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**Brittany Stephenson\***, bstephenson@lewisu.edu, and **Cristina Lanzas, Suzanne Lenhart, Jason Bintz, Eduardo Ponce** and **Judy Day**. *Comparing Intervention Strategies for Reducing Clostridioides difficile Transmission: An Agent-Based Modeling Study*. Preliminary report.

In recent years, healthcare facilities have experienced an increasing substantial burden from the toxin-producing bacteria *Clostridioides difficile*, which can cause severe intestinal disease. This bacteria can survive for extended periods of time on hospital surfaces. In this talk, I will discuss the development of an agent-based model that simulates the transmission of *C. difficile* in a healthcare setting and considers contributions of the pathogen from environmental surfaces. This model explicitly incorporates healthcare workers (HCWs) as vectors of transmission, tracks individual patient antibiotic histories, incorporates varying risk levels of antibiotics with respect to *C. difficile* infection, and tracks contamination levels of ward rooms by *C. difficile*. I will also discuss how we used the model to evaluate the efficacy of a variety of control interventions and combinations of interventions on reducing *C. difficile* nosocomial colonizations and infections. The control techniques include two forms of antimicrobial stewardship, increased environmental decontamination through room cleaning, improved HCW compliance, and a preliminary assessment of vaccination. (Received September 12, 2019)