EpiHack Arizona

The process of bringing content experts together with engineers and tech developers to **co-create solutions to pressing problems through a highly collaborative method** was designed by the Ending Pandemics Academy as an **EpiHack**. Through this highly interactive activity, innovative solutions have been created within one week of intensive, in-person group 'think and do' to detect the next emerging infectious disease before becoming an epidemic or pandemic. We have successfully conducted EpiHacks in countries at highest risk for emerging infectious diseases across five continents. Many of these solutions remain in operations decades after creation as they are cost-effective, scalable, and proven to save lives and preserve livelihoods.

The outcomes of EpiHacks are allowing communities to meet the challenges of today using tools co-created by their governments, local technologists, academics, and private sector partners through this highly collaboration and creative process. In almost all cases, the EpiHacks have resulted in the creation of bi-directional digital tools that directly engage their populations in reporting and responding to health threats in real-time. We call this approach participatory surveillance. In our experience, **One Health participatory surveillance** is the optimal way to prevent epidemics and pandemics is—taking into account the interconnection of humans, animals and the environment. The Ending Pandemics Academy is ready to explore what might be possible when communities come together to create lasting solutions to the health of people throughout Arizona.

Why One Health Participatory Surveillance?

While it is critical to detect the earliest cases of human illness from any emerging infection, the better we get at identifying environmental stressors and early cases of animal disease, the more likely we are to prevent a zoonotic transfer of pathogens from animals to humans—a spillover that could be the next hantavirus, HIV, Ebola, SARS, ZIKA, or monkeypox. Hantavirus, or example, was identified as a newly emerging infectious disease in 1993 when it jumped species from deer mice to humans—with a death rate of sixty percent. More recently, avian influenza was detected in milk from a Maricopa County dairy herd in March 2025, making it the first time this virus was found in Arizona dairy cattle.

Arizona will continue to be challenged by zoonosis given the propensity of vectors, rodents, and the increasing impact of climate change. Participatory surveillance provides a unique vehicle to engage everyone to monitor the health of their environments, domestic animals and wildlife, and community members, including themselves.

Unique Health Challenges in Arizona

Arizona shares active border crossings with Mexico for agriculture, labor, and hospitality. The state spans urban centers, rural communities, and Native American tribes, each with distinct health barriers.

Challenges include staffing shortages, extreme heat, and uneven healthcare access. Post-pandemic, influenza and RSV reached record highs. TB cases hit a 10-year peak. Drug-resistant pathogens, rising STIs, and falling immunization rates add pressure.

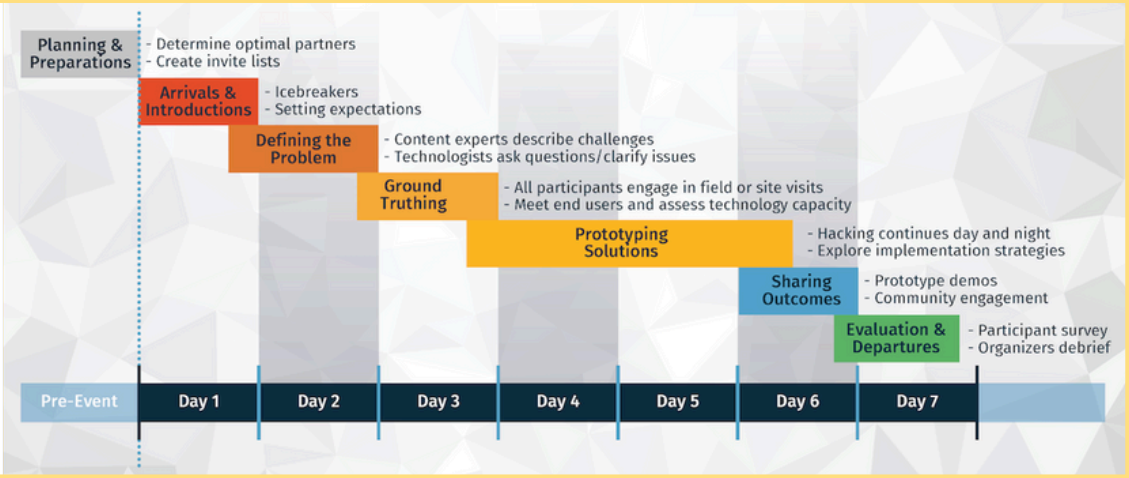
Yet new opportunities exist to help tackle these challenges. AI, for example, can process outbreak signals faster than manual systems, predict hotspots early, and reach communities traditional surveillance often misses. Arizona's complexity makes it ideal for building solutions that public health workers trust and communities own.

EpiHack Arizona is Needed Now!

The ultimate goal of EpiHack Arizona is to predict, prevent, and detect emerging infectious disease threats faster so that we can 'extinguish any spark before it becomes a raging fire'—through improved one health participatory surveillance. We firmly belief that directly engaging communities in the bidirectional process of receiving and transmitting data for action is the best way to accomplish this goal. One Health participatory surveillance is the most inclusive, scalable and sustainable way to expand health surveillance to all corners of the state, and to tackle the complex challenges of zoonotic diseases. This is especially true now, given the limited resources in public health and the complexity of health challenges across the state.

EpiHack™ Elements and Timeline

EpiHacks are typically conducted over a 1-week period to provide optimum time for defining the problems, exploring solutions, and arriving at prototypes by the conclusion of the event.



We Invite Your Input and Participation

We hope that you will join us in this exciting adventure and help us make Arizona a model state for how we prevent epidemics before they start! We are reaching out to key stakeholders to hear directly from you and to invite participation in **EpiHack Arizona** planned for late Spring 2026. We are very interested in understanding the existing gaps in the early detection of emerging infectious diseases along with any other challenges in monitoring the health of all Arizonans. The Ending Pandemics Academy within the Global Health Institute at the Mel and Enid Zuckerman College of Public Health is eager to engage with key partners from all sector of society.

We are currently in the "planning and preparations" phase of the EpiHack Elements and Timeline (see above). This phase will take several months as we meet with potential partners to determine the needs and priorities for monitoring the health of their constituents, taking into account the impact of environmental factors, domestic livestock and wildlife, and the demographics of the people in the communities they serve.

If you or your organization is interested in providing input and/or participating in EpiHack Arizona, please contact us. We are happy to meet in person or via zoom. We look forward to hearing from you!

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