

**Partnerships –  
The Foundation of a Food  
Emergency Response**



**Wendy Campbell  
Food Defense Coordinator  
Food & Drug Protection Division  
NCDA&CS**

**Faculty**

**Wendy Campbell, MS  
Food Defense Coordinator  
Food & Drug Protection Division  
North Carolina Department of  
Agriculture & Consumer Services**

**In Many Ways, The Castleberry  
Recall Was The Perfect Storm  
Waiting To Happen....**



**Millions of cans distributed  
across the US**

**Perfect time of the year  
Deadly toxin**

**Over 90 Different  
Food Products**

**27 Different Brands  
Millions of Cans**

**All Produced in 1 Facility!**

**One of the largest recalls  
related to botulism  
in canned products**

**Even Brands of Dog Food  
Were Recalled...and They  
Sound Pretty Tasty!**



## July is National Hot Dog Month

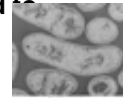
- On July 4<sup>th</sup>, Americans will enjoy 150 million hot dogs – enough to stretch from D.C. to L.A. over five times
- During Hot Dog Season – Memorial Day to Labor Day – Americans typically consume 818 hot dogs every second

And what else goes great on a hot dog, but chili!



## What Is Botulism?

- Nerve toxin formed by Clostridium botulinum – group of bacteria found in the soil
- Rod-shaped organisms grow best in low oxygen, low acid conditions
- Spore formers – survive in a dormant state until exposed to conditions that can support their growth



## Botulism – The Ultimate Terror Weapon?

- LD50 = ~1 ng/kg,
  - A few hundred grams could theoretically kill every human on earth
- Perspective, the rat poison strychnine, has an LD50 of 1,000,000 ng/kg

## Botulism – The Ultimate Terror Weapon?

- Would take four hundred tons to kill every human
- Japanese started growing BT in the 1930s and the toxin tested with universal horrific effects

## How Common Is Botulism?

- Average of 110 cases/year in US
  - Foodborne: 25%
  - Infant: 72%
  - Wound: 3%
- Average of 9.4 foodborne outbreaks/year with 2.5 cases/outbreak

## How Common Is Botulism?

- ~27% occur in Alaska due to fermented foods...fish heads, fish eggs, beaver tail, seal flipper
- Making fermented fish heads in plastic containers with tight-fitting lids vs. pits lined with wood, animal skins, or leaves made an even more ideal growing situation for the botulism germs

## How Common Is Botulism?

- More than 90% of cases due to home processed goods



## Symptoms Characterized by the Dozen D's

- Dry mouth, double vision, dilated pupils, droopy eyes, droopy face, diminished gag reflex, dysphagia (painful swallowing), dysarthria (motor speech disorder), dysphonia (also affects speech), difficulty lifting head, descending paralysis, and diaphragmatic paralysis

## Symptoms Characterized by the Dozen D's



We're not talking about a dozen doughnuts.

## Symptoms Characterized by the Dozen D's



Droopy the Dog – an undiagnosed case of botulism?

## Recovering is a Slow Process

- In the past 50 years, the proportion of patients with botulism who die has fallen from about 50% to 8%
- Recovery occurs only when the affected individual grows new nerve endings
- Survivors may have fatigue and shortness of breath for years and require long-term therapy

## Treatment Options for Botulism

- Induce vomiting and bowel movements
- Antitoxin treatment (if diagnosed early), but may cause allergic reaction
- Mechanical ventilation may be needed

## Treatment Options for Botulism

- If left untreated....illnesses may progress from head to toe, with paralysis of the face, arms, breathing muscles, trunk, and legs

## How One Patient Communicated

"We can communicate with him only by him basically moving his toes," said Deborah Busemeyer, New Mexico Department of Health spokesman.



## How One Patient Communicated

"The 52-year-old man from New Mexico's Sandoval County, whose name was not released, was hospitalized July 26 and is in serious condition, able to only wiggle his toes," state health officials said.



## Dr. David Acheson, the FDA's Lead Food Safety Expert Said at a Recall Press Conference

"We're not talking here about a bug that lands you in the bathroom for a few days with diarrhea. We're talking about a toxin that puts you in the intensive care unit. The longer this stuff stays in the can, the worse it gets."

## North Carolina's Viewpoint (Commissioner Troxler)

"We found the public was apathetic about something that just wouldn't make you sick for a few days but would land you in the ICU at the Hospital and just might kill you,"



The average consumer has heard of Botox and maybe even Bowotox... just not BOTULISM!

## Why Is It Challenging To Reach Consumers During A Food Recall?



Minnesota bridge collapses



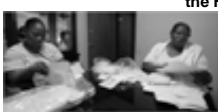
Britney Spears & K-Fed



Barry breaks the HR record



The War



Mortgage Crisis

## The Castleberry Recall Left Many of Us Praying for the Best!



## The Power of the Incident Command System (ICS)

- The standard for emergency management across the country and a key component of the National Incident Management System (NIMS)

## The Power of the Incident Command System (ICS)

- Value:
    - Clear chain of command
    - Flexible management structure (grow/shrink to meet incident needs)
    - More coordinated communication
- Competency vs. Compliance**

## Recall Timeline

June 29 <sup>th</sup>	1 <sup>st</sup> case of botulism identified in Texas
– Aug 7 <sup>th</sup>	Total of 8 cases identified in Texas, Ohio, and Indiana
<b>July</b>	
19 <sup>th</sup>	Botulism cases linked to Castleberry products Firm initiated voluntary recall
21 <sup>st</sup>	Castleberry expands voluntary recall
23 <sup>rd</sup>	FDA issues nationwide warning
24 <sup>th</sup>	FDA and USDA request assistance from State partners
25 <sup>th</sup>	NCDA&CS established ICS to coordinate efforts of 5 divisions to perform effectiveness recall checks
31 <sup>st</sup>	



Janice Spruill of Raleigh is one of the state inspectors racing to pull cans of recalled food from store shelves.

## Ventilator Shortage in Minnesota Reported March 08

In a regional or national botulism outbreak, imagine how quickly our medical (equipment and people) resources would be overwhelmed?



## Recall Deemed Ineffective Now What?

### Change Mission and Plan

### Perform Recall Effectiveness Checks



Prevent Future Purchases and Consumption of Recalled Products

### Recall Timeline

August	Event
1st	NC DENR and 86 local health agencies integrated into ICS
2nd	Develop web-based system to capture data
3rd	Demobilized portion of NCDA&CS staff
7th	Remainder of NCDA&CS demobilized
8 – 19th	Local health officials continue to search for recalled product in campsites, churches, child and adult care facilities
20th	All staff demobilized and normal work duties resumed
September	Event
21st	Hot Wash

## Why Was the Voluntary Recall Ineffective?



## Simplify Message to Public

CONSUMER ALERT	Alerta al Consumidor																																																												
<p>Castleberry's &amp; associated brands of chili, chili sauces, hot dogs, and hot dogs resulted for potential <i>Shiga-toxin-producing</i> botulism poisoning.</p> <p>Multiple brands of chili, chili sauces, hot dogs, and hot dogs.</p> <table border="1"> <tr> <td>1. Castleberry's</td> <td>10. On the Border</td> <td>20. On the Border</td> </tr> <tr> <td>2. Bunk Hill</td> <td>11. On the Border</td> <td>21. On the Border</td> </tr> <tr> <td>3. Bunk Hill</td> <td>12. On the Border</td> <td>22. On the Border</td> </tr> <tr> <td>4. Bunk Hill</td> <td>13. On the Border</td> <td>23. On the Border</td> </tr> <tr> <td>5. Bunk Hill</td> <td>14. On the Border</td> <td>24. On the Border</td> </tr> <tr> <td>6. Bunk Hill</td> <td>15. On the Border</td> <td>25. On the Border</td> </tr> <tr> <td>7. Bunk Hill</td> <td>16. On the Border</td> <td>26. On the Border</td> </tr> <tr> <td>8. Bunk Hill</td> <td>17. On the Border</td> <td>27. On the Border</td> </tr> <tr> <td>9. Bunk Hill</td> <td>18. On the Border</td> <td>28. On the Border</td> </tr> <tr> <td>10. Bunk Hill</td> <td>19. On the Border</td> <td>29. On the Border</td> </tr> </table> <p>For a complete listing of products and hot dogs, go to: <a href="http://www.ncda.gov">www.ncda.gov</a></p> <p>Important disposal information for consumers: Dispose of the recalled products in a secure location. Do not consume, feed, or use the recalled products.</p> <p>NCDA&amp;CS Food and Drug Protection Division 2100, 100-1000</p>	1. Castleberry's	10. On the Border	20. On the Border	2. Bunk Hill	11. On the Border	21. On the Border	3. Bunk Hill	12. On the Border	22. On the Border	4. Bunk Hill	13. On the Border	23. On the Border	5. Bunk Hill	14. On the Border	24. On the Border	6. Bunk Hill	15. On the Border	25. On the Border	7. Bunk Hill	16. On the Border	26. On the Border	8. Bunk Hill	17. On the Border	27. On the Border	9. Bunk Hill	18. On the Border	28. On the Border	10. Bunk Hill	19. On the Border	29. On the Border	<p>Los productos de Castleberry's &amp; asociados de chili, salsas de chili, hot dogs y hot dogs resultaron por un potencial envenenamiento por botulismo producido por <i>Shiga-toxina</i>.</p> <p>Múltiples marcas de chili, salsas de chili, hot dogs y hot dogs.</p> <table border="1"> <tr> <td>1. Castleberry's</td> <td>10. On the Border</td> <td>20. On the Border</td> </tr> <tr> <td>2. Bunk Hill</td> <td>11. On the Border</td> <td>21. On the Border</td> </tr> <tr> <td>3. Bunk Hill</td> <td>12. On the Border</td> <td>22. On the Border</td> </tr> <tr> <td>4. Bunk Hill</td> <td>13. On the Border</td> <td>23. On the Border</td> </tr> <tr> <td>5. Bunk Hill</td> <td>14. On the Border</td> <td>24. On the Border</td> </tr> <tr> <td>6. Bunk Hill</td> <td>15. On the Border</td> <td>25. On the Border</td> </tr> <tr> <td>7. Bunk Hill</td> <td>16. On the Border</td> <td>26. On the Border</td> </tr> <tr> <td>8. Bunk Hill</td> <td>17. On the Border</td> <td>27. On the Border</td> </tr> <tr> <td>9. Bunk Hill</td> <td>18. On the Border</td> <td>28. On the Border</td> </tr> <tr> <td>10. Bunk Hill</td> <td>19. On the Border</td> <td>29. On the Border</td> </tr> </table> <p>Para obtener información sobre la lista completa de los productos y hot dogs, vaya a: <a href="http://www.ncda.gov">www.ncda.gov</a></p> <p>Importante información de disposición para consumidores: Desposea los productos de la lista en un lugar seguro. No consumas, no uses ni alimentes con los productos de la lista.</p> <p>NCDA&amp;CS División de Alimentos y Medicamentos 2100, 100-1000</p>	1. Castleberry's	10. On the Border	20. On the Border	2. Bunk Hill	11. On the Border	21. On the Border	3. Bunk Hill	12. On the Border	22. On the Border	4. Bunk Hill	13. On the Border	23. On the Border	5. Bunk Hill	14. On the Border	24. On the Border	6. Bunk Hill	15. On the Border	25. On the Border	7. Bunk Hill	16. On the Border	26. On the Border	8. Bunk Hill	17. On the Border	27. On the Border	9. Bunk Hill	18. On the Border	28. On the Border	10. Bunk Hill	19. On the Border	29. On the Border
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## More Reasons....

- Multiple recall lists issued by FDA, USDA, and Castleberry
  - Expanded recall
  - All recall lists were different
- New, more fragmented distribution systems
  - Internet
  - Membership clubs
  - Other retailers

## More Reasons....

- Lack of standardized notification and removal procedures
  - Truck driver, US mail, email, telephone... you name it

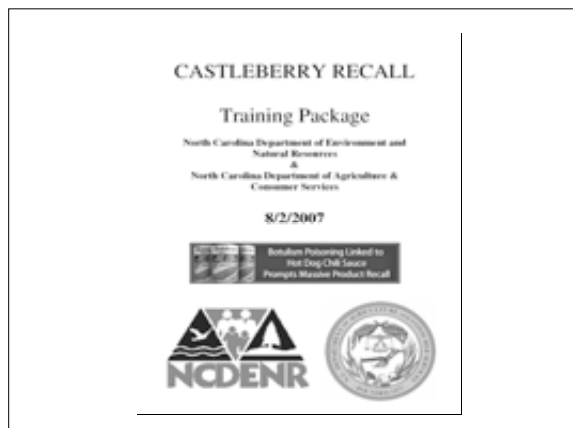


## Value of Partnerships NCDENR and Local Health Departments

- NC Department of Environment and Natural Resources (NCDENR) and 86 Local Health Departments integrated into ICS structure representing NC's 100 counties

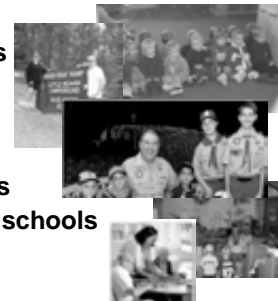
## Value of Partnerships NCDENR and Local Health Departments

- Benefits – immediate
  - Expanded number and types of facilities visited
  - Media and public listened
    - Local newspapers carried story



## Facilities Visited by NC DENR and Local Health Departments

- Day cares
- Nursing homes
- Group homes
- Pre-schools
- Local parks
- Private schools
- Vacation bible schools
- Restaurants
- Hospitals



## Facilities Visited by NCD&CS

- Independent retailers
- Convenience stores
- Warehouses
- Distribution centers
- Salvage dealers
- Farmers' markets
- Food banks



## Value of Partnerships State Public Health

- North Carolina Disease Event Tracking and Epidemiologic Collection Tool (NC DETECT)
  - Expanded filters for early detection of illnesses
- NC Health Alert Network (HAN)
  - Alerted public health officials to recall and possibility of botulism cases



By using ICS, North Carolina coordinated hundreds of personnel statewide in 3 State agencies and 86 local agencies

	NC	USDA-FSIS	FDA
Sites visited	~16,000	~800	12,989
Cans removed	~35,000		13,000

## Unified Command Meeting



## Command Center



## Maintaining Situational Awareness









**Generated Using the Multi-Hazards Threat Database (MHTD) with GPS  
Funded by Congressman David Price's NC Threat Reduction Grant**

## The Success of One Local Health Department – Guilford County



### Initially Used MHTD To Identify Convenience And Small Grocery Stores



### Accessed County Tax Records to Identify More Locations

- Staff combed through tax data – not available at the State level
- Geocoded (address matched) establishment data to create points on a map of all locations

### Accessed County Tax Records to Identify More Locations

- GIS was used to group inspection locations into clusters and produce routes that would order the locations into the most efficient means for inspection

### Team Map And Written Directions



## Database Schema Standardization

- Used the same database schema being collected on web-based data collection form on hand held units

```
1 | RecallID | VARCHAR(20), NOT NULL
2 | RecallName | VARCHAR(200), NULL
3 | Address | VARCHAR(200), NULL
4 | City | VARCHAR(200), NULL
5 | County | VARCHAR(200), NULL
6 | Zip | VARCHAR(200), NULL
7 | ContactPhone | VARCHAR(200), NULL
8 | ContactEmail | VARCHAR(200), NULL
9 | RecallCode | VARCHAR(200), NULL
10 | RecallDate | VARCHAR(200), NULL
11 | RecallStatus | VARCHAR(200), NULL
12 | RecallType | VARCHAR(200), NULL
13 | RecallPriority | VARCHAR(200), NULL
14 | RecallCategory | VARCHAR(200), NULL
15 | RecallSubcategory | VARCHAR(200), NULL
16 | RecallSeverity | VARCHAR(200), NULL
17 | RecallImpact | VARCHAR(200), NULL
18 | RecallNotes | VARCHAR(200), NULL
```

## Summary of Work in Guilford County

- Day 1 – 262 inspections (34 people)
- Day 2 – 345 inspections (28 people)
- Day 3 – 263 inspections (22 people)
- Day 4 – 54 inspections (7 people)
- Total – 924 inspections

## Total Cost of North Carolina's Response

- \$418,228.25 = Estimated total cost to North Carolina for recall effort
- \$365,832.00 in manpower costs alone
- 15,243 man hours traveling 100,325 miles

## An Update from Castleberry

- Recall cost company \$35 million
- March 2008 company's temporary permit was pulled – scheduled to reopen at the end of March

## Lessons Learned From Castleberry

- Implement ICS immediately
  - Achieve ICS *competency* by training and exercising
- Value of equal partnerships b/n Federal, State, and Local agencies and Industry
- Need innovative ways to reach the public

## Applying Lessons Learned New Era Bean Recall

- Built upon success of Castleberry recall
- Established ICS to unite partners
- Results
  - Removal of recalled product NOT on FDA list in one school warehouse
  - Rapid and coordinated response

## New Initiatives

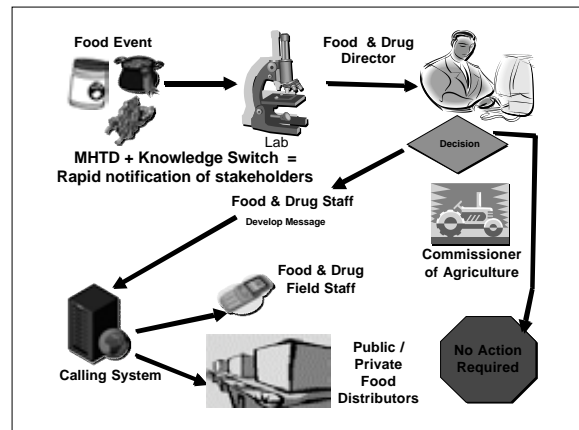
- Charge of NC Food Safety and Defense Task Force
  - Improve response capabilities of all stakeholders
  - Recognition program for industry?
  - Review of legislation

## New Initiatives

- Utilizing all partners in food protection
  - Interagency Food Emergency Response Teams (FERT's) – FDA initiative
  - Local level capabilities – reverse 911, GPS, access to tax records
  - Industry partnerships to inform consumers and industry

## Take Advantage of Technology

- WebEOC
- GPS
- Web-based data collection – meet USDA and FDA requirements
- Rapid notification methods
- FoodSHIELD



## Communications Platform



[www.foodshield.org](http://www.foodshield.org)

- Communicate quickly and easily across the nation with all stakeholders
  - Identify key roles: who does what, where
    - Food
    - Feed & Seed
    - Agricultural Chemicals
    - Human Health
    - Animal Health
    - Environmental: Air/Water/Soil
- Captures farm-to-fork regulatory and laboratory capacities & capabilities

## Summary

The Federal government may build the glove of food protection, but State and Local officials will remain the fingers in the glove if we are to be successful.