





Vernacare Hot Topics

Joseph Kim
May 29, 2019



2019 ICD-10-CM ICD-10-CM-PCS
Quebec City, Canada | Ville de Québec, Canada
May 26-28, 2019 | Oct 24-26, 2019

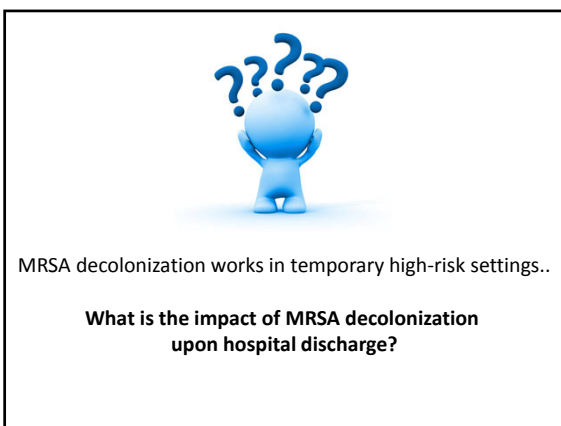
Disclosures:
Local co-investigator for:
STRIVE *S. aureus* vaccine clinical trial (Pfizer)
Prevent CDI 55 QI study (PRIHS)
Images shamelessly borrowed from 

My best of IPAC 2018-2019

Something familiar...
the usual players

Something sort of new...
at least in the news again





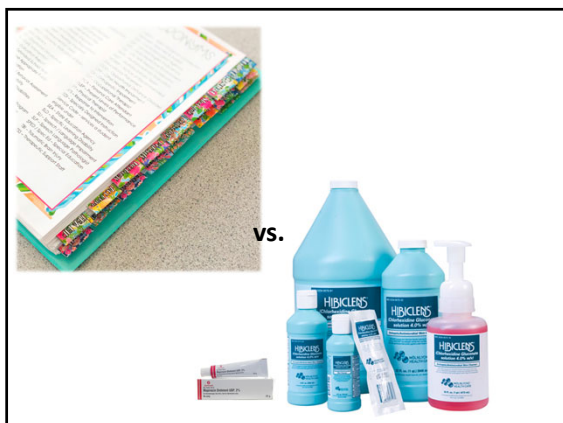
ORIGINAL ARTICLE

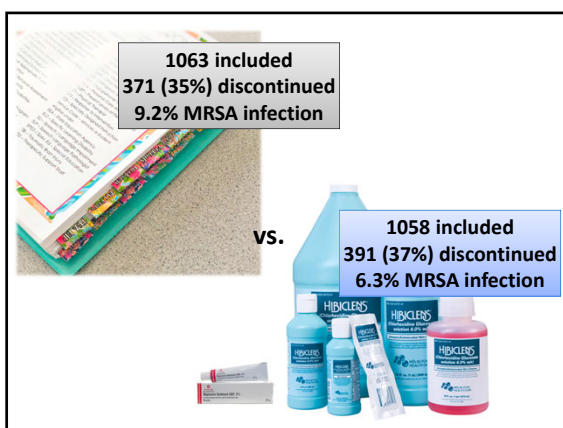
Decolonization to Reduce Postdischarge Infection Risk among MRSA Carriers

S.S. Huang, R. Singh, J.A. McKinnell, S. Park, A. Gombosev, S.J. Eells, D.L. Gillen, D. Kim, S. Rashid, R. Macias-Gil, M.A. Bolaris, T. Tjoa, C. Cao, S.S. Hong, J. Lequeiu, E. Cui, J. Chang, J. He, K. Evans, E. Peterson, G. Simpson, P. Robinson, C. Choi, C.C. Bailey, Jr., J.D. Leo, A. Amin, D. Goldmann, J.A. Jernigan, R. Platt, E. Septimus, R.A. Weinstein, M.K. Hayden, and L.G. Miller, for the Project CLEAR Trial


ABSTRACT


N Engl J Med 2019;380:638-50.






Variable	MRSA Infection, According to CDC Criteria	MRSA Infection, According to Clinical Criteria
Per-protocol analysis		
Unadjusted hazard ratio (95% CI)	0.70 (0.52–0.96) [†]	0.71 (0.52–0.97)
Adjusted hazard ratio (95% CI) [‡]	0.61 (0.44–0.85)	0.61 (0.43–0.84)
As-treated analysis[§]		
Unadjusted hazard ratio (95% CI)		
Nonadherent	1.31 (0.72–2.38)	1.09 (0.57–2.10)
Partially adherent	0.64 (0.40–1.00)	0.72 (0.47–1.11)
Fully adherent	0.56 (0.36–0.86)	0.53 (0.34–0.83)
Adjusted hazard ratio (95% CI) [¶]		
Nonadherent	0.78 (0.36–1.71)	0.72 (0.37–1.41)
Partially adherent	0.75 (0.59–0.95)	0.69 (0.54–0.88)
Fully adherent	0.72 (0.57–0.92)	0.66 (0.51–0.84)


Decolonize ~30 patients to prevent 1 MRSA infection
Natural history of MRSA


Large attrition
Mild reaction
Mupirocin resistance



Hospital environment is a reservoir for pathogens...
And bundles work well in certain clinical settings...

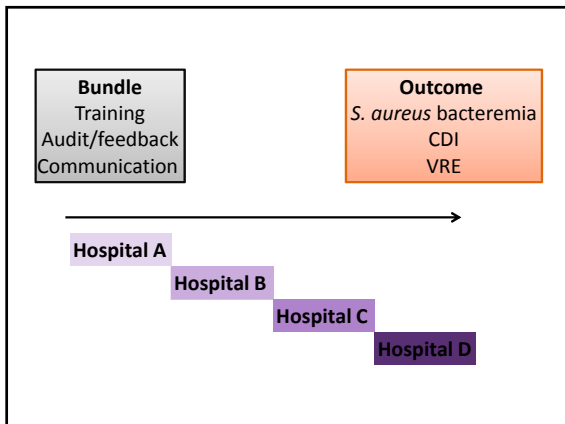
**What is the impact of cleaning bundle on
healthcare-acquired infections?**

 Articles

 **An environmental cleaning bundle and health-care-associated infections in hospitals (REACH): a multicentre, randomised trial**

Brett G Mitchell*, Lisa Hall*, Nicola White, Adrian G Barnett, Kate Halton, David I Paterson, Thomas V Riley, Anne Gardner, Katie Page, Alison Farrington, Christian A Genckle, Nicholas Graves

Lancet Infect Dis 2019;
19: 410-18



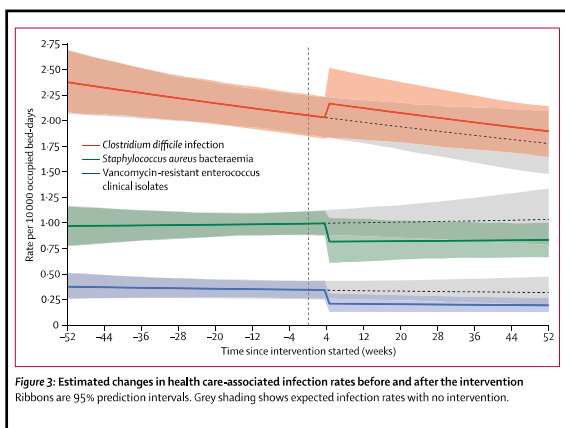
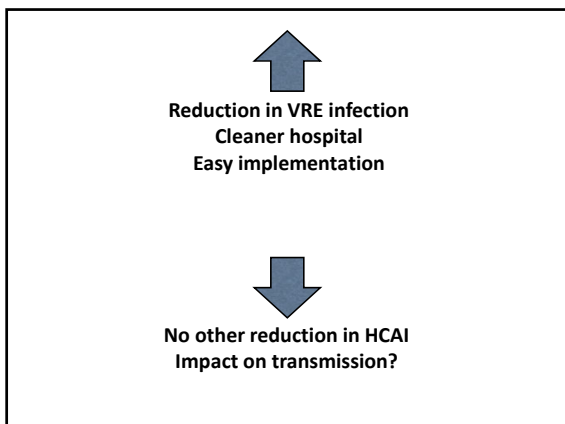


Figure 3: Estimated changes in health care-associated infection rates before and after the intervention. Ribbons are 95% prediction intervals. Grey shading shows expected infection rates with no intervention.





Hand hygiene initiatives come in various shapes and sizes...

What is the impact of a nationwide hand hygiene campaign?

Articles

Effects of the Australian National Hand Hygiene Initiative after 8 years on infection control practices, health-care worker education, and clinical outcomes: a longitudinal study



M Lindsay Grayson, Andrew J Scahill, Philip J Russo, Kate E Ryan, Karen I Olsen, Sally M Havers, Susan Greig, Marilyn Cruickshank, on behalf of Hand Hygiene Australia and the National Hand Hygiene Initiative

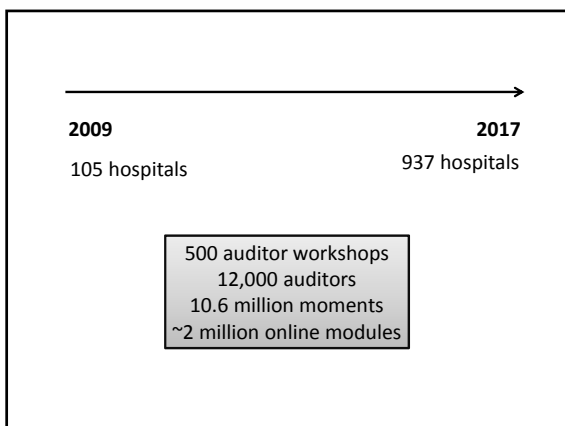
Lancet Infect Dis 2018; 18: 1269-77

National Hand Hygiene Campaign
system change
HCW education
audit/feedback

2009 → 2017

Measurement
HH compliance
HA- *S. aureus* bacteremia





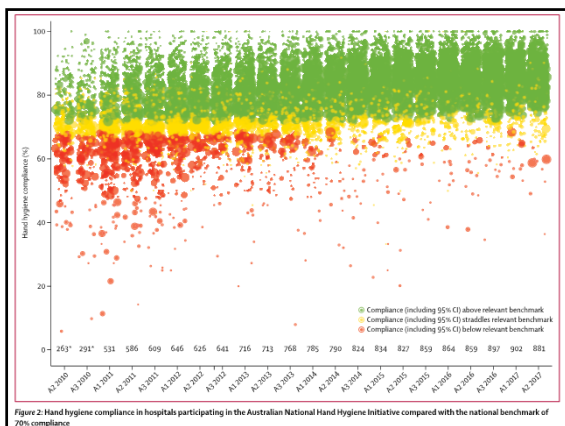





Figure 2: Hand hygiene compliance in hospitals participating in the Australian National Hand Hygiene Initiative compared with the national benchmark of 70% compliance



Massive implementation
Reduction of HA-SAB
AUD \$ 0.02 per inpatient-day


True compliance?
Association ≠ causality



Something sort of new...

QUESTIONS YOU HAVE?

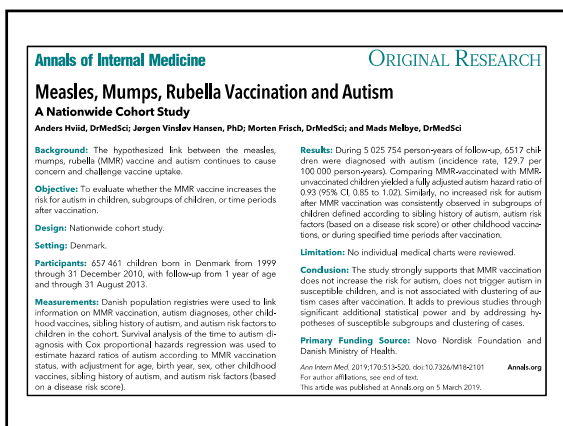


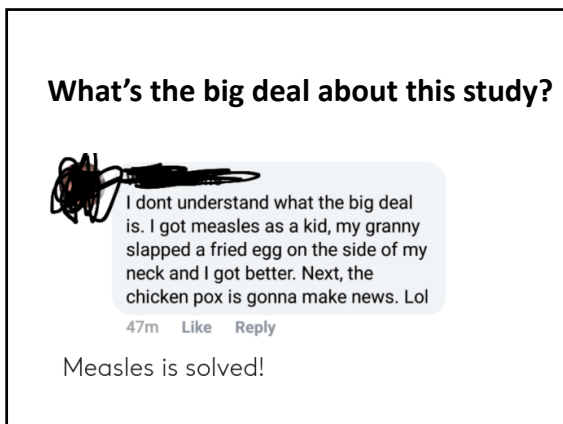
ANSWER WE GOT!

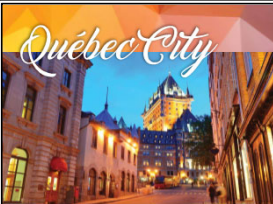
Vaccine hesitancy is real...

**Do we really need any more proof to de-bunk
unfounded risk around vaccine?**









Québec City Population 542 298

Measles, Mumps, Rubella Vaccination and Autism
A Nationwide Cohort Study

Authors: Hviid, DMH, Frølich, Jørgensen, et al.

Background: The hypothesis is that measles, mumps, and rubella (MMR) vaccine and autism comorbidity is causal.

Objective: To assess whether the MMR vaccine increases the risk of autism in children aged 3 to 16 years or more precisely the incidence.

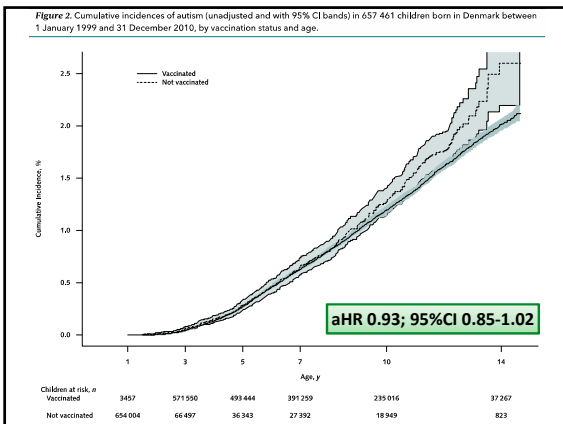
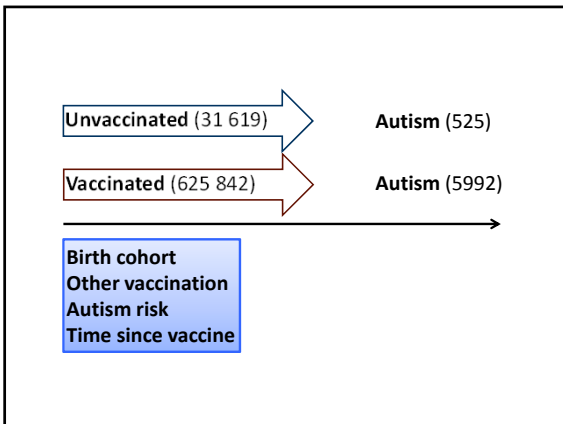
Design: Nationwide cohort study.

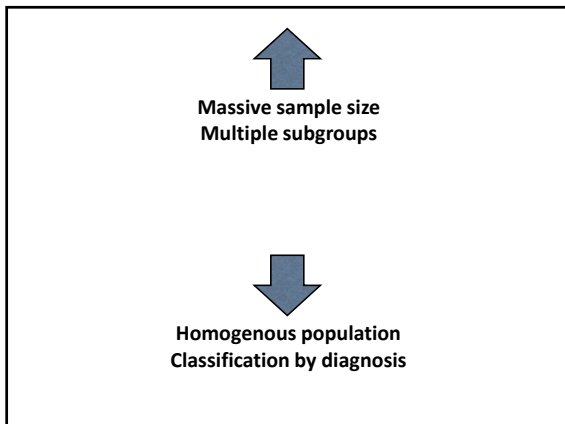
Setting: Denmark.

Participants: 657 461 children born in Denmark from 1999 through to 31 December 2010, with MMR vaccine from 1 year of age and through to August 2010.

Measurements and Main Results: Autism diagnoses were identified by hospital records, Danish Child Protection registers, and the Danish National Register of Psychiatric Diagnoses. The incidence of autism was 525 per 100 000 children aged 3 to 16 years in the unvaccinated group and 5992 per 100 000 children in the vaccinated group. The adjusted hazard ratio (aHR) for autism was 0.93 (95% CI 0.85-1.02).

Conclusion: This study shows that the MMR vaccine does not increase the risk of autism, and that the incidence of autism is similar in children who are vaccinated and those who are not vaccinated.





QUESTIONS YOU HAVE?

ANSWER WE GOT!

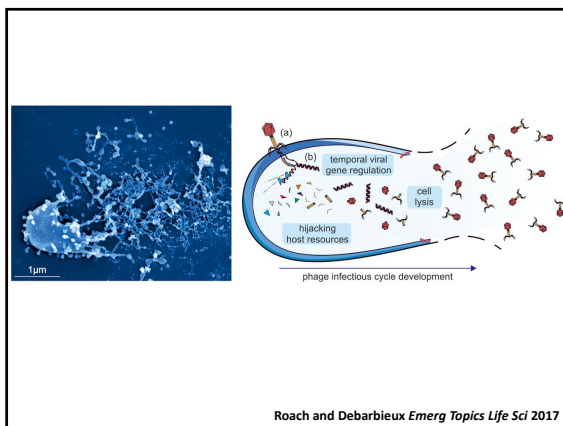
Doc... what about phage therapy for my infection?

This Scientist Used Live Viruses To Save A Woman's Life From A Superbug Infection

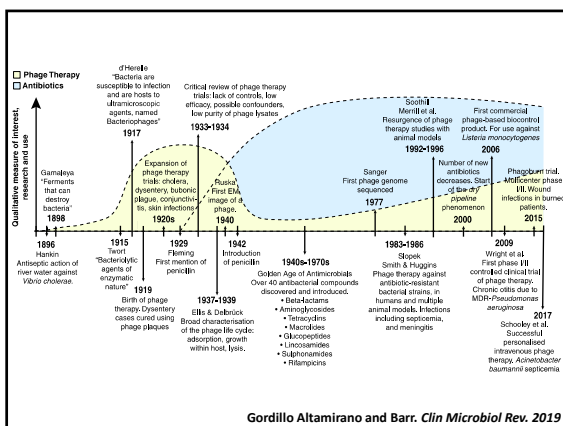
Novel phage therapy saves patient with multidrug-resistant bacterial infection

Introvirous viruses are used to target deadly bacterium; dramatic case suggests potential alternative to killing antibiotics

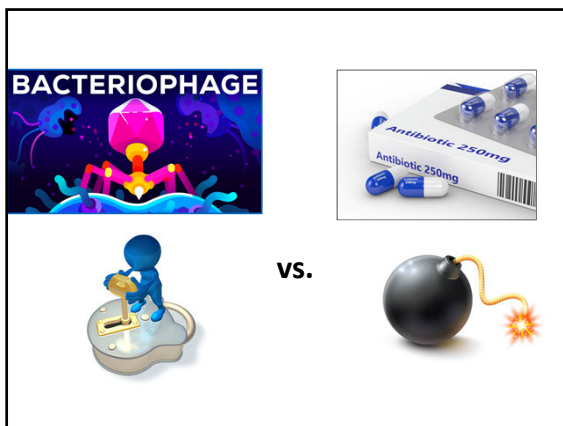
UNIVERSITY OF CALIFORNIA - SAN DIEGO




Roach and Debarbieux *Emerg Topics Life Sci* 2017



Gordillo Altamirano and Barr. *Clin Microbiol Rev.* 2019

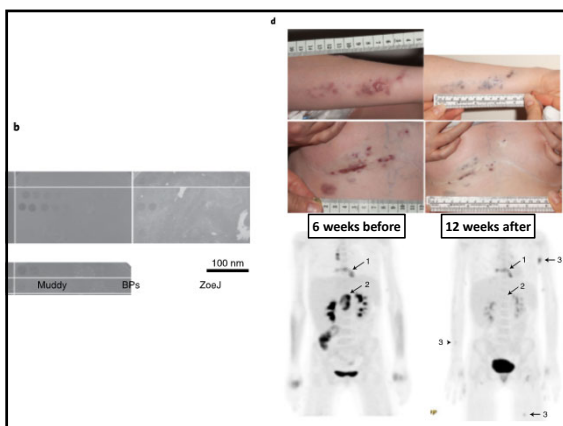


BRIEF COMMUNICATION 

<https://doi.org/10.1038/s41591-019-0437z>

Engineered bacteriophages for treatment of a patient with a disseminated drug-resistant *Mycobacterium abscessus*

Rebekah M. Dedrick^{1,4}, Carlos A. Guerrero-Bustamante^{1,4}, Rebecca A. Garland¹, Daniel A. Russell¹, Katrina Ford², Kathryn Harris², Kimberly C. Gilmour², James Soothill², Deborah Jacobs-Sera¹, Robert T. Schooley³, Graham F. Hatfull^{1,4} and Helen Spencer^{1,4}



STAY TUNED
COMING SOON
UNDER CONSTRUCTION

ClinicalTrials.gov

That record 1 of 1 for: NCT03140055

Bacteriophages for Treating Urinary Tract Infections in Patients Undergoing Transurethral Resection of the Prostate

The safety and scientific validity of this study is the responsibility of the study sponsor and investigators. Listing a study does not mean it has been approved by the U.S. Federal Government. Read our disclaimer for details.

Study Description

