The weekly CCDPH Partner Webex Covid-19 Video Conference takes place Thursdays at 4:00 p.m. To be added to the invitation list please email ccdph.covid19@cookcountyhhs.org. The virtual meeting can be joined via telephone or Webex link online, and are hosted by CCDPH Co-Directors Drs. Kiran Joshi and Rachel Rubin. Recordings of the video conferences will soon be available at www.cookcountypublichealth.org.

Next Webex Conference: Thursday, May 21, 2020  4:00 p.m.
Presenters:
Patricia Fron & Gianna Baker
Co-Directors, Chicago Area Fair Housing Alliance (CAFHA)

Video recordings of the conferences can be viewed by using the links (please see below) in your web browser, and entering the password:

April 30, 2020
Topic: Enforcing Workplace Safety; Presenter George Papadopolous, CCDPH.
Recording Password: NvU4qCJV
Recording Link: https://cookcountyhhs.webex.com/recordingservice/sites/cookcountyhhs/recording/playback/5396aea11a3f492db1f28c9de68cd33

May 7, 2020
Topic: Inequities between Illinois zip codes in rates of confirmed Covid-19 cases; Presenter Fernando De Maio, DePaul University and American Medical Association
Recording Password: pF6V4QCx
Recording Link: https://cookcountyhhs.webex.com/recordingservice/sites/cookcountyhhs/recording/playback/f5334ade1d3043e391f25d578004311

May 14, 2020
Topic: Contact Tracing; Presenter Linda Rae Murray, University of Illinois School of Public Health and Former President American Public Health Association
Recording Password: pMYTePY6
Recording Link: https://cookcountyhhs.webex.com/recordingservice/sites/cookcountyhhs/recording/playback/f9f552fd5b3a45ba90c851f713a8a813

What is the situation?

a. As of this afternoon, in suburban Cook County, we have 20,475 cases and 856 deaths.

b. This slide is from our web page. It shows cumulative rates of confirmed Covid cases by location, as measured by number of days since the first reported case. The dotted brown line is for suburban Cook County... the cumulative rate of covid19 cases in suburban Cook County is about 939 per 100,000 people (a little under 1 in a hundred) 108 days since the first reported case. That
almost 2 and 1/2 times greater than the cumulative rate for the United States as a whole, which is 382 per 100,000.

c. Our CCDPH current data continues to show the impact of structural racism. The rates for Black and Latinx communities in our jurisdiction are 971 per 100,000 people and 1,048 cases per 100,000 people, respectively. The rate of covid-19 confirmed cases for Asian people is 506 per 100,000. Compared to the white rate of 336 per 100,000, the Hispanic/Latino, Black, and Asian rates are 3.1, 2.9, and 1.5 times greater respectively.

d. The source of health inequities remain deeply embedded in the structure and power arrangements of many core institutions of society. Building a local constituency is critical.

e. According to the New England Journal of Medicine: “Black and Latinx Americans often have less ability to socially distance because of crowded housing conditions and essential jobs requiring in-person interaction. They have higher baseline rates of chronic illness and worse disease outcomes. They are exposed to higher levels of small-particle pollution, which is associated with chronic obstructive pulmonary disease, heart disease, and premature death. These factors put them at higher risk of contracting and dying from Covid-19. Similar risks probably apply to other disadvantaged groups.” [Source: Manchanda et al. NEJM May 13, 2020 Online p1 https://www.nejm.org/doi/pdf/10.1056/NEJMp2011359?articleTools=true]
Inequities in Rates of Covid-19 Cases by Race/Ethnicity in Suburban Cook County

In addition to the case positivity metrics and COVID positivity rates, another important metric for Restore Illinois is contact tracing. Right now CCDPH has about 30 people doing contact tracing, with a focus on congregate settings like long term care facilities. A important requirement for opening up our communities is the ability to do contact tracing within twenty-four hours of a positive case being reported and this needs to be done for an increasing proportion of people diagnosed with Covid-19. There is a lot of discussion and interest in contact tracing and CCDPH is working now to upload our County’s plan. So I’m delighted that my friend and colleague Dr. Linda Rae Murray will be presenting to us in a few moments about contact tracing.

Restore Illinois: Metrics & Milestones
g. Many people have lost livelihoods in suburban Cook County and the country. Millions of people are losing their health insurance that they had from their employer. If you do not have health insurance, please go to Health.Gov and enter your zip code to find a person you can talk to to help you find insurance. You can also call 312-824-2224 for the operators working for Cook County who can explain more, in Spanish or in English.

What is CCDPH doing?

a. Here are a few updates from our ongoing collection of answers to Frequently Asked Questions, which is spearheaded by Hanna Kite. Our web page has many of these FAQs.

b. IDPH has revised its guidance for oral and dentalcare.

c. The state is encouraging libraries that choose to open after May 1 to check with their municipality. The IL Department of Commerce also provides this guidance:

--To the extent feasible and to minimize contact, curbside pick-up orders should be ordered online or over the telephone.

--schedule pick-ups to ensure compliance with social distancing requirements.

--Staff within the library should be limited to the minimum number required to fulfill orders.
Updates from the CCDPH Frequently Asked Questions (FAQ) document

- Revised guidance from IDPH for oral and dental care from the IDPH

- Guidance for libraries considering curbside pickup: staff social distancing; Online/phone; design safe pickup; see transcript IMLS CDC webinar of March 30 for CDC discussion of materials safety

a. We have just finished a set of answers for businesses who have questions. This will be on the CCDPH website in the next few days. Example: What do I do if I am unable to secure mask/face-covering?If you are unable to secure masks, many local businesses now sell cloth face coverings. You can also make your own cloth masks following the instructions at this [website](https://www.cdc.gov/coronavirus/2019-ncov/prevent-getting-sick/diy-cloth-face-coverings.html) Use of Cloth Face Coverings to Help Slow the Spread of COVID-19. [SOURCE CDC WEBSITE]. Cloth face coverings should be washed after every use. A washing machine should suffice in properly washing a face covering.
b. Cook County Department of Public Health (CCDPH) is putting on the last two in a weekly School Health series in lieu of our annual in-person conference. Distinguished participants are public health, behavioral health, nursing and school health experts who present updates and resources related to school health. This FREE webinar series is for Cook County school staff involved in helping students and their families optimize physical, emotional and social health outcomes. As we navigate life during the Coronavirus-19 pandemic, this information is especially important. Thus this web series is open to all. Register at TinyURL.com/SchoolsCookC

- Register at https://tinyurl.com/SchoolsCookC.
- May 19: Narcan in the high school setting
- May 26: Effects of increased social media use on mental health

Webinars start at 1PM, and are recorded.

Host Dr. Rubin welcomed her friend and colleague Dr. Linda Rae Murray: Dr. Murray has spent her career serving the medically underserved. She has worked in a variety of settings including practicing Occupational Medicine at a Workers Clinic in Canada, Residency Director for Occupational Medicine at Meharry Medical College, and Bureau Chief for the Chicago Department of Health under Mayor Harold Washington. Dr. Murray served as Medical Director of the federally funded health center, Winfield Moody, serving Cabrini Green Public Housing Project in Chicago. She retired in 2014 after serving as the Chief Medical Officer of the CCDPH. Dr. Murray has been an active member of a wide range of local and national organizations including serving as a member of the Board of Scientific Counselors for the Agency for Toxic Substances and Disease Registry (ATSDR), and the Board of Scientific Counselors for the National Institute of Occupational Safety and Health (NIOSH) and the Board of Directors of Trinity Health (a large Catholic Health system). Including serving as the President of the American Public Health Association 2010-11. She has been a voice for social justice and health care as a basic human right for over forty years.
Topic: Contract Tracing

Linda Rae Murray, MD, MPH, FACP
Lindarae.Murray@gmail.com

Adjunct Asst Professor, University of Illinois
School of Public Health
Former President, American Public Health Association

Cook County Public Health
CCDPH PARTNERS

CONTRACT TRACING

Linda Rae Murray M.D.MPH

Contact Tracing

A call to action.
"Historically, pandemics have forced humans to break with the past and imagine their world anew. This one is no different. It is a portal, a gateway between one world and the next. We can choose to walk through it, dragging the carcasses of our prejudice and hatred, our avarice, our data banks and dead ideas, our dead rivers and smoky skies behind us. Or we can walk through lightly, with little luggage, ready to imagine another world. And ready to fight for it."

Arundhati Roy : 4/3/2020 in Financial Times

• What is Covid-19?
• Where did Covid-19 come from?
Covid-19 is the name of the disease that can result from the virus called SARS-CoV-2

<table>
<thead>
<tr>
<th>Name of the VIRUS</th>
<th>Name of the Disease</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rubeola Viruses ( many different strains)</td>
<td>Measles</td>
</tr>
<tr>
<td>Human Immunodeficiency Virus (HIV)</td>
<td>Acquired Immunodeficiency Syndrome (AIDS)</td>
</tr>
<tr>
<td>Severe Acute Syndrome Coronavirus 2 (SARS-CoV-2)</td>
<td>Coronavirus Disease 2019 (COVID-19)</td>
</tr>
</tbody>
</table>

**FAMILY OF CORONOVIRUSES**

This is a large family of viruses, many of which cause the common cold.

Recently three coronaviruses have jumped from animals to humans;

* 2002 SARS caused by SARS-CoV
* 2012 MERS-CoV
* 2019 COVID-19 caused by SARS-CoV-2

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**Coronavirus Transmission Cycle**

Reservoir Host → Intermediate Host → Human → Many humans

**Current hypothesis of the chain of transmission for SARS-CoV-2 coronavirus.** The virus is thought to have originated in bats (reservoir host) and transmitted to intermediate hosts (not confirmed, though one suspected species is pangolins). The virus likely developed mutations, or changes, that enabled it to transmit from intermediate hosts to humans and afterwards spread through human-to-human transmission.

Zoonotic viruses from animals to humans

- West Nile virus: 25,000 deaths in the United States
- Ebola virus: >1,553 deaths
- HIV: >30 million deaths
- Hendra virus: Four deaths
- Nipah virus: >250 deaths
- 2002-2003 SARS coronavirus: 774 deaths
- 2012-2013 MERS coronavirus: 54 deaths
- "Spanish flu": H1N1 influenza: >50 million deaths
- "Hong Kong flu": H3N2 influenza: >100,000 deaths
- "Russian flu": H1N1 influenza
- "Asian flu": H5N1 influenza: >271 deaths
- "Swine flu": H1N1 influenza: >15,000 deaths
- 1999-2002 H9N2 and H7N7 influenza: One death
- "Asian flu": H7N9 influenza: 44 deaths


- How does Covid-19 enter the body?
- How does the virus reproduce?
The study suggests that droplets of various sizes are trapped in a turbulent gas cloud allowing them to travel up to **26 feet**.

**Turbulent gas cloud**

Drops fall continuously, depending on weight and other factors. The most visible drops would fall **within 6 feet**.

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**How long can viruses survive on surfaces?**

<table>
<thead>
<tr>
<th>Material</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glass</td>
<td>96</td>
</tr>
<tr>
<td>Plastic</td>
<td>72</td>
</tr>
<tr>
<td>Steel</td>
<td>72</td>
</tr>
<tr>
<td>Cardboard</td>
<td>24</td>
</tr>
<tr>
<td>Copper</td>
<td>4</td>
</tr>
<tr>
<td>Aerosol</td>
<td>4</td>
</tr>
</tbody>
</table>

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Dr. Martin S. Hirsch, senior physician in the Infectious Diseases Services at Massachusetts General Hospital, said there’s still a lot to learn but experts suspect the virus may act similarly to SARS-CoV from 13 years ago.

“It’s a respiratory virus and thus it enters through the respiratory tract, we think primarily through the nose,” he said. “But it might be able to get in through the eyes and mouth because that’s how other respiratory viruses behave.”

When the virus enters the body, it begins to attack.

SOURCE: USA TODAY
ONE model of how Covid-19 is spread.

Pre-symptomatic
45% of infections happen from carriers before they develop symptoms

Symptomatic
40% of infections happen while patients have symptoms

Environmental
10% of infections happen from the environment

Asymptomatic
5% of infections happen from people who never develop symptoms

Days since infection

Number of new infections caused by day

source: chart graphically adapted by Tomás Pueyo from https://bioll-pathogens.shinyapps.io/covid-19-transmission-routes/, a site created to let the audience play with different sensitivities with a model created for the paper "Quantifying SARS-CoV-2 transmission suggests epidemic control with digital contact tracing", authored by Luca Ferrer, Chris Wyman, Michelle Kendall, Lulu Zhao, Anel Nurtay, Lucie Viber-Dömer, Michael Parker, David Bonsall, Christophe Fraser. Link: https://science.sciencemag.org/content/early/2020/04/03/science.abb6836

Flattening the COVID-19 Case Curve

Many jurisdictions are implementing some or all of these measures to help flatten the curve:
• Quarantining
• Encouraging social distancing
• Encouraging working from home
• Closing schools and other institutions
• Placing hard limits on the size of crowds at events

Without measures to slow the rate of infection
Capacity of Healthcare System

Measures taken to slow the rate of infection
(e.g., social distancing, event size limits)

OUTBREAK
Time since first case

Capacity can actually decrease as healthcare workers get sick or are placed under quarantine

Source: Adapted from Drew Harris, CDC
Incubation Period: the time when infected and when they start to show symptoms. For Covid-19 the incubation period ranges from 2-14 days with most people showing symptoms within 5 days.

INFECTION
No signs & symptoms

VIRAL SHEDDING
HIGHEST

ASYMPTOMATIC: means that these people NEVER develop symptoms. BUT with Covid-19 they may be able to infect others.
COVID-19 Clinical presentation

- **Mild** (no or mild pneumonia) reported in about **80 percent**.
- **Severe disease** (e.g., with dyspnea, hypoxia, or >50 percent lung involvement on imaging within 24 to 48 hours) reported in about **15 percent**.
- **Critical disease** (e.g., with respiratory failure, shock, or multiorgan dysfunction) reported in **5 percent** (these complications mainly in elderly and those with other health problems).
Coronavirus [COVID-19]: the severity of diagnosed cases in China

2.3% of all cases died
1,023 of the 44,415 infected people, for which the breakdown is shown on the right, died.
The case fatality rate is therefore 2.3%.

5% Critical cases
Critical cases include patients who suffered respiratory failure, septic shock, and/or multiple organ dysfunction/failure.

14% Severe cases
Severe cases include patients suffering from shortness of breath, respiratory frequency > 30 per minute, blood oxygen saturation ≤ 93%, PCO2/PO2 ratio > 300, and/or lung infiltrates > 50% within 24-48 hours.

81% Mild cases
Mild cases include all patients without pneumonia or cases of mild pneumonia.

As we learn more about this “NOVEL” virus (this just means it is NEW to humans) we learn about more symptoms. For example; clotting of blood, new inflammatory symptoms in children.

COVID-19 Signs and Symptoms

Respiratory
- Coughing and Sneezing
- Runny nose
- Shortness of breath
- Breathing difficulties
- Sore throat

Severe Cases
- Pneumonia
- Severe acute respiratory syndrome
- Lungs inflammation and congestion

Circulatory
- Decreased White Blood Cells

Severe Case
- Cardiovascular damage

Digestive
- Diarrhea

Systemic
- Fever
- Fatigue

Excretory
- Decreased Kidney Functions

Severe Case
- Kidney Failure

Figure: Symptoms of COVID-19 caused by Novel Corona Virus, SARS-CoV-2, Image Copyright © Sagar Aryal

• What is public health infrastructure?
• Why do we need contract tracing?

Impact of Public Health Infrastructure

Public Health Infrastructure—the resources needed to deliver essential public health services to every community

SOURCE: Public Health Foundation
A deficit of more than 250,000 public health workers is no way to fight Covid-19

In 2008 the Association of Schools and Programs in Public Health warned that by 2020, “the nation will be facing a shortfall of more than 250,000 public health workers.” The organization called for greatly expanding the public health workforce, recommending increased federal funding to state health departments to promote worker training; enumerate and identify current and future needs of the public health workforce; and establish a U.S. Global Health Service to “coordinate US efforts to build a workforce prepared to meet international needs.”

Conclusions

In order to relax community mitigation efforts and other measures to reduce COVID-19 transmission, it is essential to (1) rapidly test all symptomatic cases of COVID-19, identify and (2) isolate all positive cases, and (3) conduct contact tracing for all close contacts of each and every case.

This level of case-based intervention will help enable a lessening of social distancing measures, but it can be accomplished only by massively scaling up the local and state public health workforce—on the order of 100,000 newly engaged workers—to assist with the enormous and unprecedented task of contact investigation and containment on this scale.
RO (basic reproduction number) of diseases
A measure of how many people each sick person will infect on average

- MERS: 0.8
- Influenza: 1.5
- Ebola: 2.0
- COVID-19: 2.5
- SARS: 3.5
- Monkeypox: 4.5
- Rabies: 6.0
- Smallpox: 6.0
- Measles: 16.0

*This number may change as we learn more about this new disease

With a Ro of 2.6 the initial infection results in two to three other cases...

...and those people pass the infection on to two to three others.


...And so on. In the case of the Covid-19 virus each new phase takes on average between five and six days.


18 CASES
Here we can see how the spread is drastically reduced by isolating just one individual.

**10 CASES**


- **Covid-19 (low), R0 = 2**
  - Total infected: 15

- **Covid-19 (high), R0 = 3**
  - Total infected: 40

- **Influenza (Spanish flu), R0 = 1.8**
  - Total infected: 7

- **Ebola (high), R0 = 2**
  - Total infected: 15

- **Sars, R0 = 3**
  - Total infected: 40

- **Smallpox (high), R0 = 6**
  - Total infected: 259

- **Chickenpox, R0 = 10**
  - Total infected: 1,111

- **Measles, R0 = 15**
  - Total infected: 3,616

What's the difference between ISOLATION and QUARANTINE?

**ISOLATION**
Isolation separates sick people with a contagious disease from people who are not sick.

**QUARANTINE**
Quarantine separates and restricts the movement of people who were exposed to a contagious disease to see if they become sick.

**YOUR CONTACTS**
A MA COVID team member will ask you for a list of all of the people you were within six feet of during the two days before you had symptoms.

**YOUR CONTACTS**
With contact tracing in place, we can track the spread and reduce additional exposure to others by encouraging testing, supporting quarantine and social distancing.

**YOUR CONTACTS**
So, if you get a call keep your family and friends safe by answering the call. We are all in this together and by sharing information and listening to the direction of the Community Tracing Collaborative (CTC), we can spread the word to stop the virus.

**MA COVID TEAM MEMBER**
Then with your help, the MA COVID team will reach out via phone and text to anyone you've been in contact with to contain the spread of the virus. Note that we will not release your name to anyone.

**HOME ISOLATION PERIOD**
If you are staying at home, the MA COVID team member will also discuss any needs you have and connect you with a care resource coordinator who will help you get the support you need.

**CARE RESOURCE COORDINATOR**
If you need medical care, call ahead to let the doctor's office, hospital, or 911 know you have coronavirus. Avoid ride shares, taxis, and public transport if you can.
**Qualifications:** Communication skills, empathy, ability to use smart phone technology, highly motivated and knowledgeable about the community.

- **Scope of work:**
  - Supplements the DPH efforts
  - Supervises a team of contact tracer
  - Contacts newly diagnosed COVID-19 patient (orange)
  - Explains diagnosis
  - Collects details on contacts
  - Enters contact details into a database
**People | Contact Tracer**

**Qualifications:** Communication skills, empathy, ability to use smartphone technology, highly motivated.

**Scope of Work:**
- Receives names and phone numbers of contacts.
- Outreach to contacts.
- Explains to contact the procedure for testing and quarantine. (Engages translation services where needed.)

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**People | Care Resource Coordinator**

**Qualifications:** Social work/nursing or equivalent. Highly motivated and knowledgeable about the community.

**Scope of Work:**
- Interview patients identified as vulnerable.
- Assessment of basic needs for follow up of testing or quarantine recommendations.
- Connect those needing support for COVID testing or quarantine with local resources by municipality.
Program | High-Risk High-Priority Cases Remain with Local Boards of Health

WHICH WAY SHOULD THE ARROW GO IN ILLINOIS & COOK COUNTY ???

Community Tracing Collaborative

High-Risk High-Priority Cases
Congregate settings, e.g. nursing homes
Disease Clusters
Healthcare Workers
Any Complex Case

Local Boards of Health
PHASE ONE – SLOW THE SPREAD

Maintain Physical Distancing
Increment Diagnostic Testing Capacity and Build Data Infrastructure for Rapid Sharing of Results
Ensure Functioning of the Health Care System
Increase Supply of Personal Protective Equipment
Implement Comprehensive COVID-19 Surveillance Systems
Massively Scale Contact Tracing and Isolation and Quarantine
Offer Voluntary Local Isolation and Quarantine
Encourage the Public to Wear Masks.
PHASE TWO – STATE BY STATE EASING

Implement Case-Based Interventions
Begin to Relax Physical Distancing Measures
Special Care for Vulnerable Populations
Accelerate the Development of Therapeutics
Identify Those Who Are Immune

PHASES 3 & 4

• **Steps to Take in Phase III**
  • Vaccine or Therapeutic Production
  • Vaccine or Therapeutic Prioritization—When Supply Is Still Limited
  • Mass Vaccination or Therapeutic Distribution—When Supply Is Abundant
  • Global Vaccine Scale-Up and Vaccination
  • Serological Surveys to Determine Population Immunity

• **PHASE IV: Rebuild Our Readiness for the Next Pandemic**
  • Develop Vaccines for Novel Viruses in Months, Not Years
  • Modernize and Fortify the Health Care System
  • Establish a National Infectious Disease Forecasting Center
IF we are to control the epidemic it will take YEARS, GLOBAL COOPERATION, & MONEY

- 100,000 STAFF is a LOW estimate for the U.S.
- Staff needs to be employed by governmental public health with excellent pay, benefits, pensions.
- Social supports need to be expanded (basic income, medicare for all, free education etc).
- Community based organizations should be funded to provide social service and other supports.

A scanning electron microscope image from the NIH’s National Institute of Allergy and Infectious Diseases shows SARS-CoV-2 in yellow, also known as the novel coronavirus. (Image: NIAID - Rocky Mountain Laboratories)

Thank you

Linda Rae Murray, MD, MPH, FACP
Lindarae.Murray@gmail.com

Adjunct Asst Professor, University of Illinois School of Public Health
Former President, American Public Health Association
For more information call Ana Mendez. 312-965-0642 amendez@mujereslat.org

Families with children who are eligible for free and reduced lunch when in school can receive for Pandemic EBT. This is a special benefit that can help you buy food for your school age children 3 to 17 years old and 18 to 22 years old (in high school), who would receive National School Lunch Program free or reduced-priced meals.
when schools are in session. If you currently receive SNAP benefits, you DO NOT need to apply for P-EBT benefits. You are automatically eligible to receive these benefits. Your additional P-EBT benefits will be loaded into your Illinois LINK EBT account along with your regular SNAP benefits.

PLEASE SPREAD THE WORD Mujeres Latinas En Accion has launched a series of virtual workshops in Spanish to support small business owners with social media best practices. They are also commencing with virtual groups for our educational business course that is also offered in Spanish and open particularly to women. For more information call Ana Mendez. 312-965-0642
amendez@mujereslat.org
Questions: Please use the chat box

Cook County Department of Public Health
Partner Covid-19 Webex Conference Call

May 14, 2020 4:00 p.m.

Thank you

Cook County Department of Public Health
Partner Covid-19 Webex Conference

Next Webex Conference: Thursday, May 21, 2020 4:00 p.m.

May 21st Presenters:
Patricia Fron & Gianna Baker
Co-Directors, Chicago Area Fair Housing Alliance (CAFHA)
What you can do?

1. Our web page cookcountypublichealth.org for the latest data, and fact sheets, and an updated list of answers to frequently asked questions.
2. Call the CCDPH COVID-19 Hotline at 708-633-3319, M-F 9a-4p
3. Our Main phone number is 708-633-4000. Healthcare providers, hospitals, assisted living and long-term care facilities can follow the prompts to make reports 24/7.
4. Please let CCDPH know what topics you would like covered in future calls. What do you like and what can we improve? Email us at ccdph.covid19@cookcountyhhs.org
5. Follow us on Facebook and Twitter
6. Text ALERTCOOK (one-word) to 888-777 for text alerts

Continue to practice physical distancing (‘social distancing’), hand washing, stay at home if you can, take protective measures at work if you have to go out to work; stay at home if you feel sick; and be safe.