RMS® Pandemic Influenza Model Overview

- Interest in pandemic flu has increased significantly due to the spread and lethality of the active H5N1 avian flu virus. There is fear that a reassortment may occur resulting in a human-to-human transmissible virus and global pandemic.
- Historically, there have been other flu pandemics, the most notable of which was the 1918 Spanish Flu. This flu spread to nearly every country and resulted in as many as 50 million deaths worldwide.
- A major outbreak believed to be most likely in Southeast Asia, the Middle East or Africa due to the close proximities of human and bird populations. Regardless of outbreak region, pandemic will reach almost every populated region.
- Severity of a pandemic will depend on a variety of factors including the virus characteristics (which determine the infectiousness and lethality), government response measures, as well as the availability and effectiveness of a vaccine.
- RMS modeling of flu began over 2 years ago, beginning in 2004 with U.S. Casualty study (Catastrophe, Injury, and Insurance) and the Top 10 Risks published by Risk & Insurance, and in recently published Catastrophe Mortality in Japan.

MODEL HIGHLIGHTS

- **Geographic Scope:** Australia, Austria, Belgium, Brazil, Canada, China, France, Germany, Hong Kong, India, Indonesia, Ireland, Italy, Japan, Malaysia, Netherlands, Philippines, Poland, Russia, Singapore, South Africa, South Korea, Spain, Sweden, Switzerland, Taiwan, Thailand, Turkey, United Kingdom, United States, Vietnam
- **Exposures Modeled:** Human Exposures
- **Modeled Insurance Lines:** Life (Individual, Group, Credit), Health, Other Lines
- **Analysis Types:** Deterministic (scenario) and Probabilistic (OEP)
- **Stochastic Model:** Nearly 2,000 unique scenarios; vary based on virus infectiousness and lethality of virus, demographic impact location of outbreak, and pandemic lifecycle
  - Also factors in vaccine production and efficacy as well as various national counter-measures
- **Model Inputs:** Number of people (lives) by age band and/or amount of exposure (net amount at risk) by age band
- **Model Outputs:** Number of injuries/fatalities, ground-up loss; ELT, EP, and AAL
  - Portfolio-level or detailed outputs; results by different years of the pandemic and age band

SOFTWARE HIGHLIGHTS

- Infectious Disease Model - Stand-alone desktop application
- EDM / RDM compatible (software may require databases to be upgraded to add / modify tables)
- Extensible to future infectious disease models
- Probabilistic and deterministic loss analysis options
- Exposure data import, viewing, and management for life, health, and other human exposures
- Results viewing for probabilistic analysis outputs and ELTs
- Analysis profiles to specify analysis details and settings

AVAILABILITY

- July 2006 – February 2007: Available for consulting projects only
  - Insurance Portfolio Consulting
  - Business Continuity Planning
  - Alternative Risk Transfer Consulting
- February 2007: Infectious Disease Model version 1.0 software available for license