The Georgia Emerging Infections Program
2015 Update

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Georgia EIP: A Collaboration between
• Georgia Department of Public Health
• Emory University School of Medicine
• Atlanta VA Medical Center
• Centers for Disease Control and Prevention
59-67 counties, 20-30 million surveillance population, ~7-9% US population
Live births in participating ABCs sites, 2004: 455,000
2013 State Population 9.92 million
Racial distribution:
   63% White, 32% Black,
   9% Hispanic, 4% Asian
Age Distribution:
   8% <5 yrs, 26% <18 yrs,
   63% 18-64 yrs, 10% 65+ yrs
Live Births 135,000/yr

2013 20-County Metro Area (MSA)
Population 5.3 million
   (>50% of state pop.)
Live Births 71,541/yr
   (>50% of state births)
Emerging Infections Program

Population-based, Laboratory Surveillance

- FoodNet
- ABCs (includes MRSA)
- Influenza
- HAI (includes CDI)

23 years and counting!
EIP Active Surveillance 2015

**ABCs**
- Group A Streptococcus (MSA)
- Group B Streptococcus (MSA; <1yr olds, early & late onset expanded surveillance - statewide)
- *Haemophilus influenzae* (statewide)
- *Neisseria meningitidis* (statewide)
- *Streptococcus pneumoniae*-MSA
- MRSA—invasive (HD3)
- Neonatal Sepsis (HD3)
- *Legionella* (HD3)
- Pertussis (HD3)

**FoodNet**
- (All statewide)
  - *Campylobacter*
  - E.coli O157 or SLT+
  - *Listeria monocytogenes*
  - *Salmonella*
  - *Shigella*
  - *Yersinia*
  - *Vibrio*
  - *Cyclospora*
  - *Cryptosporidium*

**HAI**
- (All HD3)
  - Candidemia
  - Carbapenem-nonsusceptible
    - Gram Negative Bacilli
  - *C. difficile*

**Influenza**
- Laboratory confirmed, hospitalized influenza (HD3)
ISOLATE SUBMISSION of ABCs PATHOGEN BY YEAR

Atlanta MSA

Percent Isolates Submitted

- N. meningitidis
- H. influenzae
- Gp B Strep
- Gp A Strep
- S. pneumoniae
- All

Year:
- 2010
- 2011
- 2012
- 2013
- 2014

Colors:
- Red: 2010
- Green: 2011
- Purple: 2012
- Light Blue: 2013
- Blue: 2014
Candidemia Species and Antifungal Susceptibility Findings, 2008 – 2014*

*as of 8/28/2014

C. albicans, 1106, 39%
C. glabrata, 756, 27%
C. parapsilosis, 481, 17%
C. tropicalis, 245, 9%
Other 217, 8%

Antifungal Susceptibility
(performeD at CDC)
As of August 2014, >2805 Georgia isolates tested

C. parapsilosis and C. tropicalis: 5% isolates resistant to fluconazole

C. glabrata: considered 100% resistant to fluconazole; 5% also show resistance to at least one echinocandin
Incidence of Invasive MRSA

Georgia Health District 3

Cases per 100,000 population

- All MRSA
- CA MRSA
- HA-CO MRSA
- HA-HO MRSA
Influenza
(Hospitalized, laboratory confirmed)
Hospitalized Influenza Cases by Season, Georgia HD3 2003-04 to 2014-15*

![Graph showing hospitalized influenza cases by season and age group from 2003-04 to 2014-15. The bars represent the number of cases per season, with separate bars for pediatric and adult cases. The x-axis represents the influenza season, and the y-axis represents the number of cases per season. The graph indicates a significant increase in cases during the 2014-15 season.]
GA-EIP Influenza Case Rate by Age Group 2012-13, 2013-14 and 2014-15 (incomplete)

Incidence rate per 100,000 population

- <4 years
- 5-17 yrs
- 18-49 yrs
- 50-64 yrs
- 65+ yrs

2012-13 (H3N2), 2013-14 (H1N1), 2014-15 (H3N2)
Clostridium difficile Infection (CDI)
Burden of Clostridium difficile Infection in the United States

CDI Case Classification Definition

- **Health Care Facility Onset (HCFO):** In healthcare facility for more than three days prior to stool collection for incident positive *C. difficile* test

- **Community Onset-Health Care Facility Associated (CO-HCFA):** Case not hospitalized or hospitalized no more than 3 days at time of stool collection; with a recent past overnight hospitalization during the 12 weeks prior to positive *C. difficile* test identified

- **Community Associated (CA):** Case not hospitalized or hospitalized no more than 3 days at time of stool collection. Completed chart review and no reported hospitalizations in 12 weeks prior to incident stool
2013 CDI Classification

4246 Eligible cases
- 1583 sampled*
- CA: 685
- CO-HCFA: 266
- HCFO: 620

*Sampling scheme: 100% of 1-17 yr olds included; 1/3 sample of the following age/gender groups: 18-44 F, 18-44 M, 45-64 F, 45-64 M, 65+ F, 65+ M
CDI Rates by Age Group
2010-2014*

*2014 data pending close out and uses 2013 population estimates
Prevalence of Healthcare Associated Infections (HAI) and Antibiotic Use (AU)
1 in 25 hospital inpatients (4%) had at least one HAI
Estimated national burden of 722,000 HAIs in 648,000 patients in 2011
Pneumonia and surgical site infections were most common HAI types
Clostridium difficile was most common pathogen
Device-related infections: 25.6% of total
50% of patients were on antimicrobials at the time of the survey

Of patients getting antimicrobials, half were getting ≥2

Few differences in treatment given to patients in/outside of ICUs, for community and healthcare infections
Value of HAI and Antibiotic Use (AU) Prevalence Survey in 2015

- Complements NHSN and provides the “big picture” of hospital HAI and AU and changes over time
  - National HAI burden estimation
  - Most common infections and pathogens
  - Most common antimicrobials and indications
  - Changes in HAI and AU since 2011 survey

- Can be combined with large-scale assessment of antimicrobial drug prescribing quality (will be done in 2015)

- Provides data to address the question of what the next targets should be to continue to improve patient safety
  - HAI surveillance and prevention
  - Antimicrobial stewardship

Courtesy of Shelley Magill, CDC
U.S. HAI and Antibiotic Use Prevalence Surveys

- **Pilot HAI survey**
  - 1 city
  - 9 hospitals
  - 855 patients

- **Limited roll-out HAI and AU survey**
  - 10 states
  - 22 hospitals
  - 2015 patients

- **Full-scale HAI and AU survey**
  - 10 states
  - 183 hospitals
  - 11,282 patients

- **Full-scale HAI and AU survey**
  - 10 states
  - ~180 hospitals
  - ~11,300 patients

**Georgia 2011:**
- 22 hospitals
- 1395 patients

**Georgia 2015:**
- 18 hospitals to date
- Goal: 22-25

**2009**

**2010**

**2011**

**2015**

Courtesy of Shelley Magill, CDC
Goodbyes.....

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Congratulations!

Amy and Rauf Tunali
Married April 26, 2014
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Spring 2015

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And many, many more......
From the EIP Team to all of you for your many contributions to the Georgia EIP.

We could not do it without you.