

Testimony to the Massachusetts House of Representatives (Joint Committee on Environment, Natural Resources, and Agriculture)

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Members of the Committee. My name is Peter Shorett. For the last several years, I have been director of programs at the Council for Responsible Genetics, a non-profit science policy organization in Cambridge. I'd like to say a few words regarding accidents at bio-containment laboratories, since it's an issue that may not be addressed by other presenters.

Our organization has tracked accidents and security breakdowns at Biosafety Level 3 and 4 laboratories for several years. During that time, we have documented numerous incidents of each the following:

- 1) the disappearance of significant quantities of bioterrorism agents stored in laboratories;
- 2) the infection of laboratory personnel with a dangerous pathogen, resulting in serious illness or death, as well as community exposure to the infected individual;
- 3) the failure of key safeguards and containment measures following a security inspection or power failure.

Let me review a few recent examples to illustrate the point. In February of last year, a scientist at a BL 4 laboratory in Fort Detrick, Maryland was exposed to the Ebola virus as a result of an accidental needle prick. The same scenario unfolded at a Biosafety Level 4 facility within the State Research Center of Virology in Russia last year, resulting in one death and several unintentional exposures outside the laboratory. In China, during a two month period in 2003, two graduate students working in a Biosafety Level 3 laboratory at the National Institute of Virology in Beijing acquired SARS due to an accidental laboratory exposure. This led to the transmission of SARS to seven other people outside the lab, one death, and the quarantining of over 200 people in two provinces. At a BL4 laboratory in Taiwan in 2003, a military researcher working with SARS was accidentally infected with the virus, exposing 34 other people who were later quarantined. [Report, "Mistakes Happen," submitted for the record].

These incidents took place at unquestionably state-of-the-art facilities, several of which had been built in the last 2 to 3 years. Without a doubt, fewer accidents have occurred at the highest security labs. But this is primarily due to the fact that there are only six in operation in North America, a tiny sum in comparison to Biosafety Level 3 facilities.

No one has a monopoly on the facts regarding these risks. In fact, a lack of mandatory reporting guidelines makes it quite difficult to empirically assess the track record of laboratory safety at various institutions. Beyond the weekly reports on laboratory-acquired infections published by the Centers for Disease Control, accessible sources of data are limited and highly dispersed.

But if we accept that such risks are real, the question is: who should monitor and regulate these facilities? I would submit that there is overwhelming evidence that self-regulation by universities and other institutions that carry out research on high-risk pathogens is not sufficient. I want to mention a recent survey of 390 institutional biosafety committees across the United States conducted by the Sunshine Project. The results of this survey suggest that these committees are in a state of disrepair and have been stretched beyond their capacity in recent years. Less than 5% are operating at an adequate level of public disclosure. Boston University was among the large minority of committees that refused to disclose the minutes of their meetings, a decision which is contrary to National Institutes of Health guidelines. HD 4249 would make such disclosures mandatory. The report recommends legislation that would provide comprehensive, independent regulation and oversight of laboratory safety. [Report, "Mandate for Failure," submitted for the record]

The recently publicized tularemia infections and the OSHA investigation that followed cast doubt BU's ability to prevent and contain future accidents. We all hope that is not the case, but hope is not an adequate source of re-assurance for many people who live in the densely populated neighborhoods surrounding BU Medical Center.

A comprehensive system of regulation and oversight for high-containment facilities in Massachusetts is direly needed. For these and many other reasons, we support HD 4249.

Thank you.