

NAHQRS

Nebraska Association for Healthcare
Quality, Risk, & Safety



Nebraska Association for Healthcare
Quality, Risk and Safety

Volume 1
Issue 4



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Member, NAHQ and ASHRM
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This year seems to be flying by so quickly! It certainly has been fun and rewarding to be a part of NAHQRS in its first year of existence. Our meeting at “Chances R” in York on August 1st was very educational and productive. Several new NAHQRS members were welcomed! We had excellent presentations by Dr. Donald Maxwell about Early Goal-Directed Therapy for Sepsis and by Greg Schieke about the QIO 9th Scope of Work. We firmed up some meeting details for the remainder of the year, shared some great ideas, and resolved some issues that needed to be addressed.

Please note that NAHQRS will NOT be meeting October 3rd in Kearney. This meeting date conflicts with ASHRM Annual Conference in Boston, which some of our members may wish to attend. We are also hosting an educational program at the Nebraska Hospital Association Annual Convention at the end of October, so have elected to hold our October membership meeting in conjunction with that. Please refer to meeting information details in this newsletter, as well as your NHA Convention Book, which should be coming out soon. Our December meeting will be held at Alegent Health – Midlands Hospital in Papillion, with Cherie Backlund hosting. This meeting will be offered via the Telehealth Network.

As fall approaches, we need to be thinking about officers for 2009. The Nominating Team, led by Jeanne Temme, will begin working on a slate of candidates soon. Please consider playing an active role in helping to propel NAHQRS forward by sharing your talents as an officer or team leader next year. As we work through this first year, there also may be some bylaws revisions needed. If you are aware of any needed changes, or have suggestions, please send them to Betty Pfeiffer, Bylaws Team Leader, or to me.

Kathi Kelly and I will be attending NAHQ and ASHRM Annual Conferences, respectively. If you have concerns you would like us to relay at the chapter leadership sessions, please contact us.

I am looking forward to seeing everyone again at NHA Annual Convention in Lincoln!

Gail

Historian Report

Hello Members; the Nebraska Proclamation declaring the week of October 19th through the 25th as National Healthcare Quality Week 2008 will be signed by Governor Dave Heineman on September 11 at 10:00 AM.

Each year we send representatives from NAHQRS to the State Capital for the Proclamation signing. Please mark your calendar and plan to attend.

If you can attend, please let me know at djorgensen@lmchospital.org and I will send you details.

Donna Jorgensen



National Healthcare Quality Week is October 19-25, 2008!

Join NAHQ in observing this special week by engaging in recognition and celebratory activities at your institution.

National Healthcare Quality Week celebrates the work of quality professionals in healthcare and highlights their influence in achieving improved outcomes of patient care and healthcare delivery systems to administrators, allied health professionals, and the public. Invite greater recognition of the impact of quality in healthcare through special events during this designated week. Special events increase exposure and heighten awareness of the contributions that quality professionals make year-round. Following are some suggestions for hosting recognition and celebratory activities at your institution:

- Develop an observance of National Healthcare Quality Week that suits your unique environment and budget.
- Observe a National Healthcare Quality Day if your organization cannot devote an entire week to the celebration.
- Create activities that promote a greater understanding of the role and impact of quality professionals in healthcare, adapting the messages to your organization's needs.
- Use publicity, word of mouth, [posters](#), and news releases for internal newsletters and local media- both before and during your events-to promote your National Healthcare Quality Week activities.
- Attract the media by obtaining an official proclamation and announcing that the state governor, town mayor, or CEO of your organization has endorsed the observance of National Healthcare Quality Week.
- Send invitations for events to staff, volunteers, and the community.
- Decorate your facility for National Healthcare Quality Week.
- Download the official [National Healthcare Quality Week 2008 logo \(.jpg, .pdf\)](#) from this Web page and use it on posters, table tent cards, and t-shirts.
- Start National Healthcare Quality Week with a kick-off event or an open house.
- Continue your observance of National Healthcare Quality Week with a luncheon for the quality team, a recognition ceremony for CPHQs, a Patients' Day, educational seminars, or community outreach events.
- During the week following National Healthcare Quality Week send out post-event news releases with photos to internal newsletters and the local media, post photos on a prominent bulletin board in your facility, send thank-you letters to all who assisted, and submit your ideas and success stories to NAHQ for inclusion in NAHQ E-News.

Healthcare Quality Week Webcast:

[Click here](#) to view more information on the Healthcare Quality Week Webcast, which will be held on Tuesday, October 21, 2008. To register for this event, please click [here](#).

August 1, 2008 meeting minutes

Nebraska **A**ssociation for **H**ealthcare **Q**uality, **R**isk & **S**afety
Membership Meeting August 1, 2008
York, NE

In attendance:

Gail Brondum	Pender Community Hospital - Pender
Vicky Burbach	MMIC
Cherie Backlund	Alegent Health Midlands Hospital - Omaha
Nicole Balser	Columbus Community Hospital - Columbus
Cheryl Calabro	Children's Hospital – Omaha
Kari Clark	Columbus Community Hospital - Columbus
Kathy Corbett	Nebraska Wesleyan University
Christy Doeschot	Beatrice Community Hospital
Brandi Ganatra	Mary Lanning Memorial Hospital - Hastings
Pat Hoidal	Guest – Saint Elizabeth Regional Medical Center - Lincoln
Donna Jorgensen	Litzenberg Memorial County Hospital - Central City
Kathi Kelly	Memorial Health Care Systems – Seward
Regina Korth	Pender Community Hospital - Pender
Gladys Lake	Thayer County Memorial Hospital - Hebron
Delinda Lampe	Saint Elizabeth Regional Medical Center - Lincoln
Brad Lindblad	Mary Lanning Memorial Hospital - Hastings
Caprice Lueth	Mary Lanning Memorial Hospital - Hastings
Tina Mazuch	Harlan County Health System
Mary Meyer	Faith Regional Health Services – Norfolk
Bill Redinger	Saint Francis Medical Center – Grand Island
Julie Rezac	Saunders Medical Center – Wahoo
Beth Thomsen	Henderson Community Hospital – Henderson
Sharon Vandegrift	Jefferson Community Health Center – Fairbury
Linda Zieg	Guest

The meeting was called to order on August 1, 2008 Gail Brondum, President at 9:30 AM.

Meeting record -

Motion to approve the minutes from the June 6 meeting by Meyer, 2nd by Clark. Ayes – all.
Motion passed.

Treasurer's Report –

The Treasurer's Report and Budget were presented by President Brondum in the absence of Pam Kohn, Treasurer. Current balance is \$21,960.

Motion to accept treasurer's report by Meyer, 2nd by Blaser. Ayes – all. Motion passed

Membership Report –

Julie Rezac presented the membership report.

We have 73 paid members.

The Membership Committee continues work the criteria for the Member of the Year Award.

Education Team Report –

The Education Team report was presented by Mary Meyer and Sharon Vandegrift.

The program at the NHA Conference October 29 will be “Getting Tangled in Charlotte’s Web: A Case Study” by Barbara Levin. The program entails presentation of a case study and the impact on patient safety.

The Iowa Association for Healthcare Quality is sponsoring a 2 day exam study course for the Certified Professional in Healthcare Quality September 4 & 5, 2008 in Ankeny Iowa.

Legislative Team/Historian Report –

Donna Jorgenson presented the Legislative Team/Historian report.

Donna continues working on a Governor’s Proclamation for Nebraska Risk Management Week.

The most recent NAHQRS newsletter outlined the history of NAHQ and the upcoming newsletter will outline history for HRMS.

Communication Team Report -

Kari Clark gave the Communications Team report.

They continue work on establishing criteria for TWIV sites.

The website vendor has been selected and web test site developed.

Work is now beginning on building the individual components of the site.

Clark made the motion, 2nd Corbett to buy the historian a digital camera with a dollar limit of \$350. Ayes all. Motion passed.

The camera will be used to “record history” and add current events to the website.

CIMRO Vendor Show report

Clark volunteered be the lead person through 2009. The plan will be to transfer leadership after the May 2009 conference.

Clark expressed acknowledgement and appreciation for assistance from Redinger.

Nomination Team – Report given by Brondum on behalf of Jeanne Temme.

Officers to be elected for 2009 include President Elect for a one year term and Treasurer, Recording Secretary, and Membership Secretary for 2 year terms.

Motion made by Corbett, 2nd by Rezac for the Nomination Team to present the slate of officers for election at the November 2008 membership meeting. Ayes – all. Motion carried.

Bylaws Team – no report

NHA Report – Donna gave the report on behalf of Monica Seeland.

Nebraska Hospital Association policy development committee has sent out a survey seeking input potential legislation for the 2009 session.

NAHQ/ASHRM Update –

Brondum gave an update on the national organizations.

If joining either ASHRM or NAHQ please let Gail or Pam Kohn know.

Other Business -

October Meeting: The October meeting will be held October 29, 2008 at 1pm at the Cornhusker Hotel in Lincoln. The change is due to coordination with NHA convention and following the NAHQRS educational session. Redinger volunteered to notify Kearney of the change in plans for the October meeting date.

December Meeting: The current plan is to TWIV the December meeting with the host being at Midlands in Papillion or another Alegent site.

National Conventions: Kathi Kelly's registration to the national NAHQ convention is complimentary. It was suggested that NAHQRS may want to consider paying the registration for an additional member as a result of Kathi's complimentary registration.

Meyer made the motion, 2nd Clark, to send an officer or team leader to NAHQ annual convention in September. Discussion followed. Question was asked why send an additional person – response is that paying the registration for 2 persons was in the budget. Organizational benefit from having attendees includes education knowledge, exposure to speakers, exposure to current publications, information sharing and building of leadership. Many facilities can not afford to send staff and having the registration paid would facilitate attendance.

Meyer withdrew the motion – Clark withdrew the 2nd.

Meyer made the motion, 2nd Clark, that the membership pays the registration of an officer or team leader to an annual convention of their choice (ASHRM or NAHQ). If neither an officer or team leader volunteer, the registration should be open to any member of the organization. Ayes – all. Motion passed.

If more than one person volunteers, all names will be placed into a drawing to determine who will attend.

Membership Dues: The issue was raised regarding the pros/cons of “prorating” the membership fees for those joining late in the membership year. “Pro-rating” would be difficult. Memberships running for a full year from date of joining would also be difficult.

Rezac made the motion, 2nd Kelly, that members joining after August 1 of each year be required to pay the dues of \$35 for the remainder of the year. Discussion followed. Rezac amended the motion, 2nd by Kelly, to change the date to August 15 of each year. Ayes – all. Amendment passed. Ayes – all. Motion passed.

Event Coordinator: The recommendations for the Event Coordinator as presented at the June meeting were discussed. As presented, the “job description” is fairly well described. Is there a need to hire a part time event coordinator? The responsibilities are currently being carried by the officers and team leaders.

Motion by Clark, 2nd by Meyer, to create a team leader position for the event coordinator and add the position to the fall slate of nominations for a one year trial basis. Motion and 2nd withdrawn.

Rezac made the motion, 2nd Meyer, to direct the communications team to appoint an event coordinator for 2009. Ayes – all. Motion passed.

Safety: Rezac shared with the group the Color Coded Wrist Band initiative for same color wrist bands for allergy, fall, DNR and ID. Several NE hospitals are participating in the initiative. Contact Celeste.Felix@NMHS.org for additional information.

Update: Kathy Corbett has published “Stopping Lateral Violence: Committing to Your Code of Conduct” in Compliance Today, August 2008. Kathy also shared “Who Will Do What By When? How to Improve Performance, Accountability and Trust with Integrity” by Hansen and Hansen is an excellent book. Kathy will be working to develop a quality curriculum for Wesleyan University – if anyone has any suggestions, please let Kathy know.

The next meeting will be October 29, 2008 @ 1:00 p.m. CST Cornhusker Hotel, Lincoln NE.

Respectfully submitted by Vicky Burbach, Recording Secretary.

Have a new Job?

Get a new phone number?

Change your email address?

Forgot to tell your best friends?

If you have changes that we should know about – hey, just click on the link below to forward those changes to the people who really care.

jrezac@saunders-health.org

“The difference between perseverance and obstinacy is that one often comes from a strong will, and the other from a strong won't.”

Henry Ward Beecher



Education Education Education Education
.....

The annual **CAH Conference on Quality** will be held October 16, 2008 at the Holiday Inn & Convention Center in Kearney, Nebraska. This year’s keynote speaker, back by popular demand, is Darlene Bainbridge. Those of you who attended last year’s Conference will remember Ms. Bainbridge’s discussion on ways to communicate with your Board. Her topic this year is “Building Effective Systems to Manage Healthcare Quality”. Greg Schieke, CIMRO of Nebraska, will provide an update of our compliance with the CMS quality initiatives and share information on the 9th Scope of Work. After the Showcase of Quality, which will again feature quality initiatives from Nebraska hospitals, Katherine Jones will conclude the conference with a discussion of TeamSTEPPS™ and its application in critical access hospitals. Brochures for the conference will be sent out during the first week of September.

The **NHA’s Annual Convention** will be held October 29-31, 2008, at the Cornhusker Marriott Hotel in Lincoln, Nebraska. Keynote speakers include Dr. Thomas Westbrook, *Leadership Essentials*; Dr. Bertrice Berry, *From the Patient’s Perspective*; Dr. Michael Leonard, *The Human Factor: Effective Teamwork and Communication in Delivering Safe Care*; Greg Paris, *It’s Who’s on the Bus that Matters*; Dr. M. Tray Dunaway, *Connecting the Dots of Health Care: Better Connections through Mutuality*; and Richard Umbdenstock, President of the American Hospital Association. In addition, many allied health organizations will also convene educational meetings during the Convention.

The **Leaders in Quality** feature on the NHA web site may be one of the best kept secrets around. Periodically we feature a Nebraska hospital and one of their quality initiatives. Currently, the efforts of Tri County Hospital in Lexington to combat childhood obesity are featured. http://www.nhanet.org/quality_patient/initiatives.htm Please visit the archives to view other hospital initiatives. If you’d like to be featured on the Leaders in Quality, contact Monica Seeland at mseeland@nhanet.org.

And finally, throughout the year, the NHA offers a variety of **educational opportunities**. Follow this link to the NHA web site to view those scheduled during September and October. http://www.nhanet.org/events/events.htm?topic=combined&category_sent=NH A+Events

Monica Seeland, RHIA
Vice President Quality Initiatives
Nebraska Hospital Association





Resources for better healthcare

The Role of Accountability in Quality Improvement

Submitted by Denise Hyde, PharmD, RP, Quality Improvement Advisor

What does it mean to be accountable? According to the dictionary, being accountable is an obligation or willingness to accept responsibility or to account for one's actions. In the workplace, we are keenly aware of how important it is to identify who is accountable for the actions being taken. There are detailed job descriptions written to define which workers are accountable for the different tasks that need to be completed each day. Even with that level of detail, accountability can become a challenge in improving quality. Sometimes accountability is so narrowly defined it creates barriers to effective teamwork because of the mindset 'that's not my job'. Other times, talk of accountability in the workplace is avoided for fear of people quitting. Clarity about accountability, for the individuals and the team, can be an asset to improving the quality of care in any healthcare organization.

Quality improvement is a team effort. No one person can do it alone. There must be shared accountability for results among a variety of people working in the organization. It takes time, patience, relationship building, training, skills and support to build shared accountability with individuals and teams; and it sometimes seems there are just not enough hours in the day. Without a plan to share accountability, the responsibility for assuring lasting improvements can end up in the hands of one person who soon becomes overwhelmed, loses sight of the goal as other priorities take over or who burns out and leaves. When that happens, there is no longer any accountability to maintain the gains and progress is lost.

Building shared accountability for improvement success begins with relationships. People are more likely to be accountable to others when they have a positive, trusting relationship with them. Leaders, formal and informal, will have better outcomes when they know the skills, talents, motivation and personal goals of those they lead in order to make wise choices about who and how to delegate tasks. Leaders are more successful when they demonstrate trust in those they are holding accountable. The type of relationship people have with their leader will also determine if they are willing to approach the leader with potential problems and discuss possible solutions before there is a failure to complete the task. If the leader is unapproachable or unavailable, then accountability will fail.

People, and teams, are more likely to be accountable for tasks with which they have experience, authority, responsibility and control. When leaders provide the outcome (or vision of success), the necessary information and knowledge, access to resources and skill development needed, those they lead are more likely to take accountability for the task. Involving the team in defining, initiating, evaluating and maintaining quality improvement efforts leads to greater success, growing the individual team members and the organization in the process. Incorporating the level of personal and team accountability into job descriptions and the compensation system is another important step toward success.

The supportive environment created by the leader will influence how others accept accountability. Being accountable is something to be recognized and celebrated, whether the results are successful or not. If we are being held accountable for results of a particular task, it is important that we are recognized when we are successful and given the authority to be involved in making changes when we are not. This builds trust and deepens commitment to whatever quality improvement effort is being done. Regular feedback on progress during the process of improvement helps everyone become more accountable to achieving success and keeping it in place.

When appropriate, leaders should also consider moving from individual to team accountability. When the team is accountable, and individual team members leave, the accountability remains intact and successful improvements are maintained. Using consistent assignment of staff, and peer-to-peer mentoring, increases the opportunity to build team accountability. Providing the teams with the data, information, knowledge, skills, resources and support needed to be successful will strengthen their accountability to the patients/residents, each other and the organization.

Creating shared accountability is important to insuring lasting quality improvement. When everyone understands the reason why the change is happening, their role in successfully making the change and are equipped to participate, they will share in the accountability to achieve the outcome.

Sustain your gains by clearly defining accountability throughout your organization.

This material was prepared by CIMRO of Nebraska, the Quality Improvement Organization for the state of Nebraska, under a contract with the Centers for Medicare & Medicaid Services (CMS), a federal agency of the U.S. Department of Health and Human Services. The contents presented do not necessarily reflect CMS policy.
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**"Let no feeling of discouragement prey upon you,
and in the end you are sure to succeed."
(Abraham Lincoln)**

**"You have never tested God's resources until you
have attempted the impossible!"
(Author unknown)**

Our Sponsors



A big thank-you goes to all of our sponsors for their continued support.

9th Annual Safety Healthcare Conference

September 26, 2008

Sandhills Convention Center
North Platte, NE

8 a.m. to 4 p.m.

Who's been attending . . .

CEO's, Employee Health, Infection Control, Risk Managers, Safety and Security staff, Pharmacy staff, Plant Operations staff, Human Resources, Nursing staff, Safety and Emergency Management Committee members.

Spread the word, share this conference information with others in your facility.



Safety Officers Network and Resources

Dari Olson, SONAR Chairman, Safety Director
Community Hospital
1301 East H St.
McCook, NE 69001
P: 308-344-8362-F: 308-344-8546
Email: dolson@chmccook.org

Safety Healthcare Conference -

This conference offers a variety of safety topics for healthcare professionals to help you implement and/or improve the plans you currently have in place. We have kept the conference affordable for all and provided a central location to help you meet the ever-changing local, state and federal regulations.

Temperature in rooms vary – plan to layer accordingly.

The Program:

7:30-8:00 a.m.

Registration, Continental Breakfast served in the Exhibitor Area.

8:00-9:00 a.m.

Welcome, Dari Olson, SONAR Chairman
Keynote, Sharon Cheney, RN, MA, Lincoln, NE
Changes, Challenges and Chuckles

Education Sessions:

Sessions are scheduled for 1 hour 20 minutes.
Four different sessions are offered – choose one program per session to attend.

9:10-10:30 a.m.

1. The Joint Commission New Emergency Management Standards: What's New? What's Not?, *Dean Samet, Director of Regulatory Compliance Services, Smith Seckman Reid, Inc.*
2. Life Safety Code 101, *Mike Hoefft, State Fire Marshal*
3. Benchmarking Performance for Sustainable Health Care, *Robert L. Black, Jr. CCM, SASHE, Capital Performance Management, LLC*

10:30-10:45 a.m. Vendor Exhibit Break

10:45-12:00 p.m.

1. 2009 Life Safety Chapter, Scoring and EC Survey Focus, *Dean Samet, Director of Regulatory Compliance Services, Smith Seckman Reid, Inc.*
2. Understanding Human Behavior—“Why People Do the Stupid Things They Do”, *Steve Danon, Director-Risk Control Services, Marquette Insurance Agency*
3. RCRA Compliance, *Kevin Maas, Safety Specialist, Covidine*

Make plans now to attend next year!

12:00-12:30 p.m.

LUNCH (Door Prize give away)

12:30-1:00 p.m. Vendor Exhibit Break

1:00-2:20 p.m.

1. Construction and the Environment of Care, *Robert L. Black, Jr. CCM, SASHE, Capital Performance Management, LLC*
2. Mass Influx and Triage, *Bob Hessler, Safetyline Consultants*
3. Emergency Communications, *Reynolds Davis*

2:20-2:35 p.m. Last Vendor Exhibit Break

2:35-3:55 p.m.

1. MRSA: It's Time to Get the Facts Straight, *Sharon Conroy, RN, Infection Control, Community Hospital*
2. OSHA IN Review – Blood borne Pathogens, Lockout/Tagout, 300-logs, Commonly Identified Hazards in Healthcare Facilities, *Phil Sullivan and Eric Miller, Nebraska Department of Labor*
3. "What to Do When Things Go Wrong...", (the importance of disclosing, taking responsibility and apologizing to a patient & family when things go wrong), *Tom Cleary, Risk Management consultant for The MMIC Group, Omaha, Nebraska*

Conference Concludes

Vendor Exhibits:

Be sure to visit with vendors gathered today in one location to find products and services that may assist your organization. Please make sure to thank them for their continued support.

A block of rooms has been set-aside for Convention attendees (Room Block under SONAR), discounted rates offered. RSVP no later than September 11, 2008.

Call the Sandhills Convention Center at: 800-760-3333

**Conference Registration Form
Due no later than September 1, 2008**

Firm: _____

Address: _____

City/State/Zip: _____

Phone: () _____ Fax: _____

1st Attendee: _____

2nd Attendee: _____

3rd Attendee—no charge: _____

Registration Fees: \$85.00 per person (Includes Lunch)

***Special* - for every two paid attendees, bring the third attendee free of charge. No group rates apply after September 11, 2008.**

2 ways to register:

Mail to: Sue Mulligan
Great Plains Regional Medical Center
601 W. Leota St.
North Platte, NE. 69103

Fax to: 308-696-8650

Method of Payment:
Sorry, no credit card payments.

- Registration fee enclosed.
- Check # _____ for \$ _____
- Purchase order is attached. P.O. # _____
- Bill my organization. Attention: _____

Cancellation Policy: Advance registration is required. Cancellations and reschedules received three (3) business days prior to the course date will receive a full refund. There will be a 50% charge on late cancellations. Registrants who cancel the day of the program or are 'no shows' will be liable for the full fee.

Save the Date: S.O.N.A.R. Conference September 26, 2008

The 2008 S.O.N.A.R. Conference will be held on September 26, 2008 at the Sandhills Convention Center in North Platte.

Keynote speaker will be Dean Samet, former Joint Commission Environment of Care Director. Mr. Samet will be discussing The Joint Commission New Emergency Management Standards and "What's New and What's Not – 2009 Proposed Life Safety Chapter – Scoring and 2008 EC Survey Focus. For more information contact Dari Olson at Community Hospital in McCook at DOlson@chmccook.org or (308) 344-8362.

Quality – Risk Management – Patient Safety

ASHRM names president-elect, new board members

The American Society for Healthcare Risk Management has elected Theresa Zimmerman, patient safety officer at Catholic Health Partners in Cincinnati, its 2009 president-elect.

Theresa will succeed Georgene Saliba, administrator, claims & risk management, at Lehigh Valley Hospital & Health Network in Allentown, PA, as president-elect when Saliba becomes president on Jan. 1, 2009. .

ASHRM members also elected Andrew Oppenberg, director of risk management and patient safety officer for Glendale (CA) Memorial Hospital & Healthcenter, and Kathleen Shostek, senior risk management analyst at the ECRI Institute in Plymouth Meeting, PA, to the board of directors.

They will be sworn in during ASHRM's Annual Conference & Exhibition Oct. 2-5 in Boston, and begin their terms Jan. 1. ASHRM is a personal membership group of the AHA.



Implementation of the "FASTHUG" concept decreases the incidence of ventilator-associated pneumonia in a surgical intensive care unit

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Abstract

Background

Ventilator-associated pneumonia (VAP) is a leading cause of morbidity and mortality in critically ill patients. The Institute for Healthcare Improvement 100,000 Lives Campaign made VAP a target of prevention and performance improvement. Additionally, the Joint Commission on Accreditation of Health Organizations' 2007 Disease Specific National Patient Safety Goals included the reduction of healthcare-associated infections. We report implementation of a performance improvement project that dramatically reduced our VAP rate that had exceeded the 90th percentile nationally.

Methods

From 1 January 2004 to 31 December 2005 a performance improvement project was undertaken to decrease our critical care unit VAP rate. In year one (2004) procedural interventions were highlighted: aggressive oral care, early extubation, management of soiled or malfunctioning respiratory equipment, hand washing surveillance, and maximal sterile barrier precautions. In year two (2005) an evaluative concept called FASTHUG (daily evaluation of patients' feeding, analgesia, sedation, thromboembolic prophylaxis, elevation of the head of the bed, ulcer prophylaxis, and glucose control) was implemented. To determine the long-term effectiveness of such an intervention a historical control period (2003) and the procedural intervention period of 2004, i.e., the pre-FASTHUG period (months 1–24) were compared with an extended post-FASTHUG period (months 25–54).

Results

The 2003 surgical intensive care VAP rate of 19.3/1000 ventilator-days served as a historical control. Procedural interventions in 2004 were not effective in reducing VAP, $p = 0.62$. However, implementation of FASTHUG in 2005, directed by a critical care team, resulted in a rate of 7.3/1000 ventilator-days, $p \leq .01$. The median pneumonia rate was lower after implementation of FASTHUG when compared to the historical control year ($p = .028$) and the first year after the procedural interventions ($p = .041$) using follow-up pairwise comparisons. The pre-FASTHUG period (2003–2004, months 1–24) when compared with an extended post-FASTHUG period (2005–2007, 25–54 months) also demonstrated a significant decrease in the VAP rate, $p = .0004$. This reduction in the post-FASTHUG period occurred despite a rising Severity of Illness index in critically ill patients, $p = .001$.

Conclusion

Implementation of the FASTHUG concept, in the daily evaluation of mechanically ventilated patients, significantly decreased our surgical intensive care unit VAP rate.

Introduction

Ventilator-associated pneumonia (VAP) is a leading cause of morbidity and mortality in critically ill patients [1]. It is a form of hospital-associated pneumonia that occurs 48 hours or more after tracheal intubation and mechanical ventilation of a patient [2]. It occurs in 9%–27% of all intubated, mechanically ventilated patients and increases hospital stays by 7 to 9 days at an excess cost of up to \$40,000 per patient [3-5]. The Institute for Healthcare Improvement (IHI) 100,000 Lives Campaign has made VAP a target of prevention and performance improvement in intensive care units [6]. In addition to the IHI's targeting of VAP, the Joint Commission on Accreditation of Healthcare Organizations' (JCAHO) 2007 Disease-Specific National Patient Safety Goals (goal 7) included the reduction of the risk of health care-associated infections [7]. Our surgical intensive care unit (SICU) VAP rate of 19.3/1000 ventilator-days was high, at the 90th percentile for SICUs according to the 2004 National Nosocomial Infection Surveillance (NNIS) system [8]. We implemented a performance improvement project over 2 years to reduce our SICU VAP rates. A successful decrease in the SICU VAP rate was realized in the second year of the project with the addition of the FAST-HUG concept (daily evaluation of feeding, analgesia, sedation, thromboembolic prevention, head of bed elevation, ulcer prophylaxis, and glucose control in critically ill patients) in the SICU [9].

Methods

From 1 January 2004 to 31 December 2005 a performance improvement project was undertaken in the SICU to decrease the incidence of VAP. The occurrences of VAP were documented prospectively in the hospital's infection control database, but the review of the performance improvement project data was retrospective. Institutional Review Board approval was received for publication of the data. The SICU is a ten-bed unit in a 319-bed university medical center that averages 667 admissions per year. The SICU cares for trauma, general surgery, and all surgical sub-specialty patients. Project years 2004 and 2005 each had their SICU VAP rate compared to the historical control year, 2003. Sixty days before year 1 of the project (November 2003) an intensivist-led critical care team model was instituted in the SICU. The critical care team consisted of faculty physicians, anesthesiology and surgery residents, medical students, nurses, a pharmacist, and respiratory therapists. In year 1 (2004) of the project *procedural* interventions were highlighted. Aggressive oral care using chlorhexidine mouthwash, an early extubation strategy, changing respiratory equipment only when visibly soiled or malfunctioning, and aggressive enforcement of hand-washing and barrier protection methods for central line placement were introduced and applied to all mechanically ventilated patients.

Chlorhexidine mouthwash, which had not been used consistently, was now used every 12 hours on ventilator patients. The early extubation strategy involved spontaneous breathing trials daily coupled with a sedation holiday on all patients who qualified (by a locally developed protocol). Peptic ulcer prophylaxis consisted of the use of famotidine, pantoprazole, or sucralfate. Hand washing was aggressively enforced by "secret shoppers" (infection control department employees masquerading as others than who they really were). Also, use of maximal barrier precautions for central line placements was mandated.

In year 2 (2005) the project was augmented with the formal addition of the concept FASTHUG to the daily patient evaluation by the critical care service. FASTHUG was considered an *evaluative* intervention; this clinical information was used to augment the procedural interventions of the previous year. During year 2 FASTHUG was emphasized on patient rounds (morning and afternoon) by the critical care team, thus allowing dissemination of the FASTHUG evaluation results in the context of a patient care plan for the day. The formal emphasis on FASTHUG at the beginning of the year 2 was not part of the original performance improvement project, but was incorporated because of the lack of significant improvement in the incidence of VAP in year 1. The CDC VAP definition was used [10].

A two-tailed z-test for two proportions was used to compare the rates for the historical period (2003) with (1) the first year of the project (2004) in which new procedural interventions were added to the care of the patient, and with (2) the second year of the project (2005), where procedural interventions were augmented with an evaluative component, FASTHUG. Follow-up pairwise comparisons were conducted using a Wilcoxon test and controlling for Type I errors across comparisons at the $p = .05$ level using the least significance difference (LSD) procedure. Also, interrupted time series analysis with ARIMA (auto-regressive integrated moving average) modeling [11] was then used to test for the impact of the two interventions on the monthly rates of VAP. Additionally, age, sex, race, SICU days, hospital length of stay (LOS), a severity of illness (SOI) index, and medical diagnostic categories (MDC: respiratory, circulatory, digestive, kidney/urology, and nervous systems) were compared using t test for continuous variables and Chi square test for categorical variables. SOI was determined using the risk adjustment methodology for the clinical database of the University Health System consortium [12]. P-values less than 0.05 were considered significant.

Results

The SICU VAP rate for the historical control period, January–December 2003, was 19.3 VAPs/1000 ventilator-days (24 VAPs/1247 ventilator-days). The SICU VAP rate did not significantly decline in year 1 of the project (2004, pre-FASTHUG, procedural interventions only), 16.6 VAPs/1000 ventilator-days (26 VAPs/1560 ventilator-days), $p = 0.62$. However, with the implementation of the FASTHUG concept under the guidance of an intensivist-led critical

care team, the SICU rate declined to 7.3 VAPs/1000 ventilator-days (11 VAPs/1505 ventilator-days) in year 2 (2005, post-FASTHUG), $p < .01$. Tables 1 and 2 demonstrate that the median pneumonia rate was significantly lower during the second year after implementing the FASTHUG concept compared to both the historical control year ($z = 2.2$, $p = .028$) and to the procedural intervention year ($z = 2.04$, $p = .028$). Daily FASTHUG evaluations then became a mainstay of critical care practice. By 30 June 2007 the VAP rate had decreased to 1.3/1000 ventilator-days (1/755 ventilator-days). In fact, there were no VAPs from January–May 2007 (Figure 1). The first time series analysis comparing the monthly rates from January–December 2003 (historical period) to those for January–December 2004 (pre-FASTHUG, i.e., addition of above-mentioned procedural interventions only) revealed no significant differences ($p = 0.5909$). Since the procedural interventions of 2004 produced no statistical difference in VAP rates as compared to the historical control period, the data from the historical period (2003) and the first year of the project (2004) were pooled for comparison with the 2005–2007, an extended post-FASTHUG time frame. This second time series analysis, comparing the rates from January 2003–December 2004 (months 1–24, or pre-FASTHUG) to those for January 2005–June 2007 (months 25–54, or post-FASTHUG), demonstrated a significant drop in SICU VAP rates, $p = 0.0004$ (Figure 1). There was no difference in age, sex, race, SICU days, LOS between, or MDC between the pre-FASTHUG time frame and the post FASTHUG time frame, although LOS trended towards significance in the post FASTHUG time frame, $p = .07$ (Table 3). Additionally, there was a significantly higher patient SOI index in the post-FASTHUG time frame when compared to pre-FASTHUG time frame, $p = .001$ (Table 3).

Table 1. Wilcoxon Signed Ranks Test for VAP

Table 2. Comparison of Median VAP Rates (b)

Table 3. Descriptive characteristics of the pre- and post-FASTHUG time frames

Figure 1.

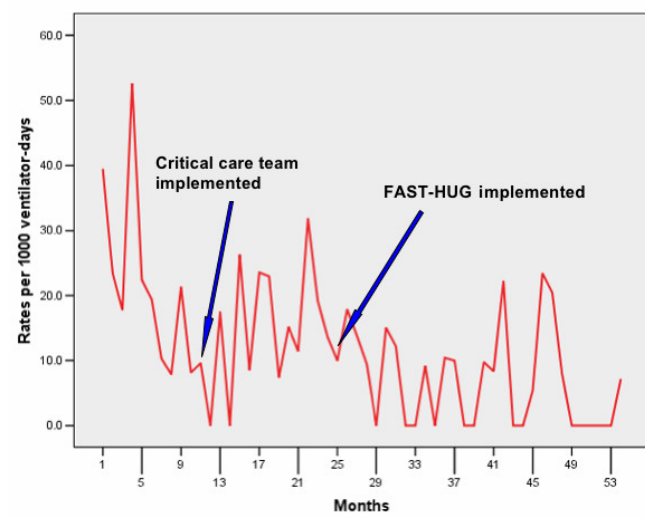


Figure 1. Ventilator-associated pneumonia rates over 54 months. The first twelve months are the historical period. The intensivist-led critical care team concept was implemented 60 days before year 1 of the project (month 11 of the historical period), and FAST-HUG was initiated at the beginning of year 2 of the project (month 25). A time series analysis demonstrated a significant difference in VAP rates between months 1–24 and 25–54, $p = .0004$. $P \leq .05$ was considered statistically significant.

Discussion

IHI 100,000 Lives Campaign has designated the prevention of VAP as one of six interventions that would significantly contribute to improved patient care and avoidable hospital deaths [6]. IHI has recommended the use of the ventilator care bundle, a group of best practices that can reduce the incidence of VAP in mechanically ventilated patients. This bundle includes deep vein thrombosis prophylaxis, stress ulcer prophylaxis, elevation of the patient's head of bed to 30–45 degrees, and a daily sedation holiday [7]. The evaluation of the sedation holiday included a spontaneous breathing trial when the patient's hemodynamic parameters were appropriate. To this bundle we added assessments of feeding, analgesia, and glucose control [9]. Additionally, this effort reinforced the Joint Commission's goal of reducing health-care associated infections.

The implementation of the FASTHUG concept by the critical care team was associated with a decreased VAP rate. However, the team's effect did not seem to be of significance in regard to VAP until a concerted effort was made to address FASTHUG on daily rounds. It can be inferred that the procedural interventions applied to the patients in year 1 were of minimal impact until the implementation of FASTHUG in year 2. The first year of the project involved changes in procedures at the bedside, whereas in the second year the changes instituted were in the evaluation of the patient. This led to examination of the patient care plan daily (sometimes even more often), allowing augmentation of the aforementioned procedural changes.

The fact that there was no difference in age, sex, race, and MDC between the pre-FASTHUG and post-FASTHUG time frames indicates that the populations were similar in their composition. However, the post-FASTHUG patients were much more ill, as indicated by their increased SOI index, $p = .001$. The assertion that implementation of the FASTHUG concept substantially impacted our SICU population is supported by the following: (1) the increased SOI index among the patients in the post FASTHUG time frame was coupled with a trend toward significance in the decreased patient hospital LOS, and (2) the post-FASTHUG population did not have increased lengths of stay in the SICU in the face of a higher SOI index.

Several studies support our approach. Resar et al have shown that use of a "bundle" of ventilator care processes (peptic ulcer disease prophylaxis, deep vein thrombosis prophylaxis, elevation of the head of the bed, and a sedation holiday) decreased VAP incidence by 44.5% in their intensive care unit population [13]. These authors stated that "the goal-oriented nature of the bundle appears to demand development of the teamwork necessary to improve reliability" of this approach [13]. Also, Crunden et al and Berriel-Cass et al provided evidence that VAP can be reduced by the use of "bundles" [14,15]. The former used a mandatory data collection tool for

reinforcement, and the latter used the physical presence of providers to reinforce bundle compliance.

Our results may have been influenced by the following factors. The use of the FASTHUG mnemonic may have created a heightened clinical acuity across disciplines regarding patient care, thereby causing more attention to be directed at the detailed care of patients. It may also be argued that better care was delivered because the parameters of FASTHUG were continually reinforced, thus facilitating a 360-degree assessment of the patient by multiple care givers. Furthermore, this study was not randomized, thus hampering our ability to make definitive conclusions. However, randomization of patients to receive or not to receive good care that has been recognized by IHI and JCAHO may be unethical. Another difficulty is that our study was monocentric and was conducted in a small university medical center. These conditions could create bias regarding the types, complexity, and number of cases that were treated. Clearly any conclusions from this small observational and retrospective study should be done cautiously. Larger studies that are multi-centered and prospective need to be performed to better assess our results. Finally, the improvement reported in our SICU VAP rates may have occurred simply because there was a critical care team present to provide care. In attempting to analyze the data it may be difficult to separate FASTHUG implementation from good critical care practice.

The FASTHUG application may not apply to all patients at all times, but its daily reappraisal at the SICU patient's bedside at our institution allowed implementation of a strategy that reinforced teamwork and improved patient care. All members of the patient care team understood what the mnemonic FASTHUG represented, and its importance to patient quality of care and safety. While this study may only have been observational in its methodology, the implementation of daily FASTHUG evaluations at the bedside produced a significant effect on the VAP rate in our SICU patients.

Competing interests

The author(s) declare that they have no competing interests.

Authors' contributions

TJP, SJH, and JMD conceived of the idea. TJP, SJH, and LRO collected the data. TJP, MJB, and JJF cared for the patients. TJP, SJH, JMD, SAK, MJB, and JJF edited the manuscript. SAK, TJP, and DO were responsible for the statistical analysis. All authors have read and approved the final manuscript.

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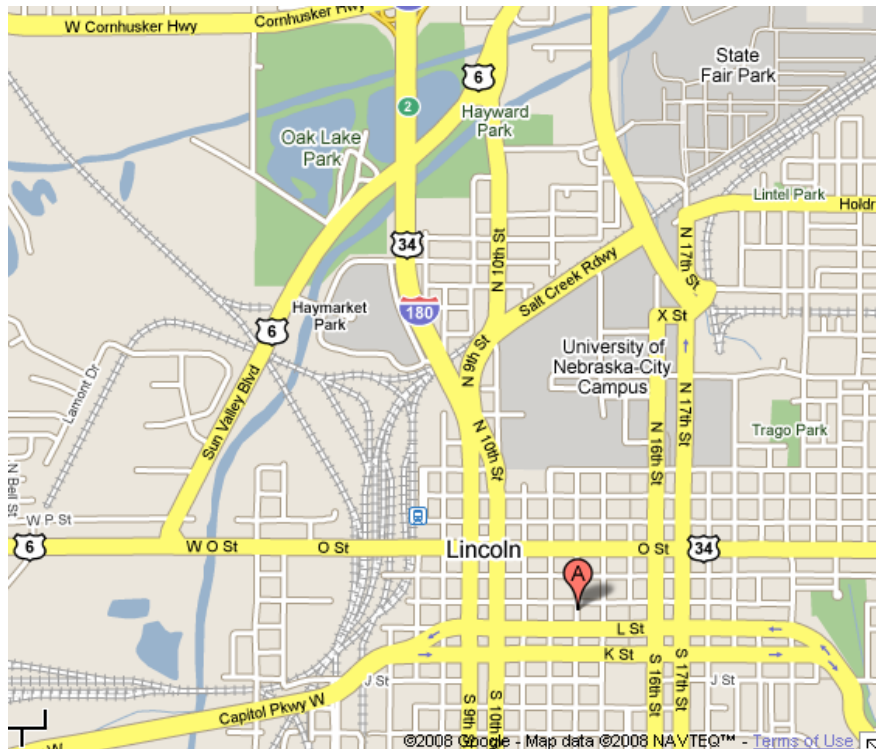
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