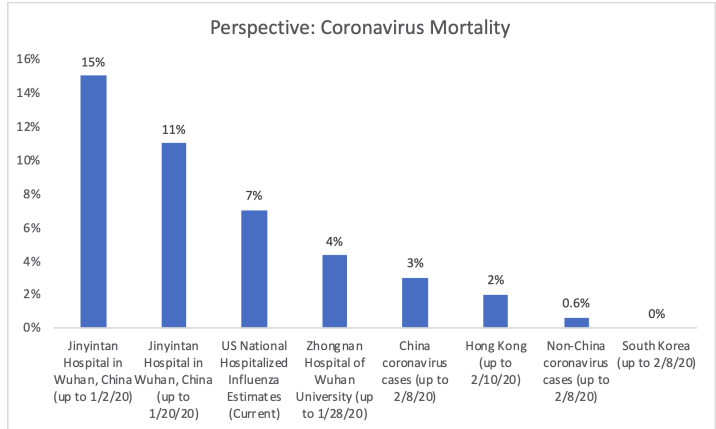


Risk Event, Day 43 of Reporting.

- China. There are currently 42,638 cases of novel coronavirus with 1,016 fatalities (2%). Average fatality since Jan 10th is 2%. There is no evidence of a peak.
 - Fatalities have been predominantly among older adults with pre-existing conditions.
 - In mainland China, healthcare worker infections are reported. There is no reliable data regarding mortality.
 - There is report of significant hospital and mortuary strain but no collapse in Hubei Province.
- Outside of mainland China. There are 476 cases and 2 fatalities (0.4%) among 27 countries and territories outside of mainland China including Macau and Hong Kong. There is no evidence of a peak.
 - Hong Kong has reported 42 hospitalized cases (unknown number of ICU admissions), and one fatality (2%). Since 2/9, there has been a significant surge of admissions in the context of striking healthcare workers.
 - The Diamond Princess cruise ship, quarantined in Japan, has 163 cases and no fatalities.
 - South Korea reported 24 cases that were hospitalized for observation and isolation with no ICU admissions or fatalities.
 - No country or territory outside of mainland China has reported healthcare infrastructure strain.

Perspective.




- As indicated in the previous report, the number of cases and fatalities outside of mainland China is markedly low by comparison. This is likely due to a combination of forewarning, prior experience with SARS, and differences in standard of care and infection control.



Global Medical Infrastructure Dashboard. By “collapse”, we are specifically looking for evidence of intensive care unit personnel being infected and incapacitated to the extent of being unable to continue management of the intensive care unit. For perspective, severe influenza pandemics abruptly and pervasively inundate medical infrastructures as well as cause broad, multi-sector absenteeism to include healthcare personnel.

Medical Infrastructure Status

cases		cases	
Mainland China (Hubei)	42,638	United Kingdom	8
Japan	163	Canada	8
Singapore	49	United Arab Emirates	7
Hong Kong	47	Philippines	3
Thailand	33	India	3
South Korea	28	Italy	3
Malaysia	18	Russia	2
Taiwan	18	Spain	2
Australia	15	Belgium	1
Germany	15	Nepal	1
Vietnam	14	Sweden	1
United States	13	Cambodia	1
France	11	Finland	1
Macau	10	Sri Lanka	1

managing patients, low strain 
 significant strain 
 collapse 

Analytic Guidance. M2 assesses fatality rates reported in China will be higher than that reported from countries in Europe or North America. M2 recommends vigilance for the following critical indicators:

- Hubei Province, China:
 - **Report of hospital collapse** in Wuhan. This is indicated by a failure to manage patient demand due to volume of patients and / or healthcare worker hospitalizations or deaths. *This indicator may be imminent.*
 - **Report of abrupt, broad absenteeism across multiple industrial sectors and deployed military forces.**
 - **Report of “panic evacuation”** of Wuhan or other cities in Hubei Province due to collapse of response in the face of overwhelming mortality.
- Outside of China:
 - **Report of healthcare worker hospitalization** in Thailand, Japan, South Korea, Singapore, Hong Kong, or any North American or European country.
 - **Validation of fatality rate statistics and healthcare worker infection rates** from non-Chinese countries is key.