of the Bed 45°
- Daily "Sedation Vacations" and Assessment of Readiness to Extubate
- Peptic Ulcer Disease Prophylaxis
- Preventing Ventilator Circuit Tube Condensation
- Daily Oral Care with Chlorhexidine



PROJECT AIMS

- 1. Decrease VAP Rates at the Adult Medical/ Surgical ICU**
- 2. Evaluate compliance with evidence-based Clinical Practice Guideline to prevent VAP**
- 3. Improve knowledge of VAP prevention amongst health care workers**





Challenges in Approval of International Studies

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- Chief of Staff/Medical Director approved the study to be done at Aka Khan University Hospital
 - No materials belonging to the hospital – files, CDs may be taken out of the hospital.



Utilization of the Promoting Action on Research Implementation in Health Services (PARiHS)



Communication & Education

Evidence

- JHNEBP Model for evidence evaluation
- Reviewing of high quality evidence with the team
- Evaluation of local information (VAP rates and consequences)
- Consensus of the clinical team on the problem in hand

Context

- Creating a multidisciplinary VAP Prevention Champion Team
- VAP team with clear roles, authority and accountability
- Enhancing a culture of evidence based practice
- Developing a VAP Clinical Practice Guideline (CPG)

Facilitation

- Utmost support, guidance and encouragement to the team
- Reviewing of all the stakeholders in the inner and outer context
- Presentations to departments, Committees and bed side teams
- Provision of resources: time, equipment, space

Leadership Commitment and Ownership

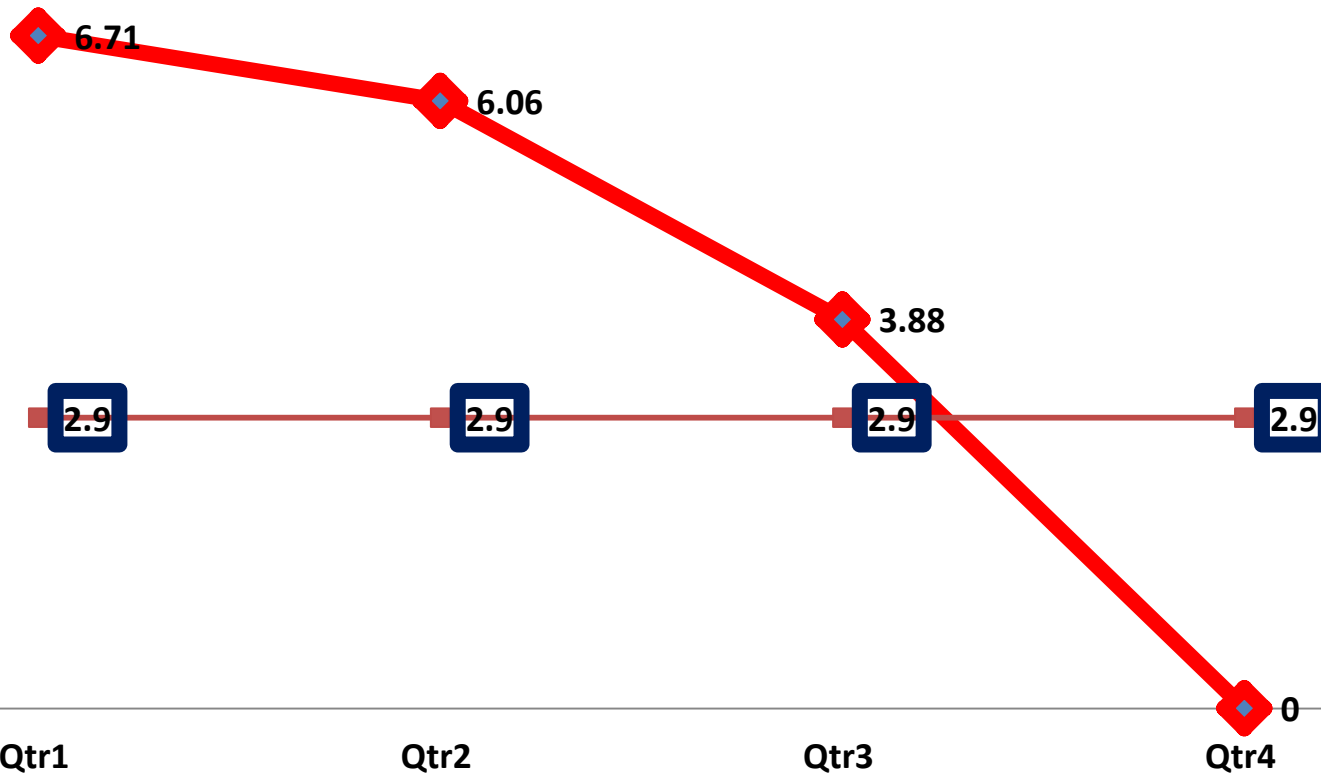


Outcomes: AIM 1



VAP Rates/ 1000 Device Days: 2010

◆ Rates ■ Benchmark





Outcomes: AIM 2



H₀: There is no difference in expected and observed frequency of observations between pre and post.

H_a: There is a difference in expected and observed frequency of observations between pre and post.

$\alpha=0.05$ and confidence level=95%

Measure	χ^2	P
Head of bed elevation at 45 degrees	5.99	0.560
Oral Care: Minimum of oral care every 12 hours with 2% Chlorhexidine	3.84	0.466
Ventilator tubing condensate	8.912	0.012
Daily Sedation Vacation and Weaning Assessment	7.055	0.029
Stress Ulcer Prevention	116.11	0.000



Outcomes: AIM 3



H_0 : There is no difference in mean scores of knowledge and practice between pre and post.

H_a : There is a difference in mean scores of knowledge and practice between pre and post.

$\alpha=0.05$ and confidence level=95 %

Measure	t	df	p
Improve knowledge about VAP prevention	2.010	73	0.048



Significance

- Positive Patient Outcomes- Reduced VAP rates
- Positive Staff outcomes – Increased Compliance of VAP CPG and Increased Knowledge
- Introduction of Multidisciplinary Approach
- Team owned project- great pride for the team
- VAP project Catalyst – two more already underway: BSI and RRT
- Introduction of JHUEBP model- culture of inquiry beyond ICU
- JCIA initiation couple with EBP culture- complete support of administration



ACHIEVEMENT





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**AHSANTE SANA
THANK YOU**