

NOT for Emergency Use Only: Using Preparedness Tools in an Outbreak Investigation

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In March 2007, a single case of active tuberculosis was identified in a call center, which ultimately led to the exposure of over 1,600 workers. Preparedness tools, most notably the Incident Command System and a Point of Dispensing model, were used to investigate and respond to the outbreak.

The OUTBREAK

In March of 2007, a single employee in a call center in Beaverton, Oregon, was diagnosed with active pulmonary tuberculosis. The patient had been symptomatic since October of 2006, but did not have health insurance and did not seek medical care. The call center was a single 100,000 square foot area, in which it was eventually determined that 1,643 people were at some risk of exposure and 622 of those were prioritized for follow up. As of January 30, 2009, 416 individuals have been tested; 6 active cases and 107 latent infections have been identified; 15 people are being treated currently and 50 have completed treatment. Follow up with 276 individuals is ongoing.



One of our MRC volunteers who assisted in the PODs



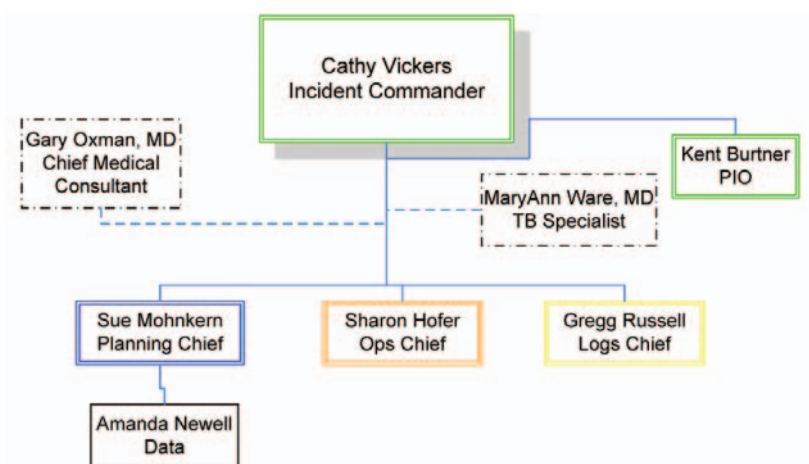
The POD TB testing area

Emergency Preparedness TOOLS

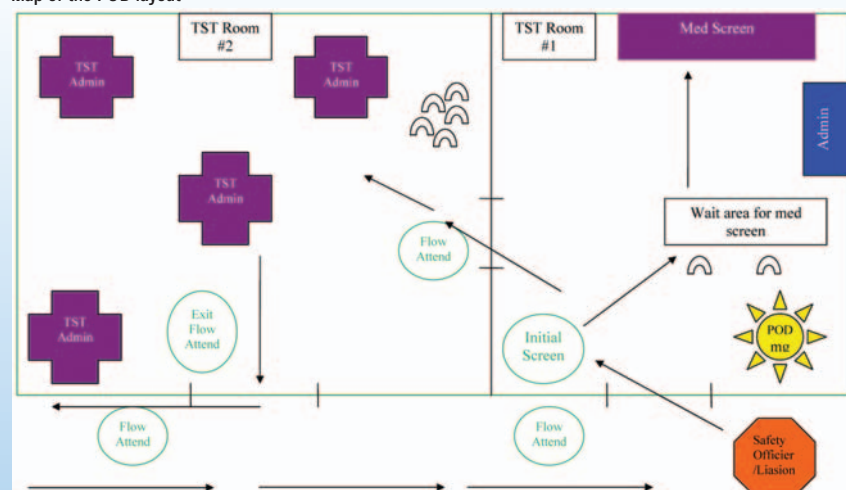
ICS Structure—almost immediately it was recognized that this outbreak would overtake the available resources at our health department. An incident command structure was initiated on April 1, 2007, and remained active until June 30, 2007, when it was determined that the model needed to change to incorporate the response into our ‘routine’ care. Using the ICS structure enabled each of the staff to have clear roles and responsibilities, with no duplication or confusion of efforts, and was used to manage the investigation and the mass testing clinics that were needed. This was the first time our small staff had performed a substantial ICS activation in anything other than an exercise.

When it became apparent that there was significant workplace exposure to TB, and that we needed to be able to test all employees, we planned our TB testing clinics based on the Point of Dispensing (POD) exercises that we have been doing for several years. The worksite was able to provide two rooms on site for the testing. During the first testing POD, we screened and placed TB tests on 320 employees in 3 hours using 16 staff, and followed up 48 hours later with a “reading” POD. We eventually held 8 of these PODs, maintaining a rate of approximately 100 clients per hour in a full medical model POD, using approximately the area and staffing of a fourth of a full POD. We were able to refine our processes as we identified and instituted new procedures based on the lessons learned from each previous POD.

The ICS structure. Our TB nurse, Cathy Vickers, functioned as the Incident Commander



Map of the POD layout



This event provided an excellent example of the significant benefit emergency preparedness has brought to our health department. This outbreak allowed the county to practice preparedness techniques in an unplanned situation, and utilize many of the tools we have been practicing for preparedness. These tools, with the planning and exercising that we have done over the last 5 years, have made us better equipped to deal with an outbreak of this magnitude.