Proposed XDRO Registry:
What is It and How Might It Control CRE?

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Disclosures

- I receive support from the CDC Prevention Epicenters program. I have no financial conflicts of interest.

Disclaimer

- I do not work for IDPH. The views expressed in this presentation are mine only.

- All descriptions of the XDRO registry are proposed; the rule (690.1500) is still in comment period and is not approved.

Objectives

1. Describe current regional CRE control strategy and identify gaps

2. Discuss details of proposed XDRO registry and how it address 2 major gaps
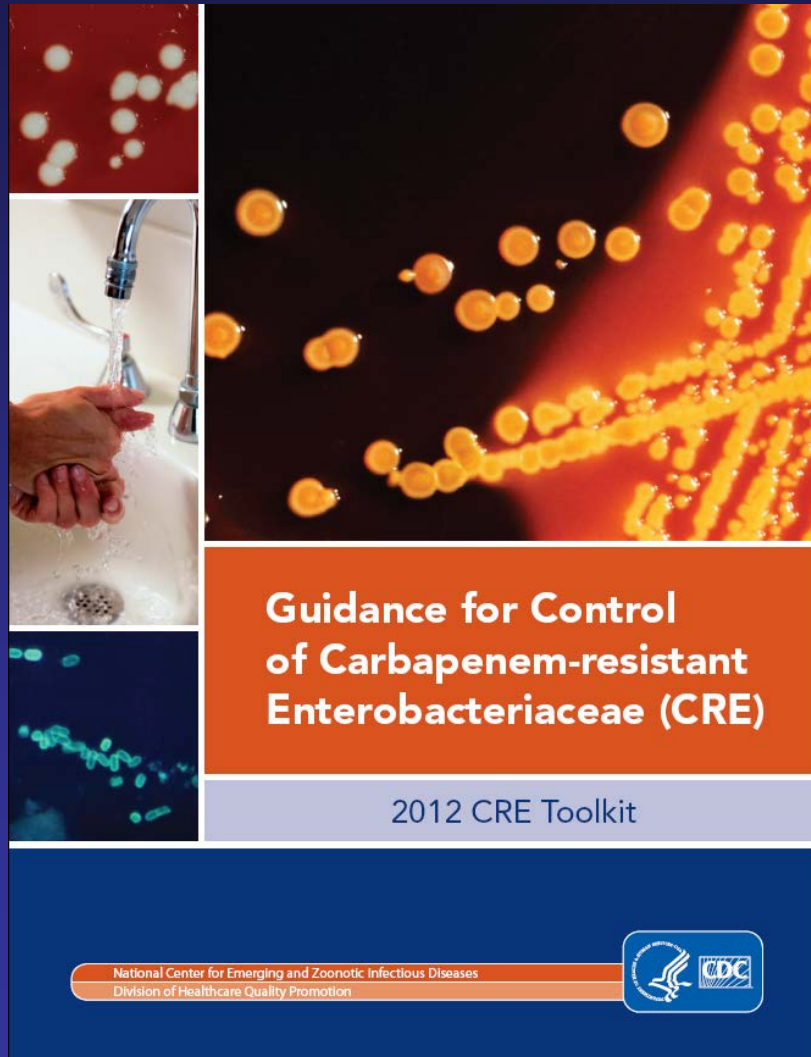
"KISS principle": Keep it simple, stupid

Kelly Johnson (left), chief aircraft engineer

- Design principle: most systems work best if they are kept simple rather than made complex

CDC's CRE toolkit

Guidance for Control of Carbapenem-resistant Enterobacteriaceae (CRE)

2012 CRE Toolkit

National Center for Emerging and Zoonotic Infectious Diseases
Division of Healthcare Quality Promotion

http://www.cdc.gov/hai/organisms/cre/cre-toolkit

Grading Chicago's CRE burden

- <u>Regions with no CRE identified</u>

- <u>Regions with few CRE identified</u> ✓
  - CRE pts admitted on monthly basis

- <u>Regions where CRE are common</u>
  - CRE pts admitted on weekly basis

"Detect and protect"

1. Find CRE-carrying patients

2. Maintain them in contact precautions

Toolkit: For "regions with few CRE"

1. Regional surveillance and feedback of results

2. Implementation of prevention measures

3. Inter-facility communication

1. Current capacity: surveillance

- Regional surveillance: REALM project
  - Voluntary point prevalence survey (twice yearly) for hospital ICUs and LTACHs in Chicago
  - High participation; detects colonization burden

REALM project - KPC

- Hospital ICUs: 3%
- LTACHs: 30% (range, 10 – 54%)

2. Current capacity: Implement prevention measures

- Intervention at 4 LTACHs (Hayden) – implementing "CRE bundle", Oct 2011 to present

- Many individual hospitals – active surveillance, CHG, improving transfer communication

3. Current capacity: Inter-facility communication

- ICU survivors: in 1 year, median 4 facility transitions (2/3 with re-admission!)
  - Unroe, Annals 2010

- Communication is facility-dependent
  - Some have automated process

Inter-facility Infection Prevention Transfer Form
When transferring patient/resident, please complete to the best of your ability to assist with care transitions.

Patient Information

Last Name _____   First Name _____
Date of Birth _____/_____/_____

Isolation Precautions
The patient currently requires the following type(s) of isolation precautions. Please indicate reason:
  □ Contact _____
  □ Droplet _____
  □ Airborne _____
□ The patient DOES NOT require isolation.

Infection/Colonization History (check all that apply)
□ MRSA (Methicillin-resistant *Staphylococcus aureus*)
□ VRE (Vancomycin-resistant enterococci)
□ *Clostridium difficile*
□ Acinetobacter, multidrug resistant
□ ESBL (extended spectrum beta-lactamase) bacteria
□ CRE (carbapenem-resistant enterobacteriaceae, such as KPC, NDM-1) bacteria
□ *Pseudomonas aeruginosa*, multidrug-resistant
□ Respiratory Illness (influenza, adenovirus, etc., suspected or confirmed) — Droplet Precautions
□ Respiratory Illness (tuberculosis , etc., suspected or confirmed) — Airborne Precautions
□ Any other pathogen requiring isolation. Please list: _____

Sending Facility Information

Facility Name _____   Unit_____
Address _____   Phone _____

Person Completing Form   **Infection Prevention Designee**
Name/Title _____   Name _____
Phone _____   Phone _____
Email/Fax _____   Email/Fax _____

Please send copies of any relevant microbiology cultures, medication administration record (MAR or POS), and immunization documentation.

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http://www.cookcountypublichealth.org/communicable-diseases/patient-transfer

Barriers to CRE communication

- Information degrades over time
  - "Telephone game" / human error
  - Emergent transfers (SNF → acute care hosp)
  - Some facilities have different definitions of MDRO colonization
- Who fills out the form?
- Patients admitted from home
- Paper forms not compatible with electronic medical record

Proposed XDRO registry address 2 critical gaps

Gap	XDRO registry
1. Need improved surveillance, particularly outside Chicago, among non-ICU pts, and among SNFs	Creates CRE surveillance rule and stores patient-specific CRE information
2. Need improvement in inter-facility communication	Serves as an information exchange for CRE information

XDRO registry – intended participants
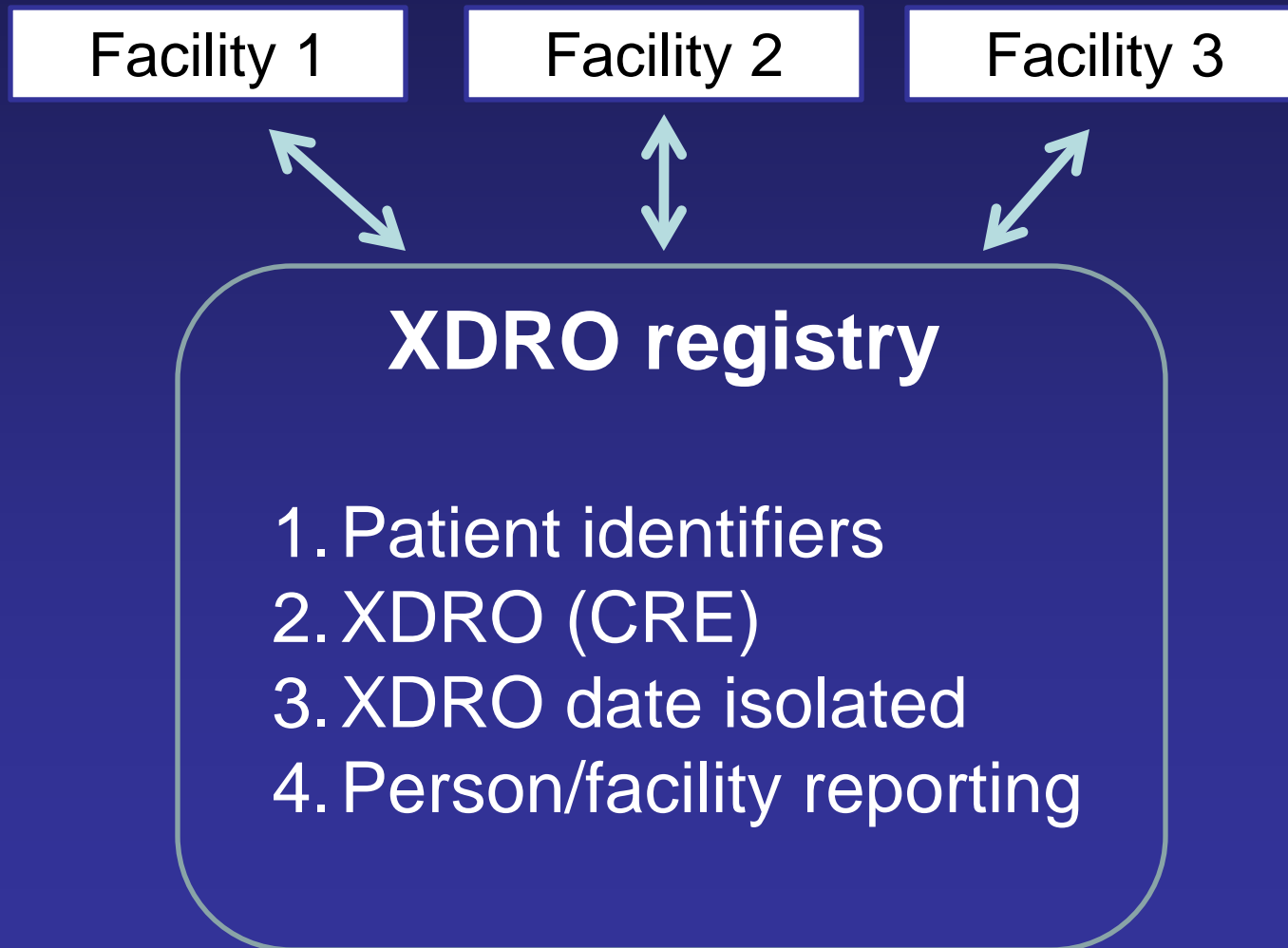
All Illinois hospitals (including LTACHs): 142

All Illinois nursing homes: 784

All Illinois laboratories

Proposed CRE definition for Enterobacteriaceae

a) Molecular test (eg, PCR) specific for carbapenemase, or

b) Phenotypic test (eg, modified Hodge test) specific for carbapenemase, or

c) For *E. coli* and *Klebsiella* spp. only:

   Resistant to all 3rd generation cephaloporins tested (ceftriaxone, cefotaxime, and ceftazidime) and

   non-susceptible to one of the following carbapenems (doripenem, meropenem, or imipenem)

Report 1st CRE event per patient per encounter

CRE reporting to registry

Facility 1   Facility 2   Facility 3

XDRO registry

1. Patient identifiers
2. XDRO (CRE)
3. XDRO date isolated
4. Person/facility reporting

Proposed reporting process

- Manual entry
  - IDPH portal, using IDPH login/password
  - Select XDRO registry
  - Enter data (0-3 patients/month)

- Electronic reporting: not available currently
  - Pt demographics and molecular typing (NDM vs KPC) not available electronically
  - Currently, XDRO registry is separate from INEDSS

Inter-facility communication, Phase 1

- Available to all, immediately:
  – Can manually query XDRO website using patient name, date of birth, to see if pt has a history of CRE reported

- Who will use manual query?
  – Primarily low admission volume facilities (SNFs, LTACHs)
  – High admission volume facilities: primarily on targeted basis

Inter-facility communication, Phase 2: automation

- Implemented over time
- Facility sends automated admission feed to query XDRO registry
- If match, then information sent to designated IPs at facility via secure email

- Who will use automated query?
  - Primarily high admission volume facilities (hospitals)

Q: How long are patients kept in the registry?

- Not defined in registry, and needs further discussion. Tentative: 1 year.

Q: Does the registry take the place of standard facility-to-facility communication at the time of transfer?

- No. Standard communication should still be followed and documented at the time of transfer.

Q: Is the registry HIPAA compliant?

- Yes, based on the public health exemption listed under HIPAA.

Q: How much work is needed to participate in the registry?

- We estimate that most facilities will have 0
  - 3 CRE/month to report

Q: My hospital sends lab data electronically to INEDSS, why can't that suffice for the registry?

- Stay tuned. However, at this time, there is a separation between INEDSS and the proposed XDRO registry.

Proposed XDRO registry summary

- Fills 2 critical gaps in regional CRE control
  - Improves CRE surveillance
  - Improves inter-facility communication
- Initially manual via website (KISS)
- More automation in later stages
- Can be expanded to other XDROs (VRSA)
- Final ruling June 11, 2013; proposed start date Sept 1, 2013

Thank you

- Proposed XDRO registry rule (690:1500) at http://www.idph.state.il.us/rulesregs/proposedrules.htm