Genomic Epidemiology: Whole-Genome-Sequencing–Powered Surveillance and Outbreak Investigation of Foodborne Bacterial Pathogens - DTU Orbit (08/11/2017)

Genomic Epidemiology: Whole-Genome-Sequencing–Powered Surveillance and Outbreak Investigation of Foodborne Bacterial Pathogens

As we are approaching the twentieth anniversary of PulseNet, a network of public health and regulatory laboratories that has changed the landscape of foodborne illness surveillance through molecular subtyping, public health microbiology is undergoing another transformation brought about by so-called next-generation sequencing (NGS) technologies that have made whole-genome sequencing (WGS) of foodborne bacterial pathogens a realistic and superior alternative to traditional subtyping methods. Routine, real-time, and widespread application of WGS in food safety and public health is on the horizon. Technological, operational, and policy challenges are still present and being addressed by an international and multidisciplinary community of researchers, public health practitioners, and other stakeholders.

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