

GUIDE TO INVESTIGATION OF INFANT BOTULISM

A. EPIDEMIOLOGIC (OBTAIN PRINCIPALLY FROM PARENT(S))

PERSONAL DATA

Name (Last) _____ (First) _____

Date of Birth: Mo. Day Yr.

SEX (7): 1 Male 2 Female

RACE/ETHNICITY (8): 1 White, not Hispanic 2 Black, not Hispanic 3 Hispanic 4 Asian or Pacific Islander 5 American Indian or Alaska native 6 Unknown

ADDRESS (No. and Street) _____ City _____ County _____ State (9-10) _____ Phone _____

MOTHER'S AGE (11-12) _____ OCCUPATION (13) _____ FATHER'S AGE (14-15) _____ OCCUPATION (16) _____

EDUCATION (17): 1 Some grade school 2 Grade school graduate 3 Some high school 4 High School graduate 5 Jr. College/Trade school graduate 6 College graduate 7 Higher

EDUCATION (18): 1 Some grade school 2 Grade school graduate 3 Some high school 4 High school graduate 5 Jr. College/Trade school graduate 6 College graduate 7 Higher

NO. OF PREGNANCIES (19) (including case) _____ NO. OF LIVE BIRTHS (20) _____

MATERNAL AND PERINATAL HISTORY

TYPE OF DELIVERY: (21) 1 VAGINAL 2 C-SECTION

Complications: (22) 1 Yes 2 No 9 Unknown

If yes, describe (23) _____

Was infant premature? (24) 1 Yes 2 No 9 Unk

If yes, gestational age (25-26) _____ Weeks

What was infant's birth weight: _____ lb _____ oz. _____ (Gms)
 (27-28) (29-30) (31-34)

PRESENT ILLNESS - INFANT BOTULISM
DEFINED AS ONSET OF CONSTIPATION OR IF NO CONSTIPATION WHEN MOTHER SAYS CHILD BECAME ILL

DIETARY HISTORY (BEFORE ONSET OF PRESENT ILLNESS)

BEFORE ONSET OF PRESENT ILLNESS

Was infant ever breast fed? (35) 1 Yes 2 No If yes, for how many weeks _____ (36-37)

Was infant ever formula fed? (38) 1 Yes 2 No

Was infant primarily (more than 50%) (39) 1 Breast fed 2 Formula fed 3 Both approximately equally

Did infant ever eat or taste (before onset of illness):

FOOD/LIQUID	NEVER 1	ONCE OR A FEW TIMES 2	MANY TIMES 3	DAILY OR MOST DAYS 4	PRINCIPAL TYPE OR BRAND
Formula (40)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____ (41)
Cow's Milk (Past.) (42)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Unpasteurized (raw milk) (43)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____ (48)
Fruit juices (44)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Cereal (45)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____ (50)
Bread (46)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Syrup/water (47)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____ (50)
Honey/water (49)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Sugar/water (51)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____ (50)
Tea/water (52)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Fruits, cooked (53)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____ (50)
Fruits, raw (54)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Vegetables, cooked (55)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____ (50)
Vegetables, raw (56)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Home-canned foods (57)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____ (50)
Baby Foods (Jars) (58)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Other _____ (59)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____ (50)

DIETARY HISTORY

Dietary History (Cont'd.)

Did infant use a pacifier? (60) 1 Often 2 Sometime 3 Rarely 4 No
 If yes, was it ever dipped in: (61) 1 Syrup 2 Honey 3 Other _____ 4 Nothing

INFANT'S MEDICAL HISTORY (PRIOR TO ONSET OF INFANT BOTULISM)

Were infant's usual bowel movements: (62) 1 Two or more per day 3 Every other day
 2 One per day 4 Less than every other day

Illness prior to onset of present illness (infant botulism)

	Yes 1	No 2	Unk 9	Age in weeks
Fever (>101° F) (63)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____ (64-65)
Cold(s) (66)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____ (67-68) _____ wks. (69-70)
Constipation (Mother's opinion) (71)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____ (72-73)
Diarrhea (Mother's opinion) (74)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____ (75-76)
Other (77)	_____			

Did infant receive antibiotics prior to onset of present illness (Infant botulism)? (78) 1 Yes 2 No 9 Unk.

If yes, give

AGE (IN WEEKS)	REASON	DRUG	ROUTE (Oral, Parenteral or Both)	DURATION (Days)
_____ (79-80)	_____ (81)	_____ (82)	_____ (83)	_____ (84-85)
_____ (86-87)	_____ (88)	_____ (89)	_____ (90)	_____ (91-92)
_____ (93-94)	_____ (95)	_____ (96)	_____ (97)	_____ (98-99)

ENVIRONMENTAL HISTORY (PRIOR TO ONSET OF INFANT BOTULISM)

Was there any construction, excessive dust, or environmental change around home from birth of infant until onset of present illness (Infant botulism)? (100)

1 Yes 2 No 9 Unk.

If yes, describe (101) _____

Was parent(s) involved in gardening or yard work from birth of infant until onset of present illness? (102) 1 Yes 2 No 9 Unk.

If yes, describe (103) _____

Did infant remain away from home for more than 1 week prior to onset of present illness? (104) 1 Yes 2 No 9 Unk.

If yes, describe (105) _____

SYMPTOMS OF PRESENT ILLNESS (INFANT BOTULISM)

a) Mother first noted infant was ill on _____ Mo. _____ Day _____ Yr. _____, at _____ weeks of age.
 (106-107) (108-109) (110-111) (112-113)

(114) First symptom _____

(115) Second symptom _____

b) The initial visit to a physician was on _____ Mo. _____ Day _____ Yr. _____, at _____ weeks of age?
 (116-117) (118-119) (120-121) (122-123)

c) Infant was hospitalized on _____ Mo. _____ Day _____ Yr. _____, at _____ weeks of age?
 (124-125) (126-127) (128-129) (130-131)

d) Symptoms noted before patient hospitalized:

	Yes 1	No 2	Unk. 9	Mo.	Day	Yr.	Weeks old
Constipation (132)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	_____	_____	_____ (139-140)
Poor feeding (141)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	_____	_____	_____

(Symptoms cont'd on next page)

SYMPTOMS OF PRESENT ILLNESS (INFANT BOTULISM)

d) Symptoms noted before patient hospitalized: (Cont'd)

	Yes	No	Unk
	1	2	9
Altered cry (142)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Irritable (143)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Poor Head Control (144)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
General Weakness (145)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Difficulty Breathing (146)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fever (147)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other (148) _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

If infant had constipation, how many bowel movements were occurring? (149)

1 Two or more per day 2 One per day 3 One every other day 4 Two-three times per week

5 One per week 6 Less than one per week 7 Other _____

Interviewee(s) (150) 1 Mother 2 Father 3 Both 4 Other _____

Interviewer: (Name) _____ Title (151) _____

(Agency) (152) _____ (Phone) _____

Are there problems with this case history form (153)

1 Yes 2 No

If yes, describe _____

B. HOSPITALIZATION DATA (OBTAIN PRINCIPALLY FROM MEDICAL RECORD OR PHYSICIAN)

Hospital where diagnosis established Medical Record No. _____

Name (154) _____ Address _____ Phone _____

Primary Physician(s) _____ Phone _____

HOSPITAL DATA

	Mo.	Day	Yr.
Date of first hospital admission	<input type="text"/>	<input type="text"/>	<input type="text"/>
	(155-156)	(157-158)	(159-160)
Date of last hospital discharge	<input type="text"/>	<input type="text"/>	<input type="text"/>
	(161-162)	(163-164)	(165-166)

Total days _____ hospitalization
 (167-168)

PHYSICAL FINDINGS

Symptoms and Physical Findings observed at any time during illness:		Yes	No	Unk.	
		1	2	9	
Loss of facial expression	(169)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Ptosis	(170)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Extraocular muscle palsies	(171)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Pupils dilated	(172)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
constricted	(173)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
sluggish pupil reactivity	(174)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Trouble swallowing	(175)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Constipation	(176)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Diarrhea	(177)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Altered cry	(178)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Weak sucking	(179)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Muscle weakness					
Poor head control	(180)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Upper extremities	(181)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Lower extremities	(182)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
"Floppy"	(183)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Knee Deep Tendon Reflex					
Absent	(184)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Depressed	(185)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Somnolent	(186)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Irritable	(187)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Fever	(188)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Dehydration	(189)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Respiratory difficulty	(190)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Respiratory arrest	(191)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Pneumonia	(192)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Other _____	(193)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

TREATMENT

Respiratory Assistance Needed	(194)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u> </u> No. of Days (195-196)
Oxygen only	(197)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Intubation	(198)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Tracheostomy	(199)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Ventilator	(200)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Infant feeding					<u> </u> No. of Days (202-203)
Feeding tube	(201)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Treatment (Cont'd.)
Antibiotics Given:

TREATMENT

Drug	Oral or Parenteral	Dose (Gms/day)	Duration (days)	Date started	
				Mo.	Day
(204)	(205)	(206-208)	(209-210)	(211-214)	<input type="text"/> <input type="text"/>
(215)	(216)	(217-219)	(220-221)	(222-225)	<input type="text"/> <input type="text"/>
(226)	(227)	(228-230)	(231-232)	(233-236)	<input type="text"/> <input type="text"/>
(237)	(238)	(239-241)	(242-243)	(244-247)	<input type="text"/> <input type="text"/>

Was antitoxin given? (248) 1 Yes 2 No

If yes, give route of administration (249) 1 I.V. 2 I.M. 3 Both 9 Unk.

If yes, how many C.C. Total (Connaught Adult 10cc/vial, Connaught Ped. 2cc/vial)

_____ Total cc (250-51)

Other specific therapeutic medication given: (252) _____

Was a spinal tap done? (253) 1 Yes 2 No 9 Unk. Date (254-259)

Was spinal tap reported as normal? (260) 1 Yes 2 No 9 Unk.

Spinal fluid protein _____ mgm% (261-263)

Total number of white cells _____ (264-266)

Was a Tensilon test done? (267) 1 Yes 2 No 9 Unk. Date (268-273)

If yes, results (274) 1 Pos. 2 Neg. 3 Equivocal 9 Unk.

Was an EMG (electromyography) done? (275) 1 Yes 2 No 9 Unk. Date (276-281)

If yes, was it interpreted as compatible or diagnostic of botulism? (282)

1 Yes 2 No 3 Not sure 9 Unk.

If EMG done, was BSAP noted? (283) 1 Yes 2 No 9 Unk.

Source of hospitalization data: (284)

1 Physician 2 Medical Record 3 Both 4 Other _____

DIAGNOSTIC TESTS

Hospitalization section completed by:

Name _____ Title (285) _____

Agency (286) _____ Phone No. _____ Date _____

C. SPECIMEN TESTING FOR *C. BOTULINUM* (OBTAIN FROM MEDICAL RECORDS, STATE LABORATORY, OR CDC BOTULISM LABORATORY)

Serum sample for toxin: (287) 1 Type A 2 Type B 3 Type E 4 Neg 5 Not tested 6 Toxic but not typed

Stool sample: (288) 1 Type A 2 Type B 3 Type E 4 Neg 5 Not tested

STOOL SPECIMEN(S)

Date Mo. Day Yr.	Infant's Age (Wks) _____	Direct Toxin Assay			Enrichment Culture			Organism Isolated	
		Type Specific Toxic 1	Non-Specific Toxic 2	Non Toxic 3	Type Specific Toxic 1	Non-Specific Toxic 2	Non Toxic 3	Yes 1	No 2
<input type="text"/> <input type="text"/> <input type="text"/> (289-294)	_____ (295-296)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> (297)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> (298)	<input type="checkbox"/>	<input type="checkbox"/> (299)
<input type="text"/> <input type="text"/> <input type="text"/> (300-305)	_____ (306-307)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> (308)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> (309)	<input type="checkbox"/>	<input type="checkbox"/> (310)
<input type="text"/> <input type="text"/> <input type="text"/> (311-316)	_____ (317-318)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> (319)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> (320)	<input type="checkbox"/>	<input type="checkbox"/> (321)
<input type="text"/> <input type="text"/> <input type="text"/> (322-327)	_____ (328-329)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> (330)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> (331)	<input type="checkbox"/>	<input type="checkbox"/> (332)

Date of first negative follow-up specimen.
(333-338)

Were food, medications, or environmental samples tested? (339) 1 Yes 2 No 9 Unk.

If yes, list: (340) _____

Samples positive for: (341) 1 Performed toxin 2 *C. botulinum* 3 Both 4 Neither

If any positive for toxin or organisms, please describe: (342) _____

Specimen testing section completed by:

Name _____ Title _____
(343)

Agency _____ Phone No. _____ Date _____
(344)

Patient outcome (345) 1 Improving 2 Recovered 3 Death

If patient died, date
(346-351)

Form Reviewed and Submitted by:

Name _____ Title _____
(352)

Agency _____ Phone No. _____ Date _____
(353)