

Center for Community Health

Joining forces with the community



Communicable Diseases Surveillance and Prevention

The Communicable Diseases Surveillance and Prevention is a program comprised of the Emerging Infections Program (EIP) and Healthcare Associated Infections Preventions (HAI) Collaboratives. The EIP is part of a national effort to provide population-based communicable disease data for surveillance of disease patterns, evaluation of vaccine programs, and to identify populations at risk for severe infection and those in need of screening and preventive care.

EIP projects include studies of risk factors for influenza disease requiring hospital admission, methicillin-resistant *Staphylococcus aureus* (MRSA), and *Clostridium difficile* in healthcare and community settings.

The work performed in the Center for Community Health's EIP and the HAI Collaborative groups serves as a foundation for research studies and informs public health practice and policy at the local, state and national levels.

Emerging Infections Programs include studies of risk factors for influenza disease requiring hospital admission, methicillin-resistant *Staphylococcus aureus* (MRSA), *Clostridium difficile* infections (CDI) in healthcare and community settings, HPV Vaccine Effectiveness and incidence of carbapenem-nonsusceptible strains of *Enterobacteriaceae* and *Acinetobacter* species in Monroe County.

- Goals of the EIP Surveillance Programs:
 - Determine the population-based incidence of community- and healthcare-associated CDI and MRSA infections among participating EIP sites.
 - Characterize *C. difficile* strains and MRSA that are responsible for infections in the population under surveillance with a focus on strains from community-associated cases.
 - Describe the epidemiology of community- and healthcare-associated MRSA and CDI and generate hypotheses for future research activities using EIP surveillance infrastructure.

- Determine the age-specific rates of laboratory confirmed influenza associated hospitalization.
- Determine the rate of serious influenza-associated complications, such as secondary bacterial infections, and the need for ICU admission/mechanical ventilation.
- Identify factors that are associated with severe illness or influenza-associated complications.
- Evaluate adherence to influenza vaccination recommendations.
- Describe the incidence of HPV-associated CIN 2/3 and AIS and monitor trends over time.
- Obtain diagnostic biopsy specimens on all reported cases of CIN2, CIN 2/3, CIN3 and AIS in females 18 to 39 years of age in Monroe County.
- Obtain additional detailed information on all reported cases of CIN2, CIN 2/3, CIN3 and AIS in females 18 to 39 years of age in Monroe County, including HPV vaccination history, complete demographic information and relevant medical history.
- Describe cervical cancer screening utilization among females 18 to 39 years to monitor trends over time using methodology other than self-report.
- Evaluate the population-based incidence of carbapenem-nonsusceptibility among common strains of *Enterobacteriaceae* and *Acinetobacter* species and describe how the incidence changes over time
- Better characterize carbapenem-nonsusceptible strains in sites submitting data in order to inform prevention efforts
- Describe known resistance mechanisms among a subset of carbapenem-nonsusceptible *Enterobacteriaceae*

Healthcare Associated Infections (HAI) are infections that patients acquire during the course of receiving healthcare treatment for other conditions. The Communicable disease surveillance and prevention program focuses on reduction of *Clostridium difficile* infections (CDI) and measuring the burden of these infections to guide prevention effort and inform policy development.

- Goals of the HAI Programs:
 - Reduce the burden of C. difficile infections (CDI) in hospitalized patients by 30%
 - Reduce the burden of CDI in key community skilled nursing facilities by 30%
 - Reduce the burden of CDI in our community by 30%
 - Estimate of the prevalence of HAIs aggregated across participating hospitals, and distribution of HAIs by major infection site and pathogens (including antimicrobial-resistant pathogens).
 - Estimate of the prevalence of antimicrobial use (expressed as percentage of total inpatients receiving an antimicrobial agent) aggregated across participating hospitals.
 - Estimate of the distribution of antimicrobial use by drug type, rationale and therapeutic site.