

Responding to Emerging Outbreaks: Sharing the Load among Laboratory System Partners

Faculty: Christine Bean, PhD, MBA, MLS(ASCP)

*Chief Learning Officer, Association of Public Health Laboratories;
Former Laboratory Director, New Hampshire Public Health Laboratories*

Rodney E. Rohde, PhD, SM(ASCP)^{CM}, SV^{CM}, MB^{CM}, FACSc, Global Fellow
*Regents' and University Distinguished Professor and Chair of Medical Laboratory
Science Program, Texas State University*

Brief Summary of Case Study:

In the inaugural session of this year's Building Bridges Across the Laboratory Community series, "Responding to Emerging Outbreaks: Sharing the Load among Laboratory System Partners," Dr. Christine Bean, PhD, MBA, MLS(ASCP) shared a case study about collaborative approaches to tackling a New Hampshire HCV outbreak, and Dr. Rodney E. Rohde, PhD, MS, SM(ASCP)^{CM}, SV^{CM}, MB^{CM}, FACSc, Global Fellow discussed the multidisciplinary effort to launch a large-scale oral Rabies vaccination program for wildlife in Texas.

Lessons Learned/Best Practices Applied by Faculty:

During an emerging public health emergency (e.g. HCV outbreak, etc.):

1. Do not sacrifice quality in the face of emergency laboratory testing needs.
Consider bringing in a CLIA officer to non-traditional pop-up laboratory testing sites to ensure high quality standards of testing. Provide training and competency assessments to volunteers being trained on new laboratory tests prior to authorizing operational testing of patient samples.
2. Ensure that clear messaging is provided to the public about the emerging crisis.
It is critical to have informed representation from the public health department interface with and provide answers to questions from media, community meetings, and other public-facing venues and channels.
3. As appropriate and necessary, leverage public health emergencies to enact legal policy and/or individual legal action needed.
Legal outcomes both in terms of policy changes (e.g. reporting of misconduct, new reportable diseases for the state, etc.) and individual legal action (e.g. legal sentence for nefarious individuals responsible, etc.) may be necessary and should be considered on a case-by-case basis.

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During the implementation of a large-scale vaccination program (e.g. wildlife vaccination program against Rabies, etc.):

1. When considering infectious diseases, human health cannot be considered in isolation.
In order to implement successful public health programs both for infectious disease control and paired vaccination programs (for epizootic or zoonotic transmitted diseases), it is critical to consider health in a more holistic way – recognizing both animal, environmental, and geographical/global health considerations.
2. Implementation of large-scale vaccination programs (for humans or animals) requires extensive levels of teamwork and partnership.
Recognize that every partner has a role to play in implementation of large-scale vaccination programs, and successful programs require thoughtful, respectful, and collaborative partnerships.
3. Emergency response efforts can create the demand for and opportunity to apply new technologies and expertise to address challenging problems.
Lean-into opportunities to embrace new technology, expertise and opportunities, even in the face of emergency response efforts. It may even open up completely new avenues of diagnostic laboratory testing capacity (e.g. molecular typing, establishment of the [Texas DSHS Regional Rabies Reference Laboratory](#), etc.).

Cross-Cutting Lessons Learned:

1. Mobilize existing mechanisms to recruit assistance from and promote collaboration among laboratory system partners.
Existing mechanisms like a governor's declaration of a public health emergency can be mobilized to provide liability protection for volunteers (e.g. under the state's emergency declaration in NH), creation of critical statewide quarantines (in the case of epizootic transmission of Rabies), and availability of funding for multi-disciplinary response efforts (e.g. the Texas Oral Rabies Vaccination Program, etc.).

In the case of the HCV outbreak in NH, the Health Alert Network (HAN) and other channels of the Laboratory Response Network were leveraged to promote efficient communication of specific needs to laboratory system partners. Building the laboratory capacity needed to effectively respond to emerging outbreaks may require engaging partners from internal laboratory staff (across departments), hospital partners (e.g. clinical laboratories serving as sentinel laboratories), CDC, other state public health labs, and APHL.
2. Following the implementation of a large-scale emergency response effort, take the time to reflect and document on lessons learned.
It is critical to document and share lessons learned, new best practices, areas for process improvement, or other considerations that arose as a response to the emergency response effort (e.g. outbreak, vaccination program, etc.). These lessons learned may prove to be invaluable in enabling a more efficient response in the future, as well as sharing best practices with neighboring counties, states, or countries facing similar challenges.

Visit our [hub site](#) to find additional resources for this Building Bridges Across the Laboratory session!