3D-Printed Nasal Swabs for the City of Austin's COVID-19 Response – Texas State University

Presenters: *Juan Gomez, Ph.D.; Research Associate; Department of Physics – Shared Research Operations; Texas State University*

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Summary of Case Study Presented:

In this second session of the Building Bridges Across the Laboratory Community series, Juan Gomez, Ph.D. presented how his team re-purposed existing and idle 3D printers at Texas State University to produce nasal swabs in support of the City of Austin's COVID-19 testing response and call to action. This innovative strategy helped to locally address the widespread supply chain bottleneck involving access to nasal swabs observed early in the COVID-19 pandemic.

Lessons Learned/*Best Practices* Applied by Faculty:

1. **Empowered leadership can be a huge asset to public health responses by providing the ability to quickly make decisions.**
   Empowered leaders are able to advocate for, mobilize, and advance action on emergency response efforts. Communication with leadership is critical to ensuring execution of informed, evidence-based and concerted emergency response efforts.
2. **When possible, during emergency responses, reduce administrative barriers.**
   Administrative barriers can cause delays in reaction time, innovation, collaboration, and forward progress during emergency responses. Establishing a common mission (i.e. to protect the public during the pandemic, etc.) can motivate administrative personnel to get on board and act accordingly through reducing barriers.
3. **Crisis management requires quickly identifying the needs.**
   During public health emergencies, it is necessary for key laboratory and health stakeholders (e.g. Government, Academia, Industry, etc.) to rapidly work together to identify needs (to support a unified goal around the common good) and then move into action (e.g. City of Austin's Governor's Strike Force call to action).
4. **The ability to work with numerous entities, and reduce silos of expertise, is essential for impactful, effective work toward solutions during crisis response efforts.**
   All stakeholders need to actively communicate and engage to address laboratory workforce challenges and public health emergency efforts. The ability for parties to stay flexible and adaptable to collaboration across different disciplines and laboratory sectors, thereby reducing silos of expert knowledge, is critical to these efforts.
5. **It is important to take note of and integrate the scientific discoveries and operational process improvements learned from studies conducted during emergency responses.**
   Glean all you can from innovative approaches and studies that were launched due to emergency responses as they can often create opportunities for improvement in work standards, operational processes, or new best practices.

Visit our hub site to find additional resources for this Building Bridges Across the Laboratory session!

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