

# **Shigellosis Outbreak Anguilla**

**By: Lynrod Brooks  
Health Planner**

# Outline

- ▣ Introduction
- ▣ Epidemiology
- ▣ Outbreak responses
- ▣ Preventive measures
- ▣ Public Health Interventions
- ▣ Challenges
- ▣ Recommendations
- ▣ Way forward

# Introduction

- ▣ Health Services in Anguilla is delivered by the Health Authority of Anguilla and the Private Sector .
- ▣ The HAA provides health services through the Princess Alexandra Hospital and the five health centres located within the various health districts
- ▣ Since the devolution of the health services to the Health Authority, the Ministry of Health key role is to provide policy direction, strategic planning and regulatory/licensing functions

## Introduction (cont'd)

- ▣ There is no national Epidemiological Unit in Anguilla, but the Health Information and Surveillance functions are covered by the Health Information Unit of the Health Authority of Anguilla
- ▣ The Princess Alexandra Hospital, Primary Care Health Centres and the Environmental Health Unit (EHU) carry out surveillance activities.

# Epidemiology

- ▣ The first case of potential food poisoning outbreak likely began on February 03<sup>rd</sup>, 2011, whereby a visitor had sought medical attention at private health care facility on the island due to symptoms associated to that of food-borne illness.

## Epidemiology (cont'd)

- ▣ Lab results from CAREC confirmed that the stool sample taken from the hospitalized male patient tested positive for *Shigella sonnei*.
- ▣ The hospitalized male patient that tested positive for *Shigella Sonnie* was linked to his place of residence, as it was revealed that other family members were also experiencing similar symptoms of food poisoning.

## Epidemiology (cont'd)

- ▣ On February 10<sup>th</sup>, 2011, reports received from Health Officials in neighbouring St Martin revealed that nine persons, whilst visiting the island had eaten lunch at a local restaurant.
- ▣ And upon returning to St Martin four of them including a six year old, were hospitalized as a result of digestive disorders.

## Epidemiology (cont'd)

- ▣ Laboratory tests carried out at a Lab in St Martin reported that 6 tested positive for *Shigella sonnie* and 3 unaccountable.



## Epidemiology (cont'd)

- ▣ Additionally, on February 16<sup>th</sup>, 2011, the Surveillance Officer of the Health Authority of Anguilla reported that three other persons who had eaten at the said restaurant had also experienced similar symptoms that were consistent with *Shigellosis*.
- ▣ Lab results from CAREC confirmed that the stool samples taken from the three persons that had sought medical attention at the local hospital tested positive for *Shigella sonnei*.

# Outbreak Response

- ❑ The Surveillance Response Team upon notification of the potential *Shigella* outbreak was engaged in several meetings, the first commencing on February 18<sup>th</sup> 2011, in order to address this public health issue.
- ❑ The purpose of these meetings was to determine the extent of the *Shigella* outbreak and to ensure appropriate prevention and control measures were implemented.
- ❑ Conference call with CAREC on March 03<sup>rd</sup> 2011 to provide an up date on the *Shigella* situation and discuss control measures implemented

# Environmental Health Investigations

- ▣ Environmental Health Officials visited the local restaurant on February 11, 2011 and undertook a full investigation which revealed the following information

# Environmental Health Investigations (Cont'd)

## ❖ **Foods consumed**

- ❑ (1)Grouper, (2) Mahi Mahi, (6) Cray fish, calamari, chicken wings, spinach, green beans, carrots, basmati rice
- ❑ Other patrons would have consumed some of the same food.

## ❖ **Staff - 9**

- ❑ 5-with food handlers permits
- ❑ 4 valid and 1 with permit but not valid and 4 without permits
- ❑ No history of staff being out sick

## ❖ **Water source**

- ❑ Well water supply- washing of utensils
- ❑ Bottled water supply (local company)- used for meal preparation and cooking

## ❖ **Food suppliers**

- ❑ Tomatoes-local farmer
- ❑ Other vegetables- local wholesaler

## ❖ **Sanitary Convenience** - Satisfactory

# Water Laboratory Investigation

- ▣ Water Laboratory staff visited the Restaurant on February 17<sup>th</sup> 2011 and collected water samples (bottled and ground water) for bacterial analysis.

# Water Lab – Results

- ▣ The results for the local bottled water used were within their respective World Health Organization (WHO) guideline values.
- ▣ Most of the results for the ground (well) water were within their respective World Health Organization (WHO) guideline values with the exception for faecal coli form.
- ▣ Confirmation tests did show that the results for faecal coli form were negative.

# Water Lab Results (con't)

- ❑ The Ground Water WHO guideline value for nitrate is 50 mg/L and 0/100 ml for faecal coli form.
- ❑ The well water values suggested that the ground water supply at the local restaurant cannot be used as a source of drinking water.
- ❑ Follow up tests revealed a trace of chlorine in ground water supply
- ❑ No bacteria trace was found.
- ❑ Other safety values met the WHO guideline values.

# Preventive Measures

- ▣ Re-emphasise the importance of cleaning, hand washing and having officials trained as valid food handlers
- ▣ Issuance of a HACCP check list which must be implemented at the restaurant
- ▣ Restaurant staff were required to provide a stool sample for testing (mandatory)



# Preventive measures

- ▣ Staff suffering from stomach disorders involving diarrhea and or vomiting were advised not to attend work.
- ▣ Chlorination of ground (well) water (chlorination instructions were issued to staff)
- ▣ Routine monitoring and inspection of food establishment.

# Public Health Interventions

- ▣ As part of our increased surveillance, weekly stool samples will be collected from persons suffering from gastro enteritis at the various Health Centres in order to determine whether there is was an actual *Shigella* outbreak on the island or the issue involving the local restaurant was just an isolated one.
- ▣ Health promotion bulletins, pamphlet and leaflets on personal hygiene were disseminated to the various media houses for public information.
- ▣ Adequate chlorination of ground water.

# Challenges

- ❑ Lack of clearly defined procedures for communicable disease investigation
- ❑ specimen collection
- ❑ Timely reporting of communicable diseases

# Recommendations

- ▣ Budgetary arrangements for communicable disease surveillance and investigation is in place.
- ▣ Establishment of standard operating procedures for communicable diseases.
- ▣ Provision of appropriate equipment to conduct testing of collected food samples.

## Recommendations (cont'd)

- ❑ Mandatory sampling of all water sources utilized at all food establishments to ensure good quality.
- ❑ Mandatory testing of water supplied to the various food establishments by private haulers.
- ❑ There is an urgent need to strengthen communicable surveillance procedures and protocols between the two islands (Anguilla and St. Martin).

# Way Forward

- ▣ Establishment of a National Epidemiological Unit.
- ▣ Develop and implement an Information Policy with specific guidelines to facilitate data collection, analysis and dissemination
- ▣ Conduct in-house trainer of trainers to improve health information management

## Way Forward (cont'd)

- ▣ Strengthen Surveillance Response protocols
- ▣ Recruitment of Chief Medical Officer
- ▣ Finalize draft Public Health Legislation and Communicable Disease Regulations
- ▣ Finalize surveillance and infection control manuals

**THANK YOU**

