### Outbreak Investigation: 10 Steps

#### 1. Prepare to investigate
- Identify outbreak investigation team
- Review scientific literature
- Determine if immediate control measures are needed

#### 2. Verify the diagnosis and confirm outbreak
- Get laboratory confirmation
- Collect stool specimens from ill persons
- Perform bacteriologic, virologic or parasitic testing at the Georgia Public Health Laboratory (GPHL)
- Link patients and environmental specimens by DNA fingerprinting/Pulse Field Gel Electrophoresis (PFGE)

#### 3. Case definition
- Establish a set of standard criteria for deciding who are the ill persons related to the outbreak ("case-patients")
- Narrow or broad (confirm, probable, suspect)
- DYNAMIC: may change during investigation

#### 4. Case finding
- Conduct systematic search based on case definition
- Create line list of possible cases (people exposed)

#### 5. Perform descriptive epidemiology
- Tabulate and orient data: PERSON, PLACE, TIME
- Frequencies
- Mapping
- Epidemic Curve

#### 6. Hypothesis generation - the how and the why
- Compare with known sources or similar outbreaks
- Design questionnaire

#### 7. Evaluate hypothesis through statistics
- Perform epidemiologic study: cohort, case-control
- Compare risk factors among ill (cases) vs not ill (controls)

#### 8. Additional environmental studies
- Collect food, water, and/or environmental samples
- Determine what happened with the implicated source or food

#### 9. Implement control/prevention measure
- Coordinate with all stakeholders including regulatory partners
- Develop strategies to prevent further or future illness

#### 10. Communicate findings
- Disseminate outbreak investigation report - internal and external audience
- Educate community, ill persons, restaurant staff, and Public Health Staff