# Debunking some Sacred Cows – Where is the Evidence?







## Objectives

- 1. Discuss the definition of a sacred cow.
- Describe 6 clinical examples from NorthBay
   Healthcare's 2015 Sacred Cow Contest and provide
   evidence on why those practices should be
   debunked.
- 3. Describe the process of how you would debunk a sacred cow using the evidence-based practice process.





### Sacred Cows

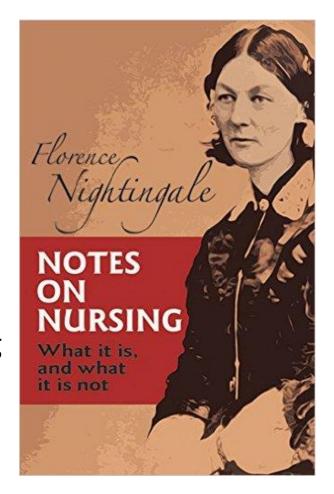
- This term alludes to the honored status of cows in Hinduism, where they are a symbol of God's generosity to humankind.
- The idiom appears to have emerged in America in the late 19th century.
- A figurative sacred cow is a figure of speech for a person or thing immune to question or criticism, especially unreasonably so....





## Sacred Cows in Nursing

- In "Notes on Nursing" Florence
   Nightingale described her observations
   and findings related to the care of
   patients
  - Patient advocacy
  - Infection control
  - Physical care of the entire body not just disease or signs & symptoms
- Developed into the philosophy of nursing or what we call the Art & Science of Nursing







## Sacred Cows in Nursing

- Scientific basis for practice:
  - Use research to answer questions
  - Establish protocols
  - Promote critical thinking and decision-making at the bedside
- Must be willing and able to change practice
  - Regarding the tradition or commonly held beliefs

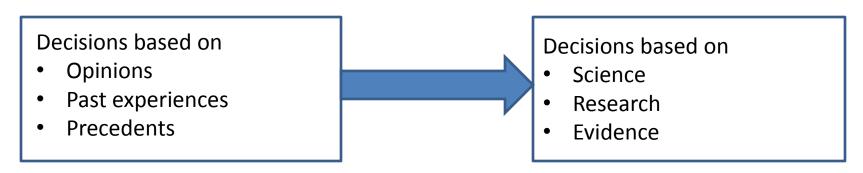






### **Evidence-Based Practice**

- Institute of Medicine Definition
  - The integration of best research, clinical expertise and patient values in making decisions about the care of individualized patients.
- Using Research to guide Clinical Decision Making is a shift in culture







#### **Sacred Cow Contest**

## Is your clinical practice evidence based?





#### **Promoting Clinical Inquiry**

Do you ever wonder why we follow certain practices in our clinical profession?

These often have become traditions and we don't really understand the reasoning behind them. We have to start asking ourselves, "Are we doing what is best for our patients with the current evidence?"



#### What is a Sacred Cow?

A sacred cow is a tradition or routine practice that is performed without any thought about why the task is being performed. We do it "because we've always done it that way."

#### Goals of the contest

- · To encourage nurses and clinicians to question their practice.
- To learn more about the sacred cows at NorthBay Healthcare.
- To generate interest in a fun way to discuss evidence-based practice.

#### **Rules**

- 1. The practice is being done in the department you work in.
- 2. Maximum of 3 entries per participant.
- 3. Description in the entry form is written in 200 words or less.
- 4. One prize per contestant.

#### Contest runs from October 1-31

All entry forms must be turned in via email or interoffice mail to Elisa Jang by the last day of the contest.

Good luck!!

Need more information? Contact Elisa Jang ejang@northbay.org or (707) 646-4032

**GIFT CARD PRIZES:** 

1<sup>st</sup> place - \$100 Amazon

2<sup>nd</sup> place - \$50 Target

3rd place - \$25 Starbucks

#### **CATEGORIES**



#### **Cash Cow**

The most expensive but costineffective traditional practice being performed without supporting evidence.

Example: Throwing away all of the trash in the biohazard bags even if it is not biohazard material.



#### **Mad Cow**

The craziest, most bizarre, outlandish, weird and ridiculous traditional practice being performed.

Example: Placing an alcohol swab over the patient's nose to decrease nausea.



#### **Cow Tipping**

A practice that may need to be tipped over.

Example: Hospital wide sacred cow about not using cellular phones in patient care areas.

Sponsored by: Evidence-Based Practice & Nursing Research Council

## The Womanly Art of...



Sandy Twyman, RN, MSN-CNS, CNOR Clinical Nurse Specialist, Perioperative Services





## Pump 'n Dump

- In the past, there has been "<u>anxiety</u> about the <u>cytogenic</u> properties of iodinated contrast media" being excreted in human breast milk and the effect is similar in nonionic agents (Webb, Thomsen & Morcos, 2005).
- Depression of fetal thyroid function <u>affects the</u>
   <u>development of the central nervous system</u> (Webb,
   Thomsen & Morcos, 2005).





## Slippery Slope Logic

- "You said that if we allow A to happen, then Z will eventually happen too, therefore A should not happen."
- The problem with this reasoning is that it doesn't address the actual issue. Instead there is a shift of attention to a hypothetical. "Because no proof is presented to show that such extreme hypotheticals will in fact occur, this fallacy has the form of an appeal to emotion fallacy by leveraging fear." The debate is unfairly skewed with unsubstantiated data/information.

https://yourlogicalfallacyis.com

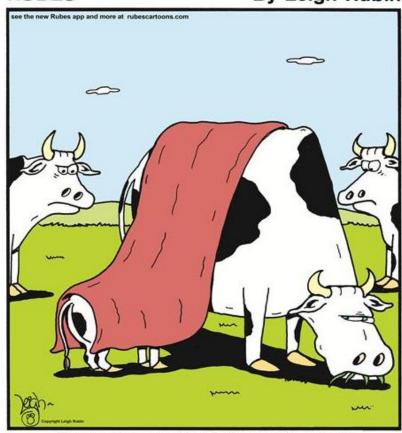




### The Fear Factor

#### RUBES ™

By Leigh Rubin



Even when practiced discreetly, raised eyebrows and disapproving glances still meet with those who dare to udder-feed in public.





- Quick but disturbing literature review
- Small study in 1987 6 women in Norway yet referred to studies done looking specifically at contrast media & lactation in 1956, 1981 and 1982 which all revealed the amount excreted into breast milk to be very low, less than what an infant would safely receive if requiring contrast for a study.

(Nielsen, et al., 1987; quasi-experimental)





- By 2005, authors Webb, Thomsen & Morcos note an abundance of research from across the world about contrast media excretion into human breast milk
- Gadopentetate has also been studied: the excreted amount is 100 x less than the permitted safe dose for a neonate (Kubik-Hutch, 2000; quasi-experimental)
- Pump 'n dump 24 48 hours after administration of contrast continues





- Canada comes out strong for revision of Pump 'n dump
- "Interruption of breastfeeding may cause difficulties such as breast refusal upon resumption"
- Notes that both iodinated and gadolinium have a less than 1% excretion rate in human breast milk & less than 0.01% of the maternal dose is actually absorbed into the infant's GI Tract (Singh & McLean, 2012).



## American College of Radiology

Manual on contrast media, version 10.2, 2016

"Because of a very small percentage of iodinated contrast medium that is excreted into the breast milk and absorbed by the infant's gut, we believe that the available data suggest that it is safe for the mother and infant to continue breast-feeding after receiving an agent. Ultimately an informed decision to temporarily stop breast-feeding should be left up to the mother after these facts are communicated..."





## How Long Does It Take?

- From the first study that revealed very low excretion of contrast in human breast milk in 1956 to today, here in Fairfield where the education about Pump 'n dump is finally changing more than a half a century later
- Adopting a practice change can take time!





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## **Practice Change**



"What if we don't change at all ... and something magical just happens?"





## NPO after Midnight







## **History Lesson**

Year	Author	Clear liquid	Food No guideline	
1847	Robinson <sup>1</sup>	No guideline		
1847	Snow <sup>2</sup>	No guideline	2-4 hr light meal	
1858	Snow <sup>3</sup>	No guideline	2-3 hr light meal; c.5 hr full meal	
1881	Lyman <sup>6</sup>	4 hr	4 hr light meal	
1883	Lister <sup>5</sup>	2 hr	'No solids in stomach'	
1901	Hewitt <sup>7</sup>	Avoid milk	4 hr meal	
1914	Gwathmey <sup>8</sup>	3 hr	2-3 hr gruel of barley or rice	
1920	Buxton <sup>9</sup>	3 hr tea, beef-tea	7 hr tea, bread boiled in milk, fish	
1943	Woodbridge <sup>10</sup>	4 hr grape juice	4 hr cream of wheat, milk	
1947	Macintosh and Bannister <sup>11</sup>	3 hr sweet tea, soup	3 hr bread and butter	
1947	Lee <sup>12</sup>	No guideline	6 hr	
1948	Minnitt and Gillies 13	3 hr tea, orange juice	3 hr sweetened tea with biscuit	
1949	Hunt <sup>14</sup>	2-3 hr	NPO midnight	
1951	Guedel <sup>15</sup>	No guideline	No guideline	
1955	Eliason et al 19	4 hr	p.m. surgery: breakfast	
1964	Lee and Atkinson <sup>17</sup>	NPO midnight or 6 hr	NPO midnight or 6 hr	
1970	Cohen and Dillon <sup>18</sup>	NPO midnight	NPO midnight	
1971	Wylie <sup>19</sup>	5 hr	5 hr	
1976	Canadian Anaesthetists' Society <sup>20</sup>	5 hr	5 hr	
1976	Collins <sup>21</sup>	NPO midnight	p.m. surgery: breakfast	
1982	Dripps et al <sup>22</sup>	NPO midnight	NPO midnight	





## What Happened in the 60's?

- 1946 Mendelson's syndrome: An obstetrician who reviewed 66 cases of aspiration out of 44,016 patients between 1932 & 1945; 2 patients died
- 1951 Morton & Wylie investigated 43 deaths in Ireland of patients under the care of inexperienced anesthesiologists – and noted that "most of the deaths occurred in full stomach or high risk cases"

(Maltby, 2006)





## The 70's Monkey Business

 4 studies involving unproven surrogate markers: "Our preliminary work in the Rhesus monkey suggest that 0.4 ml/kg in...human...we have arbitrarily defined the patient at risk...with at least 25 ml of gastric juice of ph below 2.5 in the stomach..." Another researcher instilled 0.8 ml/kg of gastric fluid with a ph of 1.0 directly into the trachea of Rhesus monkeys, equated to 50 ml in humans, this caused severe pneumonitis (Maltby, 2006)





## Surrogate Marker Studies – Can be Another Fallacy



### Monkey



Monkeys are haplorhine primates, a paraphyletic group generally possessing tails and consisting of about 260 known living species. Many monkey species are tree-dwelling, although there are species that live primarily on the ground, such as baboons. Most species are also active during the day. Monkeys are generally considered to be intelligent, particularly Old World monkeys.





Year	Author	Oral intake	Drink on day of surgery		NPO from midnight	
			Fast	RGV (mL)	Fast	RGV (mL)
1986	Maltby et al (Canada) <sup>25</sup>	Water 150 mL	2½ hr	18 (0-56)	16½ hr	27 (0-80)
	Sutherland et al (Canada)55	Water 150 mL	2½ hr	21 (0-50)		30 (2-75)
	Hutchinson et al (Canada) <sup>56</sup>	Coffee/juice 150 mL	2½ hr	24 (0-96)		23 (0-75)
1988	McGrady and Macdonald (UK)57	Water 100 mL	2 hr	17 (4-52)	12 hr	35 (0-58)
	Agarwal et al (India)58	Water 150 mL	2½ hr	21 (0-50)	12 hr	30 (0-75)
	Scarr et al (Canada) <sup>59</sup>	Coffee/juice 150 mL	2-3 hr	25 (0-90)	>8 hr	26 (0-120)
1991	Read and Vaughan (UK)60	Water no limit	2 hr			
1991	Maltby et al (Canada) <sup>61</sup>	Coffee/juice	2-3 hr	22 (3-70)	>8 hr	25 (0-107)
1991	Mahiou et al (France) <sup>62</sup>	Clear liquid 1000 mL	2 hr	38 ± 18	II hr	35 ± 15
993	Lam et al (Hong Kong) <sup>63</sup>	Water 150 mL	2-3 hr	26 (3-66)	11½ hr	22 (1-78)
	Phillips et al (UK) <sup>64</sup>	Clear liquid,	2¼ hr	21 (0-80)		19 (0-63)
993	Søreide et al (Norway) <sup>65</sup>	Water 300-450 mL	1½ hr	23 ± 20	13 hr	31 ± 30





- We had a great deal of evidence ignored it
- We have even more evidence including a Cochrane systematic review citing 2 hour fast from fluids, 6 hour fast from a light meal, & 8 hour fast from a meal that is heavier/fried/fatty (Chen, 2015)
- New evidence related to fasting and patient satisfaction with the surgical experience

(Imbelloni, Pombo & Filho, 2015; Tosun, Yava & Acikel, 2015)





## What's the Delay Related To?

- "...surgeon demands..." (Korpman, 2012)
- A nurse in Oman, Mohammed Abdullah Al Maqbali stated "Nurses are responsible and accountable for ensuring that preoperative patients do not fast for longer periods than recommended." (Maqbali, 2016)
- Perhaps we should use Rogers' Theory of Diffusion of Innovations? (Anderson & Comrie, 2009)





## NorthBay Policy

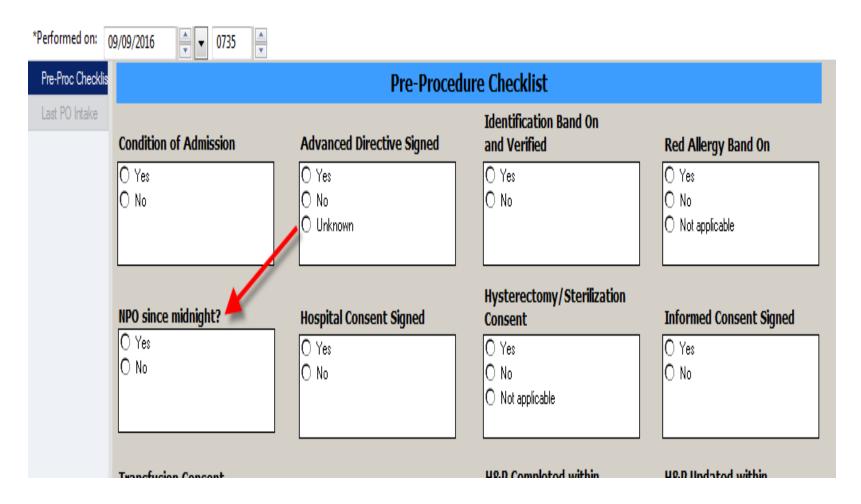
#### PREOPERATIVE FASTING INSTRUCTIONS

- Instruct patient to have nothing by mouth (NPO) for solids after 12 midnight, and a glass of water or cup of coffee as well as their instructed medications the morning of surgery/procedure.
- If surgery/procedure is scheduled after two p.m., instruct patient not to have any solid food at least eight hours before surgery/procedure, and may have clear liquids up to two hours before surgery/procedure.





## NorthBay Electronic Charting







### **Future Research**

Elective Fluid Carbohydrate Loading

(Mann, 2016; Jodlowski & Dobosz, 2011)

 Ultrasonography at the bedside prior to surgery to assess gastric content and volume

(Korpman, 2012)





## Power Up for Surgery!







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## **Bath Basins**



Nora Allen, RN, MS, CCNS, ACNS-BC Clinical Nurse Specialist, Acute Care Services





## Keep our patients clean

Why? Because we as RNs know...

- It is the right thing to do
- They will feel better
- We will decrease infections



- What about how we clean patients?
- What if, how we bathe patients causes harm?







### HAI

- What is a Healthcare Acquired Infection?
  - **□**CAUTI
  - **U**CLABSI
  - **SSI**
  - ☐ Transmission of Multidrug-resistant organisms-MRSA/VRE
- Why is this important to nursing?
  - ☐ Do no harm- nursing oath
  - ☐ Promote best patient outcomes-EBP
  - ☐ Decrease LOS, decrease costs





### **Back to Basics**

- **Environmental Theory-Florence Nightingale**
- ☐ Emphasis on environment, cleanliness, and sanitation
- ☐ Frequent bathing of patients and nurses
- ☐Clean clothing
- ☐ Hand washing #1 strategy to decrease HAIs







## So.. How do we bathe patients?

### What did we learn in nursing school?

- Clean warm water, soap and water in basin
- Washcloths and friction
- Lotion
- Fresh linen









## Current practice Soap & Water

- Scrub a Dub-Dub
- Soap and water and a bath basin

Do we stop and think?

What's inside our basins?

We store lotion, soap, toothpaste, toothbrushes



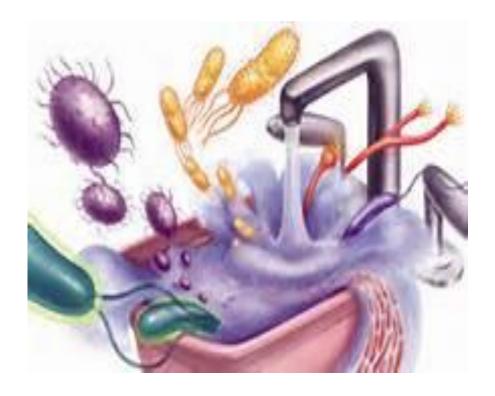


AJCC. 2009:18(1): 31-38, 41





## What's in our Basins?







### Microbial Contamination

- During bathing, friction releases skin flora into the bathwater
- Contaminated water becomes the source for HAIs
- 98% of bath basins grow potentially pathogenic microbes
- Soap and water used in bath basins can contaminate sinks for hand-washing
- Gram negative bacteria- Enterococcus and Staphylococcus are most common organisms present in bath basins





### What is CHG?

- Chlorhexidine Gluconate
- Effective against gram positive and gram negative bacteria, and fungal infections
  - ✓ MRSA, VRE, C diff
  - □Low concentration of CHG alters the integrity of bacterial cell walls
  - □CHG also has residual activity on the skin that prolongs skin antisepsis





## **Bath Basin Study**

- Bath Basin Comparative study: MRSA surveillance in Mid West Hospital
  - 5 ICUs total
  - 3 of the ICUs used CHG 4oz diluted with water in a bath basin for bathing patients
  - Other 2 ICUs used soap and water
- All basins were dated when patient arrived to ICU and basins that had been used for 5 days were included in the sample
- All basins were allowed to dry before culturing





## **HAI Reduction Study**

- Results:
- Basins used for bathing:
  - 98% of basins used for bathing with soap and water had bacterial growth
  - 4% of basins used for bathing with CHG liquid and water had bacterial growth



# How can we stop bacteria growth in basins?

- Using CHG in bath basins decreases bacterial growth by 95.5%
- Storing basins upright causes water to pool which is an avenue for biofilm to grow in the basin
- Better to store basin upside down to dry after use





#### **Bath Basins and HAIs**

- CAUTI accounts for 35-40% of all HAIs in the US and 150-450 million dollars annually to treat
- 30,000 CLABSIs are reported annually in the US alone
- CHG bathing is effective in reducing CLABSI, up to 76%
- Ongoing studies are occurring for to determine if CHG is effective in reducing CAUTI (typically there is a bundled approach so difficult to ascertain)





## CHG Liquid versus wipes

- Cost of CHG wipes (\$5.52 per bath) is 74% more expensive than using the CHG soap and bath method (\$3.18 per bath)
- \$1.75 for each 4 oz bottle of 4% CHG and bath basin \$0.35 (Critical Care Nurse, Vol 34, #5)









## NorthBay Way

- CHG is used for routine bathing for all patients with an indwelling urinary catheter or a central line to help decrease CAUTI and CLABSI rates
- CHG is safe on lines and tubes, and devices
- Bathe patient right up to dressings and over occlusive dressings
- After bathing, clean 6 inches of lines/tubes nearest to patient









#### ONLY USE CHG CLOTHS BELOW THE JAWLINE



Neck, shoulders, and chest.



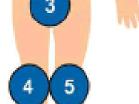
Both arms and hands.

6

3 Abdomen then groin and perineum.

6

- Right leg and foot.
  - Left leg and foot.
  - Back of neck, back, and then buttocks.



Skin may feel sticky for a few minutes. Do NOT wipe off. Allow to air dry.

Front

Back





## **CHG** Application

- Must be allowed to dry on the skin before a dressing can be placed to prevent an adverse reaction
- Peds and neonatal research is currently limited
- More research is needed for adult populations outside of the ICU in helping to reduce CLABSI, MRSA/VRE colonization, and SSI rates in hospitalized patients





#### **CHG Adverse Effects**

- Contact dermatitis or irritation
- Anaphylaxis- and extreme allergic reactions
- Accidental application of CHG to organ or mucus membrane

Class I evidence for CHG bathing does not currently exist, but is a potential option to reduce HAIs (Class II)





### References

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# Tele Rhythm Strips







## Tele Monitor Strip Documentation

- Q 4 hours?
- Q 8 hours?
- Q 12 hours?



#### What is the correct answer?

No clear answer

NorthBay documents q 8 hours and PRN for rhythm changes

(mixed units of 8 and 12 hour shifts)





## Cardiac Monitoring

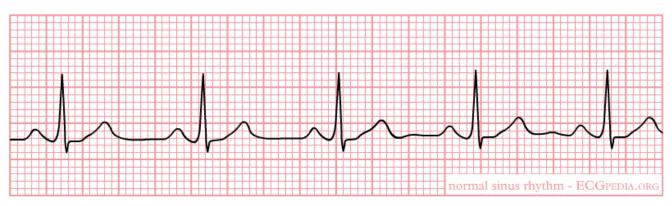
- Why do we cardiac monitor patients?
  - To assess ongoing rhythm
  - To evaluate for rhythm changes
  - To help diagnose patient
    - Example- if patient comes in with syncope- why did they pass out? Bradycardia?
    - If patient had a stroke- why? Afib?





## Critical Thinking

- Assessment is key
- Obtain initial cardiac rhythm as part of initial assessment each shift
- Ongoing assessment of rhythm and document changes as needed









#### Documentation

- Individualize alarm parameters
- Notation of strips during administration of medications
  - Digoxin
  - Lopressor
  - Other cardiac meds- IVP, bolus
- Document significant changes
  - Onset or rhythm change
  - Conversion of rhythm







## Skin Prep for Electrode Placement

Why? To obtain adequate rhythm, without artifact

- Clip excessive hair at electrode sites
- Remove skin oils or lotions with alcohol
- Abrade skin using a washcloth or gauze pad to remove dead skin cells, to decrease artifact
- Ensure gel backing is moist and change electrodes q 48 hours





## Proper Lead Placement

- Consistent lead placement- from one caregiver to the next
  - Check every shift that leads are properly placed
  - Helps prevent mis-diagnosis
  - Decreases alarm







### When to obtain 12 lead ECG

- When ordered
- Rhythm change verification
- Onset of chest pain
- Hospital specific decision base
   and nursing directives







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OPPORTUNITIES FOR
IMPLEMENTING
EVIDENCE-BASED
PRACTICE AT THE
BEDSIDE ARE WAITING
TO BE DISCOVERED!



