Some success in target programmes
- Bundles
- MRSA, VRE
- Hand Hygiene

Slow off the mark in CRE's

Major concern is in health infrastructure to manage a pandemic
- Likely accelerators of transmission
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- SARS
  - 8,422 cases and 916 deaths

- Dengue serotypes 1970 to 2004
  - 230 million cases annually
  - 500,000 hospitalised
  - 25,000 deaths

Global dissemination of methicillin-resistant Staphylococcus aureus (MRSA). The white arrows indicate the early movements of healthcare-associated MRSA around the world. Note lack of data for some regions.
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1918

Between April 2009 and January 2010; 209 countries had reported 14,141 deaths

2009
2010
2011

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“IT is time to close the book on infectious diseases, and declare the war against pestilence won”

− Dr. William H. Stewart, US Surgeon General 1965–69

Disclosure

− Robert Garcia is a member of the Speaker’s Bureau of Sage Products, Inc.
Today’s Objectives

- Review major successes in the prevention of VAP and CLABSI in the United States
- Define future challenges in the prevention of VAP and CLABSI in the United States

**Ventilator-Associated Pneumonia**

**U.S. CDC: Improving Surveillance for Ventilator-Associated Events in Adults**

- New Definition
  - Detects complications and conditions including, but not limited to VAP
  - Requires a minimum period of time on ventilator
  - Focuses on readily available, objective, clinical data
  - Does not include chest radiograph findings
  - The goal for implementation in NHSN (National Healthcare Safety Network) is January 2013.

**NHSN, ICU VAP Rates**

<table>
<thead>
<tr>
<th>Type</th>
<th>#ICUs</th>
<th>#VAP</th>
<th>VAP Vte</th>
<th>Mean</th>
<th>10%</th>
<th>25%</th>
<th>50%</th>
<th>75%</th>
<th>90%</th>
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<tr>
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<td>999</td>
<td>75.327</td>
<td>0.5</td>
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<td>0.1</td>
<td>0.3</td>
<td>0.6</td>
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<td>1267</td>
<td>20.677</td>
<td>3.4</td>
<td>0.9</td>
<td>2.6</td>
<td>4.6</td>
<td>7.2</td>
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<tr>
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<td>64</td>
<td>384</td>
<td>75.217</td>
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<td>4.1</td>
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<tr>
<td>Neonatal</td>
<td>9</td>
<td>47</td>
<td>10.126</td>
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**The New VAE Algorithm**

- It is a surveillance algorithm and is not intended for use in the clinical management of patients
- There are 3 Tiers of the new VAE definition
  1. *Ventilator-Associated Conditions* / FIGI, FEEP
  2. *Infection-Related Ventilator-Associated Complications* / Fever or WBC and New antimicrobial agent
  3. *Possible and Probable VAP* / Patient secretions and/or other positive laboratory evidence

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VAP Challenges

- International standards for VAP definition
- Use of subglottic secretion suction devices
- Use of silver coated tracheostomy tubes
- Use of tapered, cylindrical endotracheal tubes
- Implementation of comprehensive oral care, including frequency of protocols
- Extend intervention efforts to HAP

Central Line-Associated Bloodstream Infections

CLABSI Reductions, U.S.

- National reporting from all 50 U.S. States via NHSN
- Used Standardized Infection Ratio (SIR) metric
- SIR = observed # of HAs/predicted # of HAIs
- A 42% reduction in CLABSI rate since 2008

CLABSI Challenges

- Increasing compliance with maintenance bundles
- Appropriate use of skin antiseptics
- Type, disinfection, and replacement of needleless connectors
- CLABSI prevention among neonates
- CLABSI prevention among immunocompromised patients
- Decolonization of patients with central lines with chlorhexidine

Meta-Analysis on Daily Bathing with CHG HA-BSI

- One randomized and 11 non-randomized trials
- 281 CHG pts. vs 6777 POs; 357 control pts. With CHG in 69.817 POs
- Odds ratio 0.44

Sample CHG Bathing Protocol

- Study outlining daily CHG bathing flow chart:


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Thank You!
Questions?

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ExCeL London
29th September – 1st October 2013

Success and failure in infection control

Hugo Sax, MD
Division for Infectious Diseases and Infection Control
Europe

http://en.wikipedia.org/wiki/List_of_countries_by_GDP_(nominal)_per_capita

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Number of infection prevention and control nurse full-time equivalents per 250 hospital beds by country

Median number of infection prevention and control nurse full-time equivalents (FTE) per 250 hospital beds

Percentage of patients on antimicrobials

Percentage of antimicrobials for which the reason for use was documented in the patient’s records

Indications for antimicrobial use in European acute care hospitals

Percentage of meticillin-resistant S. aureus isolates from HAIs

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In Europe, on each single day 80,000 patients suffer from at least one healthcare-associated infection.

The media view
MRSA. THE FORGOTTEN MASSACRE

OUR SQUALID HOSPITALS

The deadly superbug that puts Britain’s hospitals to shame

Success in England - 1

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Success in England - 2

- Spot light
- Management and organisational awareness
- Clinician engagement
- Change in nomenclature
  HAI → healthcare associated infection
  infection control → infection prevention and control

Future challenges - 1

Future challenges - 2

- Global problem
- Increased incidence of Gram negatives
- Antimicrobial resistance
- Behavioural change
- Sustainability

Acknowledgements:
Susan Hopkins – Public Health England
CMO annual report

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