Botulism Creative Brief –11/22/04

1. Target Audience(s)

General public audience: Persons living throughout the U.S. directly exposed or potentially exposed to *C.Botulinum* who will be reached through various channels: radio, television, internet, interpersonal or person-to-person communication)

Note: This creative brief focuses on general populations who could be exposed to the toxin. It does not address infant botulism or wound botulism.

2. Objective(s)/Key messages

To help individuals (who are not health professionals) recognize their own perceived risks, understand symptoms and symptom recognition:

- SYMPTOM RECOGNITION FOR CHILDREN AND ADULTS: To assure that persons are knowledgeable about symptoms of botulism toxicity that may present as dryness of the mouth, inability to focus eyes, blurring vision, facial paralysis, respiratory distress, increasing paralysis in upper body.
- SYMPYOM RECOGNITION FOR INFANTS: To assure that parents of young children are knowledgeable about botulism symptoms in infants that include poor feeding, decreased muscle control, constipation, diminished crying and suckling responses/respiratory distress.
- DISEASE PATHOPHYSIOLOGY & PROGRESSION: To inform that the botulism toxin attacks the central nervous system, therefore the person with botulism poisoning is affected by progressive neurological paralysis from the head down through the body so that first the head and neck are paralyzed and then other bodily functions related to the trunk/torso are affected. Fatality is caused by eventual paralysis of the lungs and/or heart.
- PERCEIVED THREAT & ACTION STEPS: To define immediate actions of seeking emergency medical care and to stress the severity of botulism toxicity. Botulism toxin is one of the most deadly substances known to man, even in very small amounts. Individuals need to be informed that lack of action or treatment can lead to death of exposed individual. Current mortality rate is 5% among those treated. Much higher among those not treated. Persons should not hesitate to seek emergency care for fear of disease communicability (see Transmission section).

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Individuals are assured of medical treatment efficacy and outcomes:

- TREATMENT GOAL: To explain that goal of medical treatment is to stop the progression of paralysis by halting the spread of the toxin (poison) in the body so that bodily systems do not stop functioning. To clarify that treatment of this condition (which is similar to poisoning) concerns stopping the spread of the toxin (poison) in the body rather than destroying a bacteria or a virus (such as is done with antibiotics). It should also be stressed that once the spread of the toxin (poison) is halted, the body's own recovery system will be enabled to clear the body of the toxin and it's impact.
- MEANS OF TREATMENT: To describe administration of botulism antitoxin to stop pathology progression and the placement of patient intensive care to support vital bodily functions such as breathing. To describe the treatment setting in the hospital, including putting patients with this condition on a ventilator to help them breathe.
- TIMING OF TREATMENT: To stress the importance of receiving immediate treatment right after exposure and/or symptom recognition.
- DIAGNOSIS: To explain that extensive medical testing is required to rule out other diagnoses.
- AVAILABILITY OF TREATMENT: To assure that there is sufficient botulism antitoxin available at most tertiary care hospitals. To suggest that (if possible) persons check with their local health department to find information about which local hospitals are prepared to handle an emergency outbreak of botulism.
- RECOVERY: To describe recovery as slow and taking many weeks. However, recovery can also be complete if a person receives prompt and appropriate medical treatment.

Individuals understand how botulism is transmitted:

- MODES OF TRANSMISSION: To understand different modes of transmission, such as ingestion of contaminated food and water; ingestion of the toxin after surface or clothing contact; the potential of an air-born (or aerosolized) means of transmission in an intentional outbreak. Also, to stress that botulism is not communicable from person-to-person as it is most often found in food or water that have been contaminated.
- EXPOSURE: To teach persons that they can contract botulism if they eat

contaminated food or water, or inhaling/ingesting the toxin through air that contains *botulism toxin*.

- SERIOUSNESS: To teach persons that even ingesting a small amount of botulism toxin can cause a person to become ill. Therefore suspect foods or water should not be "tested" by tasting.
- DOSE RESPONSE TIME: To convey the notion that persons exhibit symptoms 12 – 36 hours after ingestion.

Individuals can take safety precautions to prevent exposure and illness or to prevent naturally occurring botulism:

- PREVENTIVE ACTIONS: To describe the major preventive actions that can be taken. These will differ depending on source of the botulism event and the degree to which specific populations are affected. Following are a few generic messages: a) persons should boil all food and water to 167 degrees Fahrenheit (80 degrees Centigrade) before eating or drinking; 2) avoid unfamiliar or unopened food; 3) avoid canned foods with bulging lids or those with offensive odors; 4) avoid eating at public restaurants or cafeterias in the affected areas; 5) use boiled water for showers, baths, and general hygiene (such as brushing teeth or washing face); 6) tune into local and national news and television stations for updated information; and 7) in cases of suspected exposure, seek immediate medical care.

Individuals are able to identify appropriate channels for obtaining information about the condition in a timely manner

- INFORMATION CHANNELS: Messages should specifically identify where persons can obtain more in-depth information about botulism. Specific channels can include national, state, and local hotline numbers, addresses for websites, locations for printed or downloadable fact sheets, contact telephone numbers or websites for local health departments, contact telephone numbers for appropriate first responders. The general population should also be made aware that in the event of a botulism outbreak, the emergency alert system and/or local and national news channels will cover the event.

Individuals are able to understand specific terminology related to botulism.

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The following are key terms that need to be clarified during messaging:
"CONTAGIOUS": To clarify transmission through ingestion versus person-to-person contact.
"TOXIN" AND "ANTI-TOXIN": To clarify that toxin is similar to a poison and anti-toxin stops the spread of the toxin. Also, to clarify that an anti-toxin is not a cure for the toxin, but only stops the progression.
"CURE": To clarify that treatment only stops the progression of the toxin; it does not kill or destroy the biological agent.
"VENTILATOR": To clarify the difference between a ventilator and a respirator. A ventilator sustains breasting whereas a respirator protects a person from breathing contaminated air.

3. Communication Obstacles

Obstacles – Comprehension (concepts, literacy, and language)

- Botulism is rare: persons who have no medical training are unlikely to be familiar with this agent; therefore, remembering symptoms or how it is transmitted without reminders is unlikely.
- Many symptoms for botulism are similar to symptoms for other conditions. The most important distinguishing symptoms are facial paralysis, slurred speech and droopy eyelids. Symptoms may be confused with many other illnesses including Myasthenia Gravis, stroke, Guillain Barre syndrome, bacterial and chemical food poisoning, chemical intoxication, tick paralysis, allergic reaction to medication, poliomyletis, diphtheria and mental illness.
- Difficulty in understanding concepts and/or terms such as contagiousness and cure.
- Low literacy rates in target populations.
- Lack of priming to understand preparedness concepts.
- Language differences.

Obstacles – Carrying out recommended actions

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- Actions taken by individuals may counter needs of epidemiological investigations; not all foods should be discarded prior to completion of an outbreak investigation.
- Persons most at risk for not carrying out recommendations are more likely to be isolated, poor, low literate, non-native speakers, and disadvantaged in terms of acculturation (especially in the understanding of emergency response systems).
- Recommended actions may run counter to natural inclinations and other priorities (such as retrieving children from school; not leaving pets; going home immediately after work, etc.)
- Persons may not be prepared with proper equipment, such as supply of food thermometers, battery operated radio, etc.
- Persons need repeated and consistent messages across different channels and sources in order to reinforce compliance.

Obstacles – Receptivity (credibility of threat and source of message)

- Messages need to convey urgency to be taken seriously.
- Emergency messages may need to be associated with some symbolic or tone systems (e.g. a buzzer, alert sound, beep, etc.) in order to suggests an alert.
- Messages need to be consistent across different channels.
- Sources need to be genuine to convey credibility.

Obstacles – Accessing and disseminating information

- Lack of access to internet may disallow pertinent and detailed information to be accessed; information that may not be conveyed through other channels (such as news or other broadcast media.)
- Persons at work or commuting may not access messages in a timely manner if disseminated through broadcast media.
- Interpersonal communications are still important channels for disseminating information. To ensure that messages conveyed are accurate, news or other broadcast media need to repeat messages which are simple and actionable.
- Hotline phone numbers, website addresses, or other contact information

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need to be simple and need to be constantly placed on some parts of broadcast message. In addition, acronyms that are meaningful and easily remembered need to be utilized.

4. Key Promise

Most persons recover fully from botulism toxicity if symptoms are recognized, medical care is promptly sought, the correct diagnosis is made, and treatment is received. Taking protective actions at individual and household levels can minimize risk of exposure for all household members.

5. Support Statements/Reasons Why

- Botulism can be transmitted through food, water or air.
- Botulism is caused by a toxin, which is typically ingested through the mouth.
- Botulism left untreated can be fatal.
- Botulism is not communicable from one person to another.
- There are concrete things people can do to protect themselves.
- Protective actions are not complex or costly.
- If there is an outbreak, there are systems in place (public health, medical) that will identify the source of the outbreak as well as diagnose and treat suspected cases.
- There is sufficient botulism antitoxin nationally to treat persons in either naturally occurring or larger outbreak circumstances.

6. Tone

Informational tone must not be too fast paced to account for lack of familiarity with the issue as well as to address the needs of lower literacy persons. Use journalistic or documentary realism formats; serious with a sense of urgency. Fact sheets or television bites and b-roles should have shots or pictures of families, parents, children, young adults, and elderly to stress that this can affect anyone and to emphasize the ‘protect your family’ theme. Realism should be interspersed with cut-aways to animated graphic depictions of the toxin and its impact on the body.

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These can also be used in printed materials by the use of graphic illustrations of the toxin and how it impacts the body. Also graphic depictions of symptoms in adults, children, and young infants, can be animated for use in video. Animated graphics should be realistic. The bulk of the bites and b-roles should be action shots with persons modeling behaviors. Avoid too many 'talking heads'.

6. Media

Fact sheets, television bites and b-roles, radio news releases, interactive multimedia for a website, and/or text messages for telecommunications.

7. Visual Depictions (mainly for the bites and b-roles)

Diverse populations
Families with young children
Elderly
Pets
Different environmental contexts (people at work, on the road, etc.)
Healthcare providers
Experts – outbreak EIS officers
Animated Graphics with disease progression and symptoms portrayed
Hospital intensive care units
Modeling behaviors for recommended actions

8. Creative Considerations

The first part of the presentation, whether print, video, radio or multimedia, needs to stress the symptoms, the treatment, and the urgency of actions to save lives. Graphics (either print or animated) should be used to depict disease progression and symptoms. For the video, there is a need to interface families, individuals with medical backdrops, and action in the medical sphere (laboratory tests/ bottles of anti-toxin/ respirators/ supportive care). Do not start with too many definitions, categories, or qualifying statements (typical scientific lead-in), as this information is not the most important message for impacted populations. Stress that (most often) this is a food borne disease and the likelihood of catastrophic spread is low if persons stop eating and drinking foods suspected of being contaminated.

Stress the long recovery time and need for support of stricken persons. Then cut to depictions of typical sources of botulism. Stress actions that prevent the illness both pre-outbreak and post-outbreak (such as cooking and boiling food to specific

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temperatures). Don't dwell too much on correct canning as this could be a time vacuum for getting the most important messages out.

End with depictions of outbreak investigations (lab workers, white coats, EIS officers) to assure that botulism cases are closely monitored by the CDC and local and state health departments.

Additional Considerations for Broadcast Media:

- Symptom re-enactment was not viable for television. It is better to do a medical animation or a graphic list.
- In addition to traditional broadcast media (e.g. radio and television), newer telecommunications technologies allow for text and verbal messaging on a number of outlets. For example, in California, the Amber Alert System (child abduction) provides electronic text messages on marquees by the side of the freeway to alert drivers. As well, electronic text messages can be broadcast over cell phones, email, and broadcast and cable television channels. Voicemail messages can also be broadcast through both landline and cell phone lines. These types of transmissions can be disseminated through organizational or commercial list serves.
- If messages are to be broadcast, simul-casting (or having multiple stations broadcast at once), is preferable. If this does not happen, it can a) create confusion, b) credibility may be compromised, c) message may lead to inaction.
- All broadcast messages on television need to be close captioned.
- Spokespersons need to represent some authority; if possible, representatives of local or national health agencies should be featured.
- Visual depictions of behaviors recommended to prevent or treat botulism are very important as they convey information through modeling.

Messages need to be in English, Spanish and other languages.

NOTE: *All creative Briefs **must** be accompanied by a page summarizing the background situation.*