Risk Communications in Health and Food Safety The Caribbean Experience

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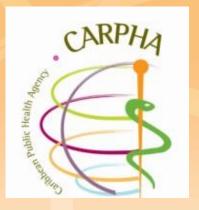


Overview

- Background
 - CARPHA
 - Foodborne Diseases Burden and Impact
- 3 Practical Experiences in Risk Communications for in Health and Food Safety in the Caribbean
 - Food Safety Policy brief: Barbados
 - Salmonella Enteritidis in Eggs: Trinidad and Tobago
 - Norovirus outbreak: Turks and Caicos Island



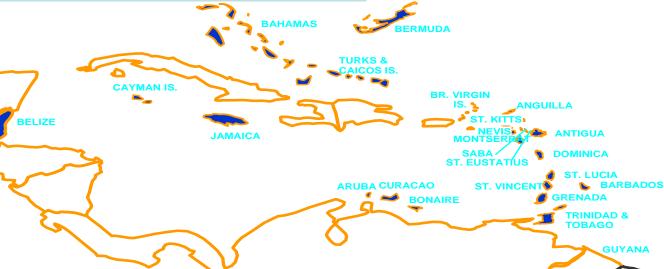
What is CARPHA?



- Small, diverse populations
- Varying levels development
- Most tourism dependent region in the world

- Regional Integrated Public Health agency
- Serves 24 Caribbean countries
- Mandated by Heads of Government
- Combines 5 regional Health Institutes
 - Caribbean Epidemiology Centre (CAREC)
 - Environmental Health Institute (CEHI)
 - Caribbean Food and Nutrition Institute
 - Caribbean Health Research Council
 - Caribbean Regional Drug Testing
- Prevent disease, Promote Health, Respond to Public Health Emergencies
 - Regional response and coordination.
 - Regional and Global PARTNERS

http://carpha.org/



Impact of Foodborne Diseases

- Foodborne diseases (FBD) : major cause of illness & death
- WHO: 1.8 million people died worldwide from diarrheal illness; 70% of diarrheal illness is foodborne, 3000 deaths/day to FBD
- Leading causes of illness & death in less developed countries, causing 2.2 million deaths/yr, 1.9 million of whom are children
- Fraction of FBD (10-15%) is reported; most of unknown cause
- Increase in outbreaks, new agents, globalisation of trade and travel.

Importance of Food safety to the Caribbean

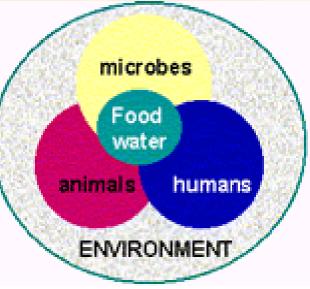
- Protect the health & well being of Caribbean people & visitors
- Meet IHR and WTO/SPS requirements for Trade and Export
- Ensure sustainability of the Tourism and hospitality industry.
- Ensure sustainability Caribbean economies



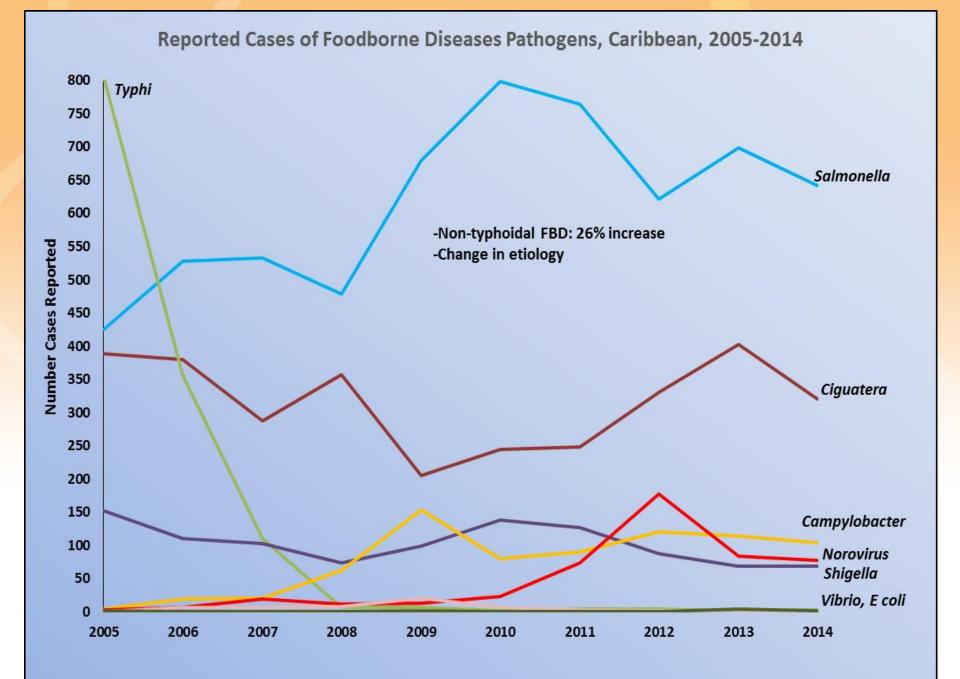
CAREC (now CARPHA) Integrated "One Health" Regional FBD & Food Safety

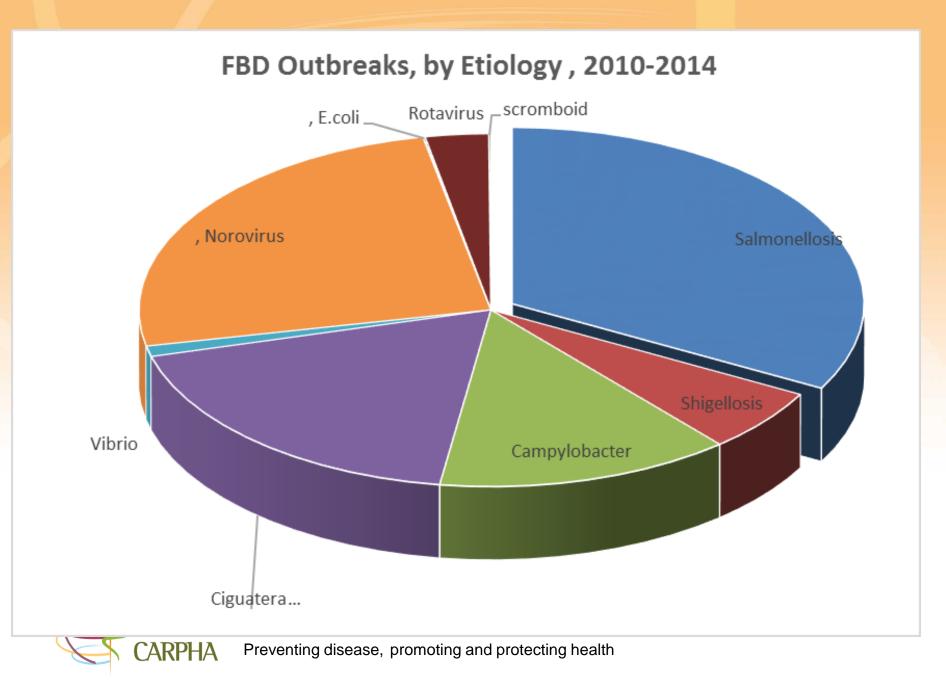
<u>Objective:</u> to promote and strengthen integrated FBD surveillance to reduce FBD incidence and outbreaks and improve food safety

- Multidisciplinary, integrated farm to table approach to FBD surveillance and food safety
- Interagency collaboration and Partnerships
 - CARICOM, CTO, CHTA, FAO, PAHO, WHO, PHAC, FDA, GFN,
- Intersectoral approach at country level
 - integrating epidemiological, laboratory, environment and veterinary health
 FBD surveillance along the farm to table
- Linking Ministry of Health, Agriculture, Tourism and Trade









Caribbean Burden of Gastroenteritis study

I in every 11 persons in the Caribbean have diarrhea/yr



Economic cost Diarrheal illness US \$1.2 -40 M/yr



CARIBBEAN HEALTH : NOT-SO-GOOD GLOBAL IMPACT



Risk communication: integral part of promoting Health, Safety, Trade and Tourism in the Caribbean

How do we disseminate this information to the groups that use it?





Clear communication

Practical Experiences in Risk Communications for in Health and Food Safety in the Caribbean

- Food Safety Policy brief : Barbados
- Salmonella Enteritidis in Eggs: Trinidad and Tobago
- Norovirus outbreak : Turks and Caicos Islands



1.Burden of Illness Policy Brief: Risk Communication Tool

How was the information that was communicated obtained?

- Conducted burden of illness gastroenteritis study
 - ID the hazards, risks factors, its magnitude

How did you know what the audience needed to hear ?

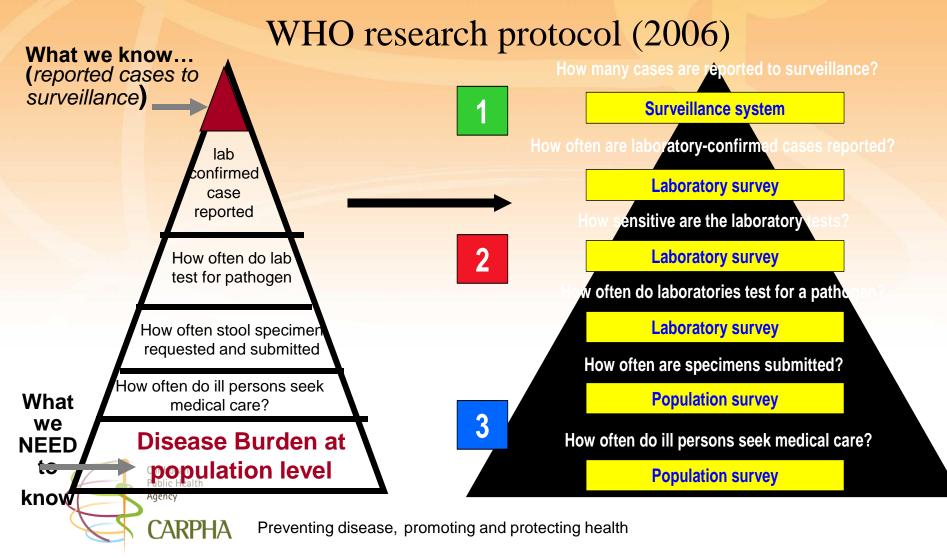
- PAHO/WHO workshop on develop food safety policy briefs
- ID audience (policy makers) & message

How was the uncertainty communicated?

- Message in acceptable format for target audience: policy brief
- 3 problems: 3 solutions/recommendations
- Go through the steps/process of acceptance
 - Approval by CMO, council of ministers, cabinet



CARIBBEAN BURDEN OF ILLNESS STUDY Estimating and Describing the Burden of Foodborne Illness, 2008-2013



Underreporting Burdens of AGE & FBD, Barbados

AGE/pathogen to MOH	Reported cases to MOH	Estimated burden	Underreporting factor
AGE syndromic	2632	7370	64.2%
AGE lab confirmed	198	44,240	208
Salmonella	108	4009	37
Campylobacter	69	2612	38
Norovirus	8	5002	313
Rotavirus	9	602	67
Stap Aureus	1	1837	1837

Economic cost: US 6.6-13.9M



POLICY BRIEF Improving food safety in BARBADOS



BACKGROUND

Food borne illness is a major cause of morbidity and mortality worldwide. In Barbados the disease burden and its economic impact are currently unknown. Reliable epidemiological data is therefore needed to quantify the burden in monetary terms, assess the cost effectiveness of interventions and ensure appropriate allocation of resources.

PROBLEM STATEMENT

Barbados is one of the most tourism dependent countries in the Caribbean and the viability of this industry is sensitive to health threats. Outbreaks of food borne illnesses have frequently occurred at major hotels on the island and some have resulted in adverse publicity, and potential brigation.

The frequent consumence of these outbreaks suggests that Food Safetr Management Systems needs to be strengthened. However, the realization of this goal is dependent on the svallability of precise estimates of the burden of foodborne illnesses. An estimation of the magnitude, distribution and spenific mik factors associated with food borne illness is therefore an essential step towards mitigation. In this regard, a burden of source gastro-intestinal illness (AGI) and food borne illness (FEI) study was conducted for one year in Barbados during August 2010 -August 2011.

KEY FINDINGS

Gastroenteritis (AGI) and foodborne diseases (FBD) pose a huge economic burden to Barbados (\$6.6-\$13.9 million/year).

More than 60% of AGI cases were not reported For every AGE case reported, 200 more cases were occurring

Norovirus and Salmonella area the leading cause of FBD in Barbados, with significant impact on food safety and tourism

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Handsrushing is a nonjoe risk factor for FED. Approximately one out of every four persons with a FBD did not practice hand washing before meals. Barbados Food Safety Policy Brief (page 1)



PRIORITY ACTIONS

- Provide adequate ongoing financial support for Norovirus and Salmonella testing by the end of 2013.
 - Develop a health promotion strategy which includes a targeted public awareness program with emphasis on hundrowshing and the transmission of (vinal gastroenteritis caused by Norovirus) and Egg Safety

CERCISIONS.

Improve notification of gestrointestinal illness by amending regulations and remitizing medical practitioners in food boxee illnesses and strengthening moveillance system

DISCUSSION

This study provides empirical evidence of the epidemiology and burden of acute gastrointertinal illness and food boarse diseases is Earbados. Essentially the magnitude of the burden of illness attributed to AGI and FBD has been shown to be much larger than that suggested by statutory notifications, syndromic surveillance and laboratory reports of illness. These estimates also emphasize the enomity of the degree of under-reporting and under-diagnosis of AGI and food boarse pathogens at all stages of the reporting pyramid. (Table 1) Assuming that the survey data are representative, scute gastroentenitis is responsible for 89,520 days of illness, 639 admissions to hospital, 89,520 days lost from work. Using cost data from private health care systems this represents an estimated annual economic burden of \$6.6 million to \$13.9 million.

Further research in the area of food preparation and consumption may identify 'safe' and 'unsafe' practices.

Table. 1 Under reporting and estimated burden of AGI and food borne pathogens in Barbados 2010 - 2011

Cases reported, estimated burden, and underreporting, Barbados

	Reported rate to Ministry of beath for mady period		
AGE (gendrames)	2632	7320	284
AGE (ab burnd)	198	44,270	208
Salminatio	108	4009	37
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Barbados Food Safety Policy Brief (page 2)

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Outcomes

Since the BOI study and its policy brief, Barbados has

- 2012: Increased resources in Norovirus and Salmonella
- 2012- present: Public health messages for target audiences
 Hand washing, cooking eggs, avoid pooling, refrigeration
- 2014 : Reduction in Norovirus and Salmonella outbreaks

Lessons learnt

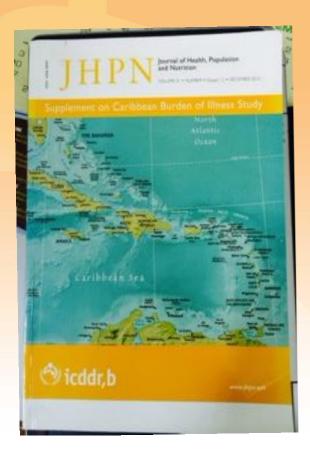
- Importance of scientific data for advocating policy change
- Target messages to different target audience
- Change is tough, takes time, advocacy
- Interagency and multisectoral collaboration (health, agri, tourism, trade) is essential for food safety



Caribbean Burden of Diseases

www.jhpn.net/index.php/jhpn/article/download/2303/977

- The burden of AGE, FBD and economic impact in the Caribbean :much larger than reported by statutory notifications & reports
- Degree of underreporting for AGE: 64%-99%
- Economic costs for AGE : US \$ 1.3 to 40 M
- Highest burden: Norovirus, SALMONELLA, Campylobacter, Guardia



Risks

- Undercooked eggs, chicken
- Hand washing & Hygiene
- Improper cooking
- Improper holding temp
- Eating outside home

2. Salmonella Enteritidis in Eggs in Trinidad and Tobago :Risk Communication Tool

How was the information that was communicated obtained?

- Conducted Salmonella Enteritidis (SE) case control study (1997-98)
- ID the hazards and risks factors

How did you know what the audience needed to hear ?

- Consulted with Health, Egg Famers, Consumer Affairs
- ID different target audience(farm to table) & messages

How was the uncertainty communicated?

- SE farm to table action plan (based on US SE action plan)
- Target messages: Famers, Food Handlers, Consumers
- SE case control computerized based study
- Advocate with authorities for acceptance & implementation Public Health Agency Preventing disease, promoting and protecting health

Salmonella Enteritidis (SE) study in T&T Indar-Harrinauth et al. 2001

- SE: most common FBD & gastroenteritis in T&T, 1995-2000
- Risk factors for SE
 - raw and undercooked eggs and egg products
 - cake batter, raw eggs & stout/guiness/aloes/juice); eggnog, tiramisu, egg paste
 - raw seafood and raw meats
 - pooling of eggs
 - lack of Refrigeration of raw eggs
 - Incomplete cooking
 - Inadequate holding (cold/hot)





Salmonella Enteritidis Farm to Table Prevention and Communication Plan

Trinidad and Tobago



2003

SE action plan

- SE epidemiology
- Mode of spread
- Monitoring & Prevention
 - Hatchery
 - Farm
 - Transport
 - Food service
 - Consumer
- Target messages
 - Famers,
 - Food Handlers
 - Consumers

Outcomes

Since the SE prevention plan, Trinidad and Tobago has

- Changed their source of imported baby chicks
- Implemented clean up and other prevention measures at farm
- Transport raw eggs in cooler conditions
- Reduced pooling of eggs, raw/undercooked eggs for risk pop

Lessons learnt

- Importance of scientific data for advocating policy change
- Promote right message: "Eggs are best source of protein"
- Target messages to different target audience
- Multisectoral collaboration (industry, health, trade)



3. Norovirus outbreak: Turks & Caicos Islands Risk Communication Tool

How was the information that was communicated obtained?

Conducted an outbreak investigation and traceback

How did you know what the audience needed to hear ?

- Consulted with Health, Tourism, Industry (hotel, airport)
- Reduce/avoid fear, bad publicity, situation under control

How was the uncertainty communicated?

- Press Releases
- Norovirus Management toolkit for Hotels
- Advocate with authorities, industry for implementation



Norovirus in Turks & Caicos

- 1. May-June 2012: NOROVIRUS introduced In TCI
- Multiple hotel outbreak
- Over 1500 ill
- Hotel closure
- Negative publicity
- Huge Costs & Economic loss
- 30% Decline in arrivals

Beaches Turks and Caicos ordered to close

By Hayden Boyce Publisher & Editor-in-Chief

The world-famous Beaches Resort Villages and Spa on th notice because of the mystery virus that has plagued mo

The temporary closure was ordered today Saturday June was reported that close to 60 guests at the hotel were a

This action came at a time when Beaches was at full Providenciales or reimbursed for their vacation and g

Beaches Turks and Caicos is the largest resort in the Tur

- 2 Late 2012 : Outbreak of Norovirus in school
 - Spread and now in the population

3: 2013: Grand Turk Cruise Port Outbreak

- Port closed
- Widespread Negative publicity & Economic loss



Intervention (Ministry of Health, PAHO & CARPHA)

Stage 1

- Outbreak investigation (Case control study) at hotels
- Trace back to index case
- Environmental investigation

Stage 2

- Consultations (health, tourism, industry, higher authorities)
- Hotel closure
- Hotel restaurants and airport visits and surveys
- Deep sanitation of hotels

Stage 3

- Norovirus management toolkit
- Lab capacity & Training

*Joint Press releases (positive slant) at all stages



Ministry of Health Turks and Caicos Islands

GUIDELINES

FOR THE MANAGEMENT

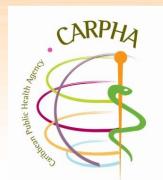
OF NOROVIRUS VIRAL

GASTROENTERITIS IN HOTELS

- To decrease the risk of transmission of communicable diseases in hotel
- Information & templates health and hotel authorities: to run educationbased preventative campaigns
- Information on spread of CD, marketing materials, such as posters, presentations, images, slogans and key phrases, to run a campaign.
- Checklist for hotels
- Cleaning and sanitization procedures
- Authorities handbook: proper prevention & procedure to follow in in a gastrointestinal disease outbreak.



Thank You! Merci! Gracious ! Danke !



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