OpenELIS 2019 Annual Report

Collaboration to Improve Public Health
I. Our Team: Welcome

Friends,

The new year has provided a stark reminder of the vital importance of public health laboratories. For perhaps the first time in history, every nation across the globe is fighting the same challenge – and turning to their respective public health entities for help.

This crisis is also a reminder of the power of collaboration. While neighbors help neighbors by staying home and nations exchange healthcare supplies, public health labs cooperate to help slow the spread of disease through testing and tracking, preparation and education.

The OpenELIS Foundation is proud to be a part of this global endeavor. And we know from nine years of working with these labs that there are many less headline-grabbing, but important challenges they face daily. We are hopeful that open collaboration and the free exchange of ideas and technology will see the world through this challenge.

With gratitude,

Gary Jones, Executive Director
OpenELIS Foundation
The OpenELIS Foundation is a consortium of public health IT and laboratory professionals, driven by a shared goal of collaboration, with a desire to share our knowledge and experience. We believe in the power of technology and open source software to improve public health laboratory processes and, by extension, public health outcomes.

We are committed to:

- Engaging our members’ passion and participation to further our shared goals;
- A productive and responsive public health community that embraces the diversity of people and ideas;
- The principles of open source software, and a corresponding exchange of ideas;
- Fostering a spirit of collaboration to benefit our members, organizations and the public who depend on us;
- Continuing to develop and support OpenELIS as an open source laboratory information management system for public health laboratories.
Public health laboratories face many challenges when choosing and implementing a laboratory information system. Based on experience in the changing public health landscape and firsthand knowledge of these requirements, we understand the demand for high performing systems with dedicated support teams.

An open source platform, OpenELIS provides an outstanding software solution for public health laboratories, with solutions in place for clinical, environmental and newborn screening testing, plus additional opportunities to provide support for interfacing laboratory instrumentation and electronic messaging.

The Foundation is committed to engaging additional public health laboratories to explore the benefits of OpenELIS. Along the way, we encourage collaboration through direct channels and the change management process, to continually improve the system.
OpenELIS U.S.

Development & Change Management: OpenELIS is differentiated by the change management process, which puts ownership and control directly into lab managers’ hands. In the past year, our partners have contributed to create 26 updates.

Investing in the Future: In 2019, nearly half of the Foundation's funds were used for user support and training, with another quarter of spending dedicated to software development.

Cloud Implementation: OpenELIS is supported in the cloud through the APHL AIMS platform. The advantages of cloud hosting and support meet the needs of public health laboratories for elastic growth in server and database capacity, and greater accessibility during outbreaks or high-volume incidents.

OpenELIS Global

Technology & Security Upgrades: Technology was upgraded to the more secure and common standard of Spring. The security framework received a complete overhaul in order to meet U.S. Government software security standards for collecting and storing patient health information on a government network. OpenELIS Global was tested by these standards and approved by the Centers for Disease Control and Prevention.

Community & Communications: The University of Washington I-TECH Digital Initiatives Group (DIGI) updated the OpenELIS Global website; launched a community discussion forum (Talk); and partnered with the international OpenHIE Laboratory Information Systems Community of Practice (International LIS Community) for sharing lessons learned with other laboratory systems, strengthening LIS/LIMS professionals, and driving the publication and use of standards architectures and processes for implementation of LIS/LIMS systems. DIGI continues to steward the OpenELIS Global codebase and community (Global OpenELIS Code Repository).
OpenELIS users benefit from continuous community engagement, which provides for knowledge sharing and input on new OpenELIS features. Community feedback and support continues to be of the utmost importance to our designers and developers, to ensure we can respond to users’ needs.

While collaboration is key to the work of the OpenELIS Foundation, each of our state partners has their own unique local focus.

**OpenELIS by the numbers**

**3:** U.S. state public health laboratories using OpenELIS.

**17:** LMIC countries using OpenELIS Global Software.

**200:** National reference and clinical labs using OpenELIS Global software to support public health testing and surveillance.
In Their Own Words: What Our Partners Say About OpenELIS

Q: How did OpenELIS impact your lab in 2019?
A: OpenELIS allowed for the consolidation of all systems – clinical, environmental and newborn screening – into one. It also provided for smoother cross-border collaboration with other states that use the system [e.g. Iowa and Missouri].

Q: How did OpenELIS help your lab prepare for the challenges of 2020?
A: Having a common system and training allows us to receive support from other sections of the laboratory when there is an outbreak or huge influx of samples, as with COVID-19. One laboratory received 3,000 tests in a day, which represented 5% of the sample volume for that lab section. Because Client Services and Data Entry staff know the OpenELIS system, they are able to help whenever there is a high-volume event.

Q: How has the OpenELIS Foundation supported your work?
A: It provides for coordination and communication within the community; we have roundtables and opportunities to learn from each other. In addition, the change management process involves the entire community and formalizes governance and the change process. It also provides financial support for development activity, which keeps OpenELIS moving forward.
The continued work of the OpenELIS Foundation would not be possible without the support of our partners, donors and collaborators.

We would like to give a special thanks to:

- University of Iowa State Hygienic Laboratory
- Missouri State Public Health Laboratory
- South Carolina Department of Health and Environmental Control
- J. Michael Consulting
- Association of Public Health Laboratories, AIMS

The Foundation also thanks the members of our board of directors for their efforts to support the Foundation and set the direction for our future:

- Jan Flowers
- Shondra Johnson
- Gary Jones
- Dari Shirazi
The OpenELIS Foundation is proud to be financially sustainable. Here’s a look at what that means, including a breakdown of 2019 revenue sources and how we allocated funds throughout the year.

### 2019 Revenue Sources
- Training, 82%
- Membership, 15%
- Donated Services, 3%

### 2019 Expenditures
- User Support & Training, 48%
- Software Development, 26%
- Technology Support, 18%
- Mgmt & Admin, 8%
We hope to build on the growth and achievements of 2019 by focusing on a few key areas.

### OpenELIS U.S.

- Continue development of an OpenELIS Instrument Interface module that will allow bidirectional exchange with laboratory instruments and OpenELIS.
- Extend web order entry capabilities through the OpenELIS Web Portal.
- Build upon the technical tools for the OpenELIS Development Team to streamline and improve code management from beginning through testing and deployment of new releases.
- Further develop migration tools to make new implementations faster and simpler.

### OpenELIS Global

- Develop FHIR APIs for exchanging data within a national health information architecture using standardized FHIR Profiles and Implementation Guides, starting with an exchange with OpenMRS and then moving to the exchange with a larger national Shared Health Record (Longitudinal Medical Record) and Surveillance systems (such as SORMAS and DHIS2).
- Use the OpenELIS-OpenMRS development exchange as a prototype for developing the OpenHIE Standard LIS-EMR exchange pattern and implementation guide to be published in 2020.
Thank You
for being part of our mission.
We look forward to finding and sharing
new ways to collaborate with our partners to
improve public health in 2020 and beyond.

Visit us online: www.openelis.org

For questions, demos or more information:
Gary Jones, Executive Director
OpenELIS Foundation
gary.jones@openelis.org