It is NOT the Nurses’ Fault!

Kevin Kavanagh, MD, MS
Health Watch USA®
The Importance Of Nurse Empowerment.
Theme: It is not the Nurses’ Fault

Nurses Face the Daunting Task of Safeguarding the:
1) Health,
2) Healthcare,
3) Safety,
For Both Themselves and Their Patients.
EBOLA – A Call To Action

There is no better testament to this problem than the recent Ebola outbreak - when it was initially stated that any hospital could take care of Ebola patients.

1. Aug. 7, 2014: ““We know how to stop Ebola with strict infection control practices which are already in widespread use in American hospitals” Thomas Freidman, Testimony”

2. Oct. 12, 2014: “Essentially any hospital in the country can safely take care of Ebola. You don't need a special hospital to do it” Thomas Freidman, News conference

3. Oct. 12, 2014: At the same time in a Lexington Herald Leader OpEd, HW USA was calling for better standardization of practices and a need to take dangerous pathogens more seriously.

EBOLA – A Call To Action

- Initially She Was Blamed for Here Own Infection.

NPR, Oct. 24, 2014: “...when Pham contracted Ebola from Duncan. Centers for Disease Control and Prevention Director Tom Frieden speculated she had infected herself.”

BUT: “For the first two days Presbyterian's medical staff treated the extremely sick and Ebola-effusive patient without the protection of the fully hooded hazmat suits the hospital had on hand.”

https://www.npr.org/2014/10/24/358574357/was-cdc-too-quick-to-blame-dallas-nurses-in-care-of-ebola-patient

- There were ineffective standards with lack of appropriate PPE. A fully hooded hazmat suit and the buddy system were not available at her facility – Deborah Burger Testimony Before Congress – Oct. 24, 2014.
Since then, steps are being taken to emphasize containment and control of dangerous pathogens. On June 19, 2018, the CDC reaffirmed that Isolation of carriers those infected with MRSA is key to controlling spread of this dangerous pathogen.

- Contact Precautions
  
  CDC recommends the use of Contact Precautions (CP) in inpatient acute care settings for patients known to be colonized or infected with epidemiologically important Multidrug-Resistant Organisms (MDROs) including Methicillin-Resistant Staphylococcus aureus (MRSA).

https://www.cdc.gov/mrsa/healthcare/clinicians/index.html
However, I feel many of our protocols to safeguard healthcare workers and patients from MRSA are based on a misinterpretation of the literature and two poorly designed studies.

- In 2003, European Researchers, Cooper, et al.– found that most studies supporting surveillance and isolation of MRSA carriers were before and after studies. However, they recommend staying the course. But, the U.S. decided to veer off course and abandon this time tested prevention intervention.

“Little evidence was found to suggest that current isolation measures recommended in the UK are ineffective and these should continue to be applied until further research establishes otherwise. – Cooper, et al, 2003.”

And then the United States backed up their decision not to do surveillance for MRSA carriers with two studies which appear to have major design flaws.

1) Harbarth, et al., in JAMA where appropriate MRSA prophylaxis was not given to the majority of presurgical patients (115 of 386 surgical patients) in the intervention group. (JAMA. 2008 Mar 12;299(10):1149-57.)

2) Huskins, et al., in NEJM where it took 5 days to get back the culture results and start patient isolation procedures. And contact precautions were not strictly followed. (NEJM. Apr. 14, 2011 364(15)1407-1418.)
The English MRSA Miracle. Micro Blog. Your window to the world of health care microbiology and epidemiology; by Jon Otter & Saber Yezli 3/8/2015

The United Kingdom instituted a hand hygiene campaign and mandatory screening and isolation for MRSA and saw a phenomenal decrease in infections.
This Figure illustrates the percentage of MRSA in *Staph aureus* cultures in Europe. The United Kingdom is the purple line. They saw over a 60% decrease in methicillin resistance in *Staph aureus* cultures. Along with a concomitant decrease in MRSA bloodstream infections.
BUT did NOT observe a decrease in MSSA or *E. Coli* bloodstream infections. Hand Hygiene was performed across the board and should have impacted all pathogens. But only MRSA, which also had implementation of screening for carriers, showed a decrease in infections.
No guarantee hand washing will work as the main intervention.

In the context of multi-drug resistant organisms, hand hygiene is a back up measure. These organisms should not be on healthcare workers’ hands in the first place.

And if they are there is a problem with containment and control.
This graph shows data which HW USA published in ARIC. The orange line is derived from NHSN data and shows an increase in Severe MRSA infections in 2015 in US Private Sector Hospitals. The Blue shows the huge decrease in MRSA in VA Hospitals. The VA screens all admissions for MRSA.

However, the baselines are not comparable. The 2015 increase may be due to changes in how the US accounts for Community MRSA.

Hospital rates are adjusted for community rates. They are also adjusted for being a teaching institution and bed size. (Initially, community rates were determined by infections diagnosed in facilities during the first two days, this was changed to the first three days.)

Thus, rates of infections and risk adjustment are more for hospital performance and accountability than the risk of workers and patients actually contracting the organisms.
REDUCE MRSA Study.

1. Probable Confusion and/or Spinning In Abstract
- “Group 1 implemented MRSA screening and isolation”

2. Surrogate Endpoints
- Primary objective was number of clinical isolates (cultures) as opposed to number of infections.

3. Changing of Metrics – After Trial Completion Date
- Urinary cultures deleted (later infections added back)
- CLABSI deleted (explanation later given)
- All-Pathogen Bloodstream Infections added - “…. universal decolonization was more effective than targeted decolonization or screening and isolation in reducing rates of ..... bloodstream infection from any pathogen.”
### Changes to NCT00980980 on 2012_06_19

**Type of info changed:** Protocol, Misc.

<table>
<thead>
<tr>
<th>Measure</th>
<th>Before (Updated 2011_10_24)</th>
<th>After (Updated 2012_06_19)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.鼻院内 MRSA 血液性感染和尿路感染培养</td>
<td>&lt;clinical_study&gt;</td>
<td>&lt;clinical_study&gt;</td>
</tr>
<tr>
<td>2. Nasocomial MRSA Bloodstream and Urinary Cultures</td>
<td>&lt;measure&gt;</td>
<td>&lt;measure&gt;</td>
</tr>
<tr>
<td>3. Routinely reported central line associated blood stream infections (CLABSI).</td>
<td>&lt;measure&gt;</td>
<td>&lt;measure&gt;</td>
</tr>
<tr>
<td>4. Routinely reported central line associated blood stream infections (CLABSI).</td>
<td>&lt;measure&gt;</td>
<td>&lt;measure&gt;</td>
</tr>
<tr>
<td>5. Routinely reported central line associated blood stream infections (CLABSI).</td>
<td>&lt;measure&gt;</td>
<td>&lt;measure&gt;</td>
</tr>
<tr>
<td>6. Routinely reported central line associated blood stream infections (CLABSI).</td>
<td>&lt;time_frame&gt;</td>
<td>&lt;time_frame&gt;</td>
</tr>
<tr>
<td>7. Routinely reported central line associated blood stream infections (CLABSI).</td>
<td>&lt;last_release_date&gt;</td>
<td>&lt;last_release_date&gt;</td>
</tr>
<tr>
<td>9. Routinely reported central line associated blood stream infections (CLABSI).</td>
<td>&lt;/clinical_study&gt;</td>
<td>&lt;/clinical_study&gt;</td>
</tr>
</tbody>
</table>
"The $1 million from the Foglia foundation was used for fellowships and studies, including one involving Sage’s wipes, Weinstein said. Foglia, through his foundation’s attorney, said that the gift had no strings attached and that Weinstein was directed only “to do the most he could for the most people with this.”

“Rush received a $1 million donation from the family foundation of Sage’s founder, Vincent W. Foglia. The money was earmarked for research by the senior scientist on the study, Dr Robert A. Weinstein, an infectious-disease specialist at Rush.”

In response to the FDA’s new guidance on chlorhexidine, Sage will add an allergy warning to labels on its wipes.

The FDA approved the wipes only for cleansing skin before surgery. Sage is prohibited from marketing them for off-label uses, including universal daily bathing. It’s even required to include a warning on the product label against using the cloths as a “general skin cleanser.”

FDA Has a Product Label Warning Against Using Chlorohexidine Cloths as a “General Skin Cleanser.”

Reuters Investigative Report on The MRSA Epidemic Wins The Kavli Science Journalism Award From The American Association for the Advancement of Science

The award was given to Ryan McNeill, Deborah J. Nelson, Yasmeen Abutaleb and the Reuters team for their series on the MRSA Epidemic. Health Watch USA participated in the report regarding chlorhexidine recommendations and conflicts of interest. "..for a series on the emergence of “superbug” infections and – in the absence of a unified national surveillance system – the failure of federal and state health authorities to adequately track such infections. Hundreds of thousands of antibiotic-resistant infections and tens of thousands of related deaths go uncounted each year, the team found."  
https://sjawards.aaas.org/2017winners
MRSA – Chlorhexidine Bathing

UCI doctor’s plan to stop superbugs is widely used. At her own hospital, it didn’t work


Chlorhexidine reduces MRSA, VRE in patients with devices

October 7, 2017

“We found that, in general units outside the ICU, only patients with central lines and other medical devices derived a benefit from chlorhexidine bathing,” researcher Susan S. Huang, MD, MPH, from the University of California, Irvine School of Medicine, told Infectious Disease News.”

(Huang SS. Abstract 1000. Presented at: ID Week; Oct. 4-8, 2017 San Diego)
In addition, there is mounting evidence that chlorhexidine can induce resistance to itself, other antibiotics and the last line of defense antibiotic – Colistin.


Surveillance of Dangerous Pathogens.

World Health Organizations: Recommends screening all presurgical patients for Staph. aureus, in the United States, we do not even do this routinely for MRSA.
Must have better nurse staffing and staff training.

Time to do hand hygiene and the donning and doffing of protective gear.

The BUGG Study (Benefits of Universal Glove and Gowns) published in JAMA found no difference in patient adverse events in those patients in isolation.

“Although there was a lower risk of MRSA acquisition alone and no difference in adverse events”

Universal glove and gown use and acquisition of antibiotic-resistant bacteria in the ICU: a randomized trial. JAMA. 2013 Oct 16;310(15):1571-80.)
Many would argue that the same almost lackadaisical approach to how Ebola was initially handled is why the United States has one of the highest rates of multi-drug resistant organisms in the world. KT Kavanagh. LHL OpEd. 10/12/2014  https://www.kentucky.com/opinion/op-ed/article44515170.html

I fell that on a system level, this has had led to the adoption of a one size does not fit all approach, and a desire to purchase the cheapest set of shoes. What emerged is a lackadaisical attitude toward the handling of dangerous pathogens by not making the very large investments in staff, staff training and equipment that are needed to stop this epidemic.
If we do not change our direction,

we are likely to end up where we are headed.

Ancient Chinese Proverb
Thank You!