Ontario's experience with healthcare associated infections

Michael Gardam
Director, Infectious Diseases
Ontario Agency for Health Protection and Promotion;
Medical Director, Infection Prevention and Control
University Health Network

March 18, 2010

Overview

- Some history
- Current activities and the future
- Questions

Ontario and infectious diseases

- Walkerton
- West Nile virus
- SARS
- Legionella


Public Reporting
Accountability
Accreditation
Leadership
Education
Regional presence
Healthcare design
Social Marketing
Behavioural techniques
Resource teams

Mandatory Public Reporting

Ontario

MINISTRY OF HEALTH AND LONG-TERM CARE

HOME | PUBLIC INFORMATION | NEWS MEDIA | **HEALTH CARE PROFESSIONALS** MOHLTC | ONTARIO.CA

- What's Being Done?
- Communiques
- **Patient Safety Indicators**
- C. difficile
- Methicillin Resistant Staphylococcus Aureus (MRSA)
- Vancomycin Resistant Enterococcus (VRE)
- Hospital Standardized Mortality Ratio (HSMR)
- Central-Line Primary Blood Stream Infection (CLI)
- Ventilator-Associated Pneumonia (VAP)
- Surgical Site Infection Prevention
- Hand Hygiene Compliance
- Surgical Safety Checklist (SSC)

Patient Safety

Hospital reporting on patient safety issues provides valuable data that can help reduce risk and improve outcomes within Ontario's health care system. Clear and standardized reporting by all hospitals in the province will help create a patient safety culture in which health care professionals learn from things that go wrong and use and share the knowledge across the system to reduce or eliminate the risk.

By April 2009, Ontario hospitals will be reporting on eight patient-safety indicators that can provide valuable data on which to base effective benchmarks, best practices and foster patient safety improvements across the province's health care system :

Reportable as of September 2008

- Clostridium Difficile Infection (CDI)
  C. difficile is a bacteria that causes infectious diarrhea and that can spread in health care settings. Find out about C. difficile rates in Ontario hospitals.

Reportable as of December 2008

- Methicillin Resistant Staphylococcus Aureus (MRSA)
  MRSA is a bacterium that can cause infections and that can spread in a health care settings. Find out about MRSA rates in Ontario hospitals.
- Vancomycin Resistant Enterococcus (VRE)
  VRE is a bacterium that causes difficult-to-treat infections, and that can spread in health care settings. Find out about VRE rates in Ontario hospitals.
- Hospital Standardized Mortality Ratio (HSMR)
  Read about HSMR and how it is calculated in Ontario hospitals.

Reportable as of April 2009

- Central-Line Primary Blood Stream Infection (CLI)
- Ventilator-Associated Pneumonia (VAP)
- Surgical Site Infection Prevention
- Hand Hygiene Compliance

Reportable as of July 2010

- Surgical Safety Checklist (SSC)

Toronto General Hospital Site

View Hospital Website

View Provincial Summary

Hospital Corporation Name	UNIVERSITY HEALTH NETWORK
LHIN	Toronto Central
Hospital Group Type	Acute Teaching

Indicator	Reporting Period	Data	
Clostridium Difficile Infection (CDI)	Jan 01 - Jan 31, 2010	Rate per 1,000 patient days: 0.42 Case Count: 5	Compare with similar hospitals
Methicillin Resistant Staphylococcus Aureus (MRSA)	Oct 01 - Dec 31, 2009	Rate per 1,000 patient days: 0.03 Case Count: <5	Compare with similar hospitals
Vancomycin Resistant Enterococci (VRE)	Oct 01 - Dec 31, 2009	Rate per 1,000 patient days: 0.03 Case Count: <5	Compare with similar hospitals
Hospital Standardized Mortality Ratio (HSMR)	Apr 01, 2007 - Mar 31, 2008	Canadian Institute for Health Information (CIHI) HSMR reports	CIHI reports HSMR data for eligible acute care hospitals only
Central-Line Primary Blood Stream Infection (CLI)	Oct 01 - Dec 31, 2009	Rate per 1,000 central line days: 2.90 Case Count: 13	Compare with similar hospitals
Ventilator-Associated Pneumonia (VAP)	Oct 01 - Dec 31, 2009	Rate per 1,000 ventilator days: 3.50 Case Count: 8	Compare with similar hospitals
Surgical Site Infection Prevention	Oct 01 - Dec 31, 2009	Percent (%): Not Eligible Case Count: -	Compare with similar hospitals
Hand Hygiene Compliance	Apr 01, 2008 - Mar 31, 2009	Compliance before patient contact (%) : 44.00 Compliance after patient contact (%) : 70.00	Compare with similar hospitals

Regional Infection Control Networks

- 14 networks sharing Local Health Integration Network boundaries
- Overlapping with 36 public health unit boundaries
- Hubs for
  - Education
  - Surveillance
  - Developing partnerships
  - Knowledge exchange

Infection control funding

- Additional staffing provided to acute care facilities to hire more infection prevention and control staff

Infection Control Resource Teams

- Outbreak/problem assessment and control
- Expert front line infection control teams
- Started as hospital contract services
- Now under OAHPP
  - Free!
  - Full day visit
  - Report
  - Follow up, questionnaire

Resource teams and CDI

- Visited hospitals compared to control hospitals
  - 48% drop in CDI rates compared with a 2% increase in controls
  - Often a catalyst for wider system and behavioural change
- They work

Education

- Online education resources
  - Central server for the province
  - Ability to track use, results
- Improve existing products
  - Avoid duplication
  - Shorter, easier to navigate

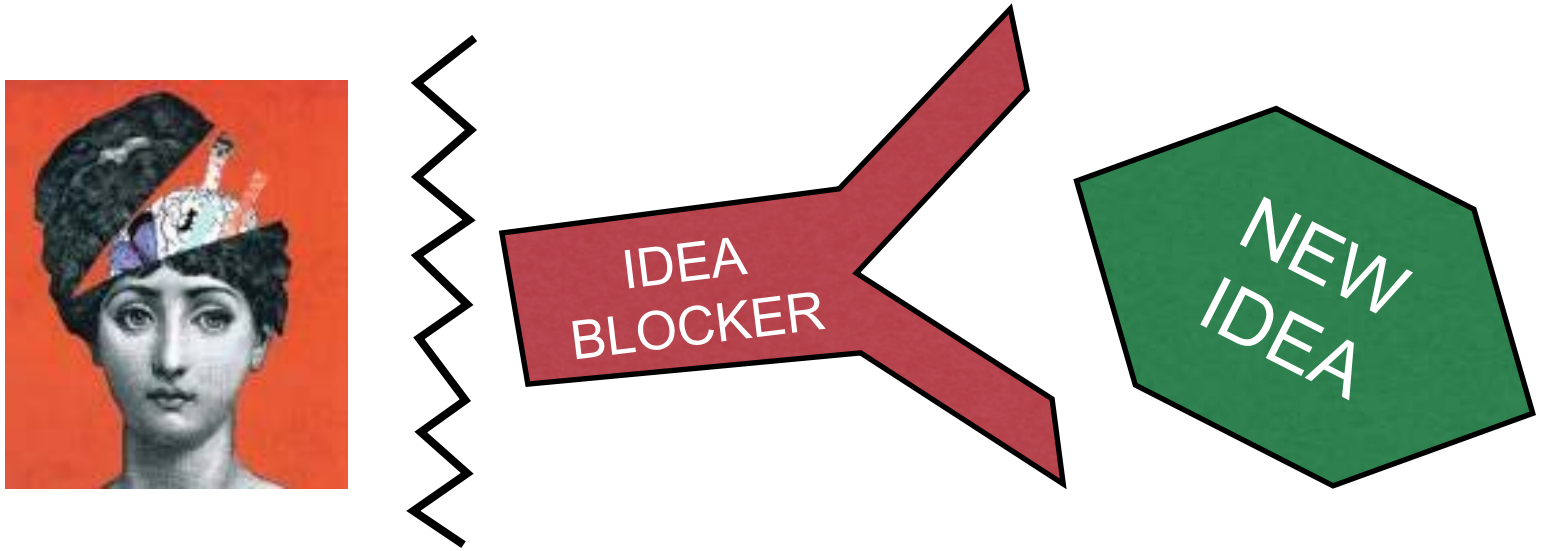
Behaviour change

- Current “top down” infection control approaches have had limited success
- Traditional “best practice” approach has been disappointing

- We need to acknowledge that healthcare workers are human!

Sharing best practices

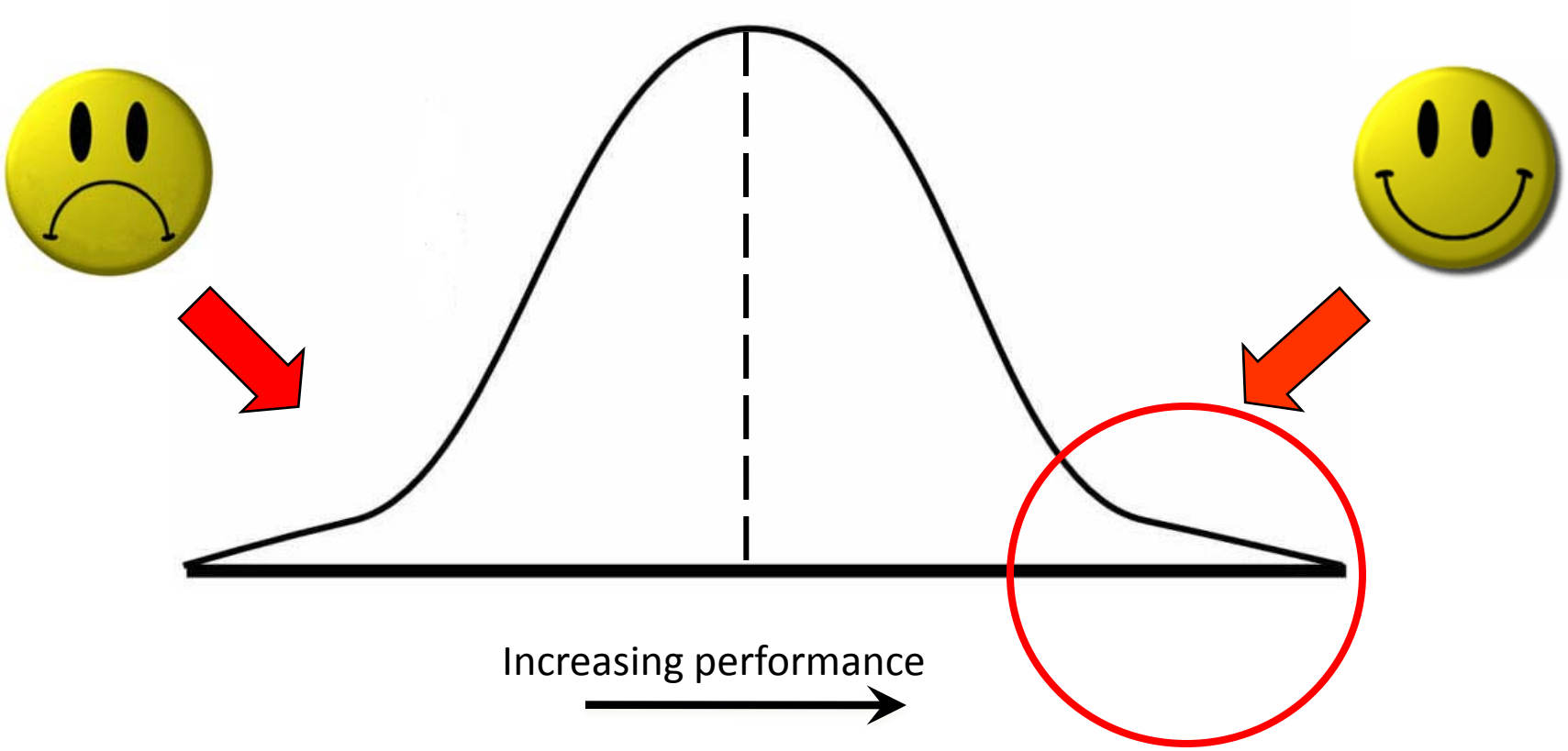
Solutions imported from external sources results in “social immune response” similar to an immune defense response



The Premise Of Positive Deviance

No matter how difficult a problem, in every community there are individuals whose uncommon practices/behaviours enable them to find better solutions to problems than their neighbours who have access to the same resources

In any group…



PD and MRSA

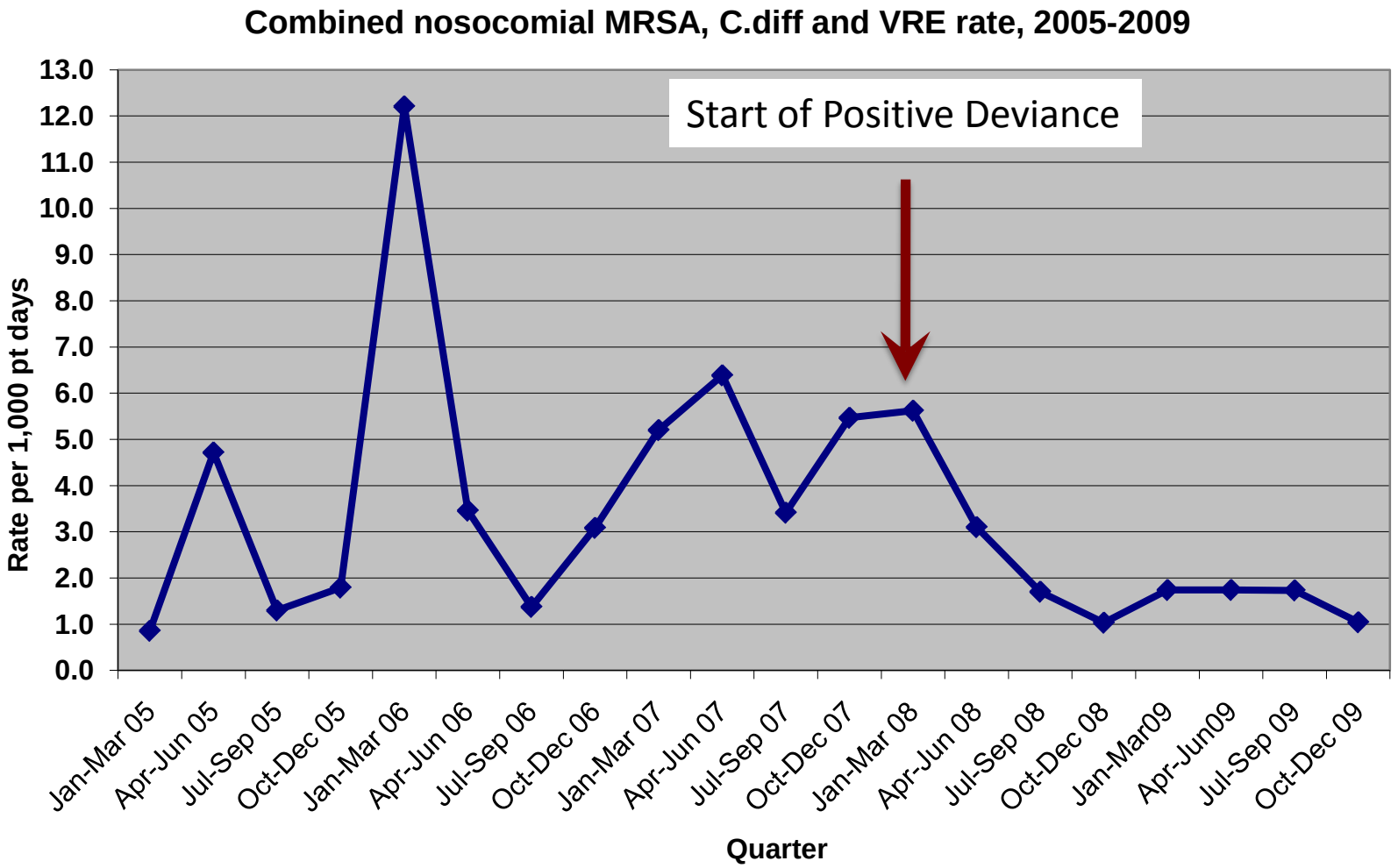
- US pilot project
- Implementation of PD followed by 20 month follow up period
- No attempt to decolonize patients
- 26-80% reduction in MRSA clinical infections

SHEA 2009

How does it work?

- Invite those who are interested
- Front-line staff must be there (the "Gurus")
- Let them discover and adopt their own solutions
- Identify and analyze the positive deviants
- Track and publish results

Academic hospital positive deviance results



Questions?

Will *deviate* for change

positivedeviance.ca