



EPI Workshop: Health care Associated Infections Pathogen Reports

Jennifer Vinyard, MPH, CIC

Health Care Associated Infections

HAI Reporting Epidemiologist

512.776.3773

Jennifer.Vinyard@dshs.state.tx.us



Presentation Overview

- Intro to Health Care Associated Infection (HAI) Reporting into National Healthcare Safety Network (NHSN)
- Explain what data are provided by health care facilities
- Define relationship with Regional HAI Epidemiologists
- Describe flagged Notifiable pathogen data
- Describe Pathogen Distribution



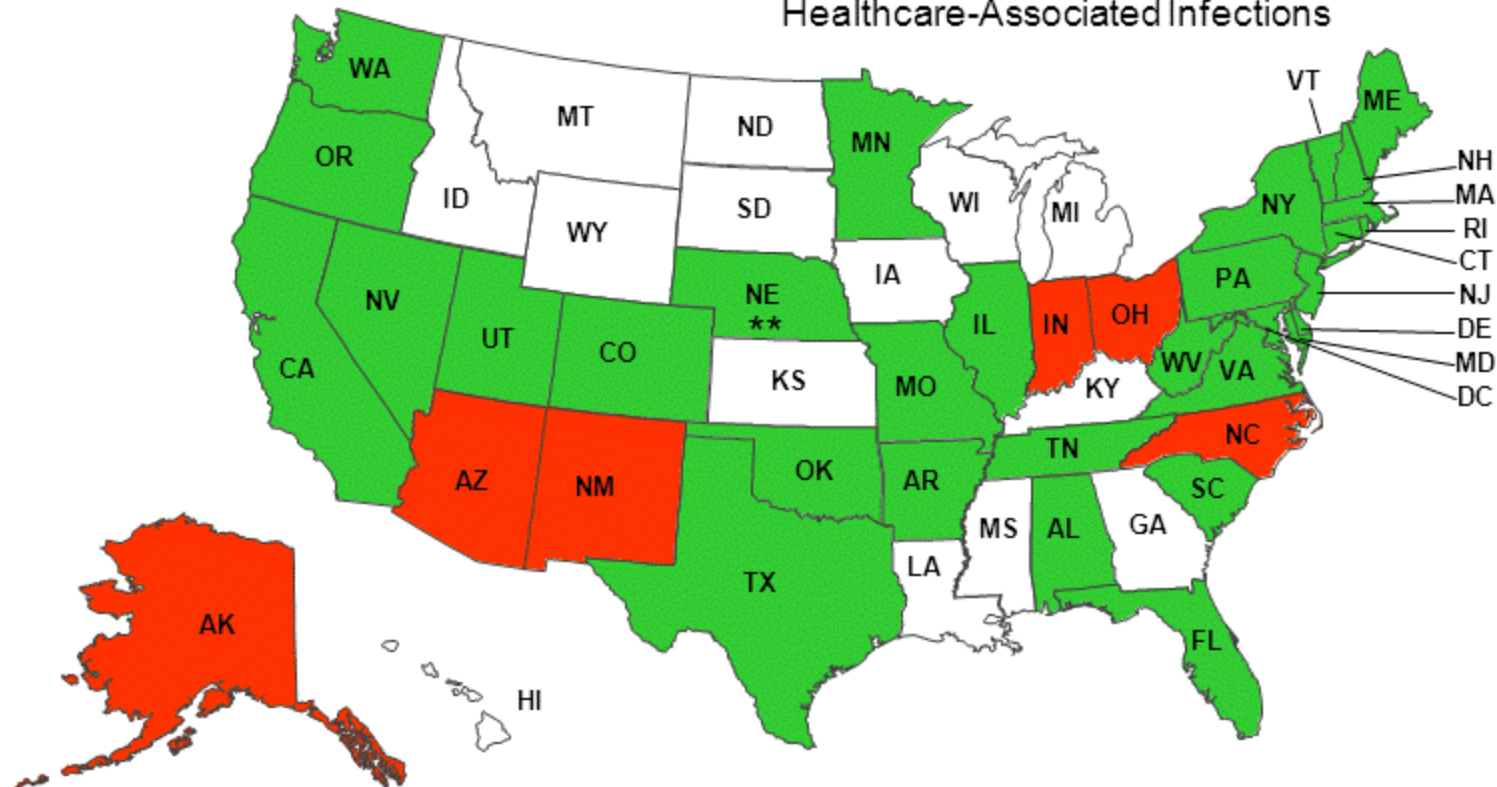
What are Health care Associated Infections?




- Infections caused by pathogens that a patient is exposed to while receiving medical care at a health care facility.
 - **CLABSI:** Central Line Associated Bloodstream Infections
 - **SSI:** Surgical Site Infections

See www.CDC.gov/nhsn for surveillance definitions

HAI Reporting Laws and Regulations

States That Have Enacted Laws Relating to Reporting of Healthcare-Associated Infections



-  States with study laws
-  Mandates public reporting of infection rates
-  Voluntary



Reporting Requirements

- Who is required to report?
 - State-Operated/Maintained hospitals that provide surgical or obstetrical services
 - Ambulatory Surgical Centers
 - General Hospitals
 - **INCLUDES SOME Long Term Acute Care hospitals and Critical Access Hospitals with ICU/CCU/NICU**



Reporting Requirements

- Reportable healthcare-associated infections
 - **Central line-associated bloodstream infections** in the following special care settings: adult, pediatric and/or adolescent ICUs/CCUs, NICUs (Level II/III & Level III Nurseries)
 - **Surgical site infections**
 - PEDS/ADOLESCENT HOSPITALS: Cardiac procedures, spinal surgery with instrumentation, and ventriculoperitoneal shunt procedures
 - ALL OTHER HOSPITALS: Colon surgeries, hip & knee arthroplasties, abdominal & vaginal hysterectomies, vascular procedures, and coronary artery bypass grafts



NHSN – Pathogen Data

- NHSN Events (Infections)
 - Pathogen Name
 - Antibiotic susceptibilities
 - Date & Source of Culture
 - Patient DOB and gender
 - Facility Name
 - Signs/Symptoms
 - HAI Risk factors

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NHSN
National Healthcare Safety Network

Primary Bloodstream Infection (BSI)

OMB No. 0920-0666
Exp. Date: 12-31-2015
www.cdc.gov/nhsn

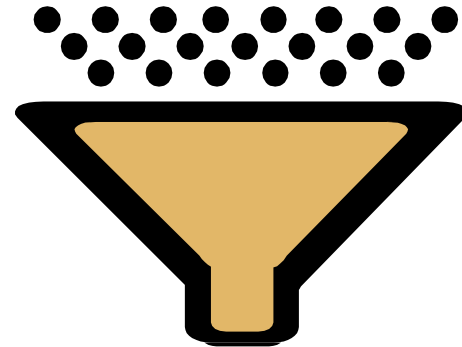
Pathogen #	Gram-positive Organisms
	<i>Staphylococcus coagulase-negative</i> (specify): VANC S1RN
	<i>Enterococcus spp. (specify):</i> AMP S1RN CIPROILEVO/MOXI S1RN DAPTO SNSN DOXYMINO S1RN GENTHL ⁵ S1RN LNZ S1RN STREPHL ⁴ S1RN TETRA S1RN TIG SNSN VANC S1RN
	<i>Enterococcus faecium</i> : AMP S1RN CIPROILEVO/MOXI S1RN DAPTO SNSN DOXYMINO S1RN GENTHL ⁵ S1RN LNZ S1RN QUIDAL S1RN STREPHL ⁴ S1RN TETRA S1RN TIG SNSN VANC S1RN
	<i>Staphylococcus aureus</i> : CHLOR S1RN CIPROILEVO/MOXI S1RN CLIND S1RN DAPTO SNSN DOXYMINO S1RN ERYTH S1RN GENT S1RN LNZ S1RN OX/CEFOX/METH S1RN QUIDAL S1RN RIF S1RN TETRA S1RN TIG SNSN VANC S1RN
Pathogen #	Gram-negative Organisms
	<i>Acinetobacter spp. (specify):</i> AMK S1RN AMPSUL S1RN AZT S1RN CEFEP S1RN CEFTAZ S1RN CIPROLEVO S1RN COLIPB S1RN GENT S1RN IMI S1RN MERO/DORI S1RN PIPPIPTAZ S1RN TOBRA S1RN TMZ S1RN
	<i>Escherichia coli</i> : AMK S1RN AMP S1RN AMPSUL/AMXCLV S1RN AZT S1RN CEFAZ S1RN CEFEP S1RN CEFOTICEFTRX S1RN CEFTAZ S1RN CEFUR S1RN CEFOX/CETET S1RN CHLOR S1RN CIPROILEVO/MOXI S1RN COL/PB S1RN ERTA S1RN GENT S1RN IMI S1RN MERO/DORI S1RN PIPTAZ S1RN TETRA/DOXYMINO S1RN TIG S1RN TMZ S1RN TOBRA S1RN



HAI Pathogen Data Flow

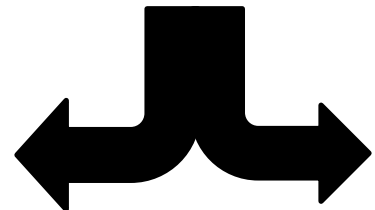


**CLABSI and SSI
Pathogen Reports**



**Organisms on Notifiable
Conditions List or
identified clusters**

**Central Office
Staff**



**Regional/Central Office
HAI Epidemiologists**



Flagged HAI Pathogen Data

- Central Office EAIBD Staff: Notifiable pathogens
- Central Office/Regional HAI Epidemiologist:
 - GAS in wound
 - Escalated Enforcement Facilities
 - ≥ 2 of same organism in same NICU per month
 - ≥ 3 of same organism in same facility in rolling 3 months



2012 HAI Pathogen Data

- As of January 3, 2013 for Q3 2012
 - 2,056 Isolates
 - 1 VRSA, 1 VISA, 1 Salmonella, 4 Invasive Strep

Notifiable HAIs for 2012	1	2/3	4	6/5	7	8	9/10	Total
BSI Isolates								
<i>Salmonella enterica</i>			1					1
Group B <i>Streptococcus</i>	1	1						2
<i>Streptococcus pneumoniae</i>				1	1			2
VRSA*				2				2
SSI Isolates								
VISA**		1						1
Total	1	2	1	2	1			7

* Not true cases

** Still under investigation



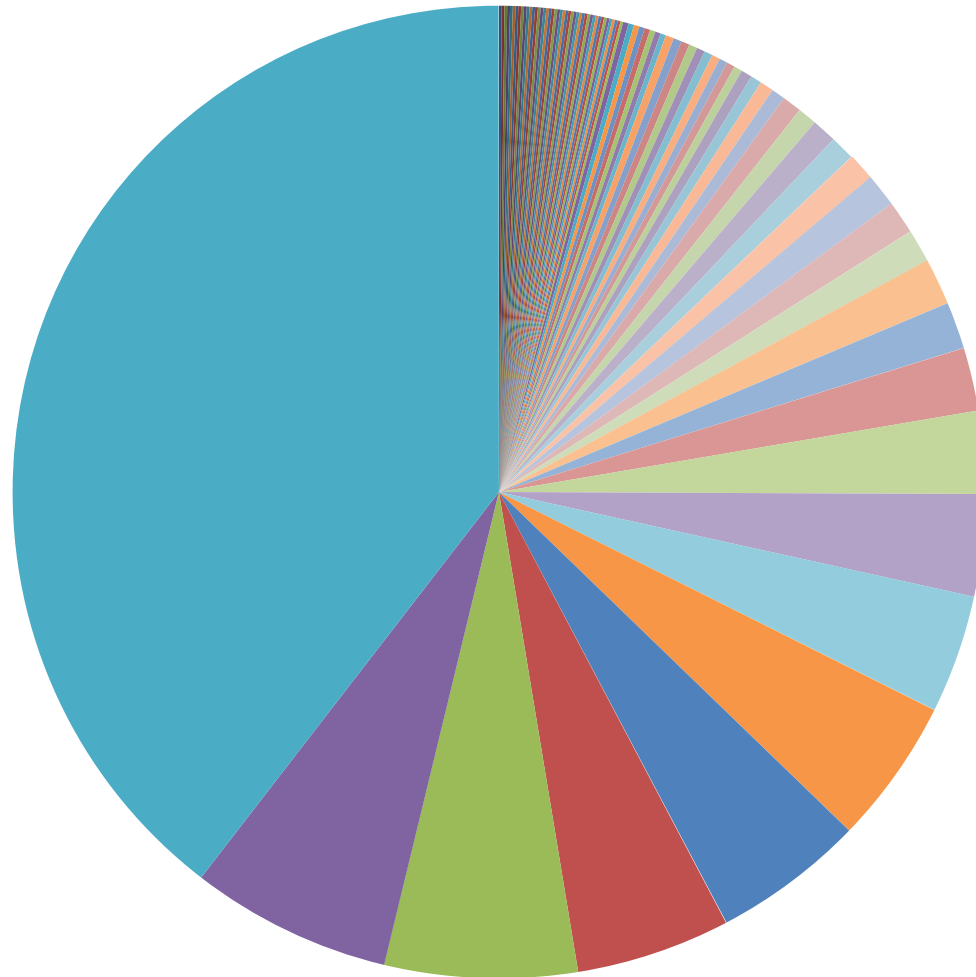
2012 HAI Epidemiologist Flags

- As of January 3, 2013... for Q3 2012
 - 46 facilities with pathogen clusters (either NICU, facility-wide or both)

HAI Clusters for Q3 2012	1	2/3	4	5	6	7	8	9/10	11	Total
Facilities with ≥ 2 of same pathogen in NICU in one month	1	2			1			1	1	6
Facilities with ≥ 3 of same pathogen in facility in rolling 3 months	3	10	5	1	8	6	5	2	4	45



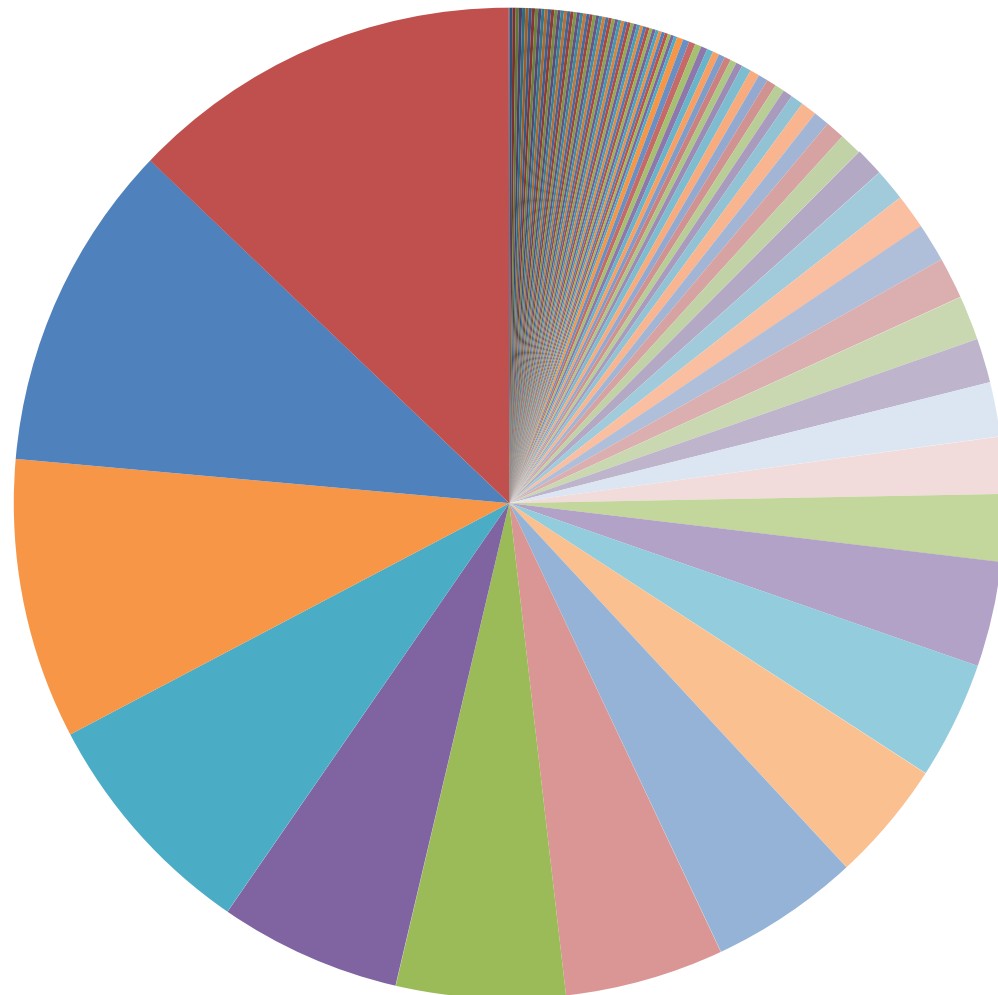
Texas SSI Pathogens



- Enterobacter aerogenes - 1%
- Corynebacterium spp. - 1%
- Enterococcus faecium - 1%
- Staphylococcus spp. - 1%
- Enterococcus spp. - 2%
- Streptococcus group B - 2%
- Serratia marcescens - 2%
- Enterobacter cloacae - 3%
- Proteus mirabilis - 3%
- Klebsiella pneumoniae - 4%
- Staphylococcus coagulase negative - 5%
- Escherichia coli - 5%
- Enterococcus faecalis - 5%
- Staphylococcus epidermidis - 6%
- Pseudomonas aeruginosa - 7%
- Staphylococcus aureus - 40%**



Texas BSI Pathogens



- Klebsiella oxytoca - 2%
- Candida parapsilosis - 2%
- Serratia marcescens - 2%
- Candida glabrata - 3%
- Enterococcus faecium - 4%
- Enterobacter cloacae - 4%
- Staphylococcus coagulase negative - 5%
- Pseudomonas aeruginosa - 5%
- Candida albicans - 6%
- Escherichia coli - 6%
- Klebsiella pneumoniae - 8%
- Enterococcus faecalis - 9%
- Staphylococcus aureus - 11%
- **Staphylococcus epidermidis - 13%**



Thanks!

Questions?

Jennifer Vinyard, Epidemiologist, MPH, CIC

– Email:

- Jennifer.Vinyard@dshs.state.tx.us
- HAITEXAS@dshs.state.tx.us

– Office: 512.776.3773