2024-2028 PHEP Notice of Funding Opportunity: Laboratory Response Network for Chemical Threats Supplemental Guidance
February 2024

Overview
The Laboratory Response Network for Chemical Threats (LRN-C) is a national network of local and state public health laboratories with capabilities for responding to chemical terrorism and other public health emergencies. LRN-C laboratories provide critical CDC surge capacity as well as local response capabilities within their respective jurisdictions. There are currently 54 LRN-C laboratories located in all 50 states, three localities (Los Angeles County, New York City, and Washington D.C.), and one U.S. territory (Puerto Rico). All LRN-C laboratories have the capacity to monitor chemical exposures at their onset, assist local hospitals and first responders with sample accessioning, packing, and shipping to other network laboratories, and to serve as CDC sentinel sites for large chemical emergencies.

Purpose
The purpose of this document is to provide supplemental guidance to the Public Health laboratory capacity (LAB) activities in the 2024-2028 PHEP NOFO.

PHEP Programmatic Requirements
Per the 2024-2028 PHEP NOFO, PHEP recipients must ensure that their respective LRN-C laboratories meet the following requirements.

- Maintain LRN-C Level 1, 2, or 3 program requirements as designated by CDC's LRN-C Program Office
- Meet all PHEP performance measures and benchmarks for LRN-C exercises and proficiency testing challenges.

LRN-C Program Requirements

CDC has identified LRN-C "core" and "additional" methods for detecting human exposures to various known chemical threat (CT) agents. LRN-C laboratories are designated as Level 1, Level 2, or Level 3 based on their respective capacity and capabilities to perform these laboratory methods.

- Level 1 laboratories must meet all requirements for Level 2 and Level 3 laboratories, as well as maintain testing capabilities for all LRN-C additional methods.
- Level 2 laboratories must meet Level 3 requirements, as well as maintain testing capabilities for all LRN-C core methods.
- Level 3 laboratories must ensure local support, (i.e., partner with poison centers, first responders, hospitals etc.) with sample logistics as well as training and outreach with local hospitals and other preparedness partners.

LRN-C Level 3 Requirements

- Complete LRN-C response reporting each budget period. See LRN-C Secure Website.
- Ensure that at least one LRN-C laboratory within their jurisdiction successfully completes an LRN-C sample packaging and shipping (SPaS) exercise each budget period.
- Successfully complete the annual 24/7 emergency contact drill.
- Submit a signed LRN-C confidentiality agreement for all chemical threat program staff.
- Maintain sample collection and shipping supplies for a minimum of 500 patient samples.

- Participate in response coordination exercises with local preparedness partners.
- Conduct SPaS training and outreach with local hospitals and poison centers.
- Establish written protocols to coordinate with hospitals, first responders (police, fire, hazardous materials teams), and civil support teams.
- Participate in monthly LRN-C conference calls administered by the CDC LRN-C Program Office.
- Ensure at least one laboratory member maintains a working digital certificate for access to CDC electronic results reporting systems.
- Maintain Clinical Laboratory Improvement Amendments (CLIA) certification.

LRN-C Level 2 Requirements

- Meet all LRN-C Level 3 requirements.
- Maintain LRN-C "Qualified' status for all LRN-C core methods.
- Ensure compliance with all LRN-C equipment replacement activities.
- Obtain and sustain current maintenance agreements for all LRN-C equipment assets valued at more than $25,000.
- Maintain subscriptions to the LRN-C Materials and Proficiency Testing programs for all qualified core methods.
- Maintain response materials and instrument consumables for the analysis of at least 500 patient samples for each qualified LRN-C method.
- Successfully participate in all LRN-C emergency response exercises.
- Maintain secure data messaging and laboratory information management system (LIMS) capabilities.

LRN-C Level 1 Requirements

- Meet all LRN-C Level 3 and Level 2 requirements.
- Maintain LRN-C "Qualified' status for all LRN-C additional methods.
- Maintain response materials and instrument consumables for the analysis of at least 1,000 patient samples for each qualified LRN-C method.
- Ensure equipment redundancy for all gas chromatography-mass spectrometry (GC/MS), high performance liquid chromatography (LC/MS), and inductively coupled plasma mass spectrometry (ICP-MS) equipment platforms.
- Maintain high throughput equipment capabilities such as 1) LC/MS automated injectors for all LRN-C core and additional methods; and 2) automated liquid handling workstation for both 96-well plate and cartridge capabilities.

LRN-C Response Summary Reports

To demonstrate the local public health impact of LRN-C resources and infrastructure, CDC will continue collecting LRN-C Response Summary Reports for the 2024-2028 PHEP NOFO.

All LRN-C laboratories must submit LRN-C Response Summary Reports to lrn-c_qa_program@cdc.gov by September 30, December 31, March 31, and June 30 each budget period.

LRN-C Response Summary Reports will include updates on any LRN-C laboratory activities related to public health emergencies involving CT agents. In addition, summary reports should describe any other uses of the following LRN-C resources.

- State biomonitoring and biosurveillance programs (e.g., children's blood lead, Medicare, or nonfatal opioid overdose surveillance).
- Partnership engagement with local, state, or federal preparedness partners such as local law enforcement, Civil Support Teams, U.S. Food and Drug Administration, U.S. Department of Agriculture, Environmental Protection Agency, and Federal Bureau of Investigation Weapons of Mass Destruction (WMD) office regarding possible public health concerns or chemical threat emergencies.
- Any test requests by local hospitals or poison centers related to either accidental or intentional overdoses, poisons, or toxic industrial chemical exposures.
- Presentations at national conferences or publications related to CT emergency response.

For more information, please contact CDC's LRN-C Program Office at LRN-C_QA_Program@cdc.gov.

Additional LRN-C Activities

- LRN-C laboratories must participate in all CDC-sponsored training opportunities.
- PHEP recipients must develop work plans to meet PHEP LAB activities and benchmarks and LRN-C program requirements. Work plans should describe the activities recipients will perform to meet or sustain minimum CT laboratory capacity and capabilities such as:
    - staffing plans,
    - training exercises with local preparedness partners,
    - surge plans with other LRN-C laboratories,
    - continuity of operations (COOP) plans, and
    - secured results reporting capabilities.
- PHEP recipients must participate in the:
    - Chemical incident discussion-based exercise and
    - Critical contact drill operation-based exercise.
    - Details are provided in the 2024-2028 PHEP NOFO exercise supplemental guidance.

Resources

Title	Description	Link/Location
LRN-C Website (Public)	General overview of the Laboratory Response Network for Chemical Threats	https://emergency.cdc.gov/lrn/chemical.asp
LRN-C Level 3 Resource Handbook	APHL training and outreach handbook for LRN-C Level 3 Capabilities	https://www.aphl.org/programs/environmental_health/Documents/LRN-C%20L3%20Resource%20Handbook,%20Feb%202018.pdf
National Response Framework (NRF)	Department of Homeland Security/Federal Emergency Management Agency provides doctrine for how the Nation responds to all types of incidents.	https://www.fema.gov/sites/default/files/2020-04/NRF_FINALApproved_2011028.pdf

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