

can easily increase its accuracy. **Methods:** Biofilm formation was examined by the method with CRA test. On CRA, slime-producing strains formed black colonies, whereas nonproducing strains developed red colonies in 6 kinds of colors, from very red to very black: very red, red, burgundy, almost black, black, and very black. Antimicrobial susceptibility testing was performed by disc diffusion or the E-test method according to the current guidelines of the EUCAST. The MRSA, and MLSB phenotypes were detected. Polymerase chain reaction (PCR) was used to detect the *mecA*, and *mupA* genes. Erythromycin resistance genes (*ermA*, *ermB*, *ermC*, and *msr*) were detected by multiplex PCR. **Results:** A positive result of the CRA test was accomplished in 66.2% cases; significantly more often in hospital strains (73.4% vs 45.4%; OR, 3.3; 55% CI, 1.2–9.3). Moreover, 73.4% isolates were fully susceptible. In hospitalized patients, the level of resistance to at least 1 antimicrobial category has been identified as 40.9%, and this rate was 27.2% in outpatients. Among the tested strains, 5 (6.0%) had the resistance phenotype MRSA and 22 (26.5%) the resistance phenotype MLSB; 4 strains manifested both mechanisms; erythromycin resistance was 25.3% in those resistant to fluoroquinolones. Resistance to fluoroquinolones was 5 times more often found in ambulatory patients. All of the tested isolates were vancomycin sensitive. **Conclusions:** Biofilm formation is an important risk factor for developmental staphylococcal hospital-acquired ocular infections. Our results prove that hospital strains have demonstrated much greater biofilm-forming ability than nonhospital strains. Studies indicate the high efficacy of chloramphenicol and fluoroquinolones treatments, as well as the need to implement new solutions due to the aforementioned bacteria's high resistance to neomycin and anatomic barriers difficulties.

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Poster Presentation

Antimicrobial-Resistant Organism Outbreak in a Skilled Nursing Facility in Pennsylvania, 2019

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Background: In April 2019, the Montgomery County Office of Public Health (MCOPH) was notified by the Pennsylvania Department of Health (PADOH) of a tier 2 carbapenemase mechanism in a resident of a Pennsylvania skilled nursing facility that was detected through targeted surveillance. Production of the New Delhi metallo- β -lactamase (NDM) carbapenemase was detected using polymerase chain reaction (PCR). The initial follow-up revealed that the patient resided at a 148-bed skilled nursing facility that specializes in spinal cord injury, neurological diseases, ventilator dependence, and pulmonary diseases. MCOPH and PADOH initiated an investigation to identify additional cases and prevent transmission. **Methods:** Over a series of 9 point-prevalence surveys, we collected 518 specimens for colonization screening. Screening was conducted on the wing of the index case and was later expanded to include the entire unit (n=90), after evidence of transmission was noted. Perirectal swabs were submitted to the regional antibiotic resistance laboratory for testing using the Cepheid GeneXpert Carba-R assay. Together with screening, MCOPH and PADOH conducted a series

of on-site visits involving the completion of the CDC infection control assessment and response (ICAR) tool and direct care observations, including 409 hand hygiene observations. **Results:** In addition to NDM, *Klebsiella pneumoniae* carbapenemase (KPC) and Verona integron-encoded metallo- β -lactamase (VIM) were also detected. ICAR results and direct care observations revealed numerous deficiencies in the domains of hand hygiene, personal protective equipment, and environmental cleaning. In addition to 2 cases of carbapenemase-producing organisms (CPO) being detected through clinical specimens, an additional 27 CPO cases were identified through screening coordinated by public health. This large, multimechanism outbreak is attributed to a combination of intrafacility transmission and imported cases. Based on these findings, recommendations for infection prevention and control were provided on site and in writing. Our continued work with this facility lead to improvements in infection control, including a HH success rate improvement of 53%. **Conclusions:** Novel or targeted multidrug-resistant organisms are effectively contained when healthcare facilities and state and local public health work together to reduce transmission to baseline and to improve infection control practices.

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Antimicrobial Stewardship Approach: Strategy to Enhance Antimicrobial Stewardship Programs in Arizona Long-Term Care

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Background: Implementing robust antimicrobial stewardship programs within long-term care facilities (LTCFs) presents unique challenges not typically seen in other healthcare settings. These facilities tend to care for older adults, rely on limited on-site clinician availability and experience higher-than-normal staff turnover. Many LTCFs lack the resources and expertise to track and analyze antibiotics usage. Through a collaborative effort between the Arizona Department of Health Services and the University of Arizona College of Pharmacy, support for carrying out stewardship activities was provided to these healthcare facilities. Our objective was to assess the viability of using pharmacy prescribing data to evaluate antibiotics usage among LTCFs throughout Arizona to assist in development of antimicrobial stewardship interventions. **Methods:** We invited interested LTCFs to participate in the development and enhancement of antimicrobial stewardship programs. We analyzed antibiotic prescribing data from November 2017 through November 2018 to assess the types and quantities of antibiotics prescribed. We worked with pharmacies to obtain a deidentified dataset that included unique patient identifiers, transaction (start) date, agent name, directions for use, route of administration, quantity dispensed, and stop dates. We estimated duration of treatment by assessing antibiotic starts using the number of transaction dates and unique patient identifiers for repeat prescriptions. Each agent was evaluated individually and assigned to an antibiotic category to better assess cumulative prescribing. **Results:** Through assistance from our community