

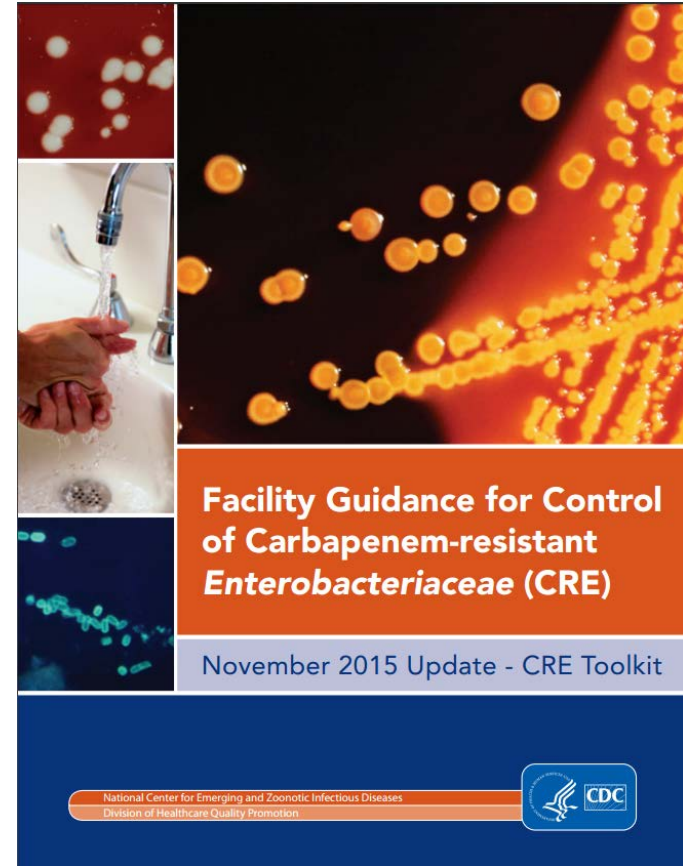
# Carbapenem-Resistant *Enterobacteriaceae* (CRE): Implementing a Regional Response

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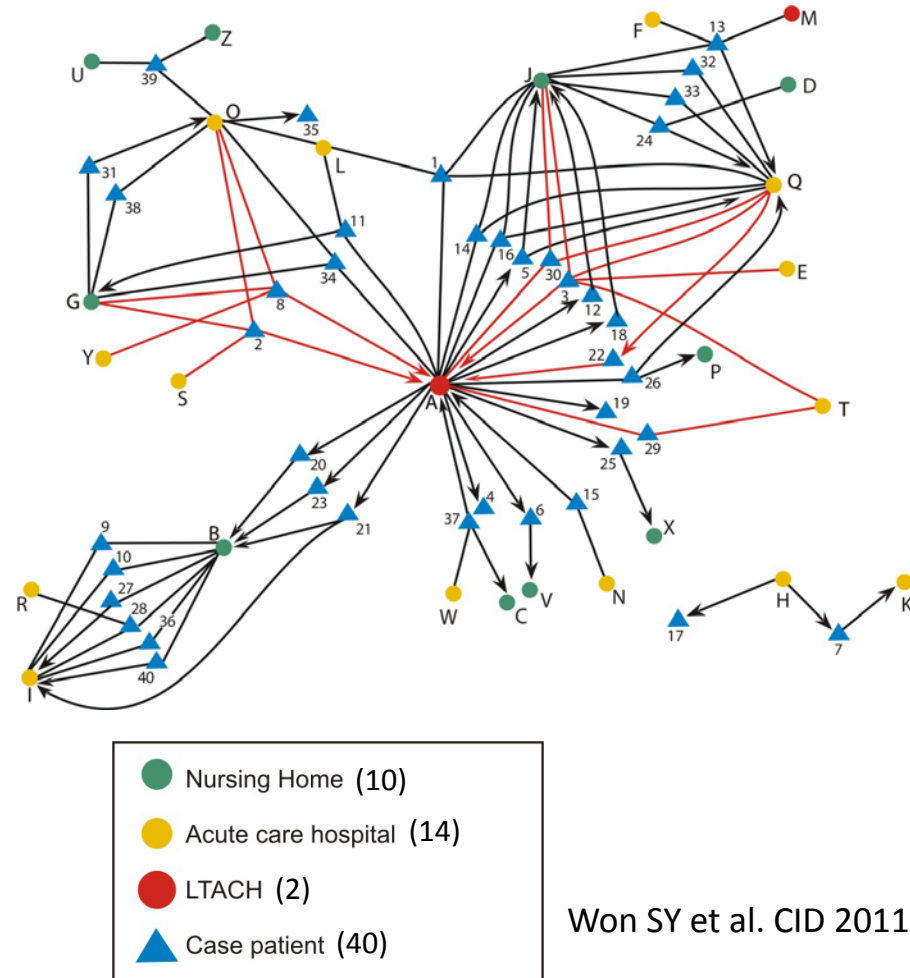
# Introduction

- Carbapenem-resistant *Enterobacteriaceae* (CRE) are a public health threat
  - Cause serious infections
  - Few antibiotic options
  - Spread via contaminated healthcare worker hands or equipment
- To prevent spread, identify CRE-colonized patients and institute infection prevention measures

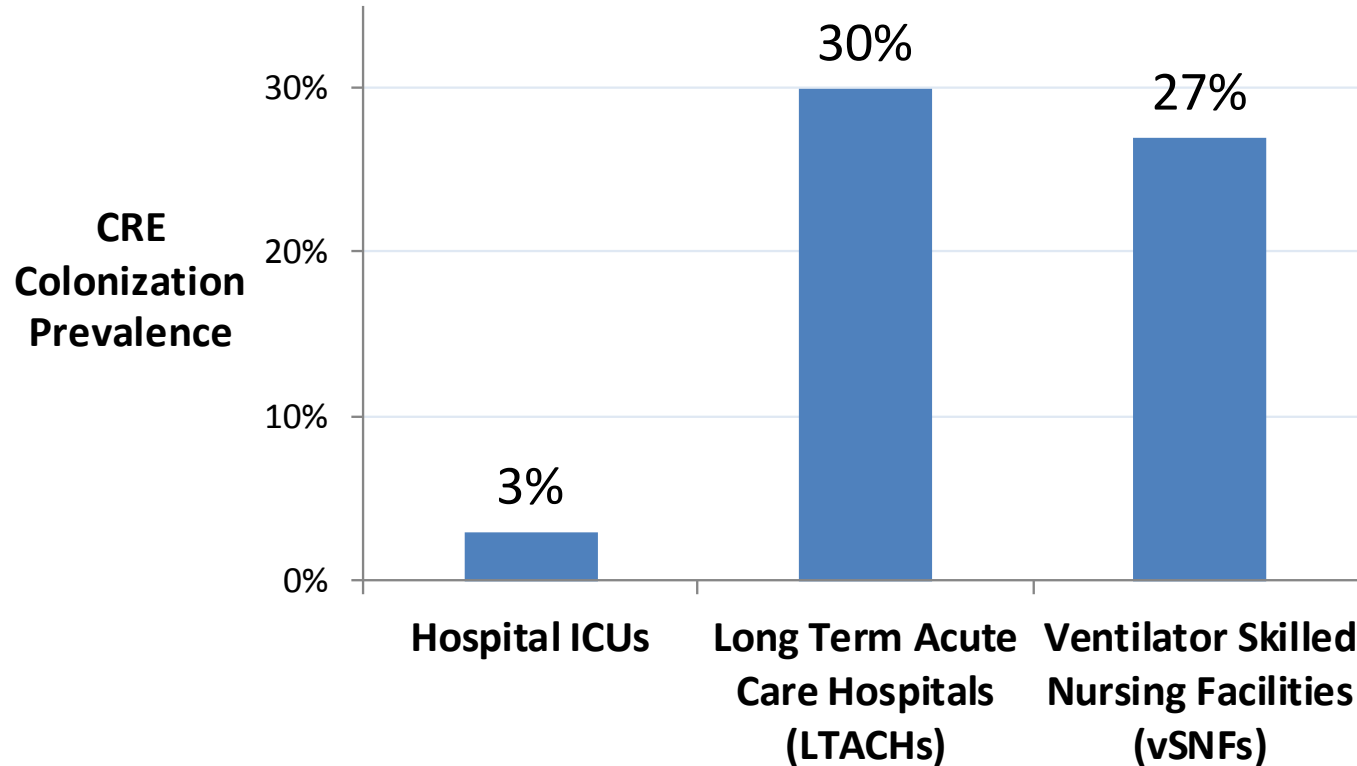


# CRE Epidemics are Regional Problems that Require Regional Control

- An outbreak in one facility expands to other facilities
- Patients visit multiple facilities, but health information (e.g. CRE status) is poorly shared



# Post-Acute Care Facilities: High Burden of CRE



<sup>1</sup> Lin MY et al, CID 2013 ; <sup>2</sup> Prabaker K et al, ICHE 2012; unpublished REALM point prevalence surveys

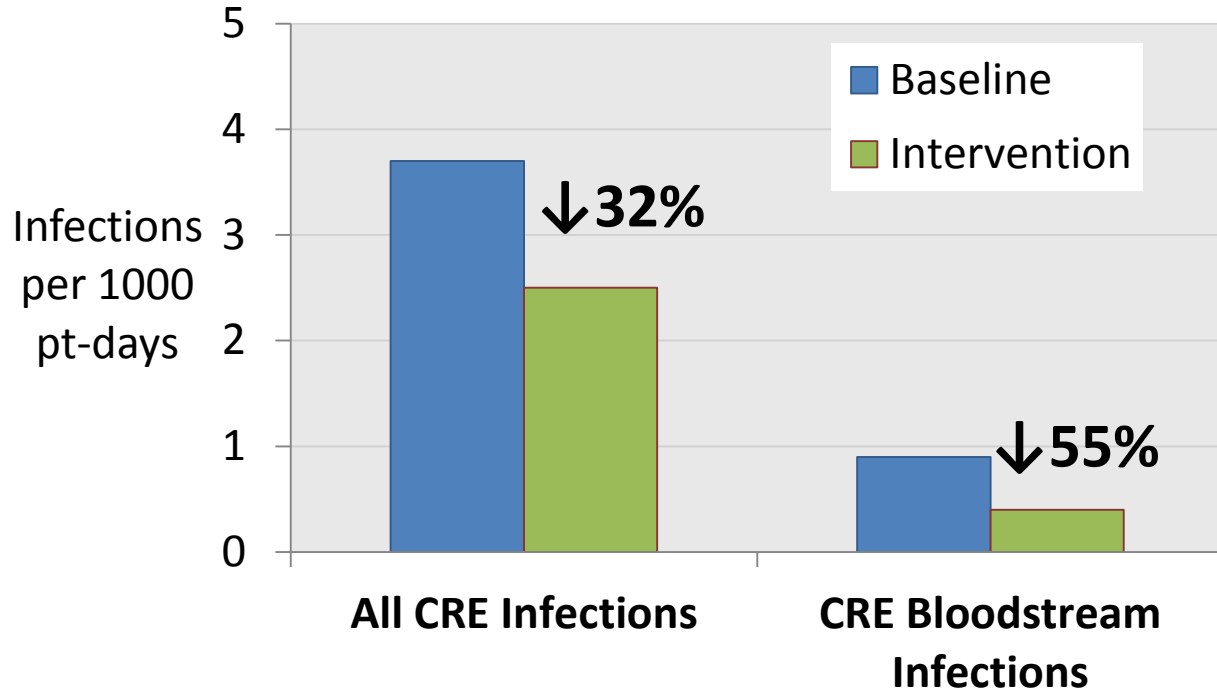
# Two Key Strategies for Regional Control of CRE

- 1. Implementing prevention strategies** that reduce CRE transmission in high prevalence facilities
- 2. Improving inter-facility communication** as CRE-colonized patients move from one healthcare facility to another, to maintain infection control precautions

# CRE Prevention Bundle Reduces CRE Burden

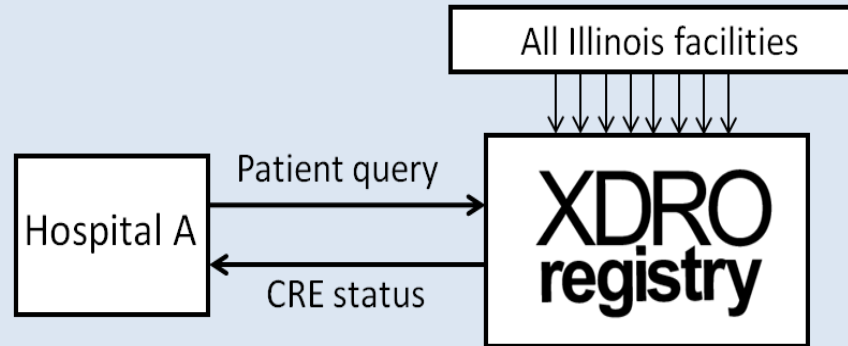
## CRE Bundle:

1. Rectal screening for CRE
2. Contact Precautions; Cohorts and private rooms
3. Daily bathing with chlorhexidine
4. Healthcare worker education and adherence monitoring



# Illinois XDRO Registry Improves Communication

## 1. Mandatory CRE reporting



## 2. CRE information exchange (inter-facility communication)

# Chicago PROTECT Project (2016-2020)

CDC-funded project to implement a CRE control program in the Chicago region

- Mathematical modeling to identify highest-impact facilities
- Cost-benefit analysis
- Targeted intervention to control CRE

Intervention	Post-Acute Care Facilities (n=15)	Hospitals (n=24+)
CRE prevention bundle	X	
XDRO registry	X	X



# Conclusions

- The spread of CRE is a major public health threat
- Effective CRE prevention requires regional cooperation among healthcare facilities, coordinated by strong public health leadership
- Our experience with Chicago PROTECT will provide a blueprint to guide future prevention efforts in other regions