

## Keynote 4

### Myths and Realities of Disaster Epidemiology

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Since the mid-1980s, there have been major changes in approaches to manage disasters and conflicts. Among others, expansions in global travel and major improvements in telecommunications have transformed the ways in which we provide relief and manage disasters. International policies to respond to crises as well as techniques to improve the effectiveness of interventions have come a long way in the last few decades. Along with many positive changes also have come stereotypes and preconceived notions of how disasters and conflicts affect a community and how these communities react to shocks. This presentation will explore some of these notions from epidemiological perspectives and suggest sustainable future directions.

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## Oral Presentations—Public Health

### Socioeconomic Disaster Risk in Affluent Society

*Richard M. Zoraster*

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Socioeconomic inequalities in health are well documented in the relatively affluent, industrialized world. Components of social status, such as income, education, primary language, legal status, and ethnicity, might seem to have little to do with the impact of ostensibly random “acts of nature”, such as hurricanes, floods, and earthquakes. However, ecological upheavals are not egalitarian; they disproportionately affect those in lower socioeconomic levels. Many high-risk geographical areas have a disproportionately high percentage of marginalized populations, and this same population is at a disadvantage for preparation, evacuation, response, and recovery. Multiple peer-reviewed articles and anecdotal reports demonstrate that Hurricane Katrina disproportionately affected the most socially vulnerable. This presentation will review disaster vulnerability and compare known risk factors to what occurred. It will review cultural and economic issues that put people at greater risk; what prevents their adequate preparation and evacuation, how disasters may disproportionately affect health, and finally, specific recovery issues.

**Keywords:** disaster; public health; risk; socioeconomic status; vulnerability

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### An Outbreak of Equine Influenza in Eastern Australia: Lessons for Pandemic Planners

*Trevor Barnes*

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On 08 August 2007, 13 horses from Japan were quarantined in Melbourne and Sydney. Blood samples showed that five horses were positive for equine influenza. This led to the first known outbreak of equine influenza in Australia. The first horses became ill on 17 August and the disease spread rapidly throughout Northern New South Wales (NSW) and South East Queensland. By 10 October, there were 4,500 infected premises covering 278,000 square kilometres throughout NSW and Queensland.

A complete restriction on horse movement was implemented. This led to approximately 250 horse owners voluntarily quarantining themselves with their horses at an equestrian center approximately 200 kilometers from Brisbane near the NSW border. While the Queensland Department of Primary Industries and Fisheries retained responsibility for the disease outbreak, a team based on the State Disaster Coordination Group provided the infrastructure to support the operation. From a health perspective, catering, environmental health, and acute medical and mental health services were provided at the equestrian center for approximately six weeks. The decision to vaccinate horses led to a mammoth logistics operation including sourcing overseas vaccines, decision making by priority groups, security and dispersal of vaccines, acquisition of syringes, etc.

The outbreak was eradicated successfully. Contact tracing was almost 100%. Social distancing could not be achieved. The last case occurred on 25 December 2008 and by 31 January, 112,000 horses had been vaccinated. The outbreak cost \$3.35 million (m) in lost equine business, betting turnover dropped by \$327 m, the NSW Government spent \$46 m, and the Australian Government provided \$268.8 m in aid.

The successful strategies included standstill orders and vaccination. A government inquiry identified some procedural issues at the quarantine entry points that are being investigated. Using the disaster management system to support the lead agency proved effective, and provides an appropriate model for pandemic planners.

**Keywords:** Australia; equine influenza; outbreak; pandemic; quarantine; vaccine

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### Health Threats and the European Commission

*Per E. Kulling; Frank Van Loock*

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The threat of a pandemic and other major health threats, along with the terrorist attacks in the US in September 2001 prompted governments and international bodies, with responsibilities related to health protection, to review and reinforce policies, contingency plans, and resources to prevent and mitigate the effects of such threats. The need for joint action in the European Union (EU) led to the