Annex 6,
Part 2:

Data Exchange Format Requirements

Post-Event Response

Data Exchange Format Requirements

Export File Descriptions

Please Note: Required data fields are marked.

Data Exchange consists of up to four sections. Each section and the applicable data elements are explained in the list below:

1. Header: Identifies global information such as the date of the extract and the sending state. There are four data elements in the header.

2. Case: Contains case identifying, demographic, and limited clinical data collected about a smallpox case during the course of an investigation. This section mirrors Smallpox Case Investigation Form (Form 1).

3. Travel Log: The travel log section contains information about the travel activities of the smallpox case, the Contact Transportation Worksheet (Form 2C).

4. Contact: Contains demographic, contact, and disposition information collected about any primary and secondary contacts of a smallpox case.

Cardinality and Repeatability

- The header section occurs once; none of the data elements in the header section may be repeated.

- Each data exchange may contain data from more than one smallpox case; therefore, the case section of the exchange (case data elements #1– #42 in the case table) may be repeated. There may be zero case sections when only travel or contact information is sent. However, it is assumed that the case information referenced in the travel or contact information has been previously sent.

- Each case may have more than one nickname or alias; therefore, the case alias name data element (#8) may be repeated for each case.

- Each case may have more than one race; therefore the case race data element (#32) may be repeated for each case.

- If the case race data element (#32) is "other," the case race name data element (#33) must be populated. Case race/case race name data element combination may be repeated; the case race may be set to "other" more than once and each occurrence of "other" must have a companion case race name.

- Zero, one, or more than one lab test may be performed for each case. Therefore, the lab test performed, date specimen taken, and lab result data elements (#40, #41, and #42) may be omitted or repeated for each case.

- Each case has only one travel log; therefore the case identifying information in the travel log data exchange structure (data elements #1 and #2 in the travel log table) is sent once.

- Each case's travel log may contain more than one type of transportation or trip. The travel data elements (#3 – #14) within the travel log record may be repeated.

- Each contact may have more than one nickname or alias; therefore, the contact alias name data element (#8) may be repeated for each contact.

- Each contact may have zero, one, or more than one other phone number; therefore the data elements that make up the other phone number; contact other phone area code; contact other phone exchange number; contact other phone line number; and contact other phone type (#27 – #30), may be omitted or repeated for each contact.

- If the data elements that make up the other phone number, #27 – #29, are populated, the contact other phone type data element (#30) must be populated.

- Each contact may have more than one race; therefore the contact race data element (#36) may be repeated for each contact.

- Each contact may be a contact of zero, one, or more than one case; therefore the related case number data element (#40) and the contact referral basis data elements (contact may be omitted or repeated). (If populated, information for each related case must either be in the case data elements of the data exchange or sent in a previous data exchange.)

- Each data exchange may contain information for zero, one, or many contacts. The contact data elements in the data exchange may be omitted or repeated. However, the information about the related case (data element #40, related case number, of the contact data elements table) and/or the related contact (data element #41, related contact number) must be either sent in a previous or the current data exchange in order to be able to link the contact.

- Each contact may be a (secondary) contact of zero, one, or more than one other, related contact; therefore, the related contact number data element (#41) may be omitted or repeated. (If populated, information for each related contact must either be in the contact data elements of the data exchange or sent in a previous data exchange.)

Export Data Elements

Header Data Elements

#	Data Element Name	Description	Data type	Size	Format?	Unique?	Required?	Repeatable?	Valid Values?	Notes
1	Sending State	The state that sent the extract and to which the data contained in the extract belongs.	Character	2			Yes		Use USPS state abbreviation list	Assumes that each state only sends one extract per day. If a state sends more than one extract (e.g., by county), the sending entity must be populated.
2	Sending Entity	The entity (county, city, etc.) that sent the extract and to which the data contained in the extract belongs.	Alphanumeric							If null, the sending entity is assumed to be the state's health department.
3	Extract Date	The date to which the data contained in the extract belongs.	Date	10	yyyy-mm-dd		Yes			This date may not be the same as the extract create date, (e.g., the extract was created on 10/15/2002 but contains data collected on 10/14/2002; the extract date is 10/14/2002 while the extract create date is 10/15/2002).
4	Extract Create Date	The date on which the extract(s) was created.	Date	10	yyyy-mm-dd		Yes			This date may not be the same as the extract date (e.g., the extract was created on 10/15/2002 but contains data collected on 10/14/2002, the extract date is 10/14/2002 while the extract create date is 10/15/2002).

Case Data Elements

#	Data Element Name	Description	Data type	Size	Format?	Unique?	Required?	Repeatable?	Valid Values?	Notes
1	Case Internal Identifier	A unique internal identifier assigned or used by the state system.	Integer			Yes	**Yes**			Provides uniqueness to the state's records. Used to match previously received data in order to identify if the received record is new or needs to be updated.
2	Case ID	Unique identifier used to identify a smallpox case.	Alphanumeric		See note		**Yes**			Format: USPS abbreviation for the state that filed the case + a unique number.
3	Case Name Prefix	Any text that precedes the name; this may be an academic title such as Dr., or other title such as Mr., Ms., or Mrs.	Character							
4	Case First Name		Character				**Conditional**			Alias (or first and last name) is required.
5	Case Middle Name		Character							
6	Case Last Name		Character				**Conditional**			Alias (or first and last name) is required.

#	Data Element Name	Description	Data type	Size	Format?	Unique?	Required?	Repeatable?	Valid Values?	Notes
7	Case Name Suffix	Any text that comes after the name; this may be an academic degree such as M.D., R.N., or other suffix such as Jr., Sr., or III.	Character							
8	Case Alias Name						**Conditional**	Yes		Alias (or first and last name) is required.
9	Case Home Street Address Line 1		Character							P.O. box addresses are not acceptable.
10	Case Home Street Address Line 2		Character							
11	Case Home City		Character							
12	Case Home County		Character							
13	Case Home State		Character	2			**Yes**		Follow USPS 2-character state abbreviations	
14	Case Home Zip Code		Alphanumeric		'nnnnn' or 'nnnnn-nnnn'					Both the 5-digit and 5 + 4-digit codes will be accepted.
15	Case Identifier Type								See identifier type valid values.	Default to SSN if not provided. If ID number is: driver's license number, populate with DLN; or passport number, populate with PPN.

#	Data Element Name	Description	Data type	Size	Format?	Unique?	Required?	Repeatable?	Valid Values?	Notes
16	Case Identification Number				nnn-nn-nnnn, if SSN	Yes, for given type.	Yes			If SSN is not collected, but another ID (e.g., driver's license number) is collected, send that number with patient identifier type populated with the DLN.
17	Case Home Phone Area Code		Number	3						
18	Case Home Phone Exchange Number		Number	3						
19	Case Home Phone Line Number		Number	4						
20	Case Work Phone Area Code		Number	3						
21	Case Work Phone Exchange Number		Number	3						
22	Case Work Phone Line Number		Number	4						
23	Case Work Extension		Number							
24	Case Other Phone Area Code		Number	3						
25	Case Other Phone Exchange Number		Number	3						
26	Case Other Phone Line Number		Number	4						
27	Case Date of Birth		Date	10	yyyy-mm-dd					
28	Case Age Value		Number							

#	Data Element Name	Description	Data type	Size	Format?	Unique?	Required?	Repeatable?	Valid Values?	Notes
29	Case Age Unit		Character						See age unit valid values.	
30	Case Gender		Character						See gender valid values.	
31	Case Ethnicity		Character						See ethnicity valid values.	
32	Case Race		Character					Yes	See race valid values.	A person may have more than one race.
33	Case Race Name		Character					Yes		Only valid if Case Race = Other.
34	Date of Onset of Fever		Date	10	yyyy-mm-dd					Null value indicates no fever present.
35	Date of Rash Onset		Date	10	yyyy-mm-dd					Null value indicates no rash present.
36	Severe Rash Type		Character						See rash valid values.	
37	Date Last Scab Fell Off		Date	10	yyyy-mm-dd					Null value indicates unknown.
38	Death Indicator		Character	1					'Y' for Yes and 'N' for No.	
39	Date of Death		Date	10	yyyy-mm-dd					

#	Data Element Name	Description	Data type	Size	Format?	Unique?	Required?	Repeatable?	Valid Values?	Notes
40	Lab Test Performed		Character					Yes	See lab test valid values (under revision).	
41	Date Specimen Taken		Date	10	yyyy-mm-dd			Yes		
42	Lab Result		Character					Yes	See lab result valid values (under revision).	Valid values tied to lab test (see valid value list for specifics).

Travel Log Data Elements

#	Data Element Name	Description	Data type	Size	Format?	Unique?	Required?	Repeatable?	Valid Values?	Notes
1	Case Internal Identifier	A unique internal identifier assigned or used by the state system.	Integer			Yes	**Yes**			Provides uniqueness to the state's records. Used to match previously received data in order to identify if the received record is new or needs to be updated.
2	Case ID	Unique identifier used to identify a smallpox case.	Alphanumeric		See note		**Yes**			Format: USPS abbreviation for the state that identified the case + a unique number.
3	Travel Date	The date the case traveled.	Date	10	yyyy-mm-dd		**Yes**	Yes		
4	Travel Time	The time the travel began.	Time					Yes		
5	Time of Day Type	Identifies if the time of travel is morning (a.m.) or afternoon (p.m.).	Character	2			**Yes**	Yes	(a.m. or p.m.)	
6	Transportation Type	The type of transportation (bus, train, place, car, etc.).	Character					Yes		
7	Transportation Carrier/Company	The name of the company or carrier who provided the travel.	Alphanumeric					Yes		
8	Route/Flight #		Alphanumeric					Yes		
9	Origin City		Character					Yes		
10	Origin State		Character					Yes		
11	Origin Country		Character					Yes		
12	Destination City	The city of the final destination.	Character					Yes		

#	Data Element Name	Description	Data type	Size	Format?	Unique?	Required?	Repeatable?	Valid Values?	Notes
13	Destination State	The state of the final destination.	Character					Yes		
14	Destination Country	The country of the final destination.	Character					Yes		Only necessary if destination country is different than the origin country.

Contact Data Elements

#	Data Element Name	Description	Data type	Size	Format?	Unique?	Required?	Repeatable?	Valid Values?	Notes
1	Contact Internal Identifier	A unique internal identifier assigned or used by the state system.	Integer			Yes	**Yes**			Provides uniqueness to the state's records. Used to match previously received data in order to identify if the received record is new or needs to be updated.
2	Contact ID	Unique identifier used to identify the contact of a smallpox case. Also known as the Smallpox Contact Tracing Form (SCTF) or Field Record Number.	Alphanumeric				**Yes**			
3	Contact Name Prefix	Any text that precedes the name; this may be an academic title such as Dr. or other title such as Mr., Ms., or Mrs.	Character							
4	Contact First Name		Character				**Conditional**			Alias (or first and last name) is required.
5	Contact Middle Name		Character							

#	Data Element Name	Description	Data type	Size	Format?	Unique?	Required?	Repeatable?	Valid Values?	Notes
6	Contact Last Name		Character				**Conditional**			Alias (or first and last name) is required.
7	Contact Name Suffix	Any text that comes after the name; this may be an academic degree such as M.D. or R.N. or other suffix such as Jr., Sr., or III.	Character							
8	Contact Alias Name						**Conditional**	Yes		Alias (or first and last name) is required.
9	Contact Home Street Address Line 1		Character							
10	Contact Home Street Address Line 2		Character							
11	Contact Home City		Character							
12	Contact Home County		Character							
13	Contact Home State		Character	2			**Yes**		Follow USPS 2-character state abbreviations.	
14	Contact Home Zip Code		Alphanumeric		'nnnnn' or 'nnnnn-nnnn'					Both the 5-digit and 5 + 4-digit codes will be accepted.
15	Contact Identifier Type								See identifier type valid values.	Default to SSN if not provided. If ID number is a driver's license number, populate with DLN.

#	Data Element Name	Description	Data type	Size	Format?	Unique?	Required?	Repeatable?	Valid Values?	Notes
16	Contact Identification Number				nnn-nn-nnnn, if SSN	Yes, for given type.				If SSN is not collected, but another ID (such as driver's license number) is collected, send that number with the patient identifier type populated with DLN.
17	Contact Home Phone Area Code		Number	3						
18	Contact Home Phone Exchange Number		Number	3						
19	Contact Home Phone Line Number		Number	4						
20	Contact Work Phone Area Code		Number	3						
21	Contact Work Phone Exchange Number		Number	3						
22	Contact Work Phone Line Number		Number	4						
23	Contact Work Extension		Number							
24	Contact Cell Phone Area Code		Number	3						
25	Contact Cell Phone Exchange Number		Number	3						

#	Data Element Name	Description	Data type	Size	Format?	Unique?	Required?	Repeatable?	Valid Values?	Notes
26	Contact Cell Phone Line Number		Number	4						
27	Contact Other Phone Area Code		Number	3				Yes		
28	Contact Other Phone Exchange Number		Number	3				Yes		
29	Contact Other Phone Line Number		Number	4				Yes		
30	Contact Other Phone Type	Identify the type of phone number (parent's, pager, etc.) in the contact other phone fields.	Character					Yes		Value will be ignored if there is no data in contact other phone area code; contact other phone exchange number; and contact other phone line number.
31	Contact Date of Birth		Date	10	yyyy-mm-dd					
32	Contact Age Value		Number							
33	Contact Age Unit		Character						See age unit valid values.	
34	Contact Gender		Character						See gender valid values.	
35	Contact Ethnicity		Character						See ethnicity valid values.	
36	Contact Race		Character					Yes	See race valid values.	
37	Contact Height	The approximate height, in feet and inches (e.g., 5 feet, 8 inches) of the contact.	Alphanumeric							

#	Data Element Name	Description	Data type	Size	Format?	Unique?	Required?	Repeatable?	Valid Values?	Notes
38	Contact Size/Build	The approximate weight or build of the contact (e.g., heavy, slim, thick, or 200#).	Alphanumeric							
39	Contact Hair	A description of the hairstyle and hair color of the contact (e.g., short brown curly, balding, blonde ponytail, weave).	Character							
40	Related Case Number		Alphanumeric				**Conditional**	Yes		A contact may be the contact of more than one case. For each case, provide a priority, a type, and a location. The related case number, the related contact number, or both must be populated.
41	Related Contact Number		Alphanumeric				**Conditional**	Yes		A contact may be the contact of the primary contact of a case. For each related contact, provide a priority, a type, and a location. Only valid if the contact type is secondary. The related case number, the related contact number, or both must be populated.
42	Contact Priority	The highest priority of the contact.	Number	1					See contact priority valid values.	

#	Data Element Name	Description	Data type	Size	Format?	Unique?	Required?	Repeatable?	Valid Values?	Notes
43	Contact Type	Indicates if the contact is a direct (primary) contact of the case (identified by the related case number); a secondary contact of the case (identified by the related case number); or a (secondary) contact of a primary contact of a case (identified by the related contact number).					Yes		See contact type valid values.	Case contact type + case contact location derived from referral basis on Form 1.
44	Contact Location	Indicates if the contact is in the jurisdiction or out of the jurisdiction of the investigating agency.							See contact location valid values.	Case contact type + case contact location derived from referral basis on Form 1.
45	Contact Disposition		Alphanumeric				Yes		See disposition valid values.	
46	Contact Previous Vaccination Date		Date	10	yyyy-mm-dd					Only valid if contact disposition = 1E.
47	Contact Previous Vaccination Take Status		Character						See take status valid values.	Only valid if contact disposition = 1E.
48	Contact Move Destination	Indicates the (new) location of the contact if the contact has moved from the jurisdiction of the investigating agency.	Alphanumeric							Only valid if contact disposition = 2B.
49	Contact Disposition Other Text	Clarifying text provided if contact disposition is other (4).	Alphanumeric							Only valid if contact disposition = 4.

#	Data Element Name	Description	Data type	Size	Format?	Unique?	Required?	Repeatable?	Valid Values?	Notes
50	Contact Smallpox Case ID	The smallpox case number of the contact.	Alphanumeric		See note		**Yes**			Format: USPS abbreviation for the state + a unique number. Only valid if contact disposition = 1B, 1C, or 3A.

Valid Value Lists

Age Unit

Value
Days
Months
Years

Contact Location

Value	Name	Description
INJ	In jurisdiction.	A contact located in the jurisdiction of the investigating agency.
OOJ	Out of jurisdiction.	A contact located out of the jurisdiction of the investigating agency.

Contact Priority

Value	Name	Description
1	Highest priority	Case household contacts: All immediate family members, others spending more than 3 hours in the household since case's onset of rash.
2	Close contact: long time	Non-household contacts with close contact (≤ 2 meters, ≤ 6.5 feet) with case (with rash) for more than 3 hours.
3	Close contact: short time	Non-household contacts with close contact (≤ 2 meters, ≤ 6.5 feet) with case (with rash) for 1 to 3 hours.
4	Close contact: < 1 hour	Non-household contact with close contact (≤ 2 meters, ≤ 6.5 feet) with case (with rash) for <1 hour.
5		Non-household contact with contact (≥ 2 meters, ≥ 6.5 feet) with case (with rash) for more than 1 hour.
6		Non-household contact with contact (≥ 2 meters, ≥ 6.5 feet) with case (with rash) for less than 1 hour; or non-household contact with case with fever only (no rash).

Contact Type

Value	Description
Primary	Someone who is the contact of a case of smallpox.
Secondary	Someone who is the contact to a contact of a case of smallpox.

Disposition

Value	Description	Note
1A	Located: Referred for vaccination. Fever, rash, or cough not present.	
1B	Located: Referred for clinical assessment. Fever, rash, or cough present.	Provide smallpox case ID.
1C	Located: Already hospitalized as suspected case. Fever, rash, or cough present.	Provide smallpox case ID.
1D	Located: Isolated, not vaccinated (within the last 6 months). Fever, rash, or cough not present.	
1E	Located: Previously vaccinated (within the last 6 months). Fever, rash, or cough not present.	Provide vaccination date and take status.
2A	Unable to locate contact.	
2B	Moved from jurisdiction of the investigating agency.	Provide location moved to.
3A	Deceased, smallpox suspected.	Provide smallpox case ID.
3B	Deceased, unrelated to smallpox.	
4	Other disposition.	Provide clarification

Ethnicity

Value
Hispanic
Non-Hispanic

Gender

Value
Male
Female

Identifier Type

Value	Name
SSN	Social Security Number
DLN	Driver's License Number

Lab Results

Value	Note
Detected	Valid only for lab test = PCR.
Not Detected	Valid only for lab test = PCR.
Pending	
Positive	Valid only for lab test = Culture.
Negative	Valid only for lab test = Culture.
Indeterminate	Valid only for lab test = Culture.

Note: values under revision

Lab Test

Value
PCR
Culture

Note: values under revision

Race

Value	Name
AI/AN	American Indian/Alaska Native
AI/AN	Asian
B	Black/African American
H/PI	Native Hawaiian/Pacific Islander
W	White
O/U	Other or Unknown

Rash

Value	Name	Description
Ordinary	Ordinary	Raised, pustular lesions
Confluent	Ordinary, confluent, to face and other site	Confluent ordinary rash on face and forearms. Subtype of Ordinary.
Semi	Ordinary, semi-confluent to face only	Confluent rash on face, discrete elsewhere. Subtype of Ordinary.
Discrete	Ordinary and discrete	Areas of normal skin between pustules, even on the face.
Modified	Modified type	Like the ordinary type, but with an accelerated course.
Flat	Flat type	Pustules remain flat, usually confluent or semi-confluent, usually fatal.
Hemorrhagic	Hemorrhagic	Widespread hemorrhages in skin and mucous membranes.
Early	Hemorrhagic type: Early	Hemorrhagic with purpuric rash, always fatal. Subtype of hemorrhagic.
Late	Hemorrhagic type: Late	Hemorrhagic with hemorrhage into base pustules, usually fatal. Subtype of hemorrhagic.

Take Status

Value
Major
Equivocal
None
Unknown

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