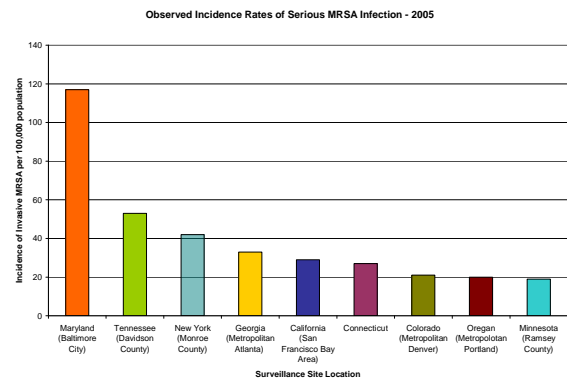
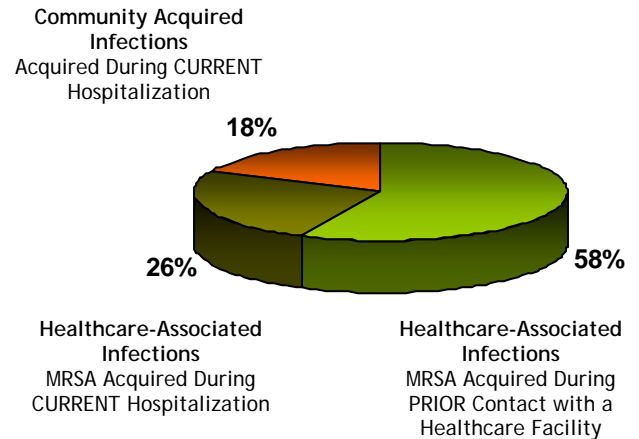


*MATCHING THE SOLUTION TO PROBLEM BY APPLYING
A SOCIAL CHANGE APPROACH*

Background

- ◆ The Centers for Disease Control and Prevention (CDC) estimates that nearly 100,000 *serious* MRSA infections occur in the US annually, resulting in close to 20,000 deaths.¹
- ◆ Eighty-four percent (84%) of these infections are the consequence of a healthcare-associated transmission. Sixteen percent (16%) occur in individuals who have acquired the non-healthcare associated strain.
- ◆ In 1993, 2,000 MRSA infections were reported in US hospitals. In 2005, data from the AHRQ Healthcare Cost and Utilizations Project (HCUP) indicates that number is 368,000
- ◆ Regional variation in MRSA rates is considerable with the highest reported rates occurring in Baltimore City with 116 cases of serious MRSA infection per 100,000 inhabitants.
- ◆ 4/5 Patients with serious MRSA infection (80,000/yr) survive their initial illness - but as a consequence may need extended courses of IV antibiotics, multiple surgeries, lost limbs and delayed life saving treatments.
- ◆ Patients with serious MRSA infection are hospitalized for an average of 10 days. Their infection adds \$27,000 to the cost of their care.
- ◆ MRSA is spread when people coming in contact with patients who are infected or colonized with MRSA spread the germ to others by way of their hands, clothes and shared equipment. As a result, the opportunities for transmission exist on a scale millions.



¹ Klevens RM, Morrison MA, Nadle J, Petit S, Gershman K, Ray S, Harrison LH, Lynfield R, Dumyati G, Townes JM, Craig AS, Zell ER, Fosheim GE, McDougal LK, Carey RB, Fridkin SK; Active Bacterial Core surveillance (ABCs) MRSA Investigators. Invasive methicillin-resistant *Staphylococcus aureus* infections in the United States. *JAMA*. 2007 Oct 17;298(15):1763-71. PMID: 17940231

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- ◆ The evidence-based practices associated with reduced MRSA transmission are long-standing and well-established but not consistently followed.²

1. Identify the reservoir of infected and colonized patients
2. Wash hands before and after every interaction with a patient and before and after putting on gloves
3. Protect clothing from becoming a transmission source by wearing gloves and gown when interacting with an infected or colonized patient
4. Keep equipment from becoming a transmission source by using designated equipment or cleaning
5. Effectively clean the patient care environment

- ◆ Successful control of MRSA transmission has been demonstrated in Northern Europe and isolated facilities within the US.

Location	Approach	Intensity/Cost	Durability	Spread
Northern Europe	Search and Destroy	High	High	Low
University of Pittsburgh/Brigham	Active Surveillance	Moderate	Moderate	Low
Pittsburgh VA Medical Center	Toyota Production System	High	Moderate	Low
Robert Wood Johnson Foundation/Plexus/Maryland Patient Safety Demonstrations	Positive Deviance	Low	High	High

² (7) Muto CA, Jernigan JA, Ostrowsky BE, Richet HM, Jarvis WR, Boyce JM, and Farr BM. 2003. SHEA Guideline for Preventing Nosocomial Transmission of Multidrug-Resistant Strains of Staphylococcus aureus and Enterococcus. Infection Control and Hospital Epidemiology 24, no. 5:362-386.



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Overview of Positive Deviance as a Social Change Approach for MRSA

Positive Deviance is an evidenced-based, validated social change process practiced extensively throughout the world. The Positive Deviance Institute at the Tufts University Friedman School of Nutrition has been awarded a Rockefeller Foundation Bridge Grant to expand global applications of this approach. The theoretical framework for Positive Deviance is complexity science.³

- ◆ Evidence-based prevention practices are well established - most require people to consciously carry out behaviors, like hand-washing and following barrier precautions, that are NOT the BEHAVIORAL and CULTURAL norm
- ◆ The spectrum of people involved as possible transmitters goes far beyond the "doctor-nurse" construct typically considered.
- ◆ Among the pool of "potential transmitting agents", there are already examples of successful but "deviant" practices that are feasible and successful in the current environment.
- ◆ The process of identifying "positive deviant" examples creates a setting for *disseminated* discovery and implementation of additional latent solutions and acts as the "process" stimulant for social and cultural change.
- ◆ Involving the "potential transmitting agents," that is, the people whose behaviors have to change in identifying these existing positively deviant and latent practices and then having those people actively amplify them can lead to rapid, durable change.⁴
- ◆ The *unit of transfer* is the PROCESS for arriving at locally appropriate solutions NOT the solutions themselves.

³ Tanner, Richard, Sternin, Jerry. Your Company's Secret Change Agents. Harvard Business Review. May 1, 2005

Plsek PE, Wilson T. Complexity, leadership, and management in healthcare organisations. BMJ. 2001 Sep 29;323(7315):746-9.. PMID: 11576986

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Positive Deviance Demonstration Projects - MRSA

2005-2007

Heinz Division Pavilion at the VA Pittsburgh Healthcare System

Alpha Test

*Jon C. Lloyd, MD, FACS MRSA Prevention Coordinator, VAPH
Coordinator Regional MRSA Prevention Collaborative, Centers for
Disease Control and Prevention
Jerry Sternin and Monique Sternin, Positive Deviance Initiative*

2005-2007

Robert Wood Johnson Foundation Pioneer Grant to Plexus Institute

Beta Test (6 Primary Sites and 41 Partner Facilities)

- ◆ Albert Einstein Medical Center; Philadelphia, PA ACTION NETWORK (JEFFERSON)
- ◆ Billings Clinic; Billings, MT
- ◆ Franklin Square Hospital Center; Baltimore, MD ACTION NETWORK (MEDSTAR)
- ◆ The Johns Hopkins Hospital; Baltimore, MD HRO NETWORK
- ◆ University of Louisville Hospital; Louisville, KY
- ◆ Veterans Administration Pittsburgh Health System; Pittsburgh, PA

*Jon C. Lloyd, MD, FACS - VA PHS/CDC
Curt Lindberg - Plexus Institute
Jerry Sternin - Positive Deviance Initiative
Margaret M. Toth, MD - Delmarva Foundation
John Jernigan, MD Centers for Disease Control and Prevention*

23-66% Reductions in MRSA clinical infection rates from facility data. NHSN data currently being analyzed

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2005-2007

Merck

Beta Test (2 sites from Columbia - in coordination with RWJF program above)

- ◆ Hospital El Tunal; Bogotá, Colombia
- ◆ Hospital Pablo Tobon Uribe; Medellin, Colombia

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Curt Lindberg - Plexus Institute
Jerry Sternin - Positive Deviance Initiative*

2006-2007

Veterans Administration

Veterans Administration PD pilot program

- ◆ Lebanon VA Medical Center; Lebanon PA
- ◆ Michael E. DeBakey VA Medical Center; Houston TX
- ◆ VA Maryland Health Care System; Baltimore MD
- ◆ VA Western New York Healthcare System; Buffalo, NY
- ◆ Wilkes-Barre VA Medical Center; Wilkes-Barre, PA

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NHSN data currently being analyzed

2006 -2007

Maryland Patient Safety Center

Regional Feasibility Demonstration

- ◆ Mercy Medical Center, Baltimore, MD
- ◆ St. Joseph Medical Center; Baltimore, MD
- ◆ Baltimore Washington Medical Center; Baltimore, MD
- ◆ Harbor Hospital; Baltimore MD ACTION NETWORK (MEDSTAR)
- ◆ Union Memorial Hospital; Baltimore, MD ACTION NETWORK (MEDSTAR)
- ◆ Easton Memorial Hospital, Easton, MD
- ◆ Dorchester Hospital, Dorchester, MD

*Margaret M. Toth, MD - Delmarva Foundation
Jerry and Monique Sternin - Positive Deviance Initiative
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50% of facilities successfully implemented targeted PD components after a single 2 day training experience with supplemental coaching calls.



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2007-2008

Maryland Patient Safety Center MRSA Prevention Initiative

First Regional Initiative in US for hospitals, nursing homes, and dialysis units in
District of Columbia, Maryland, Virginia

Facility Breakdown

20 Hospitals
6 Nursing Homes
6 Dialysis Center

Regional Breakdown

2 Virginia
3 District of Columbia
26 Maryland

Margaret M. Toth, MD - Delmarva Foundation

E. Anne Millman - Delmarva Foundation

Jerry Sternin - Positive Deviance Initiative

Lisa Kimball PhD/Sharon Benjamin PhD Plexus Institute

John Jernigan, MD Centers for Disease Control and Prevention

AMPLIFICATION STRATEGIES

1. Use existing "infrastructures"
 - i. **HRO Network** (Hopkins, Sentara and Trinity representatives - existing relationship with Delmarva Foundation)
 - ii. **Use Action Network** - Franklin Square (MEDSTAR, RAND) and Albert Einstein (JEFFERSON, CNA Corp) were RWJF Beta Sites and exceptional performers. Regenstrief Institute (INDIANA UNIVERSITY) has an existing MRSA ACTION grant and desire to use PD. Sentara is a new site for the MPSC program. (CNA Corp)
 - iii. **Use the QIO network** - working with Jade Perdue
 - iv. **Use the ESRD network** - Delmarva's MPSC program targets 6 Dialysis centers - partnering with the Mid-Atlantic Renal Coalition
 - v. **Use large systems** - E.g. Davita (1300 dialysis centers affiliated with 800 hospitals).

2. Leverage CDC partnership
 - i. NSHN - Clinical Isolates monitoring - low cost trending data