

2015 APHLTM ANNUAL MEETING

and ninth government environmental laboratory conference



*Performance
Driven —
Racing to
Results*



Race with CRE: Indiana State PHL Leads the Efforts to Develop Statewide CRE Surveillance System

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Help Request from Sentinel Lab

How are we going to identify CRE ?



What Were Behind the Request?

- New Mandatory Reporting Requirement of Marion County Health Department
- Coexistence of different CRE AST breakpoints
 - M100-21 (New CLSI at that time)
 - M 100-20
 - M 100-19

Were We Ready to Respond?

- CRE infection was not a reportable condition by the Indiana Communicable Disease Rule
- Did not perform any CRE related testing

Evolution Phases

- Assess the needs
- Built testing capabilities
- Provide testing and technical supports
- Expanded efforts beyond the Laboratory
- Established CRE surveillance guidelines

Accessing the Need

- Surveyed the sentinel labs in Indiana.
 - Systems used for calling CRE
 - CLSI versions used
 - Awareness of CRE reporting
 - Major obstacles

What Were the Challenges?

- Relied on automated systems to flag CRE
- Lack of training on non-automated alternative methods.
- Behind on the CLSI and CDC's CRE guidelines

Built CRE Testing Capabilities -ISDH Lab

- Outreach Team recruited sentinel labs for CRE project
 - IU Health
 - Parkview Health
 - Lutheran Health Network
- Applied the CDC/APHL MDRO project funding
- Validated CRE identification methods in house

Built CRE Testing Capabilities - Sentinel Labs

- Provided workshops on CRE identification.
- Promptly Communicated the CDC's CRE guidelines to all sentinel labs.

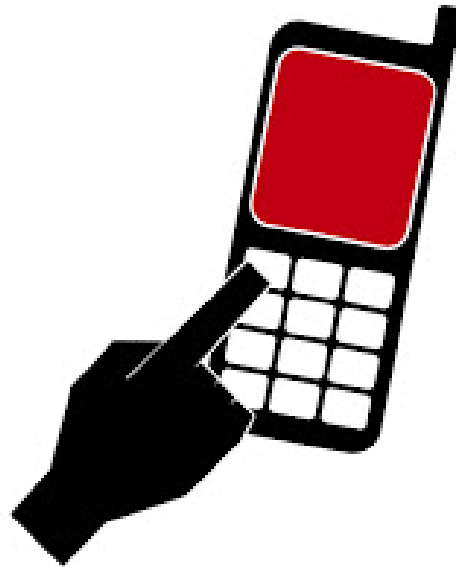
Methods Brought Onboard

- 12 -disk diffusion method
 - To identify the mechanisms of resistance
- KPC and NDM1 Multiplex Real Time PCR
- Modified Hodge Test
- Metallo-beta-lactamase (MBL) Etest

Provided Testing and Technical Supports

- 01. 2013 started CRE confirmation test service.
- Provided feedback to submitting labs on their test performance.
- Encouraged submission of suspected CRE isolates

Calling the Submitters



Expanded Efforts Beyond the Laboratories

- Identify stake holders
- Formed the Indiana Antibiotic Resistance Advisory Committee

Who Are on the Table?



ISDH

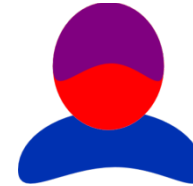
(Lab, ERC, Regulatory)



Sentinel
Labs



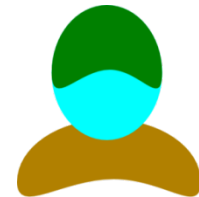
Marion CHD



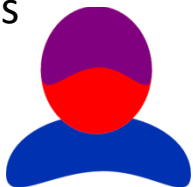
APIC-IN



Hospital
Pharmacists



Indiana Hospital
Association



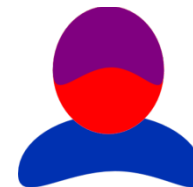
Health Care
Excel



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Indianapolis
Patient Safety
Coalition



Academia

Established CRE Surveillance Guidelines

- Discusses progress made in each representative entities
- Meets quarterly
- Recommends best practices and guidelines

What Did We See in Indiana? (1.2013-4. 2015)

Total Number of Isolates: 476

KPC Marker Detected

K. pneumoniae 266

E. coli 14

C. freundii 5

Enterobacter cloacae 2

Serratia marcescens 2

Citrobacter koseri 1

What Did We See in Indiana? (1.2013-4. 2015)

Other Markers Detected

OXA 48 1 *K. pneumoniae*

VIM 1 *E. coli*, 1 *E. cloacae*

NDM1 1 *Proteus mirabilis*

Look Ahead

- Expand carbapenemase genetic marker panel
 - KPC, NDM1, **VIM, IMP, OXA48**
- Incorporate MALDI-TOF, Carb NP to the testing algorithm
- Web-based isolate submission/reporting

Look Ahead

The new Communicable Disease Rule

- Requires reporting CRE cases to ISDH
- Requires submitting CRE isolates to ISDH Lab
- Will be in effective late 2015 or early 2016

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- CDC/APHL MDRO Grant
- Antibiotic Resistance Advisory Committee

Are We Staying in the Race?

