SEPTEMBER 30, 2014: AS EBOLA ARRIVED, THE TEXAS PUBLIC HEALTH LAB WAS READY

The world is not as large as it often seems, and there are countless reminders that diseases are willing travelers. As US health officials saw Ebola ravage populations in West Africa, it became clear that we needed to prepare just in case this devastating disease arrived here. To much of the public health community in the US, the question of Ebola arriving wasn't a matter "if" but rather "when." And when it arrived, a coordinated response would be critical to rapid and thorough containment.

The first step was to ensure we were able to detect Ebola in suspect cases. In August 2014, FDA issued an emergency use authorization (EUA) for an Ebola detection test developed by scientists at the Department of Defense (DoD) United States Army Research Institute of Infectious Disease (USAMRIID). Once the EUA was issued, CDC quickly began working with certain state and local public health laboratories, all members of the Laboratory Response Network (LRN), to determine which were best equipped to perform this testing.

Select laboratories were approached by CDC to receive the test kit (Initial deployment of the test was limited to 12 LRN member laboratories but CDC continues to expand the number of qualified labs.); the Laboratory Services Section of the Texas Department State Health Services (the state public health lab) was an obvious choice given its stellar record in biothreat testing. Dr. Grace Kubin, director of the state public health lab, explained that they had the necessary instrumentation, four highly skilled biothreat staff well versed in handling select agents and a biothreat laboratory located in a separate building from the rest of the laboratory to ensure proper containment of threat agents. Once the Commissioner of the Texas Department of State Health Services, Dr. David Lakey, gave his approval, the laboratory immediately began preparing.

The next step was to inform all of the staff at the state laboratory. "I wanted them to hear it from me first, not the media," said Dr. Kubin. She reviewed the extensive safety precautions that would be taken to ensure everyone's safety.

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From there, she worked closely with her team to establish step-by-step guidelines for handling of an Ebola specimen from receipt to distribution of test results. Laboratory staff would work with state epidemiologists who would serve as the initial contact for suspect cases. Staff in the shipping office would be alerted when potential Ebola specimens were expected; just as with all biothreat specimens, they were not to open the package but instead contact biothreat lab staff to come pick it up.

None of this was atypical for this laboratory, though. Its biothreat team works routinely with far more dangerous select agents such as ricin and anthrax. This is what they do and they do it safely. Everything was already in place for their routine work; the possibility of Ebola meant tightening existing systems and keeping fear at bay.

At the end of August they determined they were ready to test for Ebola.

Just over a month later, on Sunday, September 28, 2014, Dr. Kubin started receiving emails concerning a possible Ebola case in Dallas; later that evening CDC approved the Texas state public health lab to begin testing. On Monday the specimens were shipped to the state lab and to CDC for simultaneous testing. Early Tuesday morning the specimen arrived at the lab where staff were waiting to receive it.

This was their first specimen.

Just as instructed, the shipping staff alerted the biothreat laboratory staff of the package's arrival without opening it. Testing began right away.

By early afternoon the biothreat lab staff obtained a presumptive positive result for Ebola. CDC laboratory staff, working simultaneously and performing additional testing, confirmed that finding shortly after.

Lab staff devoted the rest of the day to distributing information to Commissioner Lakey, the hospital staff, CDC and other key parties. Though the patient was already in treatment and under isolation, staff knew other potential cases could surface as the contact investigation progressed so they were poised to receive specimens any time of the day or night. "They're used to getting calls at three AM saying there is a specimen that needs immediate testing," explained Dr. Kubin.

While I expected my conversation with Dr. Kubin to end with her telling me that her staff felt a sense of accomplishment or relief that they successfully performed this critical test, she didn't. For her staff, aside from the convoy of news trucks in their parking lot, this was all in a day's work.

The Texas state public health lab acted quickly and efficiently, just as expected. Had the specimen been sent to any of the other approved LRN laboratories, we trust they would've done the same. They are strong, dedicated members of the public health system in this country. Because we have such a system in place, health officials can be confident that a single case will not spiral into a widespread disease outbreak.

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