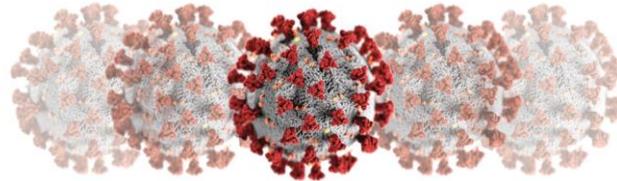




ARMY MEDICINE
One Team... One Purpose
Conserving the Fighting Strength Since 1775

Carl R. Darnall Army Medical Center COVID-19 Update

COL Richard Malish



17 Feb 20

TASK & PURPOSE: To Educate the Fort Hood Community on key facts about COVID-19 and how to flatten the epidemic curve by 1) Self-isolation, 2) Seeking healthcare remotely, and 3) Social Distancing IOT **protect our vulnerable population and maintain the viability of our healthcare system**



“Just Three Things”

- We need your help

- 1. Isolate yourself at the first sign of symptoms.** They will likely be mild. Isolate yourself anyway.

- 2. Access healthcare remotely:** phone and internet

- 3. Social Distancing** is important for all
 - It is life-saving for our vulnerable population - the elderly and the ‘already’ sick

- Be Calm.
- Coronavirus is cold-bug.
- Beware of scams
- I wouldn't sell your stocks right now
- Don't be impulsive
- Beware of fake news
- Please don't contribute to hysteria
- **All information has a date-time stamp (expiration date)**

1. **Stay informed**
2. **Educate**
3. **Correct misinformation**
4. **Limit media exposure**
5. **Anticipate & counsel about stress reactions**
6. **Take care of yourself and your loved ones**

CSTS Center for the Study of Traumatic Stress
Uniformed Services University

CSTS | Department of Psychiatry | Uniformed Services University | 4301 Jones Bridge Road, Bethesda, MD 20814-4799 | www.CSTSonline.org

CARING FOR PATIENTS' MENTAL WELL-BEING DURING CORONAVIRUS AND OTHER EMERGING INFECTIOUS DISEASES: A GUIDE FOR CLINICIANS

As our world becomes increasingly interconnected, the potential for rapid and far-reaching spread of new infectious diseases is a growing threat. Especially in the early stages of an emerging infectious disease outbreak such as Coronavirus (COVID-19), there is frequently a great deal of uncertainty about the nature of the disease, its spread, and its scope and impact. This may lead to significant and understandable emotional distress, even among those who have not been, and don't know if they will be, directly exposed to the disease.

During emerging infectious disease outbreaks, both

Especially in the early stages of an emerging infectious disease outbreak, there is frequently a great deal of uncertainty about the nature of the disease, its spread, and its scope and impact.

medical and mental health clinicians are likely to encounter patients who are experiencing various levels of emotional distress about the outbreak and its impact on them, their families, and their communities. Providers should acknowledge uncertainty about emerging diseases and help patients understand that there is often an emotional component to potential health concerns.

In addition, providers should consider the following recommendations for promoting patients' mental well-being during emerging infectious disease outbreaks:

1. **Stay informed.** Obtain the latest information about the outbreak from credible public health resources, such as the Centers for Disease Control and Prevention (CDC), in order to provide accurate information to your patients.
2. **Educate.** Healthcare providers are on the front lines of medical intervention and in a position to influence patient behaviors for protecting individual, family, and public health. Patient education plays a critical role in both containing the disease and mitigating emotional distress during outbreaks. Depending on the nature of the outbreak, this can range from education about basic hygiene such as hand-washing and cough etiquette to more complex medical recommendations for prevention, diagnosis, and treatment. Let patients know what you, your office, or your organization is doing to reduce the risk of exposure.
3. **Correct misinformation.** In this age of social media, misinformation can spread quickly and easily, causing unnecessary alarm. If patients present you with inaccurate information related to the outbreak, correct their misconceptions and direct them to vetted public health resources.
4. **Limit media exposure.** Today's 24-hour news cycle can make it difficult to turn away from the TV, radio, or news feed, but research has shown that excess media exposure to coverage of stressful events can result in negative mental health outcomes. Use trusted media outlets to gather the information you need, then turn them off—and advise your patients to do the same.
5. **Anticipate and counsel about stress reactions.** Emotional distress is common in the context of uncertain and potentially life-threatening situations, such as outbreaks.
 - a. A good first step for mitigating your patients' stress is to acknowledge that it exists and help normalize it ("I see that you're stressed, and that's understandable. Many people are feeling this way right now.")
 - b. Teach patients to recognize the signs of distress, including worry, fear, insomnia, difficulty concentrating, interpersonal problems, avoiding certain situations at work or in daily living, unexplained physical symptoms, and increased use of alcohol or tobacco. This will help them become more aware of the state of their mental health



Person-to-person spread

- The virus is thought to spread mainly from person-to-person.
- Between **people who are in close contact with one another (within about 6 feet).**
- **Through respiratory droplets produced when an infected person coughs or sneezes.**
- **These droplets can land in the mouths or noses of people who are nearby or possibly be inhaled into the lungs.**

Legend

strongly worded.

weakly worded.



Can someone spread the virus without being sick?

- People are thought to be most contagious when they are most symptomatic (the sickest).
- Some spread might be possible before people show symptoms; there have been reports of this occurring with this new coronavirus, **but this is not thought to be the main way the virus spreads.**

Spread from contact with contaminated surfaces or objects

- It may be possible that a person can get COVID-19 by touching a surface or object that has the virus on it and then touching their own mouth, nose, or possibly their eyes, **but this is not thought to be the main way the virus spreads.**

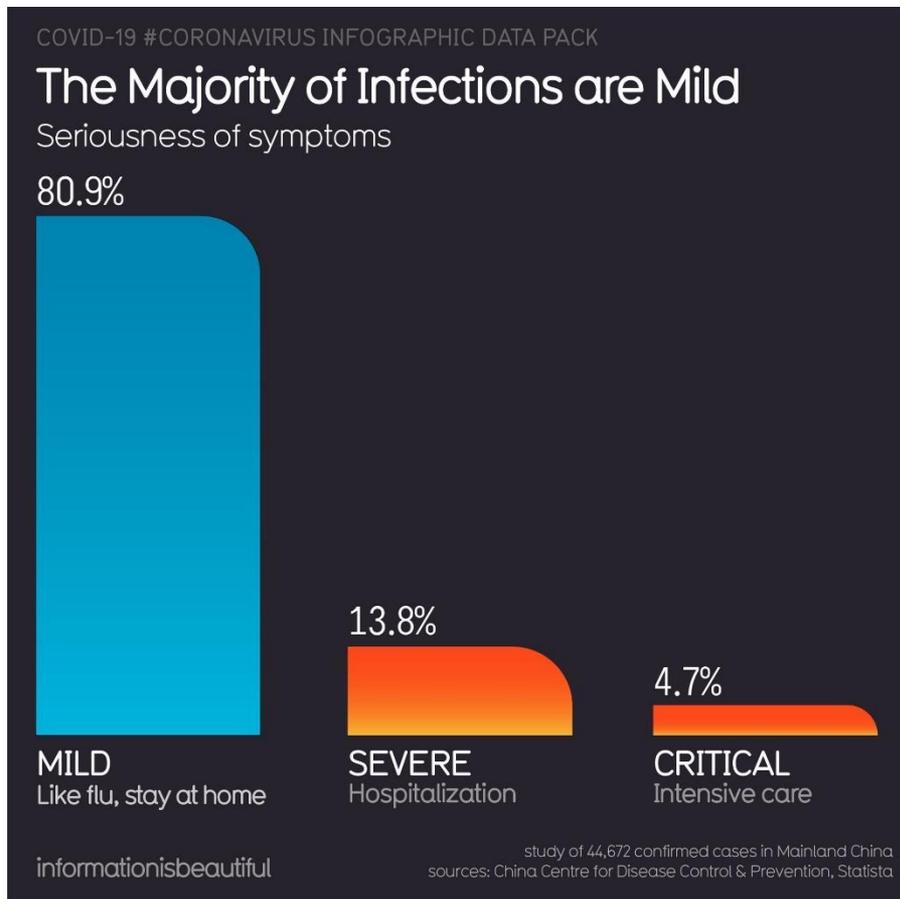


The Good News

Vast majority are mild or asymptomatic.

This is the population that will sustain transmission. We will go about our day-to-day business with mild symptoms.

This is a mixed blessing – we will spread it to our vulnerable population



Slide 5

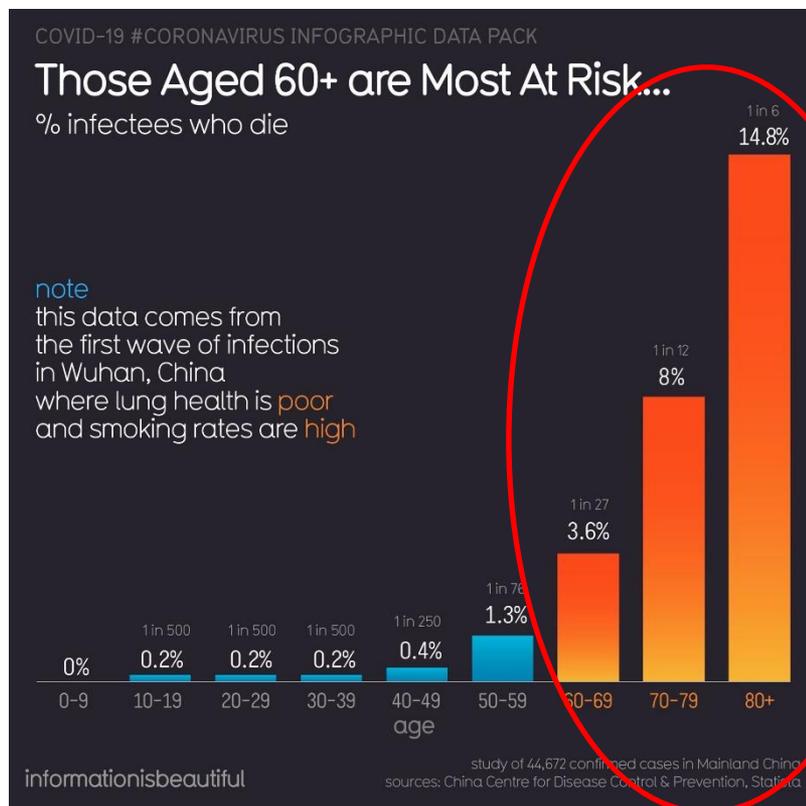
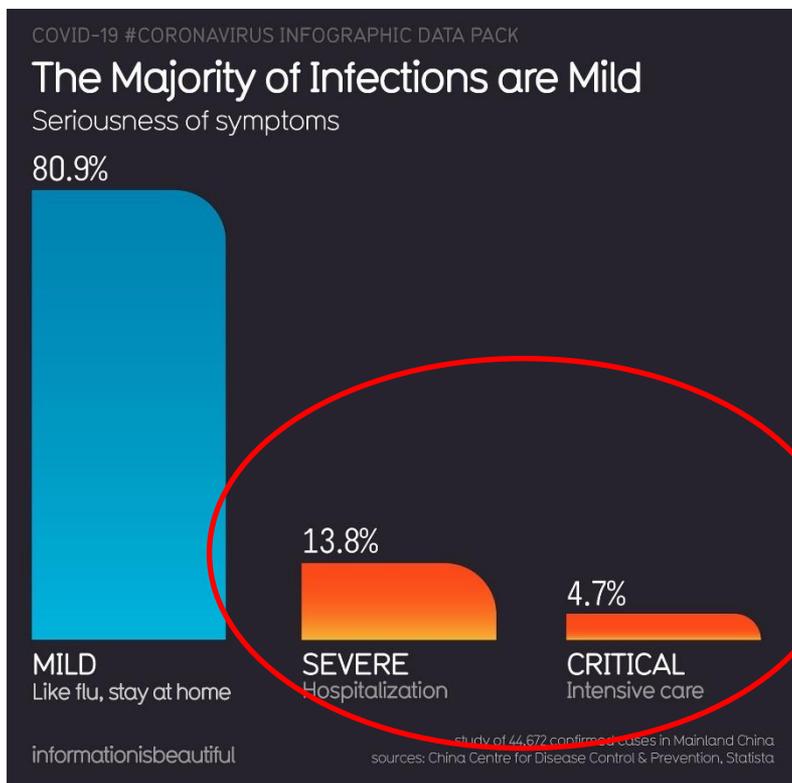
<https://informationisbeautiful.net/visualizations/covid-19-coronavirus-infographic-datapack/>



The Bad News

Up to 20% get very ill.

- Healthcare systems in areas with community spread get overwhelmed.
- The **Vulnerable population** are our loved ones – our parents, our teachers, our history, our veterans, our connection to the past



Slide 6

Protect your elderly or chronically ill friends, neighbors, and family

<https://informationisbeautiful.net/visualizations/covid-19-coronavirus-infographic-datapack/>



#Flattenthecurve

Hubei, China:

- High death rate.
- System overwhelmed.
- Hospitals overrun.
- Not enough ventilators.

We want this curve.

- Sick patients always within our capabilities
- Hospitals not overwhelmed
- Enough ventilators

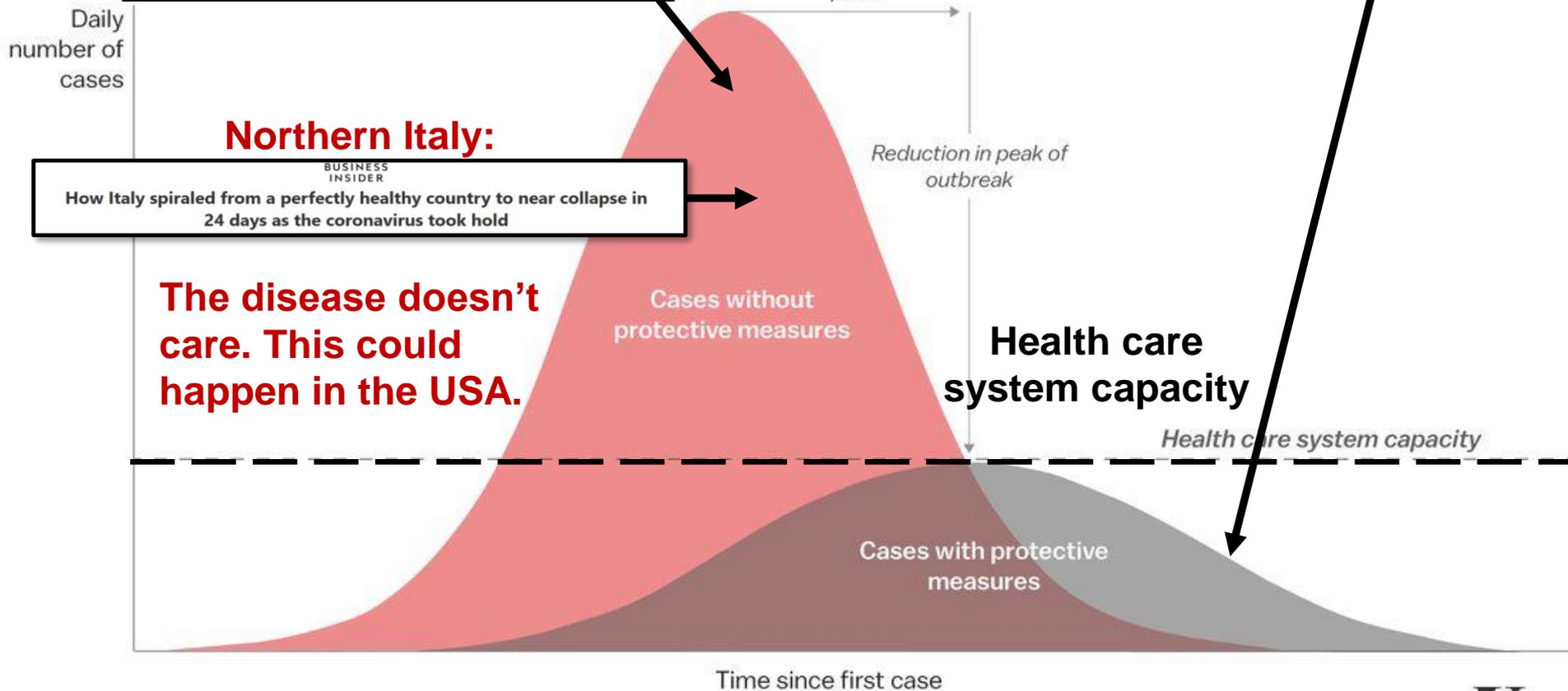
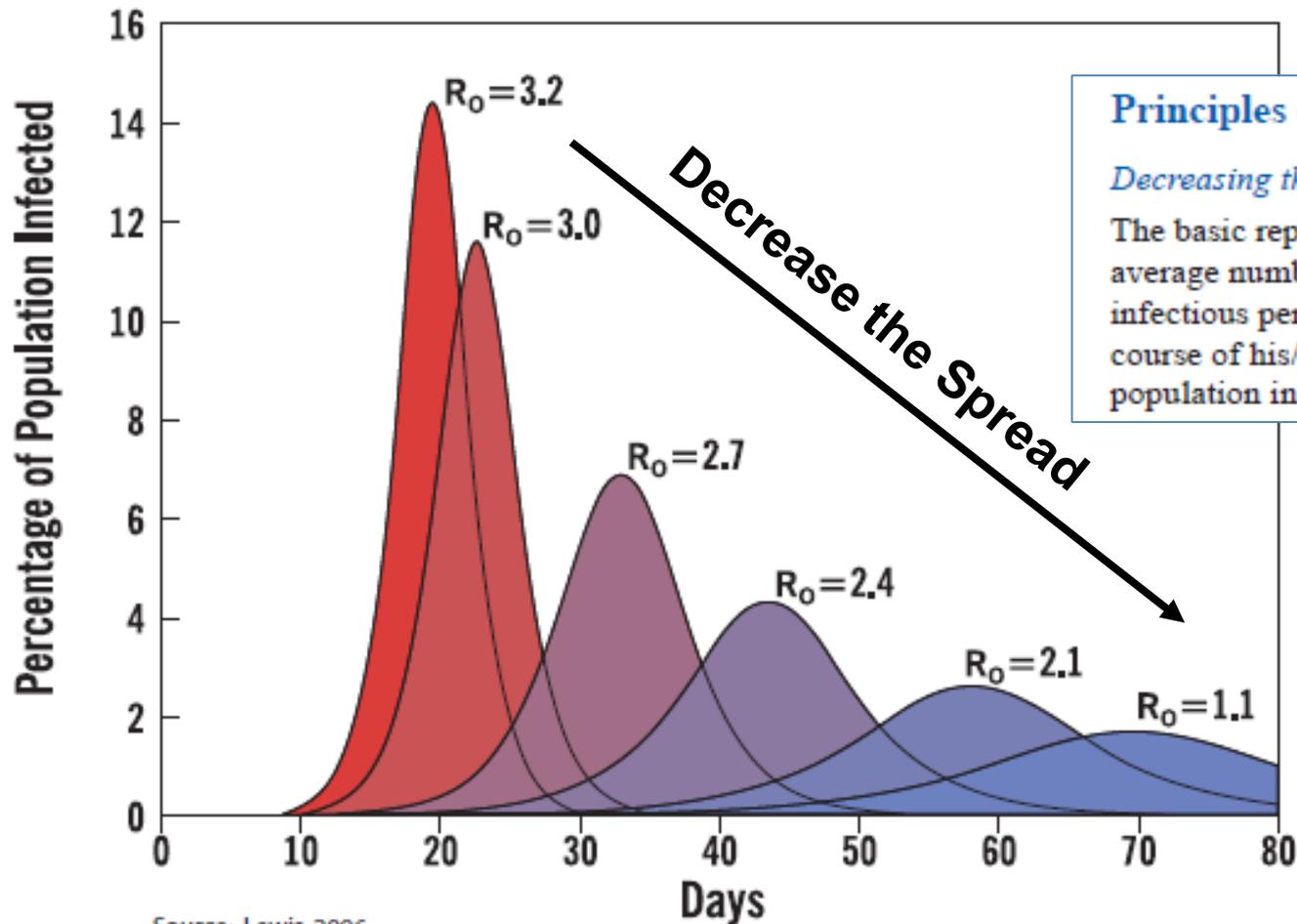




Figure 2.

Effect of R_0 on Epidemic Curves



Principles of Disease Transmission

Decreasing the Basic Reproductive number, R_0
 The basic reproductive number, R_0 , is the average number of new infections that a typical infectious person will produce during the course of his/her infection in a fully susceptible population in the absence of interventions.³⁶⁻³⁸

COVID-19's
 current R_0
 is ~**2.5**

Slide 8

“ R_0 is the average number of new infections that a typical infectious person will produce during the course of his/her infection”

https://www.cdc.gov/flu/pandemic-resources/pdf/community_mitigation-sm.pdf



We Must Decrease the Spread of COVID-19!

How will country-based mitigation measures influence the course of the COVID-19 epidemic?

to particular areas, schools, or mass gatherings. This approach underway in northern Italy will provide valuable data on the effectiveness of such measures. The greater the reduction in transmission, the longer and flatter the epidemic curve (figure), with the risk of resurgence when interventions are lifted perhaps to mitigate economic impact.

The key epidemiological issues that determine the impact of social distancing measures are what proportion of infected individuals have mild symptoms and whether these individuals will self-isolate and to what effectiveness; how quickly symptomatic individuals take to isolate themselves after the onset of symptoms; and the duration of any non-symptomatic infectious period before clear symptoms occur with the linked issue of how transmissible COVID-19 is during this phase.

Individual behaviour will be crucial to control the spread of COVID-19. Personal, rather than government action, in western democracies might be the most important issue. Early self-isolation, seeking medical advice remotely unless symptoms are severe, and social distancing are key. Government actions to ban mass gatherings are important, as are good diagnostic facilities and remotely accessed health advice, together with specialised treatment for people with severe disease. Isolating towns or even cities is not yet part of the UK Government action plan.¹⁵ This plan is light on detail, given the early stages

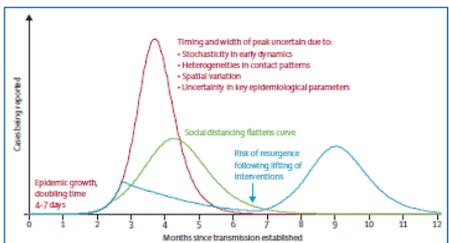


Figure: Illustrative simulations of a transmission model of COVID-19. A baseline simulation with case isolation only (red), a simulation with social distancing in place throughout the epidemic, flattening the curve (green), and a simulation with more effective social distancing in place for a limited period only, typically followed by a reurgent epidemic when social distancing is halted (blue). These are not quantitative predictions but robust qualitative illustrations for a range of model choices.

transmission—if this turns out to be a feature of COVID-19 infection—will determine the success of this strategy.¹⁶

Contact tracing is of high importance in the early stages to contain spread, and model-based estimates suggest, with an R_0 value of 2.5, that about 70% of contacts will have to be successfully traced to control early spread.¹⁷ Analysis of individual contact patterns suggests that contact tracing can be a successful strategy

“Individual behavior will be crucial to control the spread of COVID-19. Personal, rather than government action, in western democracies might be the most important issue. Early self-isolation, seeking medical advice remotely, unless symptoms are severe, and social distancing are key.”

- 1. Early self-isolation**
- 2. Seeking medical advice remotely**
- 3. Social distancing**

“Just Three Things”

of the COVID-19 epidemic, but it outlines how to delay, research, and contain to decrease the impact and lower peak mortality. After a few weeks, the impact will be further reduced (figure). Italy, South Korea, and others have mitigated the phase and are now in a rapidly growing phase. The known epidemic point to urgent action at symptom onset to reduce transmission and (appendices 2, 3) for reducing household treatment and diagnosis, and dealing with the economic consequences of absence from work. Peak demand for health services could still be high and the extent and duration of presymptomatic or asymptomatic

slow the spread of the virus in the summer.¹⁸ With an

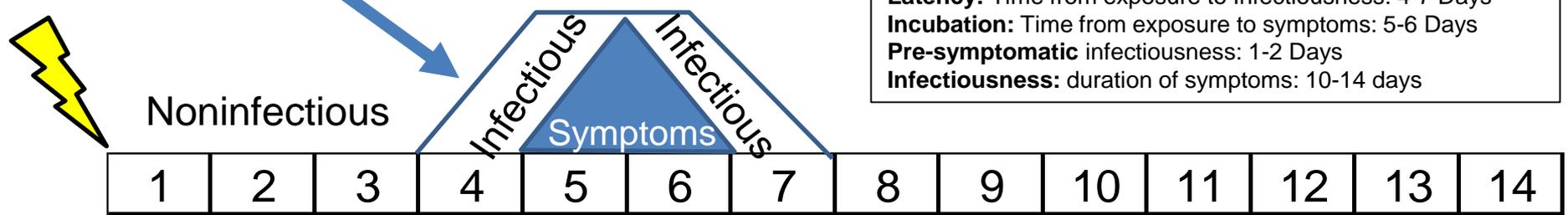
THE LANCET
9 MAR 20

[https://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(20\)30567-5/fulltext](https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(20)30567-5/fulltext)

1. Early Self Isolation- Even with mild symptoms

COVID-19 Timelines (LANCET 9 MAR 20)
Latency: Time from exposure to Infectiousness: 4-7 Days
Incubation: Time from exposure to symptoms: 5-6 Days
Pre-symptomatic infectiousness: 1-2 Days
Infectiousness: duration of symptoms: 10-14 days

Quarantine targets this group / phase



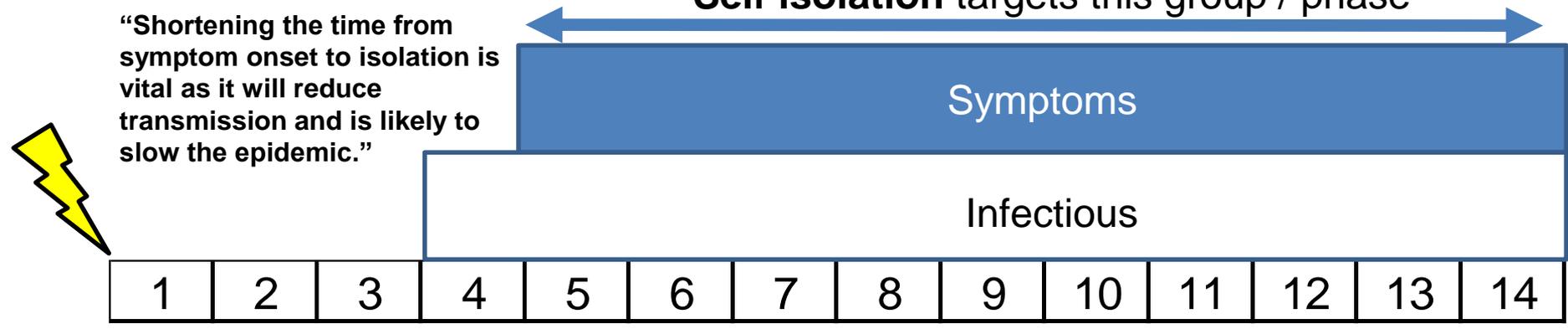
Quarantining non-sick exposures seeks to get ahead of infectiousness...

- ...but it saves only 1-2 days of exposure...
- ...and requires a huge amount of public health resources

• Is good for **Containment Phase**

Self isolation targets this group / phase

“Shortening the time from symptom onset to isolation is vital as it will reduce transmission and is likely to slow the epidemic.”

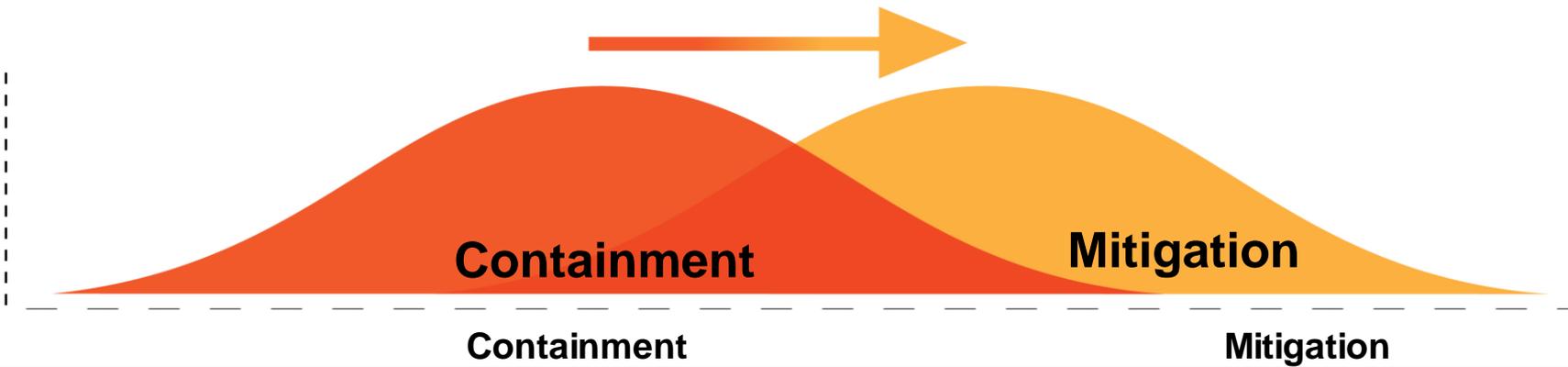


Self-Isolation misses the first two days –

- ...but reduces spread during the entire symptomatic phase – 10-14 days (duration of symptoms)
- ...and requires no public health resources

• Needed in **Mitigation Phase** (community spread)

Containment vs. Mitigation



	Containment	Mitigation
War Comparison	Area Defense	Counterinsurgency
Assumes	The virus is not in the population	The virus is in the general population
Focus	Patients with the disease	The vulnerable population. The viability of the healthcare system.
Tactics	Isolate patients to reduce transmission	Reduce disease spread through public health measures
Quarantine	Quarantine anyone with the potential to spread the disease	Quarantine is not beneficial
Testing	Vital to identify the patients to isolate	Helpful only on a macroscopic/epidemiologist scale
Contact tracing	Contact trace all possible exposures	Contact tracing is not a good use of resources
Essential Tasks. Keys to success	Identification, test, isolate, quarantine	1. Self-isolation - even with mild symptoms
		2. Access healthcare remotely
		3. Social Distancing
		4. Handwashing. Disinfecting. No face contact.

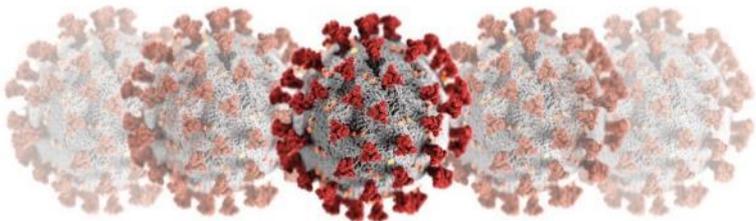
“Just Three Things”

“At the beginning of an outbreak, experts say, viral spread can be contained by isolating individuals and tracing those in contact. But when cases begin to emerge where the infection source is unknown, as they have in parts of Europe and the United States, mass behavioral changes and social distancing appear to be the better strategy.”

Coronavirus curve shows much of Europe could face Italy-like surge within weeks. Washington Post. 13 FEB 20

PLEASE Access us Virtually!

- If you have cold or flu-like symptoms – please call or email.
- Do not come into our waiting rooms. This is for your safety as well as that of our vulnerable population
- www.tricareonlinesecuremessaging.com
- (254) 288-8888
- Please ask your Soldier to avoid sick-call. Call or e-mail the provider instead.





A Message from the CRDAMC Commander

CRDAMC Beneficiaries,

As we enter a time of uncertainty surrounding the COVID-19 virus, you may begin to hear guidance to stay out of public places. 'Social Distancing' is a term used by Public Health officials to describe actions taken meant to decrease the spread of the virus. To continue to meet your medical needs and to adhere to CDC public health guidance, we would like to offer you opportunities to access CRDAMC and our clinics from the convenience of your home.

If you have routine medical needs and are not acutely ill, please request a telephone consultation, use Secure Messaging, or (where available) contact us by VA Connect.

If you are ill (or continue to wish to see us in person), our hospital and clinics remain open during their regularly scheduled hours. Call 254.288.8888 for a telephone consultation, go to www.tolsecuremessaging.com for secure messaging, and ask your clinic about VA Connect.

Sincerely,
COL Richard G. Malish, MC
CRDAMC Commander


12 Mar 20



3. Social Distancing

Social distancing means remaining out of congregate settings, avoiding mass gatherings, and maintaining distance (approximately 6 feet or 2 meters) from others when possible.

Congregate settings are crowded public places where close contact with others may occur, such as shopping centers, movie theaters, stadiums.

<https://www.cdc.gov/coronavirus/2019-ncov/php/risk-assessment.html>

Effects of social distancing on 1918 flu deaths



As the first cases of the 1918 flu were reported in Philadelphia in September 1918, authorities played down the significance and allowed public gatherings to continue. Closures in Philadelphia were only enacted once the virus had spread. The first cases in St. Louis were reported in early October, with measures to contain the spread enacted two days later. This resulted in a slower spread and lower mortality rate.

Sources: Data derived from "Public health interventions and epidemic intensity during the 1918 influenza pandemic" by Richard J. Hatchett, Carter E. Mecher, Marc Lipsitch, Proceedings of the National Academy of Sciences, May 2007.





“Just Three Things”

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- 1. Isolate yourself at the first sign of symptoms.** They will likely be mild. Isolate yourself anyway.

- 2. Access healthcare remotely:** phone and internet

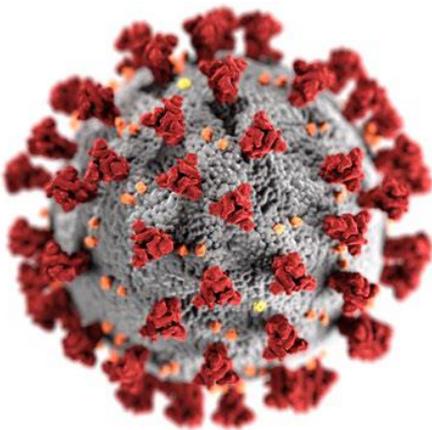
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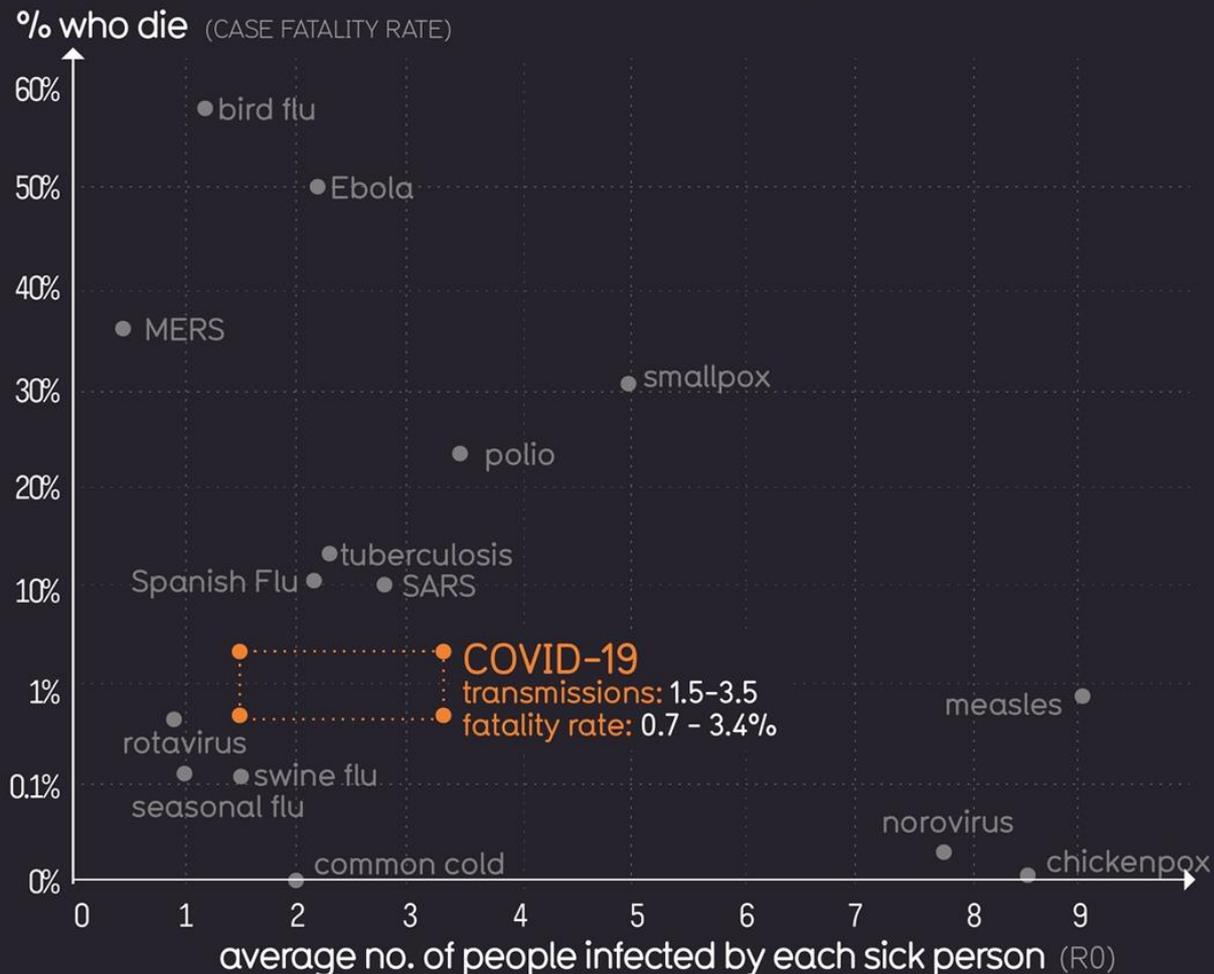
Discussion & Questions



COVID-19 #CORONAVIRUS INFOGRAPHIC DATA PACK

How Contagious & Deadly is It?

We don't fully know yet but it's in **this range**





Rationale

The guidance was designed for a “containment” approach in the absence of sustained SARS-CoV-2 transmission in US communities in order to delay introduction and spread of SARS-CoV-2. It focuses on decreasing the risk of unrecognized case importation from international locations with sustained transmission and managing contacts of laboratory-confirmed cases. In US jurisdictions that are not experiencing sustained community transmission, these activities are still important; however, a resource-intensive containment approach that focuses on international travelers poses a risk of diverting public health resources from other priority activities, including surveillance and case finding, contact tracing, and preparing for community mitigation measures. Allowing health departments the flexibility to prioritize public health actions in their jurisdictions enables prudent deployment of public health resources where they can have the most benefit based on the local situation. State and local health departments are best positioned to make such decisions within their jurisdictions.

In US jurisdictions with sustained community transmission, shifting from containment to mitigation conserves public health resources and directs them to where they can have the most benefit. In such jurisdictions, residents may have the same exposure risk as international travelers from countries with sustained transmission; therefore, applying stringent containment measures to international travelers (e.g., staying home for 14 days) no longer has a public health benefit and would be arbitrary in the context of similar risk among others in the community. Applying such containment measures (e.g., asking people to stay home) community-wide would have severe detrimental effects on community infrastructure. When SARS-CoV-2 is spreading in a community, it is also not feasible to identify all people with symptoms compatible with COVID-19 or identify all potentially exposed contacts. Applying stringent containment measures to people who are tested and have laboratory confirmation and their contacts, but not to others who are not tested and their contacts, would have no public health benefit. Such an approach could hamper surveillance efforts and ability of public health authorities to make data-driven decisions for the implementation of community mitigation measures. Separate CDC guidance is in development that harmonizes recommendations for people who are tested and confirmed positive for COVID-19 and others in the community who are symptomatic but not tested, as well as their contacts.

Interim US Guidance for Risk Assessment and Public Health Management of Persons with Poten... Page 2 of 10

<https://>