Zombie movie fans can attest that all such films start with a man in a white lab coat assuring the public, “Everything is under control.” While managing risks such as the zombie apocalypse is fanciful, the more concrete peril of Ebola evokes public health worries about the efficacy of policy responses. Nevertheless, stifling alarmism is no reason for risk managers to ignore the perils of major pandemics. Rather, they should spur tactics to mitigate the risk.

While Ebola and measles have recently been in the news, other diseases and diseases and pandemics (think influenza, avian flu, tuberculosis) are sure to make headlines in the future. From the narrower context of Ebola, risk managers must address the broader challenge of how to immunize their organizations from risks occasioned by viruses, drug-resistant bacteria, and international travel enhanced by increasing globalization.

The purpose of this article is not to fixate on Ebola exclusively, but rather to mine the events of recent months regarding that virus and extract from it crisis “nuggets” and risk management tactics that professionals can draw on to address the broader issue of pandemics in the twenty-first century.

Pandemic Risks

Pandemic risk to companies has morphed from being a “Black Swan” event to a real-life

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### What Exactly Is a “Pandemic”?**

A pandemic is an infectious disease epidemic that spreads through human populations across a large region, for instance multiple countries or even worldwide. Flu pandemics, for example, typically do not include recurrences of seasonal flu. Throughout history, there have been a number of pandemics. Tuberculosis and smallpox are two examples. More recent pandemics include the HIV pandemic as well as the 2009 H1N1 pandemic.
scenario. Following is a brief survey of where Ebola-type, pandemic risks may surface in both casualty and property insurance contexts.

**Workers Compensation Exposures**

Any entity whose employees are exposed to the Ebola virus while in the course of employment risks occupational disease claims. Prominent exposures arise in health care. Nurses and physicians treating patients risk contracting disease.

Any employee who travels on business and who, in the course of that travel, becomes infected with the virus and shows symptoms, has a viable workers compensation claim for occupational disease arising out of and in the course of employment. For example, any employee whose business travel includes traveling to or from West Africa is at risk. Simply being on the same plane with a passenger originating from West Africa can expose a fellow passenger to the risk of Ebola infection.

According to Christopher Flat, Managing Director of Marsh’s Workers Compensation Center for Excellence, “If something is contracted in the course and scope of employment, and it’s particular to their industry, it’s likely that there would be workers comp coverage.”¹ (This does not equate to expecting insurance to always cover this exposure, as we will explore later.)

**Employment Practices Liability**

In the zeal to thwart a pandemic's spread, many companies may enact employment policies and practices that can provoke claims which employment practices liability insurance may cover. For example, nurses subject to mandatory quarantines after treating Ebola patients in West Africa complained about strict policies that made them feel like criminals and prisoners. New Jersey nurse Kaci Hickox was placed in quarantine for 21 days, despite testing negative twice for Ebola. (New Jersey officials later released her after criticism of the action and later—under pressure and negative publicity—rescinded the quarantine.)

Disease-driven paranoia may prompt well-intentioned employers to enact measures viewed by some as overreaching. Employers must balance workforce health with individual rights. If that balance teeters excessively toward workforce health, aggrieved employees may sue for discrimination, harassment, and hostile work environment.

Ironically, imposing quarantines may deter healthcare workers from volunteering to treat those infected with a disease, furthering the spread of the disease and diluting the fight against it. Other businesses with employees returning from work or personal trips from infected areas may also receive special treatment, which employees could view as heavy-handed or discriminatory. Whether the employers have employment practices liability insurance, legal exposures exist. Thus, pandemics create potential employment practice liability claims, which may or may not be covered by a company’s insurance.

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General Liability

Disease-related claims could assert various legal liability theories and trigger potential coverage under commercial general liability (CGL) policies. Target defendants might be hospitals, common carriers, or businesses that fail to take reasonable precautions to prevent a pandemic’s spread. Business sectors particularly vulnerable to such claims include hospitality, healthcare, agricultural, mining, and energy companies. Travel companies and firms that provide entertainment for sporting events face exposure. Any organization (e.g., RIMS) that manages events which host large numbers of people has a significant exposure.

Visitors to a premises who contract a disease due to lax procedures by that premises owner, operator, or manager are candidate plaintiffs for general liability claims. Even if such claims lack legal foundation, and companies successfully deny them, firms pay a cost in time and legal fees.

Product Liability

Nature abhors a vacuum. Medical crises invite players in the healthcare arena to develop products that prevent or treat viruses. Among pharmaceutical firms, the race is on to develop medicine to prevent or cure a disease or palliate its symptoms. The company that is first to market such a product will be able to command a premium price and establish itself as a leader in that niche.

However, companies may overreach in claims regarding what their medical device or medication may accomplish. To speed products to market, firms may compress clinical trials or try to accelerate approvals. While some patients may benefit from newly developed products to treat pandemics, many medications have side effects. Patients suffering adverse symptoms may file product liability suits. Product liability claims may allege failure to warn, defective design, defective manufacturing, or some combination of the three.

The plaintiff’s bar monitors adverse event reports as a weather vane pointing to new pockets of product liability litigation. Personal injury groups can quickly coalesce into specialty practice areas revolving around a specific medical device or drug. Any product touted as a disease preventative or cure may invite litigation.

Medical Professional Liability

Physicians who fail to diagnose a disease or fail to take reasonable steps to thwart the spread of the disease expose themselves to medical malpractice claims. A Texas hospital treating one of the first patients sent a patient home even though the patient was Ebola infected. Hasty, erroneous medical judgments that lead to disease progression render physicians, hospitals, and other healthcare workers vulnerable to malpractice claims. Plaintiffs will argue that medical professionals breached the standard of care in diagnosing and/or treating patients infected with a disease.

Directors and Officers (D&O) Liability

Company directors and officers must look out for the interests of the organization. While execution is a management role, directors and officers set the course and direction. They are to think strategically, to embrace longer planning
horizons than operating management. If a company fails to prepare for pandemic threats and suffers financial loss, one can expect D&O suits.

If a company’s financial position degrades, or its stock price drops due to lapses in curtailing a disease, derivative shareholder suits may confront directors and officers. One theory of liability would be that a company’s directors and officers failed to exercise reasonable business judgment in forging a plan to thwart pandemics or failing to task management with executing strategies to address such uncertainty.

**Business Interruption**

Business interruption losses can arise, even without physical damage to property—a requirement of business interruption insurance. This spotlights the importance of contingency planning. Companies also face significant financial loss from business interruption due to pandemics. For example, Texas Health Resources saw its financial performance take a hit after September 2014 problems in managing Ebola cases. Its flagship facility, Texas Health Presbyterian Hospital in Dallas, incorrectly diagnosed its first Ebola patient after his initial emergency room visit. Some quipped that it went from being the Neiman-Marcus of hospitals to being the Sears-Roebuck of facilities.

Publicity punished the company’s finances. Emergency room visits dropped by over 50 percent. Net revenue plummeted by over $8 million. Patients spooked by the hospital’s handling of Ebola made them bypass a once sought-after healthcare destination and eroded the institution’s financial health. Risk managers should not assume, however, that business interruption risks from pandemics are confined to hospitals or even the healthcare sector.

One clear risk management lesson of Ebola is to shore up a company’s immunity to business interruption due to disease. Ebola interrupted the business plans of many companies. For example, ArcelorMittal S.A. shelved a $1.7 billion project that it had planned at a Liberian iron ore mine. London Mining, PLC, one of the largest investors in Sierra Leone, sought bankruptcy protection in October 2014 after plummeting iron ore prices and Ebola worries undercut its ability to attract needed financing. Rio Tinto, PLC, ceased work on a $20 billion iron ore mine in Guinea, since it was located in an area affected by the virus.

Pandemic risk even impact international sports. In November 2014, Morocco backed out of hosting the 2015 African Cup of Nations soccer tournament due to concerns over Ebola. Event organizers scrambled to find a new host.

Many companies, particularly in the manufacturing sector, rely on other firms for labor or materials to bring goods to market. If key suppliers of labor, materials, or outsourced production face business interruptions due to pandemics, this would cripple a company’s ability to sustain operations. This creates a contingent business interruption risk by virtue of breaking the supply chain. One lesson from the Ebola scare is that business continuity plans are a “must.” Every business needs a

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plan for continuing operations if employees are unable, unwilling, or prohibited from going to the workplace.

Perhaps key employees needed for outsourced production are incapacitated due to a spreading disease. Scenarios abound. A precautionary quarantine of workers who are asymptomatic could diminish production of key raw materials. Government action shuts down a key supplier of goods, raw materials, or outsourced operations. Any such scenario can disrupt a company's supply chain and crimp its ability to meet consumer demand. This can hurt revenues, profits, and—for public companies—can deflate stock prices.

Accordingly, organizations developing pandemic-related risk management plans must consider not only their own preparedness, but the readiness of key business partners to thwart the disease and sustain operations. Otherwise, interdependencies between the risk manager's company and key business partners can have a domino effect in interrupting business continuity.

**Reputational Risks**

Modern pandemics can also heighten reputational risk. How a company or an entity responds to a fast-spreading disease can impact its reputation, which has a ripple effect on customer confidence, market standing, and share price. Entities want to build and maintain platinum reputations and to have in place sound preparedness plans.

For example, some hospital administrators felt conflicted about being specially equipped to treat Ebola patients. The stigma of being “an Ebola hospital” can prompt patients to cancel procedures or seek treatment elsewhere. Of the roughly 5,000 hospitals in the United States, dozens have offered to treat Ebola patients. This includes, but is not limited to, hospitals near five international airports. Healthcare facilities draw sobering lessons from the Texas Health Presbyterian Hospital, whose bottom line deflated in October 2014, during which its emergency room closed for 9 days, emergency room visits plunged, and net revenue plummeted.⁴

For many organizations, its good reputation is everything—once lost, it cannot be regained. Thus, another lesson from the Ebola scare, therefore, is that the media can turn any unfortunate event into a far worse crisis than it would otherwise be. A well-conceived media response plan and training of spokespeople before a crisis hits are wise investments indeed.

**Pandemic Risks and Enterprise Opportunities**

Companies establishing themselves early in the market of new disease diagnostics can command a favorable revenue stream and maximize profit. In an enterprise risk management context, new risks can create positive opportunities. For example, Ebola already spiked demand and business in certain economic sectors, particularly for personal protective equipment.⁵ So-called medical moon suits have been in short supply, to the point where purchases from U.S. buyers have crimped the availability of such equipment for African nations. Manu-

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facturers of personal protective gear have strained to meet unexpected demand. The ability of industrialized Western nations to buy the equipment has siphoned supplies from areas with higher risks, accentuating Africa’s susceptibility to contagion.

The Chinese kanji symbol for danger also represents opportunity. Enterprise risk management urges companies to consider not only the costs of risk but also its opportunities. In like context, the emergence of new viruses and diseases—while, on balance, negative phenomena—creates opportunities, particularly for life science firms.

For example, multiple companies are racing to develop a quick diagnostic test for Ebola. This includes: BioFire Defense, Corgenix Medical (portable test that delivers results in 10 minutes), Chembio Diagnostics Systems, Integrated BioTherapeutics, and Genalyte. Some of these are point-of-care tests using reagents. Others use blood drawn by a finger stick. Others deploy a silicon chip to test a drop of blood with a pinprick. Lakeland Industries, based in Long Island, saw its sale of hazmat-type protective suits jump over 400 percent after Ebola emerged in the fall of 2014. Johnson & Johnson and GlaxoSmithKline are racing to develop Ebola vaccines. Simultaneously, Takeda Pharmaceuticals and Mapp Biopharmaceutical are working to develop Ebola cures.

The challenge of developing products to meet pandemic challenges already attracts some startup companies. For example, Columbia University biomedical engineering majors developed new protective suits to keep health-care workers from overheating. Near Washington, DC, a startup known as Qore Performance has adapted cooling packs for athletes to fit into medical protective suits. Another startup company, Inspire Living, is developing a watch-like device to use with protective suits. When the device is placed in a patient’s thorax, it can quickly measure vital signs. These examples illustrate the fact that new risks create new opportunities for companies embracing an enterprise perspective on risk management.

Aethlon Medical has produced a specifically designed cartridge that attaches to dialysis machines. The cartridge’s filter actually attracts Ebola viruses and filters them from the blood as it flows through.

Emerging pandemics also drive a demand for pharmaceuticals that counteract the ailments. Many drug companies are working to develop Ebola-resistant antibiotics. In early stages of public awareness of Ebola in the United States, sales of hazmat suits spiked. Along with legitimate drugs, nutritional supplement companies tried to exploit Ebola phobia. For example, a diet supplement firm marketed an “Ebola-C” pill, implying its effectiveness in combating the disease through vitamin C. (Little to no medical evidence, however, supports the notion that vitamin C megadoses prevent or cure Ebola.)

New threats create markets for new products. This underscores the fact that, from an enterprise standpoint, risk brings not only potential loss but potential gain.

Insurance Coverage Issues

Pandemic-related claims may give rise to insurance coverage disputes. Following are

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some exclusionary provisions that insurers could cite in denying coverage.

**Pollution Exclusion**

Insurance companies may contest coverage for disease claims based on pollution exclusions found in liability and property policies. This may be a dicey coverage defense, inasmuch as it may be a strained interpretation to allege that a virus constitutes pollution.

**Communicable Disease Exclusion**

A standard exclusion of liability arising out of the transmission of a communicable disease—Insurance Services Office, Inc. (ISO), form CG 21 32—is commonly attached to the general liability policies of insureds that face the exposure. It was developed in response to the emergence of avian flu, severe acute respiratory syndrome (SARS), and rotaviruses as public health threats, but would apply to claims involving the Ebola virus as well. For policies that include this endorsement, insurers would have grounds to contest claims for liability stemming from causing actual transmission of the disease, hiring and supervising of employees, testing for disease, failing to prevent the spread of the disease, and failure to report the disease to authorities.

**Virus or Bacteria Exclusion**

Many commercial property policies contain an exclusion of loss due to virus or bacteria. For example, the ISO commercial property endorsement CP 01 40, which is in use in a majority of jurisdictions, excludes loss or damage resulting from “any virus, bacterium, or other microorganism that induces or is capable of inducing physical distress, illness, or disease.” Insurers confronted with either direct damage claims (such as for destruction of property due to contamination) or business interruption claims (whether resulting from contamination of insured property or not) would likely raise this exclusion as a defense.

**Direct Physical Damage Requirement**

Commercial property policies require physical damage to insured property for business interruption coverage to apply. Insurance companies facing business interruption or contingent business interruption claims may assert that there is no coverage because the insuring agreement requires direct physical damage to covered property. For example, if a contagion arises within a workforce, causing an interruption in operations or a breakdown at a key supplier for a business partner, insurers may argue that such loss is excluded because it was not the result of direct physical damage to the insured property.

**“Occurrence of Injury” Controversies**

Insurers facing liability claims due to emerging diseases may disclaim coverage or reserve rights based on the uncertainty as to the time when injury occurred. This would arise most often in cases where it is unclear when a disease-related exposure occurred. What is the date of loss or accident? Is it the date of occurrence? Pinpointing this may be tough. Is it the date symptoms first manifested? Is it a continuous trigger? If these dates straddle different insurance policy periods, with either different insurance companies or differing insurance structures (for example, differing limits of liability, different self-insured retentions, etc.), such issues could spawn coverage litigation.
Bodily Injury Exclusion

D&O forms are universally written with bodily injury exclusions because D&O liability coverage is intended to cover only financial loss arising from managerial decisions. Usually, this exclusion precludes coverage "... for bodily injury...," meaning "direct" bodily injury only. However, in some policies, this exclusion precludes coverage for claims that "... arise out of or are in any way related to bodily injury." This latter version of the bodily injury exclusion could, for example, be used by an insurer to deny coverage for a situation where it is alleged that the failure of a publicly traded hospital’s directors and officers to contain the spread of an Ebola outbreak caused the company’s stock to plummet.

Insurance Market Responses

The reaction to the Ebola crisis teaches us that the insurance market will react warily to providing financial protection for disease-related claims. For example, in October 2014, ACE announced that it might exclude Ebola from general liability policies. Commercial general liability policies are likely to contain such exclusions. Risk managers placing or renewing general liability coverage should carefully review such policies to spot disease-related exclusions. Such reticence by insurers is not surprising. Until insurers fully understand the scope of the problem, it is impossible for them to rationally rate for potential liabilities.

By contrast, health threats in the form of pandemics create new opportunities for insurance companies as well. This links to the notion of enterprise risk, wherein twenty-first century risk managers look not only at potential drawbacks from new risks but new opportunities. Certainly executives at insurance companies have an opportunity to view pandemics as chances to develop new insurance products or endorsements. However, the default mode will likely be one of exclusion until insurers assemble more data.

Insurers avoid risks they cannot rationally rate for or quantify. The universe of data on Ebola and other emergent diseases is likely too small or embryonic to enable underwriters to price such coverage. Until then, underwriters’ modus operandi will likely be to exclude Ebola from coverage. The moral: be aware of such exclusions and—if pandemic risk is a concern for the company—try to negotiate removal of such exclusions.

Pandemic Loss Control Strategies

Ebola’s high average mortality rate (around 70 percent) obscures the fact that it is relatively ineffective at spreading in controlled environments, if patient contacts are minimized. Therein lies one key to loss control for pandemic risks. Loss control measures include temperature checks on employees and visitors, providing hand sanitizers at key checkpoints, avoiding unnecessary company travel and meetings, and utilizing email and teleconferencing to replace traditional meeting practices. Other tactics include the following.

➤ Create organizational awareness through multiple media: announcements, emails, and text messages to employees, meetings, company intranets, etc. Invest in prevention through workforce education.

➤ Implement mandatory “clearance” procedures for employees, vendors, and busi-
Risk Management Lessons from the Ebola Crisis

Future Contagions: The Broader Challenge

As menacing as Ebola appears, perspective for risk managers remains important. Obesity and alcoholism—just to name two conditions—injure and kill more people per year than Ebola. In stratifying a hierarchy of risk, managers must temper concern with a reticence to chase “The Next Big Thing” blaring from over-hyped media coverage. As of November 2014, more Americans had married a Kardashian than had died from Ebola.

In the spectrum of risk management needs, company management must ask itself, “What priority do we assign a particular disease as a risk for us to manage?” Any risk manager has finite resources of time, budget, and attention span. Bandwidth must be intelligently parceled amid an ever-widening array of crises, problems, and priorities. Risk managers pondering Ebola must peek over the horizon, beyond today’s headlines and “breaking news” flashes, peering beyond the immediate threat. Microsoft’s Bill Gates suggests that society must look at the broader issue of preparedness for other pandemics and disease threats. He asks rhetorically, “What’s to stop some form of SARS or SARS II showing up?”

The broader issue is that of organizations being prepared for illness and disease. According to Laurie Laudano, Network Safety Officer with Seton Healthcare Family (Austin, Texas), “There’s going to be some type of emerging infectious disease on the horizon. It may not be Ebola, it may be something else ... and we just

One impediment for risk managers to overcome is the organizational or corporate perspective that, “It can’t happen here.” Risk managers should be proactive, identifying contact points, vectors, or disease pathways that they can block. This is an interdisciplin ary role, drawing from occupational health and human resource specialists. The risk manager’s role includes making sure that the company has pandemic plans in place, that they are kept current, and that they are well known and understood by company employees.

➤ Reinforce basic hygiene practices, such as hand washing, by employees.

➤ Establish an infection monitoring team. This group should be the focal point for creating staff and customer awareness. Organizations may also install help lines for staff who are concerned or need help. Additionally, companies and other organizations may consider travel restrictions for staff, opting increasingly for teleconferencing and tools such as Skype.

➤ On a “micro” basis, loss control includes updated training and checking for personal protective equipment and cleaning supplies for custodians, receptionists, and salespeople who have daily contact and interaction with a wide range of others.

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always need to stay prepared. 8 Whether the danger is Ebola, tuberculosis, avian flu, or Middle East Respiratory Syndrome (MERS), prevention and containment are core strategies for risk managers to implement.

Risk managers must stratify threats amid an array of competing concerns, prioritizing according to the individualized needs and concerns of their respective organizations. Each practitioner must assess whether pandemic preparedness merits top-shelf or peripheral attention. After all, there is much to worry about. Global warming could cause sea levels to rise, damaging property and threatening business continuity. Solar flares could disrupt communications. Global destabilization could cause a rogue state or terrorist to detonate a nuke, generating an electromagnetic pulse that sends civilization back to the nineteenth century. Large near-earth objects could strike the planet, as one did millions of years ago, triggering a new Ice Age.

A thin line separates risk managers from being proactive to being so “out there” that top executives perceive them as wearing the risk management equivalent of a tinfoil hat. Thus, risk managers must weigh not only possibilities, but the temperature of their management teams to determine how receptive they are to forward thinking. They will win no credibility points with upper management and the board if the latter perceive them as twitching from risk to risk, depending on the day’s headlines or media hysteria du jour, exhibiting the risk management equivalent of attention deficit hyperactivity disorder (ADHD). Risk managers must walk a tightrope between proactivity and alarmism, deciding where in the hierarchy of risks facing the company they position emergent diseases.

Richard Preston’s 1994 nonfiction thriller, The Hot Zone, tells a riveting tale of what—at the time—was an unknown and terrifying disease. Few people had heard of Ebola 21 years ago when the book hit the best-seller list. Fast-forward to 2015, and the disease has morphed into a peril on the radar screens of risk manag-

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ers worldwide. The good news is that a toolbox of tactics is available for risk managers in attacking the broader problem of pandemics in the twenty-first century.

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