



AP an touch

Supply Chain Risk Leadership Council

Pandemic Influenza

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What is an Influenza Pandemic?

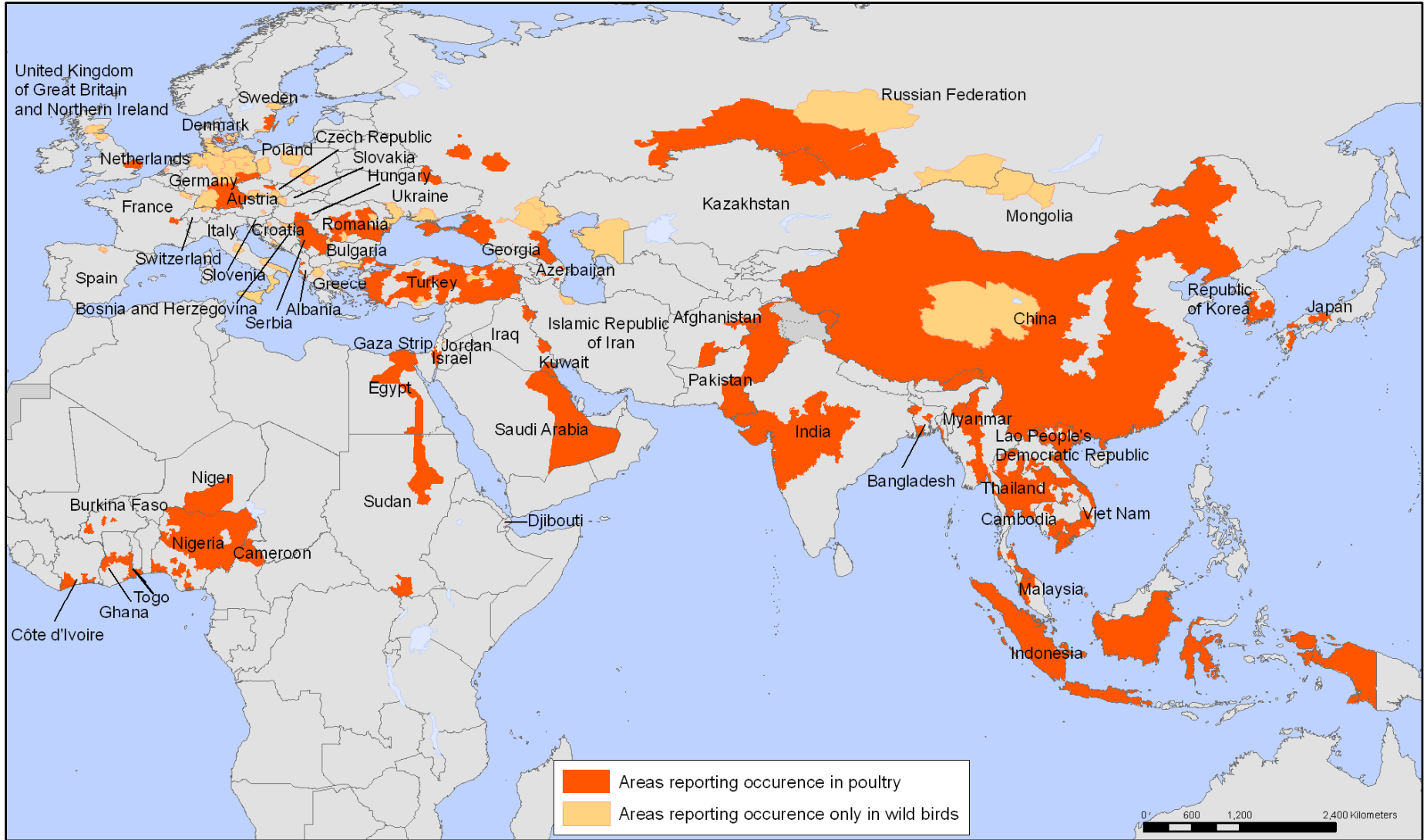
- An epidemic occurring over a very wide area (several countries or continents) and usually affecting a large proportion of population.
- Examples:
 - Cholera
 - AIDS
 - Pandemic Influenza



Pandemic

Areas reporting confirmed occurrence of H5N1 avian influenza in poultry and wild birds since 2003

Status as of 27 September 2007
Latest available update



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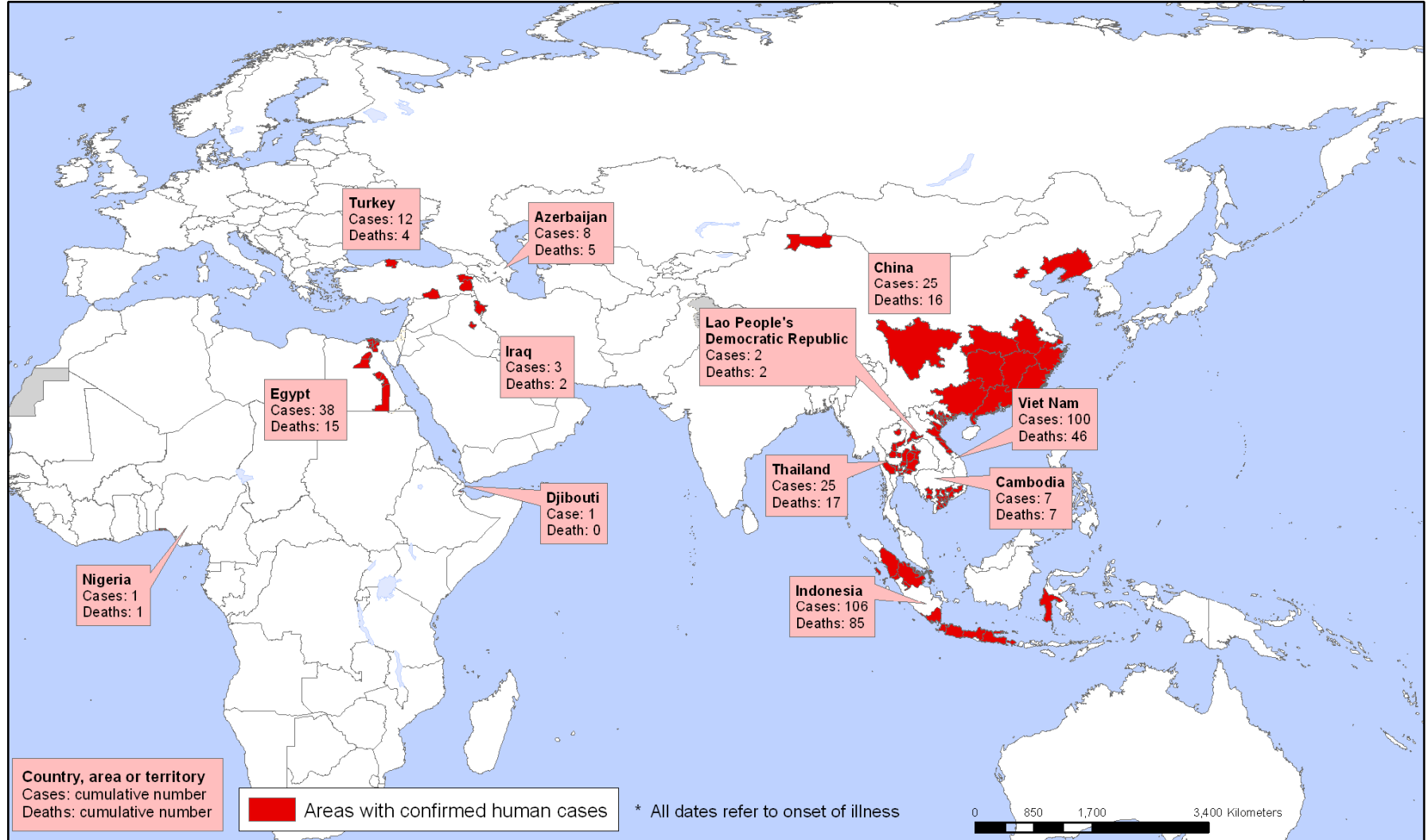
The boundaries and names shown and the designations used on this map do not imply the expression of any opinion whatsoever on the part of the World Health Organization concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted lines on maps represent approximate border lines for which there may not yet be full agreement.

Data Source: World Organisation for Animal Health (OIE) and national governments
Map Production: Public Health Mapping and GIS
Communicable Diseases (CDS) World Health Organization



Areas with confirmed human cases of H5N1 avian influenza since 2003 *

Status as of 10 September 2007
Latest available update



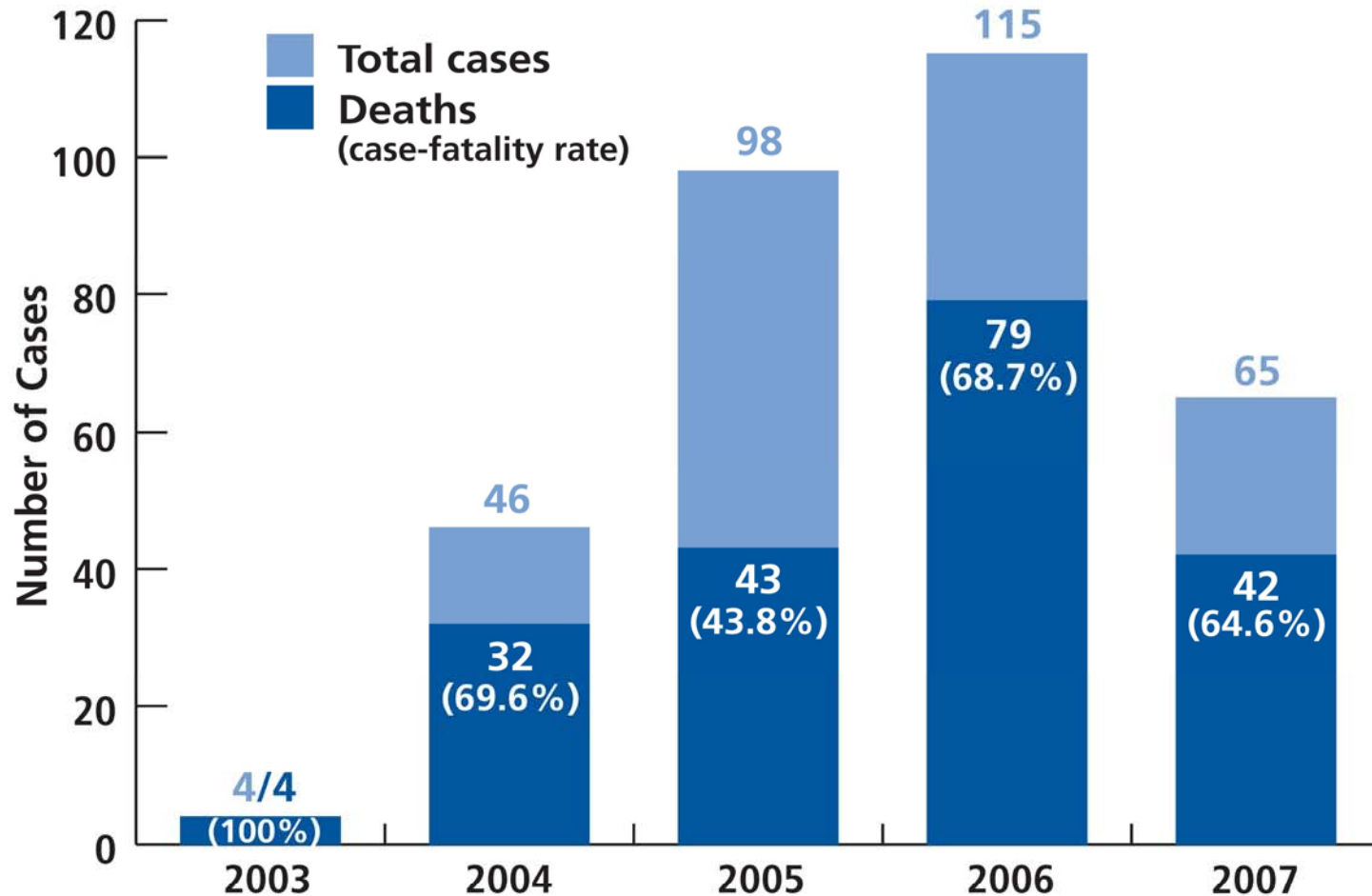
World Health Organization

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H5N1 Cases and Deaths in Humans



From late 2003 through Sep 26, 2007, the World Health Organization has confirmed 328 human cases of avian flu, 200 of them fatal, for a case-fatality rate of 60.9%.

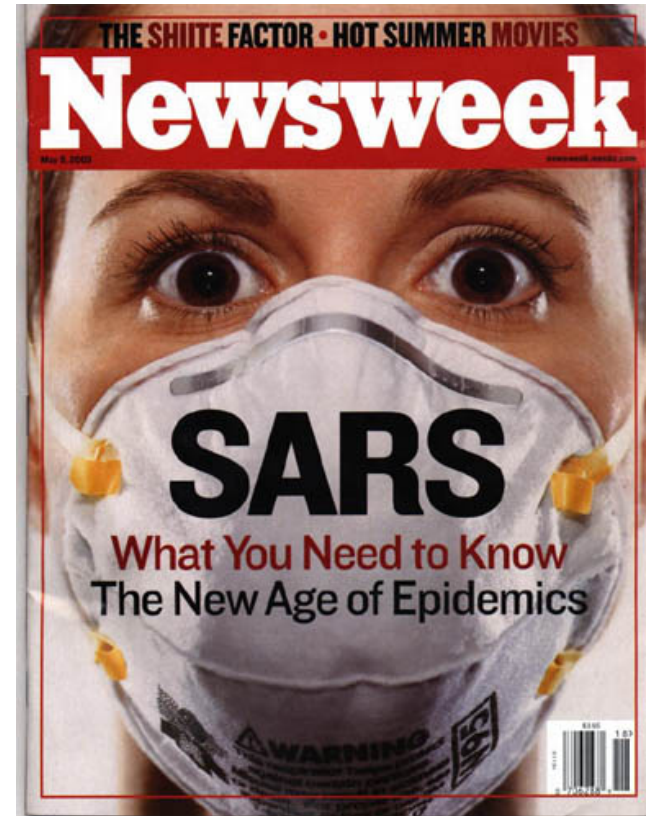
Current risk from H5N1



- close unprotected contact with sick birds
- close unprotected contact with an infected family member
- raw / undercooked poultry products?

Severe Acute Respiratory Syndrome

- Nov 02 - Jul 03 cases in 29 countries
- 8096 cases 774 deaths
- 15 March 2003 World Health Organization issues emergency travel advisory “*There is presently no recommendation for people to restrict travel to any destination.*”
- 2 April 2003 WHO recommends “*consider postponing all but essential travel*” to Hong Kong and Guangdong province China



SARS and economic effects

- Short term impacts: reduced demand
 - Dramatic decline consumer confidence
 - Service: especially tourism, up to 70-80%
 - Investment : uncertainty, increased risk
- Economic loss in 2003 estimated at
 - 0.5 percent of annual East Asian GDP
 - 0.15% in Canada (2/3 in Toronto)



SARS and the supply chain



- Production impacted due to infection and quarantine of employees. Some facilities closed.
- Freight carried on passenger flights (est. 50% of the electronics trade in Asia/Pacific)

The Next Influenza Pandemic Assumptions



Different to SARS

Supply Chain

- Will be disrupted –”shock”
- How much?
- How long?
- How can you mitigate?

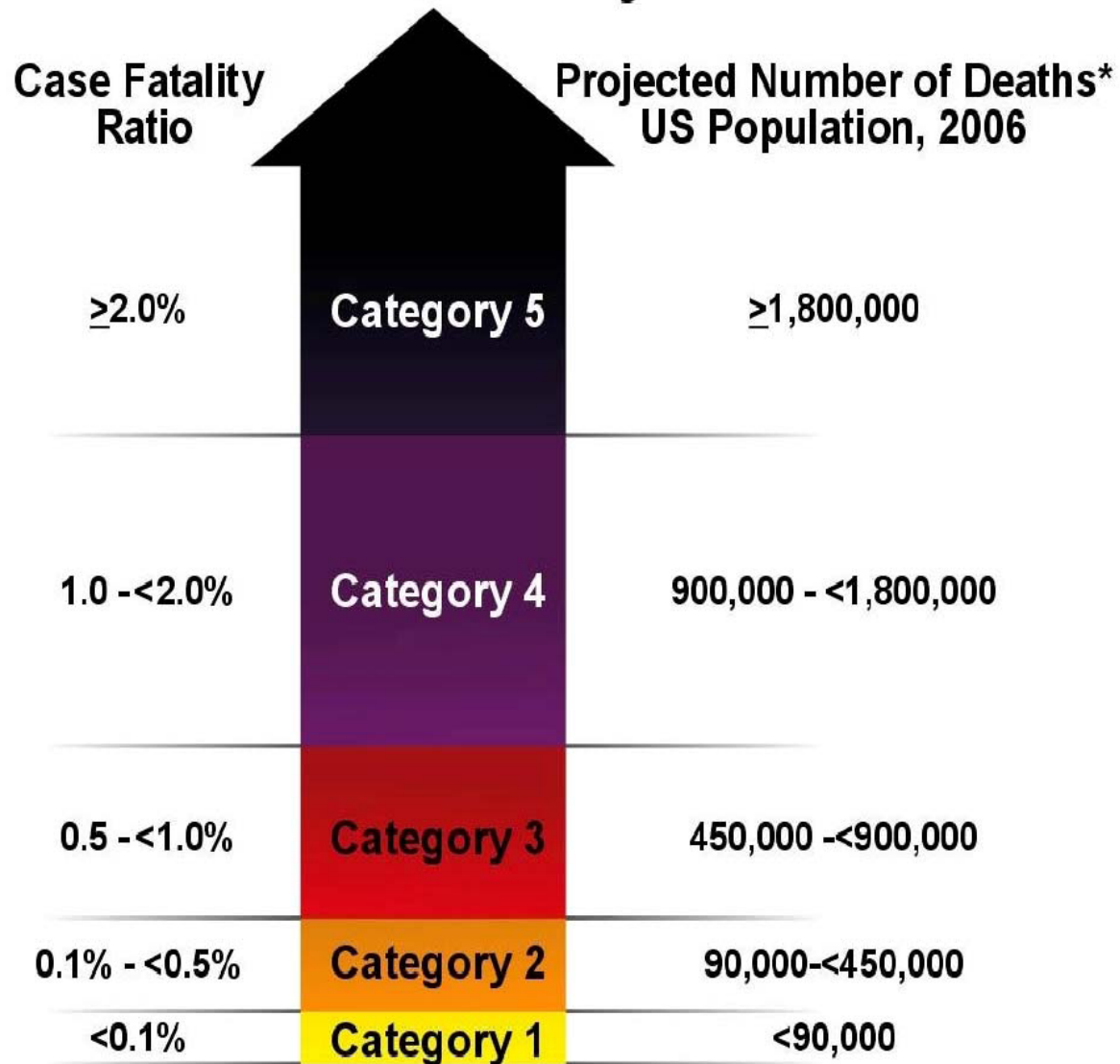


Epidemiology



- 30% of the population will fall sick
- Incubation period 1-2 days
- Infectious period
 - 1 day before onset of symptoms, maximal first 2 days
- infected persons will transmit infection to 2 other people.
- All countries affected
- Multiple waves

Pandemic Severity Index



* Assumes 30% Illness Rate

Social Consequences



- will depend on severity of virus
- borders are expected to close
- travel restrictions
- gatherings cancelled
- closure schools / child facilities
- disruptions public transport / utilities
- shortage food / fuel / daily needs
- security issues

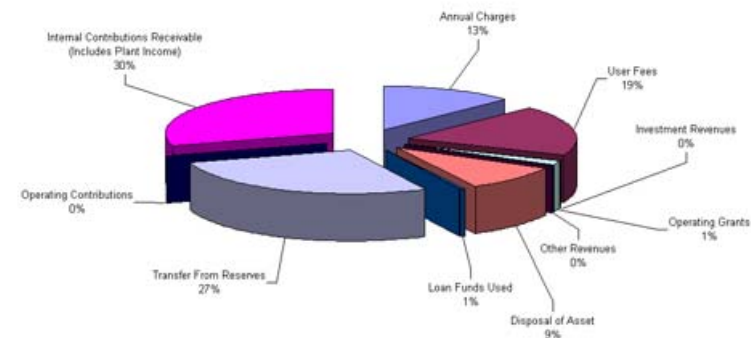
Medical Treatment

- Medical supplies (including vaccines and antivirals) will be inadequate in all countries at the start of a pandemic and for many months thereafter
- Surge in demand
- Medical facilities will be overwhelmed



Economy

- Sharp decline in demand - Non-essential activities that require social contact would likely decline.
- Short term supply-side effects
- Longer-term supply-side effects
- Fall in stock market
- “Recession”
- Recovery





BCP, Workforce, HR



- Shrinking of labor supply
- Absenteeism may reach 40% at the peak
- Public health measures increase absenteeism
- Some ill people will still come to work
- Overtime and added responsibility may be required
- The company, its suppliers and customers may be instructed to limit or stop operations for a period of time.



National Pandemic Plans

- Many nations have made pandemic plans
- Some are “more prepared” than others
- Nevertheless, all countries will be impacted
- Plans for quarantine, border closures
- Encouraging of private sector planning



Mitigation

Pharmaceutical and Non-Pharmaceutical Interventions

- Optimize employee health
- Reduce risk of employees becoming infected
- Reduce risk of introducing virus into facility
- Management of infected persons



Mitigation

- Risk Analysis
 - “business critical”
- Cross training
- Communications
- Audit key contractors / suppliers
- Industry differences in emphasis on non-pharmaceutical interventions



Q & A