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Universal Local Epidemic Model and Its Usage in the Assessment of
Novosibirsk Region Resource Preparedness to a Bioterrorist Attack
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Objective of the study is to substantiate the possibility to assess local/regional resource capacity needed for a large-scale epidemic response as concerns emerging infectious diseases caused by pathogenic agents of particularly dangerous infections, such as smallpox, anthrax, plague, and Ebola, Marburg, Lassa, Crimean-Congo fevers. Investigations are conducted using a designed at the SRC VB "Vector" universal local epidemic/outbreak (developing within a closed population) model. The results of epidemic dynamics modeling suggest that in case of mass infection of the population in the Novosibirsk Region its resources are well sufficient for tularemia, anthrax, and Marburg and Crimean-Congo fever outbreak control. Response measures for smallpox, plague, Ebola and Lassa fever epidemic control will require additional large-scale federal support.