Improving Disease Surveillance Capacity in the Democratic Republic of Congo

NICOLE HOFF WAS IN THE FIRST WEEK of her M.P.H. program at Tulane University School of Public Health and Tropical Medicine when she received something her mother thought she would find interesting – a National Geographic article on monkeypox in the Democratic Republic of Congo (DRC). Among the work highlighted in the piece was that of Dr. Anne Rimmel, a member of the UCLA Fielding School of Public Health epidemiology faculty. Working closely with DRC government and academic collaborators, Rimmel’s group has helped to improve the disease surveillance capacity in a nation that is one of the world’s poorest – and one that remains devastated by the effects of civil war.

“At the time, I didn’t know where I saw myself going with epidemiology,” says Hoff, currently a Ph.D. student at the Fielding School. “But after reading that article I thought, ‘That’s exactly what I’m going to do.’ It was everything I had been interested in – getting to see the world and combining biology with working in the field to collect and analyze data in a way that has major implications on people’s lives.”

Although she kept the article, Hoff mostly forgot about it until it came time to apply to doctoral programs. Although she had attractive scholarship offers from other programs, when the opportunity arose to enroll at the Fielding School and work in the DRC as part of Rimmel’s group, it was an easy decision.

Thanks to fellowship funding from the Faucett Family Foundation, Hoff has spent most of her time since August 2011 in Kinshasa, DRC, where Rimmel’s team is based. Hoff is assisting Rimmel on a number of projects, including data management of monkeypox surveillance; the USAID-funded PREDICT, which works with hunter cohorts and conservation organizations to track viral pathogen emergence in animals and the potential for crossing over to humans; and the building of a large-scale network of conservation organizations working in remote DRC locations to collect animal tissue samples for public health research. Hoff is also assisting in vaccination campaigns through funding received by Rimmel’s group from the Bill and Melinda Gates Foundation.

That and other work have taken Hoff to some of the DRC’s most remote, difficult-to-reach areas. As part of the vaccine program, she has accompanied groups that have gone to villages with no electricity or means of outside communication. Getting to these villages can take a full day, including river crossings and long walks through marshes. In conversations with local health workers once her group has arrived, Hoff has learned of the harsh realities they face. “They know they’re supposed to vaccinate regularly, they know the vaccine is supposed to be kept cold, and they know they’re supposed to report diseases regularly,” Hoff says. “They know so much, but they have so little. Without the most basic resources they do the best they can.”

Beyond her on-the-job lessons in international field epidemiology, Hoff has gained a remarkable set of life experiences. “I had never ridden in the cockpit of a plane, or on the back of a motorcycle through the jungle,” she says. “I had never met with a minister of health. I’m around incredible people and am learning a lot more than just about my field. It’s been an amazing experience.”