Public Health Preparedness: Our Multi-Billion Dollar Problem/Opportunity

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Abstract

Public health security is a key aspect of national security in any country. In the US, public health security and preparedness efforts are supported by the Strategic National Stockpile (SNS), a federally held $6 billion repository of medical and pharmaceutical supplies that is intended for use in any type of public health emergency, including a terrorist or bioterror attack, when local supplies are insufficient. We describe models we developed to address three questions relevant to the SNS and public health response: (1) What would be the costs and benefits of alternative strategies for stockpiling and dispensing medical and pharmaceutical supplies in the event of an anthrax attack? (2) To what extent should inventories for anthrax response be pre-positioned in local communities? (3) What types and quantities of medical and pharmaceutical supplies should be held in the SNS? We conclude with a broader discussion of key challenges in public health preparedness and opportunities where modeling can inform decisions.

About the Speaker

Margaret Brandeau is the Coleman F. Fung Professor of Engineering and Professor of Medicine (by Courtesy) at Stanford University. Her research focuses on the development of applied mathematical and economic models to support health policy decisions. She is a Fellow of the Institute for Operations Research and Management Science (INFORMS) and a member of the Omega Rho International Honor Society for Operations Research and Management Science. From INFORMS she has received the President’s Award (recognizing important contributions to the welfare of society), the Pierskalla Prize (for research excellence in health care management science), the Philip McCord Morse Lectureship Award, and the Award for the Advancement of Women in Operations Research and the Management Sciences. She has also received the Award for Excellence in Application of Pharmacoeconomics and Health Outcomes Research from the International Society for Pharmacoeconomics and Outcomes Research, and a Presidential Young Investigator Award from the National Science Foundation, among other awards. She is currently a member of the Institute of Medicine Standing Committee for the CDC Division of the Strategic National Stockpile and a member of the Board of Scientific Counselors, a Federal Advisory Committee to the Office of Public Health Preparedness and Response of the CDC. Professor Brandeau earned a BS in Mathematics and an MS in Operations Research from MIT, and a PhD in Engineering-Economic Systems from Stanford University.