Recent outbreaks have created an awareness of the complexity of manufacturing vaccines and therapeutics in time to address an emerging infectious disease threat. Emergent BioSolutions, as an HHS/ASPR/BARDA (Biodefense Advanced Research and Development Authority) Center for Innovation in Advanced Development and Manufacturing (CIADM), facilitates advanced development of chemical, biological, radiological, and nuclear (CBRN) medical countermeasures and ensures domestic manufacturing surge capacity to address the US government’s preparedness priorities and needs. Emergent has a broad range of vaccine manufacturing experience and has been evaluating and implementing processes for the rapid manufacture of vaccines and therapeutics to address these events. For products in pre-clinical development, the use of an expression system with an established manufacturing platform greatly reduces time to initiate manufacturing and increases the probability of success. In addition, platform processes allow for some in-process and release tests to be developed and ready for implementation. However, success is still not guaranteed as challenges with purity, potency, yield and stability may still be encountered. While some of these challenges can be overcome by approaches such as developing and validating platforms, additional challenges may still be present such as availability of testing and fill/finish facilities and preparation and agreement on necessary legal and regulatory documents. Timelines for manufacture are still several months at the minimum and may take significantly longer. Preparing platforms for the response to a potential infectious disease outbreak in advance is the best way to have effective vaccines and therapeutics ready to counter it.