21st century challenges and opportunities for risk communications

1. Health security as a modern day challenge

Public health security is defined\(^1\) as the policy areas in which national security and public health concerns overlap. Foreign policy structures usually include or relate closely to overseas aid-giving mechanisms, and a number of health issues inform foreign policy.

An interconnected world is increasing the opportunities for human, animal and zoonotic diseases to emerge and spread globally. Today’s health security threats arise from at least 5 sources:\(^2\):

1. the emergence and spread of new microbes;
2. the globalization of travel and food supply;
3. the rise of drug-resistant pathogens;
4. the acceleration of biological science capabilities and the risk that these capabilities may cause the inadvertent or intentional release of pathogens; and
5. continued concerns about terrorist acquisition, development, and use of biological agents. The recent emergence of the H7N9 influenza virus and Middle East Respiratory Syndrome Coronavirus (MERSCoV) underscore infectious disease as a serious global threat.

Here is how the US government framed\(^3\) the issue in 2014.

1. In today’s increasingly interconnected world we remain vulnerable. Disease threats can spread faster than ever before with increased global travel and trade.
2. Global health security means safer nations and more stable economies.

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\(^2\) US Governments’ Global Health Security Agenda, is an effort between the U.S. government, other nations, international organizations and public and private stakeholders, to accelerate progress toward a world safe and secure from infectious disease threats and to promote global health security as an international security priority.[http://www.globalhealth.gov/global-health-topics/global-health-security/](http://www.globalhealth.gov/global-health-topics/global-health-security/)

\(^3\) See 54 above
3. The vitality of the global economy is only as secure as the collective health of our people.

- 11 years ago SARS cost $30 billion in only 4 months.
- The anthrax attacks of 2001 (in the USA) infected 22 people, killed 5, and cost more than $1 billion to clean up.
- The 2009 H1N1 influenza pandemic killed 284,000 people in its first year alone.
- AIDS spread silently for decades before detection and response, causing untold loss.

Health security has made health more complex, more political and intertwined with security issues bringing new players (military, defence, trade, etc) into contact and sometime collision with health experts and policy makers. Funding for health, traditionally from development partners or national social welfare budgets, is increasingly mixed with funding from security, defence and military and trade spending. All of these affect how risk is communicated and perceived and pose serious challenges for issues of real or perceived conflicts of interest.

Three evolutions in global health security are offered by Dr Julie E. Fischer co-director of research projects in global health security with Dr. Rebecca Katz at the George Washington University School of Public Health and Health Services.

1. *Achieving widespread access to essential health services, and protection from environmental and behavioural risks to global public health.*

This definition frames health security as an aspect of human security: the "freedom from want" of life-saving clinical and public health interventions. This is not just a humanitarian concern: healthy populations are an essential aspect of economic development. In this

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4 From 2007-2012, Dr. Fischer led Stimson’s Global Health Security project when this evolution was framed.
are the considerations of how to strengthen health systems sustainably by looking at the hard numbers - the technical and financial assistance, programs, and policies aimed at improving health status in the world’s low and middle income countries.

2. **Systems and agreements to prevent the cross-border spread of communicable diseases and other threats to public health.**

Rapid international trade and travel, an increasingly complex animal-human interface, urbanization, shared global supply chains for pharmaceuticals and foods, and changing human behaviours increase the odds that significant new public health threats will emerge and spread among vulnerable populations worldwide. Here the focus is on the evidence base for strengthening global disease detection and response capabilities - particularly the demands of implementing the International Health Regulations (2005), a commitment to reciprocal responsibility among nations to detect, assess, report, and respond to public health events before they spill across borders.

3. **Tools and instruments to ameliorate the threat of biological weapons and bioterrorism.**

Decades-long efforts to prevent the deliberate use of biological weapons through the Biological and Toxin Weapons Convention (BWC) and other measures attained new urgency after the 2001 anthrax assaults against US targets. This led to new US government strategies for biodefense and biosecurity, as ubiquitous skills, tools, and
knowledge have lowered the barriers to biomedical and biotechnology research that could be deliberately diverted or misused.

2. **New communication technology and culture - the double-edged sword**

Technology has changed our world. And risk communications capacity building is impacted by these changes.

The International Telecommunications Union (ITU)\(^5\) reports that globally, mobile-broadband penetration will reach 32% by end 2014 – almost double the penetration rate just three years earlier (2011) and four times as high as five years earlier (2009). In developed countries, mobile-broadband penetration will reach 84%, a level four times as high as in developing countries (21%). By end 2014, the number of mobile-broadband subscriptions will reach 2.3 billion globally, almost 5 times as many as just six years earlier (in 2008). Africa leads mobile-broadband growth and reaches close to 20% in 2014, up from 2% in 2010.

The number of mobile-cellular subscriptions worldwide is approaching the number of people on earth. According to its recent UN study\(^6\), more people on earth have access to cell phones than toilets. Out of the world’s estimated 7 billion people, 6 billion have access to mobile phones (in 2013). Far fewer — only 4.5 billion people — have access to working toilets. Mobile cellular subscriptions will reach almost 7 billion by end 2014, corresponding to a penetration rate of 96%. More than half of these (3.6 billion subscriptions) will be in the Asia-Pacific region. In developing countries, mobile-cellular penetration will reach 90% by end 2014, compared with 121% in developed countries.

\(^5\) The world in 2014: ICT facts and figures, International Telecommunications Union.

\(^6\) World Water day, 2013.
By end 2014, the number of Internet users globally will have reached almost 3 billion. Two thirds of the world’s Internet users are from the developing world. In developing countries, the number of Internet users will have doubled in 5 years, from 974 million in 2009 to 1.9 billion in 2014. Internet user penetration has reached 40% globally, 78% in developed countries and 32% in developing countries. Globally, there are 4 billion people not yet using the Internet and more than 90% of them are from the developing world.

In Africa, almost 20% of the population will be online by end 2014, up from 10% in 2010. In the Americas, close to two out of three people will be using the Internet by end 2014, the second highest penetration rate after Europe. Europe’s Internet penetration will be reaching 75% (or three out of four people) by end 2014, the highest worldwide. One third of the population in Asia-Pacific will be online by end 2014 and around 45% of the world’s Internet users will be from the Asia-Pacific region.

By end 2014, 44% of the world’s households will have Internet access at home. Close to one third (31%) of households in developing countries will be connected to the Internet, compared with 78% in developed countries.

According to the ITU, one out of every five minutes spent online is spent on social media. This bears witness to studies that show that the public is increasingly likely to seek information from the Internet and by extension, from social media networks to seek health advice. See a snapshot of the state of social media in 2014 in the figure above.

The availability and accessibility of new technology means there is

1. decreasing reliance on health or medical experts, and health authorities such as

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**Social Media Users**

As of January 2014

- Facebook 1.15 billion + users
- Twitter 230 million + users
- LinkedIn 238 million + users
- Google+ 500 million + users
- YouTube 1 billion unique monthly users
- Pinterest 70 million + total users
- Instagram 138 million + users

Pinterest was the fastest growing social network of 2013

Over 2.6 million companies have pages on LinkedIn

Google+ adds 25,000 new users every day

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Ministries of Health and international organizations like the World Health organization.

2. Increasing reliance on exchange of views and opinions from trusted networks and less credibility is given to official sources of “one-way” information such as Ministry of health websites.

3. Increasing likelihood of the presence and transmission of misinformation, spreading of rumours and incorrect information.

All these make risk communication harder and more complex.

3. Journalism has changed

The following patterns are all impacting how risk communication is possible through the media and journalists.

1. New technology has changed journalism. Here are a few internet based views on how journalism has changed.

   The Internet has not only changed the methods and purpose of journalism, but also people’s perceptions of news media. Professors Bardoel and Deuze note that, “the shifting balance of power between journalism and its [audience], and the rise of a more self-conscious and better educated audience (both as producers and consumers of content)” has indelibly altered the landscape of journalism⁹.

   Really Simple Syndication (RSS) is one of the most underestimated innovations in journalism¹⁰. At its most basic level it means journalists can subscribe to a range of RSS feeds in one RSS reader – and therefore not have to keep checking back to dozens of original websites for updates. RSS enables

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⁹ Journalism in the Digital Age -- a project for CS181 by Danny Crichton, Ben Christel, Aaditya Shidham, Alex Valderrama, Jeremy Karmel

¹⁰ http://onlinejournalismblog.com/2008/03/06/ten-ways-journalism-has-changed-in-the-last-ten-years-bloggers-cut/
very specific consumption: readers can now subscribe to just one section of a newspaper – or even one writer.

2. Journalism and news production is an economic activity. In the USA alone, newspapers are a $34bn (£21.6bn) industry. This means that producers and editors have to make a profit and will cover stories that attract the largest audiences. There is usually very little appetite from the industry to cover health risks, unless people are dying in large numbers or there is enough material that engages the imagination (such as the Ebola outbreak in West Africa).

4. Investigative journalism and beat specialization are diminishing. As news agencies have less money to spend on investigative reporting, there is a clear decline of trained, qualified journalists to cover in depth issues. Nonprofit “muckraking” organizations are mushrooming, but most of these have budgets less than $50,000 and five or fewer people on staff. Five years ago, there were 39 nonprofit investigative reporting organizations in the world. Today there are 106 of them in 47 countries.

5. The rise of the Internet and social media mean there is now a 24-hour news cycle, which is as much filled by opinion as by facts and hard news. This also invites sensationalism. US cable networks, MSNBC, CNN and FOX News report the same news, but that doesn't mean they report the same stories. And while news is limited by the size of an event, a story is limited only by the size of cable news producers’ imaginations. And so in this 24-hour news cycle, overblown stories reign supreme. If ever the axiom "Go big or go home" applies, it's in the realm of cable news.

The 24 hour news creates ferocious competition among media organizations for audience share. This, coupled with the profit demand of their corporate ownership, has led to a decline in journalistic standards. In their book Warp Speed: America in the Age of Mixed Media, they write that "the press has moved

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11 2012 figures accessed through Forbes magazine; http://www.forbes.com/sites/timworstall/2012/03/17/google-now-larger-than-entire-us-newspaper-industry/


toward sensationalism, entertainment, and opinion" and away from traditional values of verification, proportion, relevance, depth, and quality of interpretation.

CNN (Central News Network), the world’s first 24-hour news network, which made its debut in June 1980 heralded in the new era of 24/7 news. CNN forever changed the notion that the news could only be reported at certain times during the day. Founded by Ted Turner, CNN created the 24-hour news cycle which created an increased demand for news stories or stories presented as news. It has been theorized that the development of the 24-hour international news cycle created what many social and media experts call the “CNN effect” to describe the perceived impact of real time, 24-hour news coverage on public opinion and policy decisions.14

6. Citizenship journalism

The concept of citizen journalism, also referred to as street journalism or participatory journalism is based upon public citizens "playing an active role in the process of collecting, reporting, analyzing, and disseminating news and information.15". Jay Rosen proposes a another simple definition: "When the people formerly known as the audience employ the press tools they have in their possession to inform one another.16" Courtney C. Radsch argues that this term best describes this particular form of online and digital journalism conducted by amateurs, because it underscores the link between the practice of journalism and its relation to the political and public sphere.17

14 http://timesillustrated.com/24-news-cycle/

17 Deutsch Karlekar, Karin and Radsch, Courtney C., Adapting Concepts of Media Freedom to a Changing Media Environment: Incorporating New Media and Citizen Journalism into the Freedom of the Press Index
New media technologies have made citizen journalism more accessible to people worldwide. The public – citizen journalists - can report breaking news more quickly than traditional media reporters. Notable examples of citizen journalism reporting from major world events are the South East Asian tsunami of 2004, the Arab Spring, the 2010 Haiti earthquake, recent events in Ukraine.