

Attribution-NonCommercial-NoDerivatives 4.0 International (CC BY-NC-ND 4.0)  
<https://creativecommons.org/licenses/by-nc-nd/4.0/>

Access to this work was provided by the University of Maryland, Baltimore County (UMBC) ScholarWorks@UMBC digital repository on the Maryland Shared Open Access (MD-SOAR) platform.

**Please provide feedback**

Please support the ScholarWorks@UMBC repository by emailing [scholarworks-group@umbc.edu](mailto:scholarworks-group@umbc.edu) and telling us what having access to this work means to you and why it's important to you. Thank you.

### 1369. Antibiotic Resistance in Maryland: The Statewide Antibigram Initiative

Elisabeth Vaeth, MPH<sup>1</sup>; Molly Reid, M.P.H.<sup>2</sup>; Katherine Richards, MPH<sup>1</sup>; Lucy Wilson, MD, ScM<sup>1</sup>; David Blythe, MD, MPH<sup>1</sup>; <sup>1</sup>Maryland Department of Health and Mental Hygiene, Baltimore, MD; <sup>2</sup>Maryland Institute for Applied Environmental Health, University of Maryland School of Public Health, College Park, MD

**Session:** 144. HAI: Epidemiologic Methods  
*Friday, October 28, 2016: 12:30 PM*

**Background.** Antimicrobial resistance is among the greatest current threats to human health. Both the White House and the Centers for Disease Control and Prevention have recently emphasized the need for awareness of resistance trends at the local and regional levels.

**Methods.** In 2014 the Maryland Department of Health and Mental Hygiene requested that all acute care microbiology laboratories submit an antibiogram for calendar year 2013. Forty-one of 44 laboratories submitted an antibiogram. Isolate data from all units/wards and all body sites were aggregated to calculate a percent susceptible for each combination of organism and antimicrobial. Isolates were also stratified by region and hospital size to identify trends. It is unknown how closely each laboratory adhered to current Clinical Laboratory Standards Institute guidelines for antibiograms.

**Results.** Statewide, *Acinetobacter baumannii* and *Pseudomonas aeruginosa* were the most resistant gram-negative organisms. *Acinetobacter baumannii* was only 33%–57% susceptible to the third- and fourth-generation cephalosporins, 44%–51% susceptible to quinolones, and 53%–57% susceptible to carbapenems. *Pseudomonas aeruginosa* was 74% susceptible to ciprofloxacin and levofloxacin and 87%–89% susceptible to carbapenems. The *Enterobacteriaceae* species also showed considerable resistance to penicillins, cephalosporins, and quinolones. Among gram-positive organisms, methicillin-resistant *Staphylococcus aureus* represented 50% of the total *S. aureus* isolates collected in Maryland hospitals in 2013. No significant vancomycin resistance was identified in this species, however. Only 26% of *Enterococcus faecium* isolates statewide were susceptible to vancomycin. *Streptococcus pneumoniae* showed significant resistance to macrolides. Differences in resistance trends by region and hospital size were also detected.

**Conclusion.** Maryland faces significant threats from antibiotic resistance in some of the most commonly encountered pathogens in inpatient hospital populations. Differences in testing practices and adherence to current guidelines for antibiogram creation create challenges for interpretation of aggregate data and suggest the need for specific requirements when antibiograms are submitted for regional analyses.

**Disclosures.** All authors: No reported disclosures.