State of New Hampshire
Division of Public Health Services
Healthy Homes & Lead Poisoning Prevention Program
Flat File Specification Guide 2020

Reporting blood lead data to the New Hampshire Department of Health and Human Services, Division of Public Health Services, Healthy Homes and Lead Poisoning Prevention Program (HHLPPP) is required under RSA 130-A Lead Paint Poisoning Prevention and Control http://www.gencourt.state.nh.us/rsa/html/NHTOC/NHTOC-X-130-A.htm. Specific details on reporting are included in He-P 1600 Lead Poisoning Prevention and Control rules located at http://www.gencourt.state.nh.us/rules/state_agencies/he-p1600.html under section 1603.02 Reporting.

Knowing that not everyone has the same volume of blood tests to report and IT resources available to them, the HHLPPP supports three distinct methods for the electronic reporting of blood lead test results making available a reporting method for our larger commercial laboratories, local Hospital Health Systems, and the individual provider offices. These three methods include:

- Reporting blood lead test data via **Health Level-7 (HL7)** messages sent through a secure virtual private network (VPN) between the reporting facility and the Division of Public Health Services. The HL7 *Implementation Guide* contains details about standards for Hl7 messages. An online posting of this guide can be obtained from this link at https://www.dhhs.nh.gov/dphs/bphsi/documents/elrguide.pdf.

- Reporting blood lead test data via a **Flat File** using this New Hampshire's *2020 Flat File Specification Guide*. The HHLPPP will establish and make available a secure File Transport Protocol (sFTP) account for the safe and secure transport of the confidential blood lead data from the reporting facility to the Division of Public Health Services.

- Reporting blood lead test data via a **Flat File** using a **Leadcare II Excel Spreadsheet** that the HHLPPP will customize and provide. The Provider Office staff manually complete this spreadsheet and its output uploaded to a sFTP site. The HHLPPP will establish and make available a secure sFTP account for the safe and secure transport of the confidential blood lead data from the provider office to the Division of Public Health Services.

New Hampshire's 2020 Flat File Specification (below) has been developed to establish the acceptable flat file structure and clarify instructions for populating flat file fields. All flat files prepared in accordance to this specification shall use a comma to separate fields, and all file submissions will use either a "txt" or "csv" file extension. When more than one test is being reported, the results may be batched so that each laboratory order is presented as a distinct row. Carriage return (ASCII 010) line feed (ASCII 013) character sequences are expected to mark the end of each row. Carriage return and line feed characters are not allowed within any of the reported data fields. If your data has/could have special characters (such as a commas or tabs), you should wrap the data in double quotes " (see the example below where every data element is wrapped like this).

This flat file structure has been developed to conform to New Hampshire RSA 130-A *Lead Paint Poisoning Prevention and Control*, and Administrative Rule He-P 1600 http://www.gencourt.state.nh.us/rules/state_agencies/he-p1600.html   All lead test results for NH residents are reportable **regardless of test result** or demographics etc.

Column	Field Name	Description	Optionality	Special Instructions for Flat File
A	LAB	Reporting laboratory name	Required	Populate with the "laboratory name" that has been designated and provided by the HHLPPP. If you are unaware of (and would like to know) your reporting laboratory's name, please contact HHLPPP at 603-271-8128 or leadtest@dhhs.nh.gov.
B	SPEC_DT	Specimen collection date	Required	Format: MM/DD/YYYY
C	LAST_NA	**Patient** last name	Required	
D	FIRST_NA	**Patient** first name	Required	
E	INITIAL	**Patient** middle initial	Required	
F	HOUSE_NBR	House number from **patient** residence street address	Required	
G	STREET	Street name from **patient** residence street address	Required	
H	APT_NBR	Apartment number from **patient** residence street address	Required	
I	CITY	City/town from **patient** residence address	Required	
J	STATE	State from **patient** residence address	Required	Populate with the two character US Postal service abbreviations for all domestic addresses. Populate with the information recorded within the patient residence state field for foreign addresses.
K	ZIP	Zip code from **patient** residence address	Required	Populate with the 5-digit postal zip codes for all patient domestic addresses. Populate with the information recorded within the patient residence zip code for foreign addresses.
L	GLAST_NA	Parent/guardian last name (for minors)	Conditional	Required if **patient** is less than 16 years old.
M	GFIRST_NA	Parent/guardian first name (for minors)	Conditional	Required if **patient** is less than 16 years old.
N	PROV_ID	<empty>	Empty	Leave field empty.

				Populate field with the Race code values per the following table: | Code	Description
1 or I	American Indian or Alaskan Native
2 or A	Asian
3 or B	Black or African American
4 or P	Native Hawaiian/ Other Pacific Islander
5 or W	White
8 or O	Other Race
9 or U	Unknown | A description of these race categories can be found at: https://2020census.gov/en/about-questions/2020-census-questions-race.html
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O	RACE	Patient race code	Required	
P	ETHNIC	Patient ethnicity code	Required	Populate the Ethnicity code values per the following table: | Code	Description
1 or H	Hispanic
2 or NH	Non-Hispanic
9 or U	Unknown	
Q	DOB	Patient date of birth	Required	Format: MM/DD/YYYY
R	SEX	Patient sex	Required	Populate the Sex code values per the following table: | Code	Description
1	Male aged 16 years or older
2	Female aged 16 years and older
M	Male aged less than 16 years
F	Female aged less than 16 years | Ages will be calculated from the difference between the patient's date of birth and the specimen collection/draw date.
S	SPEC_ID	Specimen ID	Required	Populate with a unique ID number for the specimen collected and tested for each patient. This ID number must be able to be correlated back to the specific patient and their blood test.
T	MEDICAID	Patient Medicaid ID number	Required or Empty	Leave empty if Medicaid ID is unavailable.
U	SAM_TYP	Sample/draw type for specimen	Required	Populate sample type per the following table: | Code	Description
C	Capillary
V	Venous	

					Z or U	Unknown

V	AN_DATE	Analysis/result date	Required	Format: MM/DD/YYYY
W	PB_RESULT	Blood lead test result	Required	Populate PB_Results with the number value of the lead test up to 3 digits to the right of the decimal, and should include applicable signage (Examples: <,>). Do not write "LOW" or "less than".
X	EP_RESULT	Protoporphyrin test result	Optional	Populate field when Erythrocyte protoporphyrin has been tested for patients less than 16 years of age. Populate result with the number value of the Erythrocyte protoporphyrin test up to 3 digits to the right of the decimal and should include applicable signage (e.g. :<,>). Do not write "LOW" or "less than".
Y	PT_PHONE	**Patient** phone number	Required	Format: [(999)]999-9999 [X99999]
Z	PROVIDER	Provider practice or Institution name	Required	Populate with the "Provider Name" that has been designated to you by the HHLPPP. If you are unaware of your reporting "Provider name", please contact HHLPPP at 603-271-8128 or leadtest@dhhs.nh.gov. Example: Belmont Pediatrics
AA	MD	Provider who placed lab order	Required	Populate with the name of the healthcare provider ordering the blood test. Format: LastName, FirstName Do not include any name prefixes or suffixes in this field (e.g. MD, APRN, JR, SR). There will be only one space character after the comma. Compound last names and compound first names will have all white space characters and hyphens removed. A representative example of a correctly structured MD value for a provider who goes by "Mary Ellen Thomas-Smith MD, MPH, ACHE" would be "ThomasSmith, MaryEllen".
AB	PROVIDER_HOUSE_NBR	House number from **provider** street address	Required	
AC	PROVIDER_STREET	Street name from **provider** street address	Required	
AD	PROVIDER_APT_NBR	Unit/suite/or apartment number	Required	

		from **provider** street address		
AE	PROVIDER_CITY	City/town from **provider** address	Required	
AF	PROVIDER_STATE	State from **provider** address	Required	Populate with two character US Postal service abbreviations for all domestic addresses. Populate with the information recorded within the provider address state field for foreign addresses.
AG	PROVIDER_ZIP	Zip code from **provider** address	Required	Populate with 5-digit postal zip codes preceded with a single quote mark shall be returned for domestic addresses. Foreign zip codes shall be reported as received, but shall also be prepended with a single quote character.
AH	PROVIDER_PHONE		Required	Format: [(999)]999-9999 [X99999] [B99999] [C any text]
AI	REFERRING_LAB	Referring Laboratory is physical location where the specimen (e.g. blood) was collected	Conditional	Field is required when the testing laboratory is different than the specimen collection laboratory
AJ	PB_UNITS	Unit of measure used to quantify laboratory test results	Required	Should be "ug/dL" – micrograms per deciliter
AK	METHOD_ANALYSIS	Method of Analysis	Required	(e.g. GFAAS, ICP-MS, ASV)
AL	OCCUPATION	Job title of **patient** at time of specimen collection	Conditional	Populate with description that are associated with the LOINC code when patient is 16 years of age or older. Occupation observations correspond to LOINC code 74287-4 https://loinc.org/74287-4/
AM	EMPLOYER	Employer of person	Conditional	Required or Empty when patient is ≥16 years of age
AN	CLIA ID	CLIA ID	Required	ID begins with two numbers, a letter, and number (10 characters). https://www.cdc.gov/clia/LabSearch.html

Note:

"**Required**" fields must be populated in accordance with New Hampshire RSA 130-A and He-P 1600.

"**Conditional**" fields must be populated when the criteria stated in the "Special Instructions" column is satisfied. Conditional fields need not be populated when criteria is not satisfied.

"**Optional**" fields are those fields that need to be populated if the data is available. Optional fields need not be populated if the laboratory/medical provider has not provided the data.

Flat File Example

The below example demonstrates how a flat file should be formatted. To improve readability, this example has been formatted for display using line wraps – otherwise these 4 lines would have extended well beyond the right margin of this document. The actual ends of each line are marked with a black [CR][LF] to represent a carriage return and line feed combination . This example also has line numbers at the start of each row to improve readability. The actual flat file required by the lead program should not be formatted to conform with any page margins. This example shows one column headings row and three patient records.

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1  "LAB","SPEC_DT","LAST_NA","FIRST_NA","INITIAL","HOUSE_NBR","STREET","APT_NBR","CITY","STATE","ZIP","GLAST_NA","GFIRST
   _NA","PROV_ID","RACE","ETHNIC","DOB","SEX","SPEC_ID","MEDICAID","SAM_TYP","AN_DATE","PB_RESULT","EP_RESULT","PT_PHONE
   ","PROVIDER","MD","PROVIDER_HOUSE_NBR","PROVIDER_STREET","PROVIDER_APT_NBR","PROVIDER_CITY","PROVIDER_STATE","PROVIDE
   R_ZIP","PROVIDER_PHONE","REFERRING_LAB","PB_UNITS","METHOD_ANALYSIS","OCCUPATION","EMPLOYER","CLIA_ID"[CR][LF]
2  "LABCORP ANYTOWN","10/20/2019","MOUSE","MICKEY","","1","WALT
   DRIVE","","ANYTOWN","NH","03301","MOUSE","MINNIE","","W","U","02/01/2010","M","LC000001","","C","11/05/2019","<1.0","
   ","3215551212","ANYTOWN SPECIALTIY PROVIDER","STOOGE, LARRY","123","ANY
   STREET","55","ANOTHERTOWN","NH","03333","1234441212","","UG/DL","ASV (LEAD CARE II)","","","30D1231234"[CR][LF]
3  "LABCORP ALLTOWN","11/02/2019","DUCK","DONALD","A","200","FLOCK
   WAY","","ANYTOWN","NH","03301","","","","B","NH","01/02/2000","M","LC000002","","C","11/05/2020","4.234","","45655512
   12","ALLTOWN MEDS -R- US","STOOGE, CURLY","12","ALL
   STREET","400","ALLOTHERTOWN","NH","03333","4564441212","","UG/DL","ASV (LEAD CARE II)","","","30D1231234"[CR][LF]
4  "LABCORP ANYTOWN","11/04/2019","DOG","GOOFY","","10","GOOFBALL
   WAY","5","ANYTOWN","NH","03301","","","","W","NH","10/20/2003","M","LC000003","","C","11/05/2021","=5","","6785551212
   ","ANYTOWN SPECIALTIY PROVIDER","STOOGE, MOE","12","ANY
   STREET","400","ANOTHERTOWN","NH","03333","6784441212","","UG/DL","ASV (LEAD CARE II)","","","30D1231234"[CR][LF]
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To simplify the reading of this flat file, the same content shown above has been parsed into Excel. Had this been a true example, the table would contain three records with 40 columns.

LAB	SPEC_DT	LAST_NA	FIRST_NA	INITIAL	HOUSE_NBR	STREET	APT_NBR	CITY	STATE	ZIP	GLAST_NA	GFIRST_NA
LABCORP ANYTOWN	10/20/2019	MOUSE	MICKEY		1	WALT DRIVE		ANYTOWN	NH	03301	MOUSE	MINNIE
LABCORP ALLTOWN	11/02/2019	DUCK	DONALD	A	200	FLOCK WAY		ANYTOWN	NH	03301		
LABCORP ANYTOWN	11/04/2019	DOG	GOOFY		10	GOOFBALL WAY	5	ANYTOWN	NH	03301		

PROV_ID	RACE	ETHNIC	DOB	SEX	SPEC_ID	MEDICAID	SAM_TYP	AN_DATE	PB_RESULT	EP_RESULT	PT_PHONE
	W	U	02/01/2010	M	LC000001		C	11/05/2019	<1.0		3215551212
	B	NH	01/02/2000	M	LC000002		C	11/05/2020	4.234		4565551212
	W	NH	10/20/2003	M	LC000003		C	11/05/2021	=5		6785551212

PROVIDER	MD	PROVIDER_HOUSE_NBR	PROVIDER_STREET	PROVIDER_APT_NBR	PROVIDER_CITY
ANYTOWN SPECIALTIY PROVIDER	STOOGE, LARRY	123	ANY STREET	55	ANOTHERTOWN
ALLTOWN MEDS -R- US	STOOGE, CURLY	12	ALL STREET	400	ALLOTHERTOWN
ANYTOWN SPECIALTIY PROVIDER	STOOGE, MOE	12	ANY STREET	400	ANOTHERTOWN

PROVIDER_STATE	PROVIDER_ZIP	PROVIDER_PHONE	REFERRING_LAB	PB_UNITS	METHOD_ANALYSIS	OCCUPATION	EMPLOYER	CLIA_ID
NH	03333	1234441212		UG/DL	ASV (LEAD CARE II)			30D1231234
NH	03333	4564441212		UG/DL	ASV (LEAD CARE II)			30D1231234
NH	03333	6784441212		UG/DL	ASV (LEAD CARE II)			30D1231234

Questions?

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