

It is NOT the Nurses' Fault!

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The Importance Of Nurse Empowerment.

Theme: It is not the Nurses' Fault

Nurses Face the Daunting Tack 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.
- 4. Oct. 12, 2014: Nina Pham, a Nurse, Became Infected with Ebola.

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.





MRSA - Surveillance & Isolation

Since then, steps are being taken to emphasis 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



MRSA - Surveillance & Isolation

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."



Cooper BS, Stone SP, et al. Methodological Weaknesses in Studies Recommending Surveillance. *Health Technology*

Assessment 2003; Vol. 7: No. 39, p. 39.

MRSA - Surveillance & Isolation

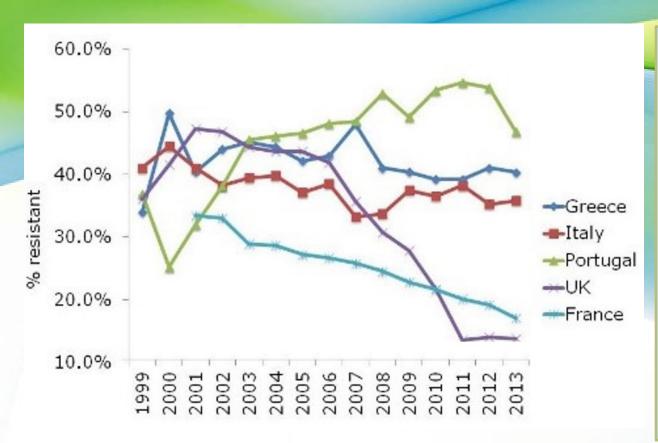
And then the United States backed up their decision not to do surveillance for MRSA carriers with two studies which appear to have major design flaws.

- ➤ 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.)





MRSA - Surveillance & Isolation

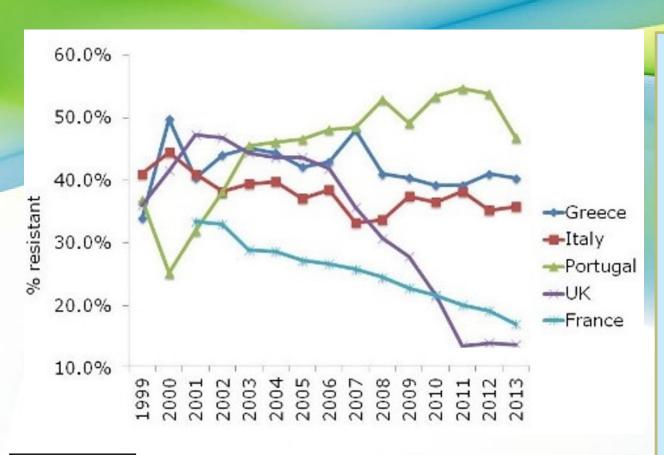


The United Kingdom instituted a hand hygiene campaign and mandatory screening and isolation for MRSA and saw a phenomenal decrease in infections.





MRSA - Surveillance & Isolation

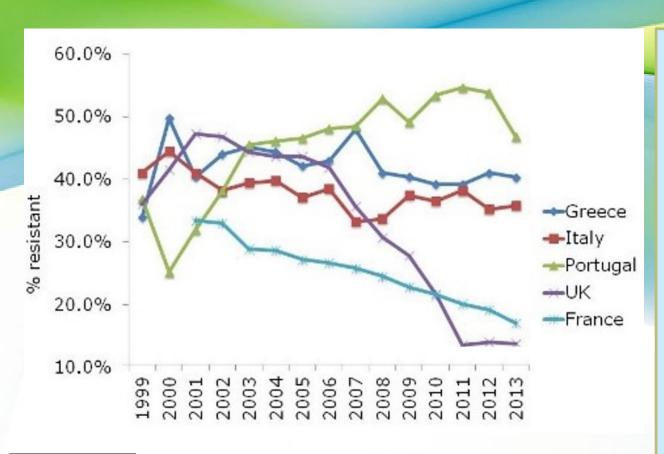


This Figure illustrates the percentage of MRSA in Staph aureus cultures in Europe. The United Kingdom is the purple line. They saw over a 60% decrease in methicillin resistance in Staph aureus cultures. Along with a concomitant decrease in MRSA bloodstream infections





MRSA - Surveillance & Isolation



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.





MRSA - Surveillance & Isolation

- ➤ 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.

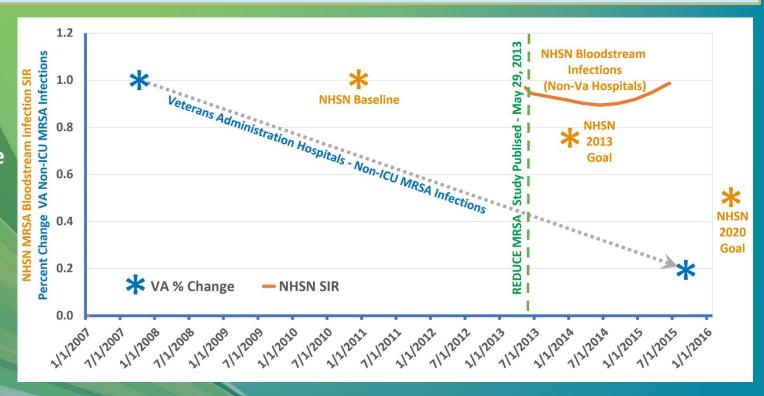




This graph shows data which HW USA published in ARIC. The orange line is derived from NHSN data and shows an increase in Severe MRSA infections in 2015 in US Private Sector Hospitals. The Blue shows the huge decrease in MRSA in VA Hospitals. The VA screens all admissions for MRSA.

However, the baselines are not comparable.

The 2015 increase may be due to changes in how the US accounts for Community MRSA.





Kavanagh KT, et al. Antibiotic Resistance & Infection Control (2017)6:34



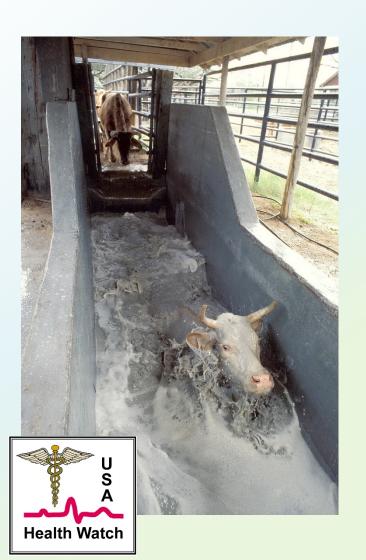
Hospital rates are adjusted for community rates.

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.



MRSA - Chlorhexidine Bathing



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."

ENTUCKY

Linking patients to medical research

Developed by the National Library of Medicine

- ☐ Hide unchanged portions (except top/bottom lines)
- ☐ Hide non-essential portions (contact info, locations, etc.)

Changes to NCT00980980 on 2012_06_19

Type of info changed: Protocol, Misc.

	Before	After
	(Updated 2011_10_24)	(Updated 2012_06_19)
1	<pre><clinical_study></clinical_study></pre>	<pre> <cli>clinical_study> </cli></pre>
- 1	<measure></measure>	<measure></measure>
2	Nosocomial MRSA Bloodstream and Urinary Cultures	MRSA Bloodstream Infection
1		+
- 1		
- 1	<measure></measure>	<measure></measure>
	Routinely reported central line associated blood stream infections (CLABSI).	ICU-attributable All-pathogen Bloodstream Infection
	<time_frame></time_frame>	<time_frame></time_frame>
	18 months	18-months
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- 1	^^^^^^	^^^^^^
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Cleaning Up

Money from infection-control industry muddies research into beating back superbugs

By Deborah J. Nelson and Ryan McNeill

Filed April 7, 2017, 1 p.m. GMT

In a Reuters Investigative Report that Health Watch USA Participated in:

It was reported that a well know researcher on the REDUCE MRSA study had at least an appearance of COI with the manufacture of the chlorohexidine product they were testing.

"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." "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." "



Nelson D. McNeill R. Money from infection-control industry muddies research into beating back superbugs. Reuters Investigates. April 7, 2017.



Cleaning Up

Money from infection-control industry muddies research into beating back superbugs

By Deborah J. Nelson and Ryan McNeill Filed April 7, 2017, 1 p.m. GMT

"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."

Nelson D. McNeill R. Money from infection-control industry muddies research into beating back superbugs. Reuters Investigates. April 7, 2017.

https://www.reuters.com/investigates/special-report/usa-superbugs-research/





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."







MRSA – Chlorhexidine Bathing

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



By MELODY PETERSEN MAY 16, 2017 | 6:00 AM







http://www.latimes.com/business/la-fi-uci-infant-outbreak-20170515-story.html

IDWeek

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."

- In addition, there is mounting evidence that chlorhexidine can induce resistance to itself, other antibiotics and the last line of defense antibiotic – Colistin.
- "Reduced susceptibility to chlorhexidine may contribute to the success of XDR K. pneumoniae as a nosocomial pathogen, and may provide a selective advantage to the international epidemic strain K. pneumoniae ST258. "Naparstek L, Carmeli Y, Chmelnitsky I, Banin E, Navon-Venezia S. Reduced susceptibility to chlorhexidine among extremely-drug-resistant strains of Klebsiella pneumoniae. J Hosp Infect. 2012 May;81(1):15-9. doi: 10.1016/j.jhin.2012.02.007. Epub 2012 Mar 30.
- Wand ME, Bock LJ, Bonney LC, Sutton JM. Antimicrob Agents Chemother. 2016 Dec 27;61(1). pii: e01162-16. doi: 10.1128/AAC.01162-16. Print 2017 Jan. Mechanisms of Increased Resistance to Chlorhexidine and Cross-Resistance to Colistin following Exposure of Klebsiella pneumoniae Clinical Isolates to Chlorhexidine.
- "Researchers tested strains of K. pneumoniae typically found in healthcare and exposed them to increasing concentrations of chlorhexidine. While some strains died from the exposure, others survived and some gained resistance to colistin. "Study links antibiotic resistance with chlorhexidine exposure. Becker's. Clinical Leadership & Infection Control. Nov. 2, 2016. https://www.beckershospitalreview.com/quality/study-links-antibiotic-resistance-with-chlorhexidine-exposure.html





- 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.)





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.

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











