



To Our Subscribers

We want to thank our new subscribers and welcome everyone to the fifth issue of the ARM quarterly newsletter! We hope you find this publication valuable. With a few short articles meant to provide unique insights, we present ideas about how to address specific problems and introduce potential risks that may not yet be on your radar.

The primary authors are Dave Ingram and Max Rudolph. We have been active participants in the risk management, actuarial, investment and insurance spaces for many years.

Subscribers are encouraged to suggest topics for articles and ask questions of the authors during our follow-up webinars. Ever cognizant of regulatory requirements, leveraging them to add value to your company in practical ways, will be our focus.

Published by Actuarial Risk Management (ARM), the Strategic and Risk Solutions for Executives (SRSE) subscription is free to all.

A free webcast is also available and our podcasts covering these topics is called [Crossing Thin Ice](#). If you would like to further engage the authors as consultants or for continuing education purposes, please reach out. More info can be found throughout this newsletter. We hope to help you find a solution that meets your needs!

For more details
Visit actrisk.com

or

Contact Marc Altschull
maltschull@actrisk.com

We hope you will join us on our journey!

Sign-up to receive future newsletters automatically at
<https://www.surveymonkey.com/r/AMRSRSE>



Spillover Diseases

Diseases have periodically impacted geopolitics and socioeconomic circumstances since the dawn of civilization. The plague in the 14th century devastated European society, but the impact on the peasant population generated higher wages and increased mobility for survivors and reduced economic inequality. European ships brought smallpox to the Americas, reducing Indigenous populations with no previous immunity by as much as 90%.

Diseases jump from animals to humans in a process called zoonotic spillover. They are often benign in host animals but can be fatal to humans. Examples include coronavirus, influenza, HIV, Ebola and West Nile virus. As humans encroach further on natural ranges and evolving ecosystems, the likelihood of an existing or novel disease becoming transmissible among people increases.

Among the current concerns are H5N1 bird flu, an influenza virus lethal to many birds but not yet transmissible between humans. It appears that various animal coronavirus pathogens have jumped directly to humans in the recent past, often to children from host dogs.

Influenza can jump directly from birds or pass through an intermediate mammal (often a pig), which is more common, where it can pick up genetic material that makes the virus easily transmissible among humans. The natural migratory patterns allow "bird flu" to travel geographically very quickly. Given the role of birds, especially chickens, in agriculture this leads to culling of entire



flocks when a single case is discovered. This leads to high prices for products like chicken wings and eggs until the chicken flocks are replenished.



Spillover Diseases (cont'd)

Viruses are one pathogen to worry about since they are built from RNA and reproduce by randomly matching up with a similar virus. Genetic changes can also occur through environmental stresses like heat or toxins. The resulting virus then competes with others that are circulating. One variant typically dominates until enough immunity is built up that another variant takes over. This can vary regionally and is impacted by vaccination rates and lockdowns.

When a host animal and humans exist side-by-side an immunity can gradually build up. This is why smallpox, which came to humans from cows, had less impact on farm-based societies who had domesticated cows but was devastating when introduced in the Americas. These relationships can lead to vaccines being developed using small components of the virus. These can be live, killed or weakened virus.

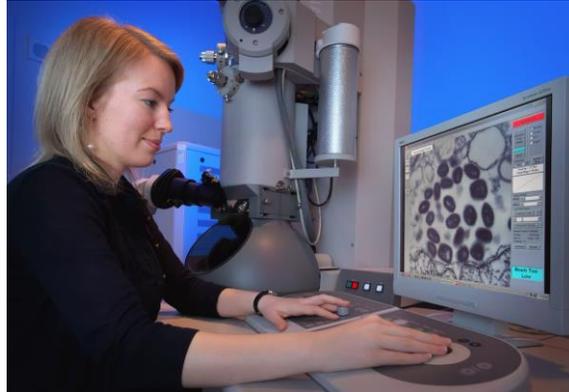
Diseases can live asymptotically in a host animal. They don't even notice them. When jumping to a human, transmission can be direct or through another animal that acts as a mixing vessel to reassort, pulling pieces from similar diseases randomly (virus). Animals known to be factors in reassortment include pigs, ferrets, guinea pigs, camels, primates, dogs, cats and mink. The reassortment process is random, but enough combinations of genetics are available that a vast group of transmissibility and lethality options are constantly being tested to see if a new version will become dominant.

COVID-19 provides a recent example of a virus' evolution. For a virus to survive and reproduce requires a host capable of spreading the virus. This appears to be why so many viruses locate in the respiratory system and spread via sneezes - not because some entity determined this was the best way to survive, but because random trials found a distribution method that worked. Earlier coronaviruses survive today as the common cold, and this could be where the current pandemic virus ends up. If the virus finds the sweet spot of lethality and transmissibility for its host population, we may feel its effects for many years.





Spillover Diseases (cont'd)



One type of virus that originated on the African continent and has high lethality is Ebola. The Marburg virus is similar, and of great concern, but Ebola serves as a good example. Currently the Ebola virus is very deadly. Coming into contact with fluids (but not spread by air, food or water) of someone infected is very dangerous. Caretakers wear hazardous materials (hazmat) suits and bodies need to be burned rather than buried to eliminate contaminated bodily fluids.

Countries each dealt with the recent pandemic in their own way, providing guesses to where an Ebola epidemic could spread. To date Ebola outbreaks have all occurred on the African continent with travel taking the virus elsewhere in a few cases. Assuming a natural pandemic and not one spread intentionally, Ebola is likely to start in Africa where bats host the virus.

Concerns about an American response come from two perspectives; lack of preparation at the border and health care facilities, and a focus on rights and litigiousness. A highly lethal virus just needs a tiny crack to gain a threshold in a new location. Travel testing and detection of early cases must be prioritized to be successful. In the US, a split between those willing to accept government expertise and those who insist on individual rights could end up making the US a hotbed of disease.

A century ago, the mortality records of several states, including my home state of Nebraska, were considered so tainted that they were estimated based on neighboring states. We have had to resort to an excess deaths analysis to develop effective strategies to respond during the ongoing pandemic. How will we deal with a more lethal virus in the future? If we don't work together people will die needlessly.

Sign up for the associated March 15 webinar at https://us02web.zoom.us/meeting/register/tZcqcu-rqjIsGtw0S_npRysx0nXIbTZINip



Strategic Risk Focus for Insurance Company Board Members and Executives

Two-part training program on May 24 and June 7 at 2 pm ET leveraging CGAD requirements to demonstrate the importance of risk management processes and the most common current concerns. Register for free: [Part 1](#) and [Part 2](#)

Additionally for a fee, we offer a private session customizing Part 1 and/or Part 2 to incorporate specific information that reflects your company’s unique ERM program, key risks and Board role for just your Board members and Executives.

Part 1 (May 24)

ERM & Board Role

- General introduction designed for new board members and executives and as a refresher for current board members and executives who have been less involved in ERM in the past
- Primary components of Insurer ERM Program
- Fundamental Board roles in ERM

[Free registration for Part 1 here](#)

Part 2 (June 7)

Current Focus of Insurer ERM Programs

- Provides broad perspective on risks most concerning to over 200 insurance executives for 2023 (identified in ARM’s Dangerous Risks Survey) and the level of ERM practice by over 60 insurers (from ARM’s ERM Practices Study)
- Essential background for board members to provide meaningful oversight to management in the area of ERM

[Free registration for Part 2 here](#)



While Enterprise Risk Management is a continuous process, Own Risk Solvency Assessment (ORSA) and NAIC Corporate Governance Annual Disclosure (CGAD) require insurance company leaders to annually report on their risk management program including direct Board involvement.

DAVID INGRAM | SENIOR ERM CONSULTING ACTUARY



ARM is the leading next generation actuarial and consulting firm and since 2006 continues to work with many Top 30 accounting firms, including BDO USA, LLP and members of the global BDO network.

Insurance companies continue to trust and rely on ARM. You can too. It’s that simple.

maltschull@actrisk.com

1-512-345-5200

Visit us on LinkedIn

5914 West Courtyard Drive,
Suite 190. Austin, Texas 78730



Strategies & Risk Solutions for Executives

Now providing three ways for you to get insights, strategies and solutions from ARM consultants to help resolve your risk issues.

Newsletter

- 3 to 6 articles quarterly
- Written by Dave Ingram, Max Rudolph and other ARM consultants focusing on risks faced by insurers and risk management strategies
- Available on the ARM website

Webcast

- One-hour live webcast once each quarter following the newsletter publication
- Webcast includes brief presentations, interviews with authors and live Q&A with your questions answered regarding the newsletter topics

Podcasts

- Two per month
- Delivered by Dave Ingram & Max Rudolph
- Presenting material from the newsletters and webcasts in a totally audio format.
- Available wherever you usually download podcasts

* No charge to subscriptions to all three services

“

While insurers have been challenging by low interest rates and the pandemic, the next few years will see a radically changing environment for insurers. We will be using this provocative platform to identify emerging risks and delve into what we see as the drivers of future success.

DAVE INGRAM | SENIOR ERM CONSULTING ACTUARY

Sign-up to receive notices for all three automatically at <https://www.surveymonkey.com/r/AMRSRSE>

”