

Presentation 6 Estimating the location and spatial extent of a covert anthrax release
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Releasing highly pathogenic organisms into an urban population is a form of bioterrorism that could result in a large number of casualties. The first indication that a covert open-air release has occurred is quite likely to be individuals reporting for medical attention. If such an attack is suspected, then public health authorities would attempt to identify those individuals who have been infected in order to provide rapid treatment with the aim of reducing the possibility of disease and potential death. Aiming treatment at too small an area might miss individuals infected further down and/or up wind, whereas issues surrounding both treatment resources and serious side effects may rule out mass treatment campaigns of large sections of the population. Our work provides scientific robustness to firstly estimate where and when an aerosolized release has occurred and secondly identify the most critically affected geographic areas. In order to use this statistical tool during an outbreak, public health workers would only need to collect the time of symptomatic onset and the home and work locations of early cases; recent weather information would also be required. Although the accuracy of the estimates is likely to improve as more cases appear, treating individuals based on early estimates might prove more beneficial since time would be of the essence.