Risk communication in a pandemic

Preliminary findings from the Asia Pacific

Prof. Rohan Samarajiva
Ramathi Bandaranayake

Tezpur University, 17 December 2020

Structure of the presentation

- Examine the most authoritative risk communication practice recommendations, based on systematic reviews of extant research
- Document actual practices of three Asian countries with relatively good, but different forms of, COVID-19 management
- How well are they following the recommendations based on evidence?

- Work that remains to be done
  - Further analysis of recommendations and case studies
  - Analysis of social media messaging by government and others using CrowdTangle data
  - Quantitative studies of trust, based on Gallup Wellcome Global Monitor

The problem

- Containing a pandemic such as COVID-19 requires preventive behaviors by large sections of the public
  - Government cannot monitor each and every citizen to ensure compliance, and must rely on voluntary compliance
  - Citizens must comply its directions (e.g., mask-wearing, social distancing, hand washing, vaccination in two stages, etc.), based on trust
- Emergency risk communication (ERC) is the description used by disaster managers to describe this domain

Emergency Risk Communication: Big picture

- People respond to risk as they *perceive* it
- People seek to verify their perceptions by various means, including outside sources and their own experiences and observations
- People are more likely to take risk-mitigating actions if they believe
  - they are vulnerable to the risk
  - can act to reduce their vulnerability, and
  - the advantages of said actions are greater than the potential drawbacks

Glik, “Risk Communication for Public Health Emergencies” (2007). *Annual Review of Public Health,* 28, pp. 33-54. doi:10.1146/annurev.publhealth.28.021406.144123

Who communicates? Whose directions are the communicators likely to heed?

- Disaster response officials, generally. In the case of COVID19 pandemic, health officials mostly
    - In some instances, political leaders such as Angela Merkel (but not every day)
    - In exceptional cases military leaders, as in Sri Lanka's second wave (but health official spoke during first wave)
- National health authorities pay attention to WHO recommendations

Evidence supporting the WHO recommendations? 2017 research synthesis

- Systematic review of published work and grey literature conducted by multiple institutions, directed by high-calibre expert groups
  - Five languages
  - Quantitative and qualitative studies

https://www.who.int/risk-communication/guidance/process/systematic-reviews/en/

LIRNEasia has been deeply engaged in systematic reviews from 2013, including by publishing a special section of *Information Technology and International Development* Vol 14 (2018)

WHO Risk Communication Recommendations

A1: Trust

To build trust, risk communication interventions should:

- link to functioning and accessible services,
- be transparent,
- be timely,
- be easy-to-understand,
- acknowledge uncertainty,
- address and engage affected populations,
- link to self-efficacy, and
- be disseminated using multiple platforms, methods and channels.

A2: Communicating Uncertainty

Communication by authorities to the public should

- include explicit information about uncertainties associated with risks, events and interventions, and
- indicate what is known and not known at a given time.

Findings on trust

- Trust is a multi-faceted concept with multiple components and closely related concepts, all of which may be affected differently by the same message designed to enhance it. Trust is also dynamic. It changes across different message sources, the public's demographics, type of hazard/ event, and the course of the event.
- During an emergency event, people consider multiple sources offering information and recommendations and use source credibility for resolving the conflict among sources. The careful sorting of information and its sources occurs in life circumstances that may include poverty and associated multitude daily hazards and risks, entrenched cultural beliefs and behaviors, and past history with authorities' response to events. Messages that disregard this broader social context outside of basic demographics will fail.

Findings on trust

- Some cautious generalizations about what works to enhance trust:
  - coordination with other agencies, institutions, and the media;
  - swift and uniform message dissemination and intervention;
  - communicating uncertainties;
  - being transparent and not concealing negative data; avoiding rapid changes in information and preventing conflicting information dissemination from different agencies;
  - disseminating information through multiple platforms; and sustaining public involvement and dialogue
- High trust in authorities can lead to positive outcomes such as higher vaccination and evacuation behaviors, but it can also lead to negative outcomes such as lowered perceived risk for hazards

WHO recommendations

A3: Community Engagement

- Identify people whom the community trusts and
- build relationships with them and
- involve them in decision-making to ensure that interventions are collaborative and contextually appropriate, and that the community owns the process of communication.

B1: Governance and Leadership

ERC [Emergency Response Communication] should have a designated strategic role in global and national emergency preparedness, and response leadership teams with well-defined roles and responsibilities for communication personnel.

B2: Information systems and coordination

B2.1: Develop and build on relevant stakeholder and organizational networks across geographical, disciplinary, and, where appropriate, national boundaries.

B2.2: Tailor information and communication systems to users' needs and involve local stakeholders to guarantee the flow of information across sectors.

B3: Capacity building

Preparation and training of personnel for ERC should be organized regularly and focus on coordination across involved stakeholders.

WHO recommendations

B4: Finance

ERC requires a defined and sustained budget that should be a component of core budgeting for emergency preparedness, response and recovery.

C1: Strategic communication planning

ERC planning must occur well in advance, and be a continuous process with a focus on preparedness as well as response. Planning should be sensitive to stakeholders' needs, participatory, responsive to the context and incorporate feedback from affected groups.

C2: Monitoring and evaluation tools

Research is required to establish best mechanisms and methods for rapidly evaluating ERC interventions, and incorporating evaluation findings and feedback from stakeholders and communities to inform and improve ongoing and future responses.

C3: Social Media

C3.1: Social media may be used to engage the public, facilitate peer-to-peer communication, create situational awareness, monitor and respond to rumors, public reactions and concerns during an emergency, and to facilitate local-level responses.

C3.2: Social media and traditional media should be part of an integrated strategy with other forms of communication to achieve convergence of verified, accurate information.

Findings on social media use

- Scholars from a range of disciplines have provided a range of evidence that social media need to be used to monitor and speak *with*, and not only *to*, the public to promote health measures together, based on credible information.
- Social media are still tools that have not become routine practices in many governmental agencies regarding public health in the countries studied. Obstacles still include the reluctance to learn new ways to communicate, the lack of additional staff to handle the increase of information exchange needs via social media and missing universal guidelines on best practices of social media in daily operations of public health officials and especially during public health crises events.
- Big data analysis of large amounts of posts from social media have become an increasing trend in social media studies within risk communication.

WHO recommendations

C4: **Messaging**

C4. 1: Risk should not be explained in technical terms, as this is not helpful for promoting risk mitigation behaviors.

C4. 2: Consistent messages should come from different information sources and emerge early on in the emergency.

C4.3. Messages should promote specific actions people can realistically take to protect their health.

World Health Organization, (2017) *Communicating risk in public health emergencies: A WHO guideline for emergency risk communication (ERC) policy and practice.*

Findings on messaging

- Explaining risk in probabilistic and technical terms is not helpful in promoting a variety of risk mitigation behaviors.
- Public health officials appear to be the most credible source for risk information; depending on the culture and in some cases, government officials and non-local information sources are generally found to be less credible.
- Traditional mass media, particularly radio and television, have been found to be the most impactful communication channels; when events include a loss of power, interpersonal communication networks become important.
- Messages should come from different information sources and emerge early in the outbreak.
- Messages should be conveyed in non-technical language, and the lack of an early message allows rumors to take hold.
- Messages from a set of sources will get integrated with messages from other sources, whether that is the mass media or family and friends.
- Many sorts of messages will be dismissed by individuals and sometimes communities for a variety of non-generalizable but sometimes shared reasons.

Case Studies

- We present preliminary findings from COVID-19 case studies: Taiwan, Singapore and Sri Lanka
- Justification - All three have so far had relatively low death rates from COVID-19
- The case studies were researched in July-August 2020

Current COVID-19 Situation

Country	Population (millions)	Cases	Deaths
Taiwan	23.8	720	7
Singapore	5.7	58,297	29
Sri Lanka	21.7	30, 072	144

Source: Johns Hopkins University Coronavirus Resource Center
Note: Figures as of 10 December 2020; population 2018

Case Study: Taiwan

Channels of communication:

- Center for Disease Control COVID information website
  - Includes guidelines, press releases, etc.
- Daily Press Briefing by the Minister of Health and Welfare [2]
- Hotlines to report suspicious symptoms in oneself or others [2]
- Regular Public Service Announcements
  - By VP of Taiwan (an epidemiologist). Announcements broadcast from the office of the president and available online. Included guidance on practices such as mask wearing and hand washing [2]
- Mobile Apps
  - "Mask maps," "epidemic prevention maps" to let the public know where to obtain epidemic prevention supplies[1]
- Social Media
  - LINE account of the Ministry of Health and Welfare
  - Facebook page of the CECC
- Informational posters[3]

Content of messages:

- CECC Facebook and the Ministry of Health and Welfare LINE
  - Updates on confirmed cases and case specifics (e.g. travel history)
  - Numerical updates: no. of new cases, cumulative cases, tests results, recoveries, deaths
  - Preventive measures (e.g., social distancing, hand washing)
  - Updates on travel warnings / restrictions and border control information
  - Linking to other information sources (e.g., CDC website, press releases, press conference videos)
  - Visiting healthcare facilities - restrictions and recommendations
  - Scientific information on COVID-19
  - Updates on investigations and cluster cases
  - Quarantine policies
  - Clearing up misinformation and rumors
  - Updates on restrictions (e.g., closures)

Measures to improve communication

- Use of humor - comedians creating memes, animal mascots used to communicate about staying safe [3]
- Use of images (e.g. how to put on a mask, wash hands) (LINE)

Case Study: Singapore

Channels of Communication

- Conventional Media
  - Weekly press conferences, with main govt officials. [1]
  - Some multilingual announcements in the press conferences[1]
- Digital & Social Media
  - COVID-19 WhatsApp Channel - 2-3 daily updates with misinformation and scam alerts, links to credible information sources, govt. advisories, support programs etc.[1]
  - Facebook - PM Lee Hsien Loong, Twitter - SG Ministry of Health, govsingapore, PM), YouTube (govsingapore) sharing COVID-19 related information
  - Hotline: 1800 333 9999 for enquiries on COVID-19 (https://www.moh.gov.sg/contact-us)
- Use of informative apps and websites [2]
  - E.g. COVID-19 Chat for Biz chatbot, FluGoWhere, MaskGoWhere, TraceTogether App
- DORSCON Level system [3]
  - Disease Outbreak Response System Condition
  - Organized into four levels: Green (lowest risk), Yellow, Orange, and Red (highest risk)

Messaging:

- Openness about uncertainty about the disease[1]
- Social media
  - GovSingapore sent condolence messages for individual deaths on twitter
  - GovSingapore YouTube - COVID updates, press conferences, celebrity videos on COVID-19, videos featuring experts, inspirational messages (some videos in multiple languages)
- MOH websites: updates, press releases.[4]
- Use of “defensive pessimism”
  - To heighten concern about COVID-19[1]

Case Study: Sri Lanka

- The Health Promotion Bureau (HPB) of Sri Lanka released a detailed Risk Communication and Community Engagement Plan[1]

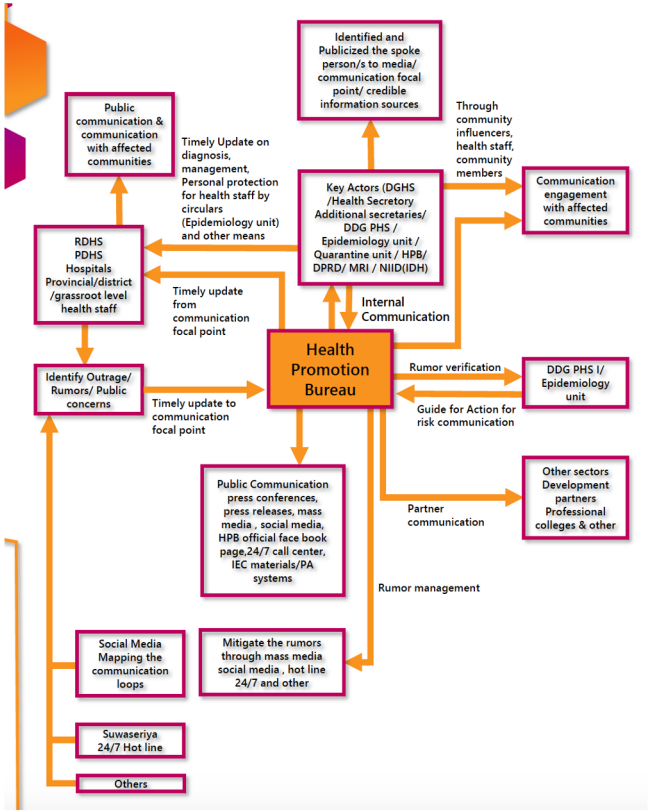


Image credit: Health Promotion Bureau of Sri Lanka

- Daily televised briefings during the March-April 2020 period of lockdown. Reliance on mostly traditional media
  - Featured then-Director General of Health Services Dr. Anil Jasinghe, Minister of Health Pavithra Wanniarachchi, and Lt. Gen. Shavendra Silva, among others
- Websites
  - Official Website for Sri Lanka's Response to COVID-19: https://covid19.gov.lk/news.html
    - News releases, statistics, guidelines, and contact information (directory)
  - National Operation Centre for Prevention of COVID-19 Outbreak: https://alt.army.lk/covid19/
    - news updates and Youtube video links
  - Health Promotion Bureau COVID-19 Dashboard: https://hpb.health.gov.lk/covid19-dashboard/
    - Updates, statistics, and contact information about COVID-19
  - Epidemiology Unit (MOH): http://www.epid.gov.lk/web/index.php?lang=en
    - Case count updates, circulars and directives, and guidelines
- Apps
  - MyHealth Sri Lanka: Information and updates on COVID-19 in Sri Lanka

- Social Media
  - Viber
    - HPB SL COVID-19: https://invite.viber.com/?g2=AQBfgwZSTjnrf0s%2BLxOWSueYJuni13CXJ0Kp5eiTKupc%2B%2FBsPTjjwqf3HHz6ZTgW&lang=en
    - Government Information: https://invite.viber.com/?g2=AQAr73SDEIkx4kvUu991sclyDaHbh08ji%2F1M84l%2B%2Fi1VjyozrjHtFMmwX%2FUOxmFZ&lang=en
  - Facebook of the Health Promotion Bureau, President Gotabaya Rajapakse, and Minister of Health Pavithra Wanniarachchi.
  - Twitter of Health Promotion Bureau, and PM Mahinda Rajapakse and President Rajapakse
  - YouTube of HPB
- COVID-19 hotline
  - 1390 hotline to report symptoms [2]
- Department of Government Information
  - Regular press releases on COVID-19, including daily case counts, deaths curfew updates, etc.

To what extent are WHO recommendations being used?

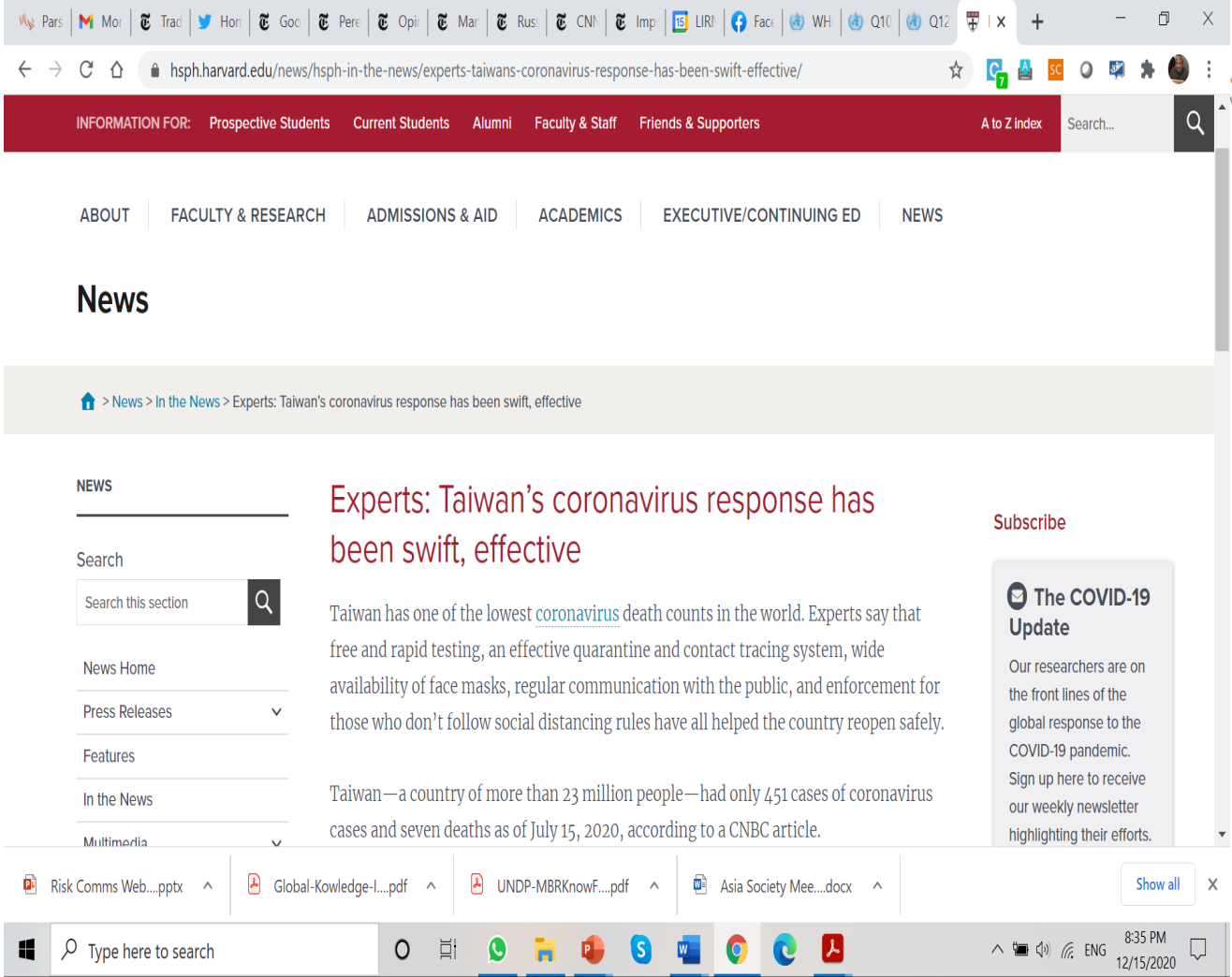
- Here, we look for evidence of usage of some of the WHO recommendations
- Note that this is NOT a full evaluation of these communications activities
- We focus primarily on the A (trust and related) and C (messages, social media) recommendations

Trust Recommendations	Taiwan	Singapore	Sri Lanka
link to functioning and accessible services	E.g. links to CDC website	Yes, (e.g. the specialized apps and websites)	Contacts available at a very granular level, e.g. Public Health Inspectors
be transparent	We could not fully assess transparency at this stage.		
timely	Regular briefings by Minister of Health and Welfare, VP	Updates through weekly press conferences, WhatsApp	Daily Televised briefings during first curfew
easy-to-understand	Use of humor	Multilingual videos, DORSCON	Easy to understand graphics on the HPB website with bullet point instructions saying what to do if you are sick.
acknowledge uncertainty		Officials openly spoke about scientific uncertainty regarding the virus	

Trust Recommendations	Taiwan	Singapore	Sri Lanka
address and engage affected populations		Some targeted communication - e.g. Tamil communications during the outbreak in migrant worker dormitories[1]	
link to self-efficacy	Information about preventative measures and supplies	Yes, through specialized websites / apps	Information about precautions such as handwashing, social distancing etc. in HPB website guidelines
be disseminated using multiple platforms, methods and channels	Yes	Yes	Yes.

Social Media	Taiwan	Singapore	Sri Lanka
Social media may be used to engage the public, facilitate peer-to-peer communication, create situational awareness, monitor and respond to rumors, public reactions and concerns during an emergency, and to facilitate local-level responses.	In depth digital media strategy. We highlighted above what information was given on the CECC Facebook and the Ministry of Health and Welfare LINE.	We have detailed this in previous slides.	Social media a less prominent mode of RCCE, more reliance on conventional media.
Social media and traditional media should be part of an integrated strategy with other forms of communication to achieve convergence of verified, accurate information.	Difficult to ascertain, because we would have to check deeper for consistency across different communication modes.		

Messaging	Taiwan	Singapore	Sri Lanka
Risk should not be explained in technical terms, as this is not helpful for promoting risk mitigation behaviors.	Use of humor to make messages more relatable	Short "ThinkB4YouDo" videos on GovSG YouTube with easy to follow advice on staying safe	Easy to understand graphics on COVID-19 prevention - HPB website
Consistent messages should come from different information sources and emerge early on in the emergency.	We have not had the scope to check thoroughly for consistency.		
Messages should promote specific actions people can realistically take to protect their health.	This is dealt with under "self-efficacy" in the Trust category.		



LIRNEasia
Pro-poor. Pro-market.

Takeaways

- Governments should be mindful of which channels of communication people are most likely to access, and direct messaging towards those.
- Set expectations early – acknowledge that knowledge about the disease is uncertain and likely to evolve.
- Holistic communication that is tailored to specific contexts
    - E.g. Sensitive to specific national contexts, as well as communication targeted towards groups that may be exceptionally vulnerable due to health, economic, or other reasons.

Acknowledgements

Valuable contributions were made by LIRNEasia Research Interns Diane Sosa and Ruoqian Wang in researching the risk communication literature and case studies.

References

Background

Glik, “Risk Communication for Public Health Emergencies” (2007). Annual Review of Public Health, 28, pp. 33-54. doi:10.1146/annurev.publhealth.28.021406.144123

World Health Organization, (2017) *Communicating risk in public health emergencies: A WHO guideline for emergency risk communication (ERC) policy and practice.*

Taiwan

1. Tu, C.-C. (2020, 7 Apr.). “Lessons from Taiwan’s Experience with Covid-19.” Atlantic Council.
2. Wang, C. J., C. Y. Ng, R. H. Brook (2020). “Response to COVID-19 in Taiwan: Big Data Analysis, New Technology, and Proactive Testing.” JAMA, 323(14), pp. 1341-1342. doi:10.1001/jama.2020.3151
3. Bendix, A. (2020). “A coronavirus 'spokesdog' in Taiwan delivers crucial information to the public — part of a 'humor over rumor' strategy that helped stop the country's outbreak.” Business Insider.

Singapore

1. Wong, C. M., & Jensen, O. (2020). The paradox of trust: Perceived risk and public compliance during the COVID-19 pandemic in Singapore. Journal of Risk Research, 1-10. doi:10.1080/13669877.2020.1756386
2. Responding to COVID-19 With Tech. (2020). Retrieved July 17, 2020, from https://www.tech.gov.sg/products-and-services/responding-to-covid-19-with-tech/
3. Being Prepared for a Pandemic. (n.d.). Retrieved July 13, 2020, from https://www.moh.gov.sg/diseases-updates/being-prepared-for-a-pandemic
4. Updates on COVID-19 (Coronavirus Disease 2019) Local Situation. (2020). Retrieved August 24, 2020, from https://www.moh.gov.sg/covid-19

Sri Lanka

1. Health Promotion Bureau, Sri Lanka (2020). *COVID-19 Risk Communication and Community Engagement (RCCE)*
2. (5 April 2020) COVID-19 prevention measures to continue until after New Year – Dr. Jasinghe http://www.adaderana.lk/news.php?nid=62265. Retrieved 8 Dec 2020