
Long Beach CRE Prevention Collaborative: Self-Assessments and New Developments

Long Beach CRE Prevention Collaborative
Long Beach, California
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Objectives

- Review results from self-assessments and share some of the common responses and themes
- Provide updates on new CRE-related announcements and research
- Present new guidance and resources on preventing transmission of MDRO like CRE
- Introduce the topic of communicating with patients, residents, family members, and caregivers

Overall Participation

	Total	Yes	
Onsite Assessments	15	16	94%
Self-Assessment	10	16	63%

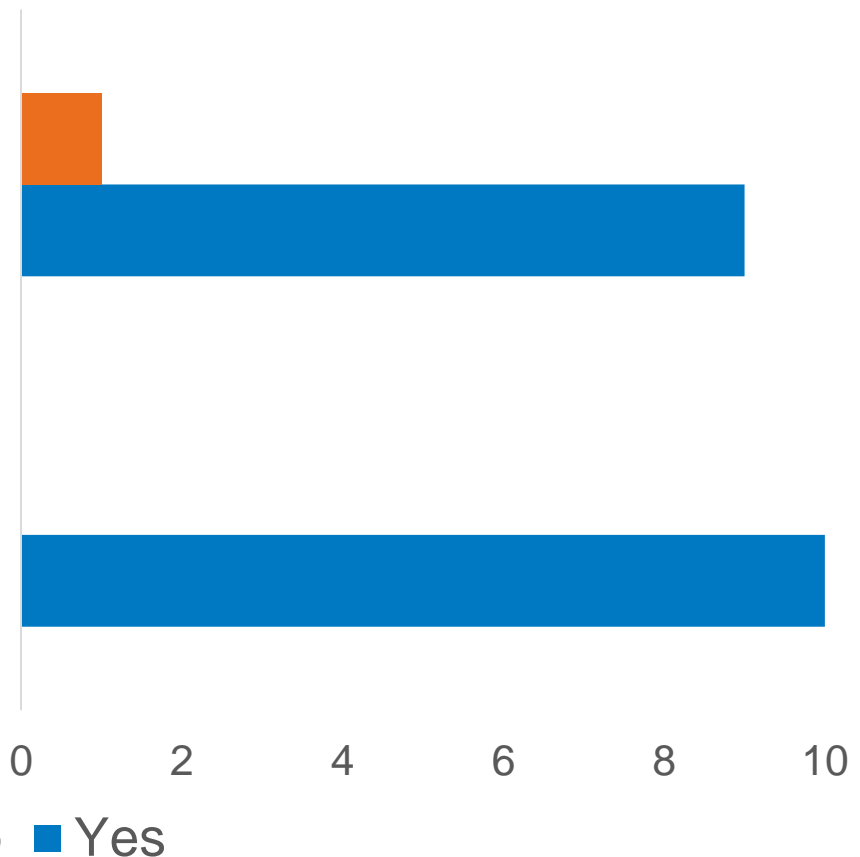
Communication Strategies

	Total	Yes	
Are staff regularly updated or educated about CRE processes, policies, and protocols?	10	9	90%
If your facility is transferring a resident with CRE or similar MDRO, do you have a protocol for the discharge planner or DON to contact the receiving facility directly?	10	10	100%

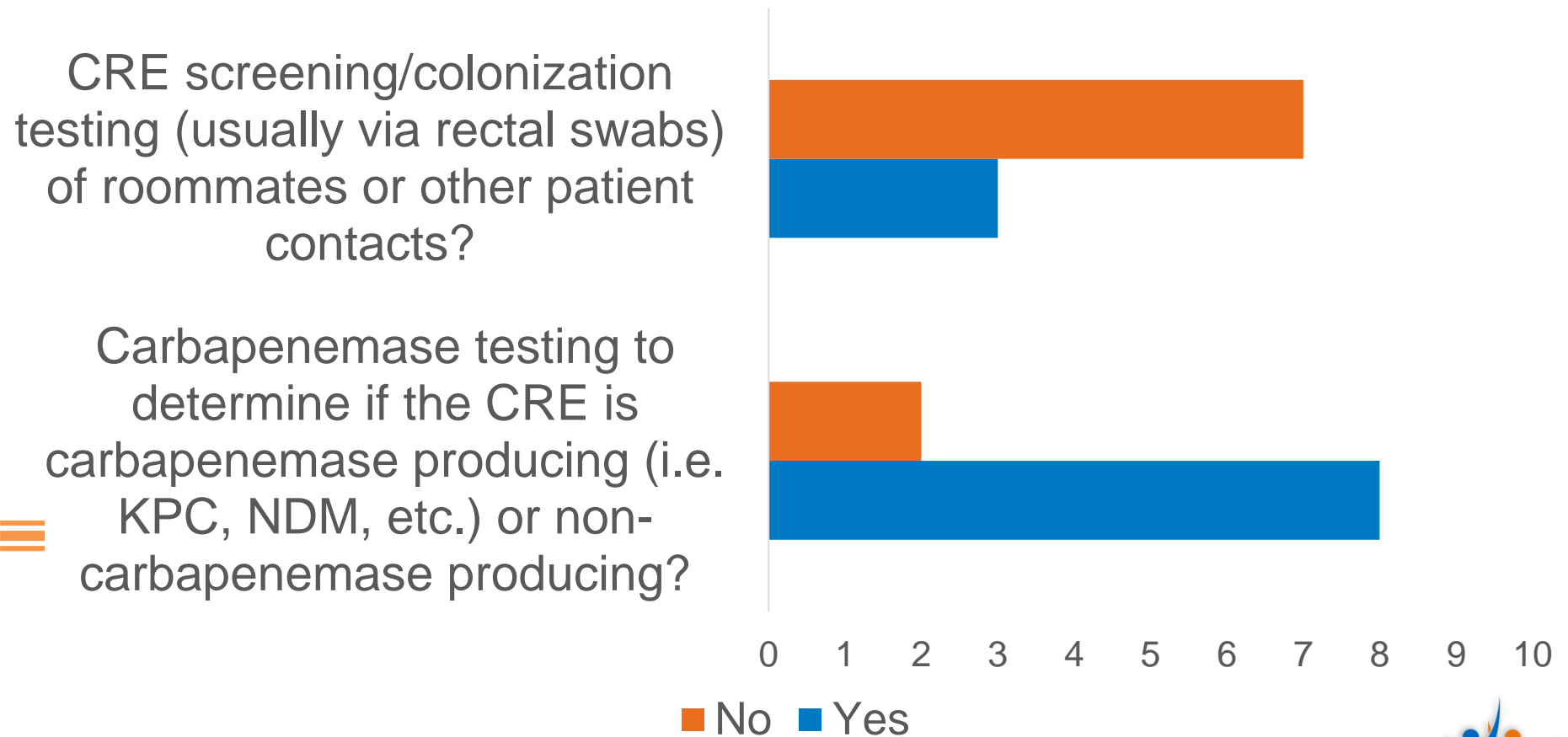
Are CRE and MDRO Prevention Priorities?

Is preventing/reducing CRE or similar MDROs an organizational goal?

Is leadership engaged and supportive of efforts to address CRE or similar MDROs?



If a patient or resident with CRE were identified, has your facility identified ways to access the following?



Supplemental Strategies

- Chlorhexidine bathing of patients at high risk for colonization or transmission of CRE or other highly resistant MDROs
 - 50% Yes
- Screening of roommates or other patient contacts for CRE colonization when a patient is newly identified with CRE
 - 10% Yes

Do you work closely with your healthcare facilities in your referral network to address issues like MDRO?

“If residents are sent to the hospital and we receive culture results while the resident is out to the hospital we will **notify the hospital of culture results.**”

Does your facility have written policy/procedures for evaluating new admissions of residents with CRE to determine appropriate infection control measures?

“The admission nurse is responsible for obtaining that information and setting isolation precautions for new admissions. Also, our **admissions coordinator and nurses of review new admissions screen for diseases and assess if isolation is needed.** We keep all isolation information on the inquiry form for new admissions and assign them to isolation rooms.”

Does your facility have written policy/procedures for evaluating new admissions of residents with CRE to determine appropriate infection control measures?

“The referring hospital finds all medical information, the DON and IP review and if more answers are needed they call for follow up. **If needed we contact Long Beach PHD for answers.**”

Does your facility have written policy/procedures for evaluating new admissions of residents with CRE to determine appropriate infection control measures?

“Upon admission, each resident's clinical conditions will be assessed for signs and symptoms of active infection. Each case must be assessed on its own individual merit. DON/ADON/IP will **review all data on the interfacility transfer form** from the acute care hospital for any diagnosis of MDROs”

Does your facility have written policy/procedures for responding to newly identified CRE cases in your facility?

“The laboratory notifies the providers and Infection Prevention & Control through the electronic notification system under the Clinical Alert/Notification section. **The lab also notifies the provider through a phone call.**”

What is your level of comfort with CRE compared to one year ago? Are there significant ongoing barriers you can identify?

“In comparison to last years, I’d rate myself from 2/10 to 7/10. Any information I may have from the meetings or articles I have are readily available for nursing staff...”

“Our staff is responding to educational materials and better equipped to apply appropriate procedures for identified patients”

“Staff were provided with various education related to CRE and other MDROs. A nurse-driven protocol was enforced to isolate patients prior to an order for suspected and confirmed MDRO cases to prevent exposure or transmission.”

Post/Self-Assessment Actions Taken, Outcomes/Improvements

“We have numerous hand hygiene signs posted in public areas, including restrooms and elevators. **We installed hand sanitizers in each resident’s room** (for both staff and guests).”

Post/Self-Assessment Actions Taken, Outcomes/Improvements

“Implemented **auditing of staff entering and exiting isolation rooms for compliance with proper use.** On the spot training done when opportunity of improvement noted. Continued monitoring and reinforcement needed, particularly with hand hygiene prior to donning gloves.”

Post/Self-Assessment Actions Taken, Outcomes/Improvements

“Patient and family handouts were created and made readily available to provide to the patient; staff are required to document in the patient’s chart that education was provided; monthly random audits are conducted to ensure that each inpatient unit is 90% compliant or above. For units less than 90%, the managers are notified to encourage staff on providing patient education.”

New Research, Resources, and Tools

Travel Alert VIM-producing *Pseudomonas aeruginosa*

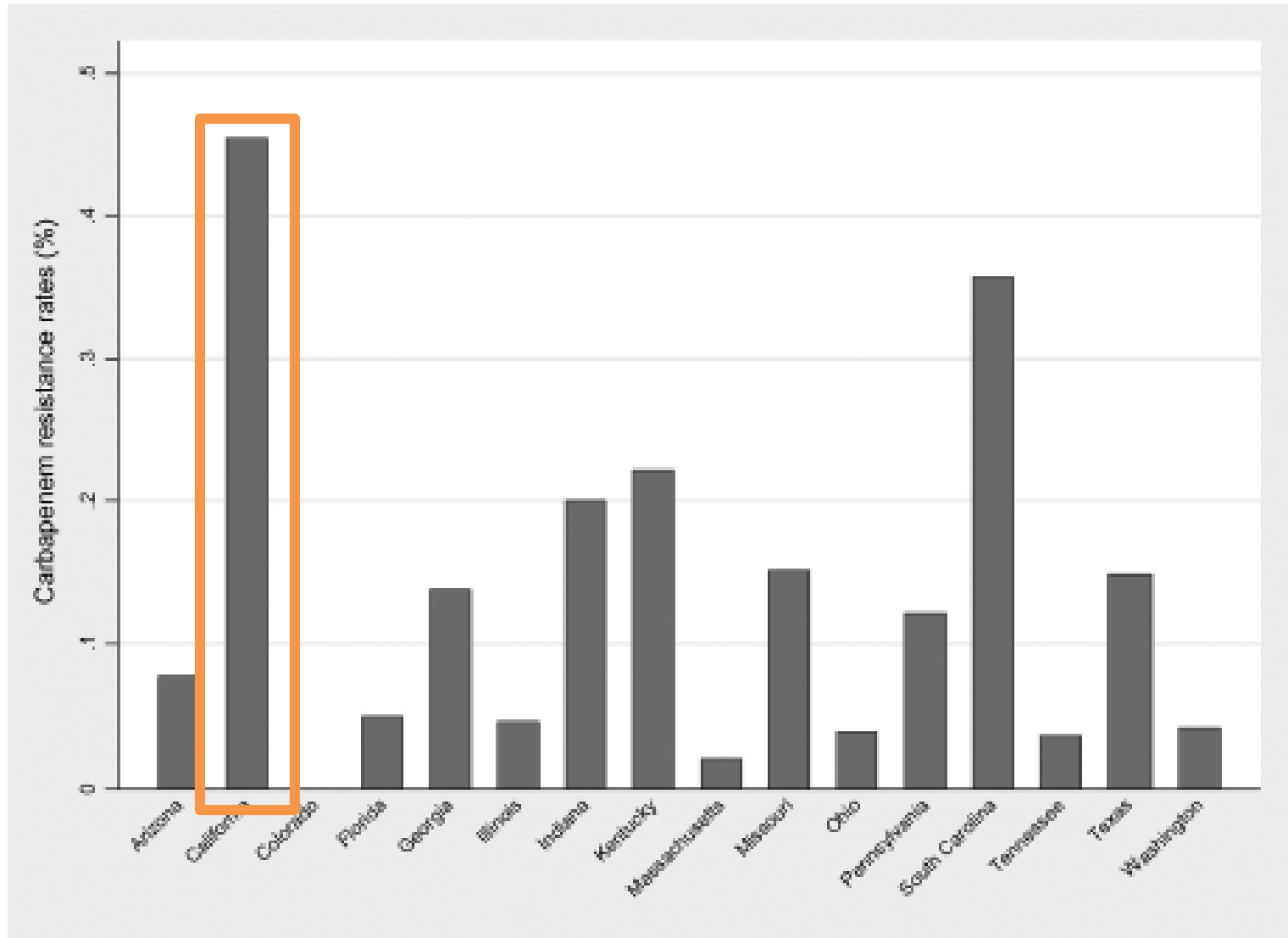
- US residents returning from Tijuana, Mexico
 - All travelers had an invasive medical procedure, most commonly weight-loss surgery
 - Over half had their surgery at Grand View Hospital
- At least three confirmed patients identified in California with possible additional cases
- Multistate outbreak highlights the importance of collecting travel history upon admission and submitting highly resistant isolates for mechanism testing



Risk factors for CRE infection and colonization

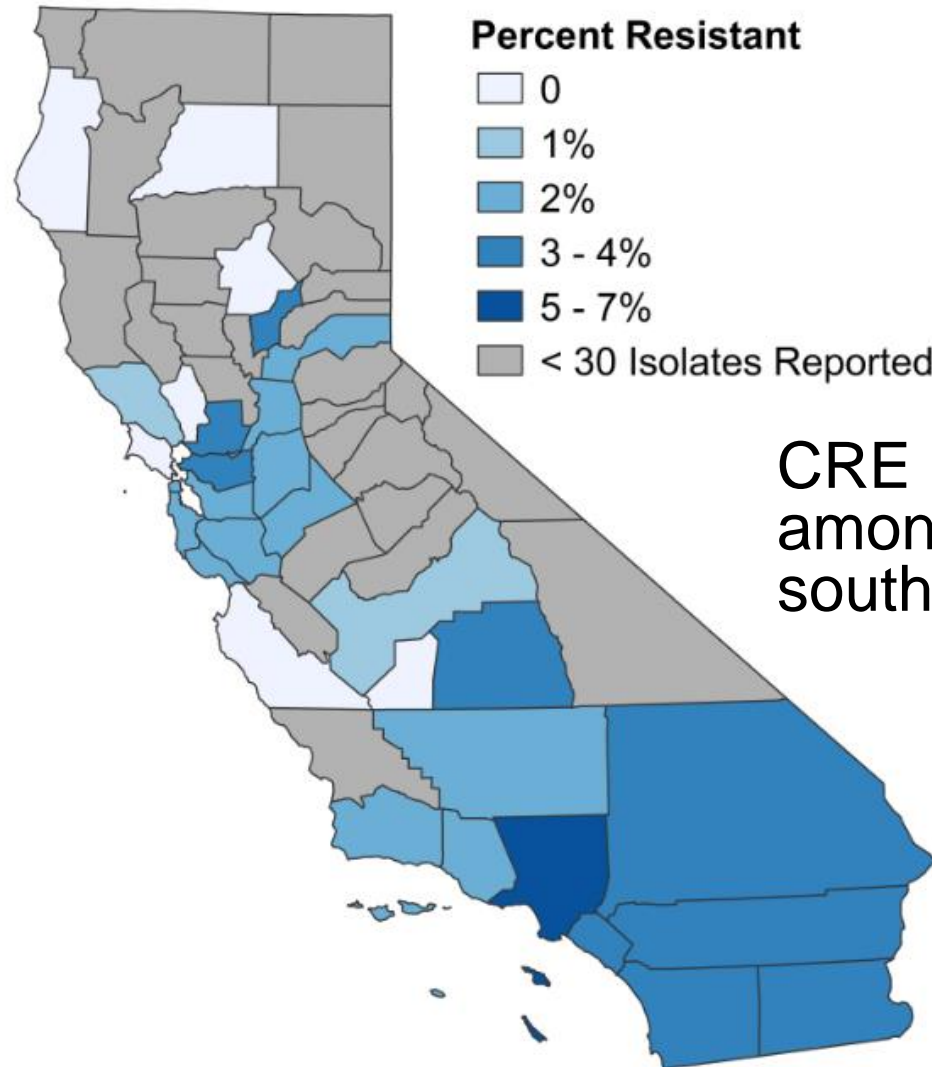
- Healthcare exposures outside the U.S.
- Extensive antibiotic use
- Poor functional status
- Presence of indwelling medical devices; receipt of mechanical ventilation
- Recent stay at a long-term acute care (LTAC) hospital

Carbapenem-resistant *K. pneumoniae* in Long Term Acute Care Hospitals



Han et. al Clin Infect Dis (2017) 64 (7): 839-844.

Enterobacteriaceae Isolates Resistant to Carbapenems Reported among HAI, 2014-2017



CRE prevalence among HAI is higher in southern California

Evaluating Movement of Patients with CRE infections using Social Network Analysis

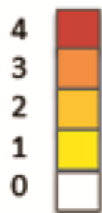
- Patients/residents at facilities with elevated “betweenness” – most connected to other facilities – associated with higher risk of having CRE

Facilities

- △ Acute Care Hospital
- Long Term Acute Care Hospital
- Skilled Nursing Facility

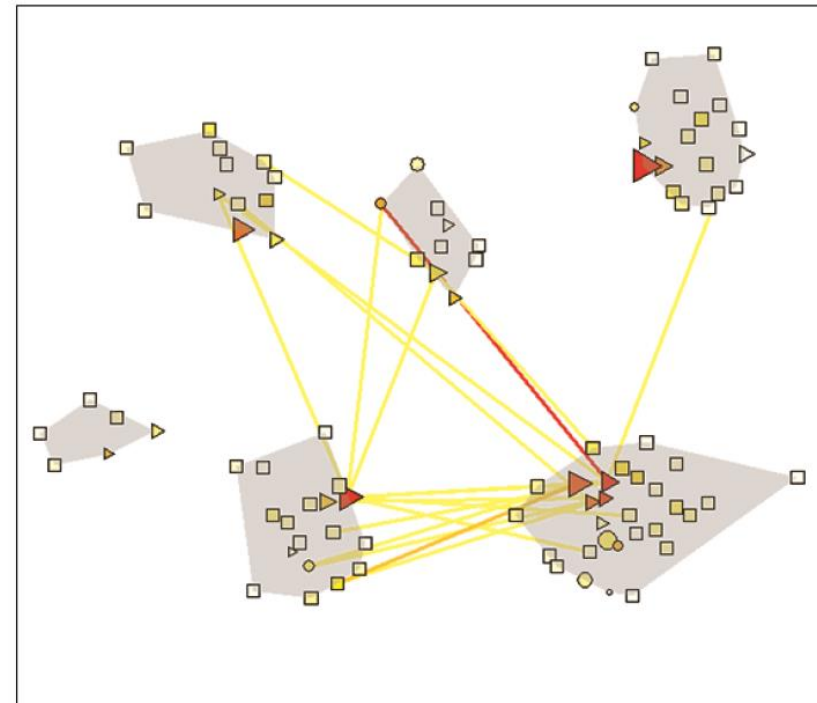
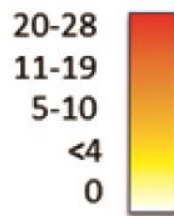
Edges

No. Transferred CRE Cases

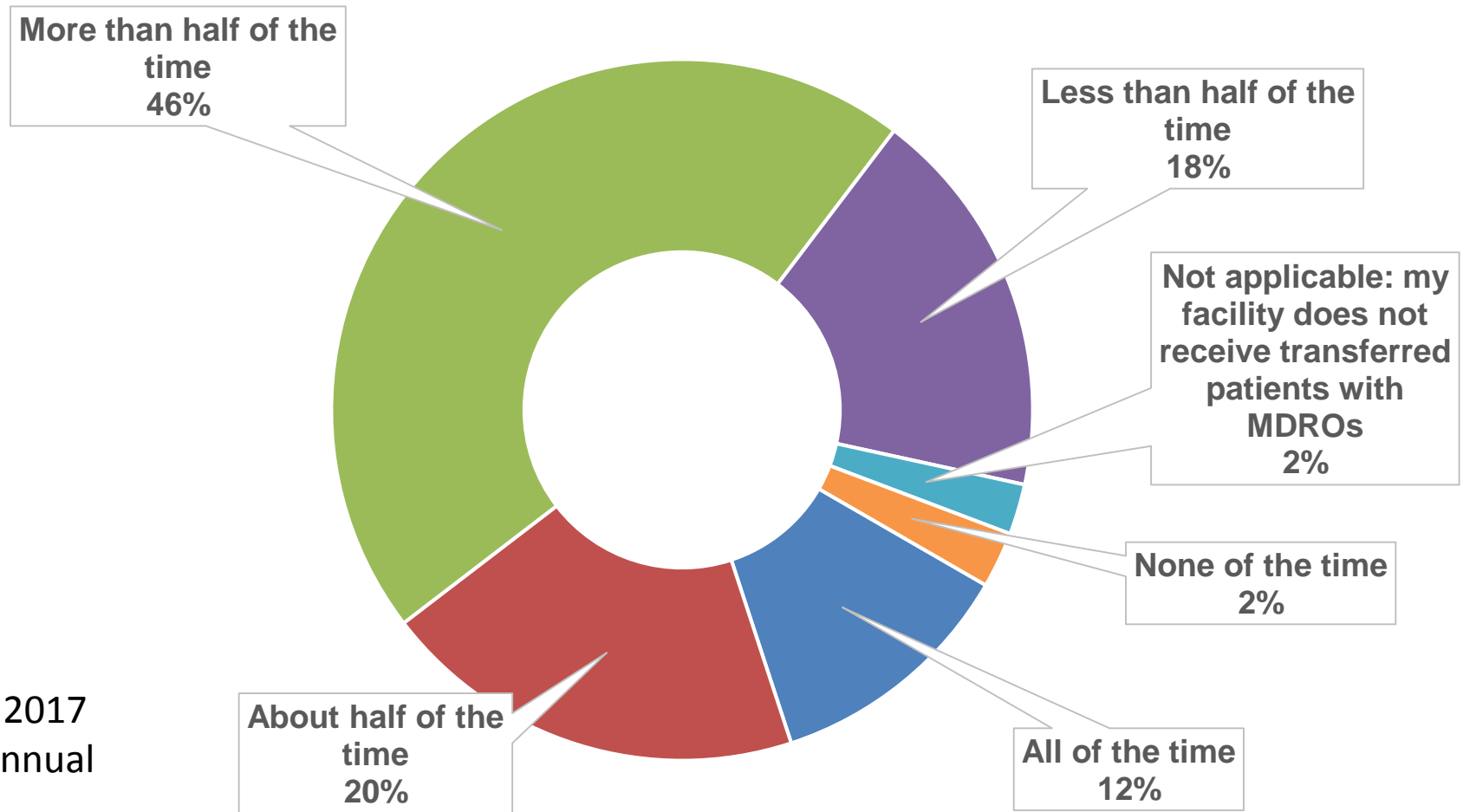


Nodes

No. CRE Cases at Facility



Among patients with an MDRO admitted to your acute care hospital from another healthcare facility, please estimate how often your facility receives information from the transferring facility about the patient's MDRO status?



Source: 2017
NHSN Annual
Survey

Point Prevalence MDRO Carriage Among All Residents and Patients Swabbed at Nursing Homes and LTACs

	No.	Any MDRO	MRSA	VRE	ESBL	CRE	MDRO w/o History
Nursing Home w/o Ventilator Beds	14	58% (44, 82)	36% (24, 62)	15% (2, 34)	26% (0, 54)	0% (0, 2)	55% (42, 72)
Nursing Homes w/ Ventilator Beds	4	76% (72, 88)	54% (48, 60)	18% (14, 24)	52% (40, 66)	10% (0, 12)	74% (66, 78)
Long Term Acute Care Hospital	3	82% (72, 86)	30% (26, 42)	56% (50, 60)	38% (30, 48)	8% (8, 10)	66% (64, 76)

Duration of Contact Precautions

- 2018 SHEA Expert Guidance¹ recommends that acute care hospitals should maintain contact precautions indefinitely for patients with CP-CRE in acute care hospitals
- 2019 European guidelines² also highlight the importance of maintaining contact precautions patients with CP-CRE

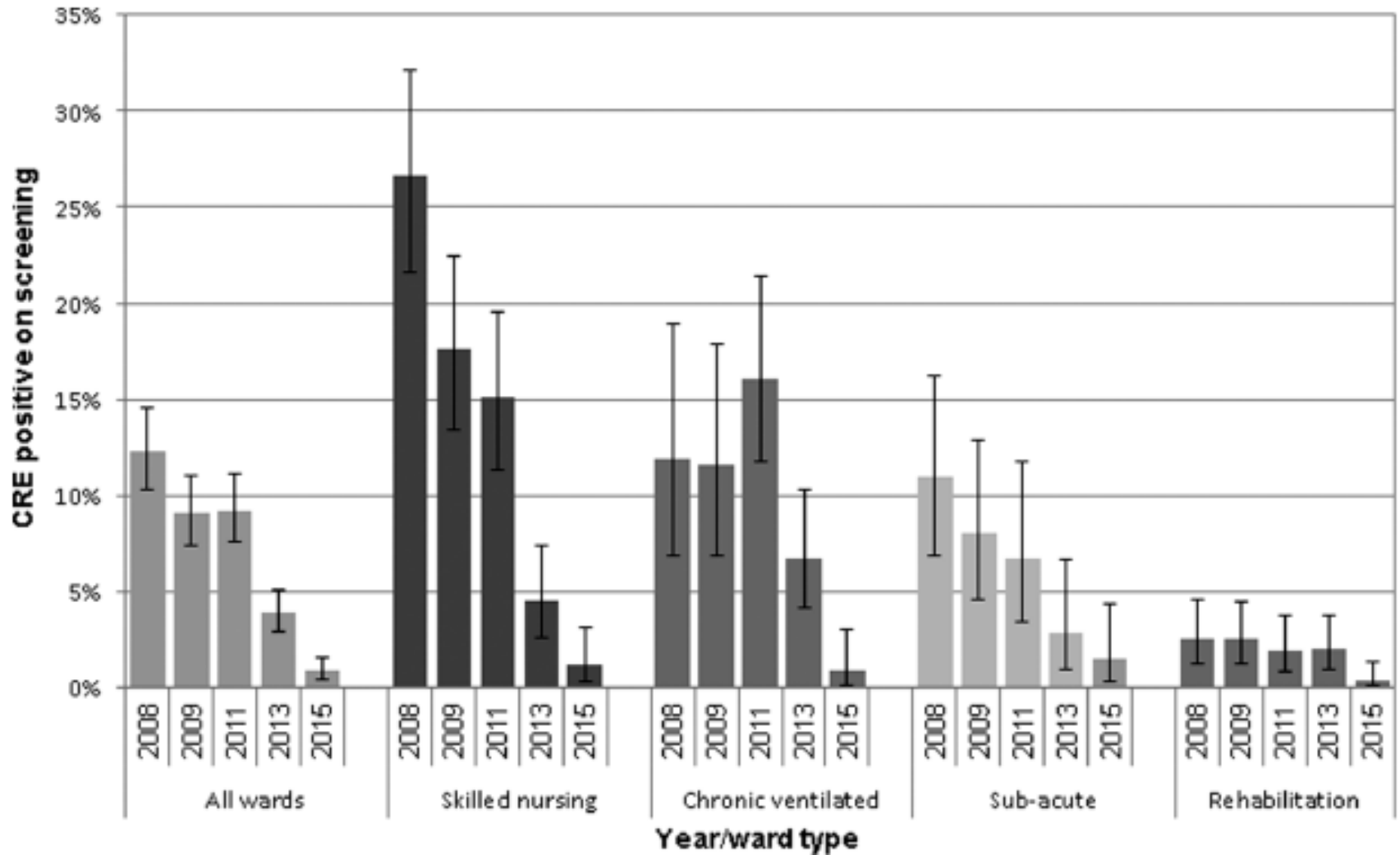


1. Society for Healthcare Epidemiology of America (SHEA) Expert Guidance, Duration of Contact Precautions for Acute Care Settings
2. European Committee of Infection Control (EUCIC) and European Society of Clinical Microbiology and Infectious Diseases (ESCMID) clinical guidelines on decolonization of multidrug-resistant Gram-negative bacteria carriers

Success of a National Intervention in Controlling CRE in Israel's Long-term Care Facilities

- National, coordinated interventions resulted in sustained decrease in CRE incidence and prevalence in Long Term Care Facilities
 - CRE colonization testing
 - Training and workshops with healthcare personnel
 - Interfacility communication and mandated reporting
 - Private rooms or cohorting of high risk residents

Success of a National Intervention in Controlling CRE in Israel's Long-term Care Facilities



New from CDC: Talking Points for Healthcare Facilities Participating in Containment Responses

- How were antibiotic resistant bacteria identified at our facility?
- What is our facility doing to address the situation?
- What happens if we find more patients with the resistant germ?
- Why was this germ identified in our facility?
- Why is an investigation being performed?

New from CDC:

Patient FAQs for MDRO Screening

- Am I at risk of catching this germ if I received care in this facility?
- Why is it important for me to be tested for this bacteria?
- What happens if these bacteria are found in or on me?
- How can I be tested for this bacteria?
- Do I have a choice to be tested?
- If my test is positive, will I need treatment?
- I am a patient/resident with a rare antibiotic resistant germ. Will I have it forever?

Washington State DPH Guidance

- How do hospitals and skilled nursing facilities prevent the spread of CRE?
- How can I prevent the spread of CRE?
- How can family and friends prevent the spread of CRE?
- How is CRE treated?
- Cleaning, laundry, dishes, etc.



Moving to a hospital or skilled nursing facility

What to expect when you have CRE

(Carbapenem-resistant Enterobacteriaceae)

A booklet for
patients, residents, family
members,
and caregivers



Summary

- CRE and MDRO research and developments are constantly changing and updating
- New guidance documents and resources are available online and through your local health department
- Good communication with patients, residents, families, and healthcare workers is vital to preventing the spread of MDRO



CREag's Journey through the Health Care System

Creag is admitted to County General Hospital from Shady Pines Skilled Nursing Facility.

- 78 yo male
- History of 2017 CVA
- Foley catheter in place
- Admitted with fever, lower back pain
- MRSA nares negative upon admission, no known history of MDRO

Creag has a positive urine culture for carbapenem-resistant *E. coli*.

- The lab submits the isolate to a reference laboratory and identifies the gene for KPC
- Patient treated with ceftazidime-avibactam
- Infection resolves after several days

Who should the nurse notify that Creag has CRE?

- A. Shady Pines
- B. The local newspaper
- C. The patient's primary caregiver
- D. The nurse's husband
- E. Frontline nursing staff
- F. The Long Beach Department of Health



Must report via NHSN!

How long should Creag remain on Contact Precautions during his stay at the County General?

- A. Wait 48 hrs, then retest urine, and if negative, take off contact precautions
- B. Always, even if he is discharged and readmitted, regardless of any future urine or blood cultures
- C. For 7-10 business days
- D. Until Creag feels better and symptoms have resolved

Creag's infection has resolved and is ready to transfer him back to Shady Pines. What important steps should the IP take to ensure a safe handoff? (select all that apply)

- A. Note Creag's CRE results on the transfer
- B. Don't do anything, because you don't really care what happens to him after he leaves
- C. Call the receiving facility and speak to the IP to make sure they know of the CRE result
- D. Don't transfer him to a SNF because they cannot care for people with CRE

Once Creag's back at Shady Pines, the Director of Nursing and Staff Development conduct a risk assessment to determine what level of PPE this patient needs

- No signs and symptoms of infection present
- Foley catheter in place
- Does not need assistance with activities of daily living
- Able to perform hand hygiene

Is Creag at high risk of transmitting an MDRO? **Yes, foley in place**

Should Creag be confined to his room? **No, If good hygiene, may leave room**

High risk for spreading MDRO

Low risk for spreading MDRO

Poor functional status

Such as

- Dependent on assistance for activities of daily living (ADLs)
- Unable to maintain personal hygiene

Higher functional status

Such as

- Able to carry out ADLs with minimal assistance
- Cognitively intact
- Maintains personal hygiene

Presence of indwelling devices

Such as central lines, urinary catheters

No indwelling devices

Ventilator dependent

Not on ventilator, no tracheotomy

Wounds

No wounds

Incontinence

Continent

County General Hospital had ordered a urine culture the day before discharge, and the results come back positive for carbapenem-resistant *E. coli*

Should Creag be put on antibiotics to clear the CRE from the patient's urine?

No, asymptomatic bacteriuria has not been shown to be associated with adverse outcomes in nursing home residents and residents should not be treated with antibiotics

Creag's family notices that nurses are not putting on gowns and gloves to enter Creag's room. They also wonder why Creag is leaving the room routinely at Shady Pines when he was confined to his room at the hospital.

Why was Creag on contact isolation at County General but not at Shady Pines?

When a patient is in the hospital, its hopefully for a temporary period of time and the patient usually has an active infection.

When a resident is admitted to a nursing home, the staff must assess a resident's needs along with his clinical condition and risk of transmitting MDROs like CRE. Since the resident may be at the nursing home for a long time, its important to make sure they can thrive both clinically and psycho-socially and maintain the least restrictive measures possible.