

# Missouri: Fellowship in the Laboratory Builds Workforce Capacity

## Innovations in Informatics: Laboratory Success Stories

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**Attracting and retaining a skilled workforce is a critical issue for public health. The Missouri State Public Health Laboratory (MSPHL) took advantage of the [Public Health Laboratory Fellowship Program](#) to identify a talented informatics fellow to address immediate gaps in capacity. After a successful fellowship, Missouri brought on this former fellow as a full-time Informatics Unit Chief.**

### The situation

MSPHL, like public health laboratories across the country, was struggling to staff specialized positions with qualified candidates with a passion for public health. The strength of our public health system and our ability to modernize is dependent on workforce capacity. Missouri needed a consistent pipeline of new talent and strategies to develop the technical skills of its staff and then retain competent resources.

### The solution

In 2022, MSPHL onboarded five APHL fellows across the laboratory, including their first informatics fellow. The Public Health Laboratory Fellowship Program is an APHL-CDC initiative that prepares scientists for careers in public health laboratory science. MSPHL identified an ideal candidate with experience in laboratory science, healthcare system implementations and epidemiology, in addition to a degree in informatics. For her part, Dené saw the fellowship with Missouri as a wonderful opportunity to get back to the lab and leverage her IT experience.

As her fellowship project, Dené created a work instruction manual, a step-by-step method of procedure for configuring, updating and operating the laboratory information management system (LIMS) to complete laboratory workflows. Dené now uses this collection of standard operating procedures (SOPs) to train incoming staff at all levels and as a reference guide for existing staff. This project filled an important gap in the laboratory's documentation.

### Impact

- Building workforce capacity
- Filling critical gaps in internal skillsets

Dené established strong connections with staff and had such a positive experience that when the position of Unit Chief became available, Dené returned to the lab, and even relocated to Missouri. Dené was able to step into the position as someone with existing relationships and an intimate knowledge of the laboratory, the LIMS and the organization at large.

During her fellowship, Dené had rotated through each unit in the lab, talking to the bench scientists. This exposure enabled her to develop a comprehensive understanding of how the data flows through the laboratory and why; it also strengthened the partnership and trust between the laboratorians and the informatics staff and helped break-down silos across domains.

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## Reflections

### Collaboration

The success of Dené's fellowship required a commitment from the entire Informatics team. Collaboratively, the team identified gaps and arrived at a consensus project plan for their fellow to tackle. Furthermore, MSPHL as an organization demonstrated support for the APHL Fellowship Program and strove to make the fellows feel included in the laboratory community.

### Challenges

The Informatics team was in a state of transition and onboarding when Dené began. The team had to assess whether they had the bandwidth to support and mentor a fellow and had to carefully scope the project. While instrument interfacing or electronic test orders and results were high-priority goals, MSPHL focused the fellowship on the creation of SOPs to ensure that Dené would be able to complete the project on time and that the laboratory would have a much needed resource developed.

MSPHL wanted to hire Dené at the conclusion of her fellowship—it was clear early on that she was a great fit for the laboratory—but had to wait for more than a year for a position to become available.

### Suggestions for others

PHLs can leverage APHL fellowships as a source of informatics talent, both for entry level and more senior positions. Laboratories should make the decision to bring on fellows collaboratively to ensure buy-in from the entire team. Keep in mind that a modestly-scoped project will still make an impact and the fellow will still learn from the experience. Fellows should be allowed to make the most of their experience and have a chance to explore the different business operations and areas within the laboratory to help them define the professional path that they would like to pursue.

For those considering a career change, remember: "It's never too late to do what you want to do."

## Up next

APHL is developing a toolkit that will make it easier for laboratories to onboard and mentor fellows so they can take advantage of this talent pipeline.

Dené, now the Informatics Unit Chief, says that she is 100% behind bringing on more informatics fellows at MSPHL in the future. She also sees this as a potential pathway for those with a wide range of backgrounds—coming from IT or computer science, or those with laboratory skills and an interest in informatics. There are many ways to attract talent beyond the traditional university approach.

**Creating a pipeline to train tomorrow's leaders today.**

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