In the Event of a Pandemic, What Can Be Done?

By Max J. Rudolph, FSA CFA MAAA
Vice President and Actuary, Mutual of Omaha

Bird flu and a potential human influenza pandemic have received top billing in the popular press of late, but what do they mean for the insurance industry? Most analysis of the topic has appropriately focused on the health aspects, but insurers have several other issues in addition to the obvious increase in claims. From a public policy perspective, insurers and the general population are aligned. Reducing morbidity and mortality, proactively preparing for a pandemic, and the side benefits of that preparation will benefit everyone. Leading this advance planning will also help the insurance industry build goodwill with its customers.

During a global pandemic large numbers of people will get sick, and some will die. In 1918, during the worst influenza pandemic in recorded history, it is estimated that 0.6 percent of the US population died with 30 percent becoming sick. Given a population of about 300 million in the US, this corresponds to 2 million dead and nearly 100 million sick over a very short period of time. While the annual flu primarily infects those individuals with weakened immune systems, mainly the elderly, in 1918 those aged 15-40 were heavily impacted as their strong immune systems turned against their bodies. Those older than 65 had antibodies already present due to earlier exposure to a similar virus.

There are four broad issues for life/health insurers to consider.

- Business continuity risk — how will insurers meet customer needs?
- Economic risk — what is the impact on insurers' assets?
- Insurance risk — how will increased mortality and morbidity affect this?
- Counterparty risk — will reinsurers be able to meet their obligations?

Business Continuity Risk

How will an insurer meet customer needs? During a time when the health system will be overloaded and claims will spike, many in the home office will also be sick or taking care of family members. Schools, day cares, churches and malls will all be closed. Employees will need options to balance these additional responsibilities. Telecommuting and split shifts will be among the social-distancing methods utilized. Insurers should also participate in their community's tipping point exercise. A region can materially reduce the impact of a pandemic by working with their local health authorities to strategically send home employees, reducing contact rates. Pay policies should be determined in advance for time off, whether voluntary or mandatory. Much as Y2K provided an opportunity to update company technology, a potential pandemic can drive insurers to improve their Internet and automatic phone-driven systems for customers.

Economic Risk

A few companies will thrive during an influenza pandemic. These include health care providers, along with the makers of cleaning products and masks. For others, reduced output and poor sales are expected to lead to an overall global recession. Unlike natural disasters like earthquakes and hurricanes which provide a natural boost to the economy through rebuilding, the economic losses are unlikely to rebound quickly. A recession will lead to unrealized losses on bonds just as claims rise above those normally expected. This will lead to a potential liquidity event for insurers, with many taking losses on assets to generate cash to pay claims. Insurers should create financial sensitivity scenarios that predict the financial impact of this and other risks.

Insurance Risk

Higher than expected health and life claims is the obvious risk for insurers during an influenza pandemic. Group life is especially vulnerable, since previously healthy employees may be heavily impacted, and premium rates assume few deaths. If the virus impacts all age groups, including the elderly, then payout annuities will provide an internal financial hedge. Accumulation products will also provide a buffer, since the assets back all general account products and would be available to minimize asset sales. Variable annuities will provide an interesting case study as fund values drop and mortality rises, all within a short period of time. Residual morbidity is unknown, but following the 1918 pandemic, neurological, lung, and heart ailments all increased. Many companies self insure their medical insurance risk, and don't realize that this non-core risk has the ability to materially impact their financials.

Counterparty Risk

While insurers writing business directly to groups and individuals need to create scenario plans to show how they would deal with various potential economic outcomes, they often have offsetting liabilities and excess surplus. Reinsurers often rely on the law of large numbers, maximizing their returns and minimizing surplus funds. This law does not conform to pandemics and makes reinsurers susceptible to solvency risk. Direct carriers should expect to be shown the scenario plans of reinsurers.

Summary

There will be influenza pandemics in the future. No one knows when they will occur or how severe they will be. What is clear is that health care will have to be rationed during a pandemic. The health system cannot support the total level of care needed, from beds to ventilators. An insurer pays if care is received. Who gets to make these life-determining decisions? In our litigious society, will someone be required to pay for unreceived health care? Who will it be?

Individuals should keep redundant supplies of food, water, cleaning supplies and medicines at home. A weather radio with the option to run via crank power provides additional assurances that your family will maintain contact with the outside world. In our "just-in-time" global economy, all companies should keep extras of critical parts necessary to provide basic services like heat and electricity. Hospitals and clinics should maintain stores of extra supplies.

What's good for humanity is also good for the insurance industry. Proactively making the public aware of common-sense activities like washing hands, limiting contacts, and checking in on those who may be sick saves lives. Honest communication is the key.

Rudolph is an actuary at Mutual of Omaha, focusing on the impact of balance sheet risks.
He serves on the Board of Governors for the Society of Actuaries and has chaired the Society Of Actuaries' Enterprise Risk Management Strategy Task Force.
He can be reached at max.rudolph@mutualofomaha.com.

In the Event of a Pandemic, What Can Be Done?
The Marketer, LIMRA International, Volume 13 • Number 1 • 2006
by Max J. Rudolph, FSA, CFA, MAAA