Beyond the Beltway: Health Webinars for Journalists

COVID-19 Webinar Miniseries
Flattening the Curve

Wednesday, March 18, 2020
Participating in the Webinar

Listen in through computer audio. Headset recommended.

or

Select Phone Call to see the number to call, Access Code and PIN

Type your questions or just say hello here.

Agenda

12:00 – 12:05 Introduction
• Sarah J. Dash, MPH, Alliance for Health Policy

12:05 – 12:15 Opening Remarks
• Kathleen Winter, Ph.D., University of Kentucky

12:15 – 12:30 Moderated Discussion

12:30 Conclude

COVID-19 Webinar Miniseries Session 1 – Flattening the Curve
Materials

At allhealthpolicy.org

- Agenda and Speaker Bios
- Selected Resources List
- Selected Experts List
- Video (posted later)

Kathleen Winter, Ph.D.
Assistant Professor,
Department of Epidemiology,
College of Public Health,
University of Kentucky
Globally – as of 3/18/2020

- >205,000 cases
- 157 countries/regions
- 8,248 fatalities (CFR 4.0%)

- [https://coronavirus.jhu.edu/map.html](https://coronavirus.jhu.edu/map.html)
- Major epidemics with sustained local transmission in China, Italy, Spain, France, Iran, South Korea, U.S.A. .................
In the U.S. – as of 3/17/2020

- 4,226 confirmed COVID-19 cases in the U.S.
- 75 deaths
  - 17 deaths associated with LTC facility in Seattle, WA
- 49 states


COVID-19 cases in the United States by date of illness onset, January 12, 2020, to March 16, 2020, at 4pm ET (n=1,295)**
Current data on COVID-19: Infectiousness

- **R0 estimates for COVID-19:**
  - 2.2 (95% CI: 1.4-3.9) [Early disease reporting data (Li et al. NEJM. 2020)]
  - 2.24 (95% CI: 1.96-2.55) when assuming 8-fold increase in reporting rate
  - 3.58 (95% CI: 2.89-4.39) when assuming 2-fold increase in reporting rate [Modeling paper using data from Jan 10-24th in China (Zhao et al. International Journal of Infectious Diseases, 2020)]
  - 2.8-3.9 [Modeling paper using data before 1/26 in China (Zhou et al. Journal of Evidenced Based Medicine. 2020)]
- Probably as infectious as SARS
  - R0 estimates: 2.2-4.2 [Lipsitch et al. Science. 2003; Riely et al. Science 2003; Wallinga & Teunis. AJE. 2004]
- More infectious than influenza
  - R0 estimates pandemic flu: 1.46-1.8
  - R0 estimate for seasonal flu: 1.28 [Biggerstaff et al. BMC ID. 2014]

Current data on COVID-19: Incubation Period

- Incubation period most likely 2-14 days (CDC)
  - 5.1 days [Chan et al. Lancet. 2020]
  - 5.2 days (95% CI: 4.1-7.0)[Li et al. NEJM. 2020]
- Similar to SARS which was 6.4 days (5.2-7.7 days) [Donnelly et al. Lancet. 2003]
- Serial interval (onset-to-onset): 7.5 days (95% CI: 5.3-19 days) [Li et al. NEJM. 2020]
Current data on COVID-19: Clinical Course

- Initial symptoms of fever, cough, shortness of breath (ILI)
- Can progress to viral pneumonia over the course of several days; seems to have a characteristic “ground glass” appearance
- Infections can be completely asymptomatic
  - Seems to be more common among children and young adults
- Asymptomatic transmission (before symptoms or in completely asymptomatic people) is known to occur [Rothe et al. NEJM. 2020; Bai et al. JAMA. 2020]

Zhou et al. Lancet. 2020

- 191 hospitalized COVID-19 cases from Wuhan
  - 54 fatal
  - 91 (48%) w/ comorbidity; [30% HTN, 19% DM, 8% CHD]
- Hospital LOS 11 days (7-14)
- 26% ICU admit; LOS 8 days (4-12)
- Onset => ICU 12 days (8-15 days)
- Onset => death/discharge 21 days (17-25 days)
- Onset => viral clearance 20 days (IQR 17-24 days)
Current data on COVID-19: Severity

- Study of 72,000 Covid-19 cases in China. [Wu et al. JAMA 2020] Of the ~45K (62%) lab-confirmed:
  - 2.3% fatal (Severity: 81% mild/moderate disease; 14% severe disease; 5% critically ill)
    - Fatality higher among those with preexisting conditions: 10.5% CVD; 7.3% DM; 6.3% chronic respiratory disease; 6% HTN; 5.6% cancer
    - Fatality higher among elderly: 14.8% among ≥80y; 8% among 70-79y
- Age: Only 2% of cases were <20 years of age
- HCW: 3.8% of confirmed cases, including 5 deaths

Novel viruses are of particular concern because of the lack of herd immunity
Why it is important to “flatten the curve”

• Even if widespread transmission is inevitable, it is important to slow the spread

![Graph showing the importance of flattening the curve](image)

Containment & Mitigation Strategies

- **Isolate the sick**
  - Infection Control
  - Case investigation
  - Case identification
  - Isolation

- **Quarantine the exposed**
  - Contact tracing
  - Quarantine

- **Reduce social mixing**
  - Closing schools
  - Cancelling public events
  - Closing public spaces/restaurants
  - Travel restrictions
  - Public transit closures
Social distancing during 1918 influenza pandemic
Markel et al. JAMA

- Historical mortality and census data from 43 large U.S. cities from waves II and III of pandemic
- News reports on use/timing of social distancing measures (isolation, quarantine, school closure, public gathering ban)
- Implementation of multiple measures was more effective at reducing excess death rate (EDR) than individual measures

Laboratory testing

- Testing kits
  - State and some local PHLs have capacity to run testing, but criteria and capacity vary by site
  - Commercial labs offering testing, turnaround time ~3-4 days
- Specimen collection kits: nasopharyngeal swabs, viral transport media
- Personal protective equipment for healthcare workers
  - N95 respirator; surgical mask acceptable where supplies limited (and they are)
  - Eye protection (goggles or face shield)
  - Gown
  - Gloves
Personal Protective gear

- Patient: surgical mask
- Health Care worker: surgical mask if able to maintain a distance over 3 feet from the patient safely

Vaccine development

- NIH working closely with researchers to fast-track development
- Candidate immunogen: receptor-binding domain of the “spike protein”
- Animal studies to assess safety ongoing
- First Phase I trial just beginning
In conclusion

• This pandemic is unprecedented in modern history
• We are just at the beginning of this outbreak in the U.S.
• Efforts to slow disease spread will help reduce the burden on the healthcare system
• There is still a lot that is unknown about this virus, modes of transmission, why children seem to be largely spared, and how much asymptomatic disease is occurring
SAVE THE DATE

COVID-19 Webinar Miniseries

• Session 2:
  At the Front Line: Public Health and Health System Challenges
  Thursday, March 19 | 12:00 - 12:30 p.m. E.T.

• Session 3:
  Leading Through Crisis with Gov. Mike Leavitt
  Friday, March 20 | 12:00 - 12:30 p.m. E.T.

Visit allhealthpolicy.org to register or learn more

We value your input...

Please fill out the evaluation survey you will receive immediately after this presentation and by email this afternoon!
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