KASIC NEWSLETTER

Issue Six, Volume One

Pictured Top: Louisville Skyline
Attribution to Fine Art America

In this Issue:

Norton Infectious Diseases Institute Grand Rounds Educational Series

Every Wednesday
from 12:00 – 12:30 PM EST

Click here to add Grand Rounds to your Calendar

March 1st, 2023:
A Primer in Machine Learning in Infection Prevention and Control with Timothy Wiemken PhD

March 8th, 2023:
Environmental Infection Control: Surface Disinfection Technologies with Hudson Garrett, PhD, MSN, FNP-C

March 15th, 2023:
Lab Testing for Sexually Transmitted Diseases with Alan Junkins, PhD

March 22nd, 2023
Treatment of Sexually Transmitted Diseases with Wes Johnson, PharmD, MPH

Meet KASIC's Sister Program Focused on Infection Prevention and Control Training: KyIP Training & Project Firstline

Funded by the Centers for Disease Control and Prevention (CDC) and the Kentucky Department for Public Health, the goal of Kentucky Infection Prevention Training Center is to provide education and training in the area of infection prevention and control across all healthcare settings. Under **KyIP Training**, the center houses a variety of training and educational opportunities, such as **Project Firstline**, the Norton Infectious Diseases **Grand Rounds Educational Series** where topics include the latest in infection prevention and control techniques, laboratory controls, and antimicrobial stewardship opportunities, and opportunities for free **continuing education credits** provided through myCME.

Project Firstline is a CDC-funded initiative that provides infection prevention and control education and training to frontline healthcare workers in every setting where healthcare is provided. The safety of our healthcare workforce is our top priority. In Kentucky, Project Firstline will focus on infection prevention education and training in acute care, long term care (LTC), skilled nursing facilities (SNF), dialysis centers, school nursing, public health nursing, and everywhere else where healthcare is delivered. The most effective way of reducing the spread of germs in healthcare facilities is by being consistent in our infection control and prevention approaches, of which Project Firstline addresses.

Click to visit KyIPtraining.org

Best Practices Best Outcomes
www.kyiptraining.org

CDC Issues Warning about Rising Spread of Drug-Resistant Stomach Bug, Shigellosis

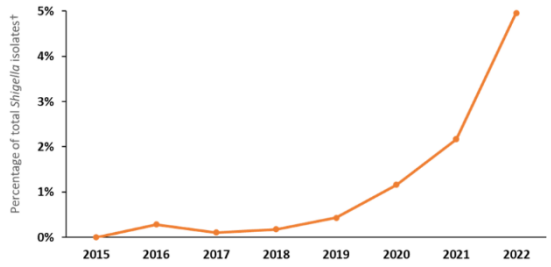
About 5% of all shigellosis infections in 2021 were extensively drug-resistant, up from zero in 2015

The CDC is warning practitioners and public health departments about a dramatic increase in serious gastrointestinal infections caused by bacteria that are resistant to common antibiotic treatment. Since late February, the CDC has been monitoring an increase in people infected with strains of Shigella bacteria that are highly resistant to available drugs. Shigella infections, known as Shigellosis caused by the bacterium *Shigella dysenteriae*, usually causes diarrhea that can be prolonged and bloody, as well as a fever, abdominal cramping, tenesmus, and malaise. In the past, Shigella infections predominately infect those 4 years of age and younger; however, the CDC has seen an increase in transmissions for populations outside the norm. Drug resistant Shigella infections are "challenging to treat and easily transmissible, especially among vulnerable populations," states CDC medical officer Naeemah Logan. Superbug infections "are a serious public health threat, and we want to ensure providers are aware of the increasing potential for antibiotics to fail."

Antibiotic-resistant superbugs are strains of bacteria that have evolved to become resistant to one or more types of antibiotics, making it difficult or even impossible to treat infections caused by these bacteria using standard antibiotic therapies. The long-term consequences of antibiotic-resistant superbugs are potentially catastrophic. These superbugs can cause severe infections that are difficult to treat, leading to longer hospital stays, higher healthcare costs, and a higher risk of death. In addition, the rise of antibiotic-resistant bacteria may also lead to the reemergence of infectious diseases that were previously considered to be under control, such as tuberculosis and pneumonia.

The spread of antibiotic-resistant superbugs can also have far-reaching consequences for public health and the economy. Furthermore, the development of new antibiotics is slow and expensive, and there is no guarantee that new drugs will be effective against emerging superbugs, making antimicrobial stewardship even more important today.

Figure: Percentage of *Shigella* isolates that showed an extensively drug resistant (XDR)* phenotype or genotype in the United States, by year, 2015–2022†



*XDR *Shigella* bacteria (n=239) are defined as resistant to azithromycin, ciprofloxacin, ceftriaxone, trimethoprim-sulfamethoxazole, and ampicillin.

The above graph represents the dramatic increase in Extensively-drug Resistant (XDR) Shigella. XDR Shigella is defined by the CDC as, as strains that are resistant to all commonly recommended empiric and alternative antibiotics—azithromycin, ciprofloxacin, ceftriaxone, trimethoprim-sulfamethoxazole (TMP-SMX), and ampicillin.

A rise in any XDR bacteria can increase mortality in every population.

Looking for more information on Shigella?

Visit the CDC page by **clicking here** for additional information

Who is at Risk for Shigellosis?

- Individuals living in close proximity, like in a **long-term care facility**, such as a nursing home or dormitories
- Individuals with **compromised immune systems**, such as those on chemotherapy or people living with HIV/AIDS
- **International Travelers**, especially to locations with poor sanitation and low hand hygiene standards
- Those that **work in the food service or handle food** through contaminated water or food
- **Individuals with poor hand hygiene**, such as not washing hands after using the restroom or before preparing food