Background

- *Clostridium difficile* infection (CDI) is a major cause of morbidity and mortality in the United States.
- *C. difficile* was estimated to cause almost half a million infections in the United States in 2011.
- Historically considered a nosocomial infection associated with antibiotic exposure, CDI has now also emerged in the community in populations previously considered low risk.

Objectives

- The aims of this cross-sectional population-based study are to determine:
  1) Overall incidence rate of CDI in the State of South Carolina.
  2) Incidence rate of CDI based on site of acquisition:
     i) Community-associated CDI (CA-CDI);
     ii) Community-onset healthcare facility associated (CO-HCFA);
     iii) Hospital-onset CDI (HO-CDI).
  3) Estimate the healthcare and financial burden of CA-CDI in South Carolina.

Methods

- South Carolina CDI initiative identified CDI cases from National Healthcare Safety Network (NHSN) and South Carolina Infectious Disease and Outbreak Network (SCION) from January 1, 2015 to June 30, 2016 through complete enumeration of South Carolina population, excluding infants <1 year old.
- A positive stool *C. difficile* test was regarded as a “CDI case” for the purpose of this study.
- Only first and recurrent episodes after 8 weeks of initial one were included in this analysis.

Results

- During 18-month study period, 10,254 unique CDI events were identified in South Carolina residents.
- Over one-half of CDI cases were community-acquired (CA-CDI) [Table 1].
- Overall incidence rate of CDI in South Carolina was 139 per 100,000 person-years (71, 36, and 32 for CA-CDI, CO-HCFA CDI, and HO-CDI, respectively) [Figure 1].
- Incidence rate of CDI increased with age and greater for women as compared to men [Figure 2].

Conclusions

- Incidence rate of CA-CDI in South Carolina has surpassed both CO-HCFA CDI and HO-CDI combined.
- The heavy burden of CA-CDI justifies dedication of public health resources to combat CDI in ambulatory settings.
- Antimicrobial stewardship initiatives targeting unnecessary and inappropriate antimicrobial use in the community may reduce the burden of CDI in South Carolina.