In support of improving medical care across the world, Project C.U.R.E. is pleased to share the fourth edition of our COVID-19 Education and Prevention Newsletter. Dr. Spaulding, senior medical advisor for Project C.U.R.E., will regularly provide up-to-date information on Coronavirus—what it is and how we can keep ourselves and our communities safe. This information is up-to-date as of May 2nd, 2020 from a variety of highly reliable sources. Our knowledge is rapidly increasing as doctors and researchers are working day-and-night globally. We still have much to learn and will keep you updated as new information comes in. Updated information and guidance are also regularly being provided by the World Health Organization (WHO) and the United States Centers for Disease Control and Prevention (CDC).

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HOW SEVERE IS COVID-19 FOR MOST PATIENTS

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a) Data from China on 44,500 confirmed infections reported for every 100 patients:
   i) ~80 patients will have “mild” disease (i.e., no or mild pneumonia)
   ii) ~20 patients will have “severe or critical” disease
      (1) Requiring hospitalization for essentially all of these 20 patients
      (2) ~15 of these 20 patients will have severe disease (hypoxemia or >50% lung involvement on chest X-ray)
      (3) ~5 of these 20 patients will have critical disease (respiratory failure, shock, multi-organ failure)
   (4) The elderly patients are most vulnerable to serious disease
      (a) ~8% mortality for those patients aged 70 - 79 years
      (b) ~15-18% mortality for those aged ≥80 years
   iii) Overall, COVID-19 appears at least 10 times more deadly than Influenza
      (1) Although other information from various countries preliminarily report a Case Fatality Rate of 2-3% (vis-à-vis Influenza at only 0.1%)
      (2) Which, if verified, would indeed make COVID-19 even 20-30 times more deadly than Influenza

ASSOCIATED CLINICAL ISSUES OF CONCERN

a) Coagulation abnormalities
   i) COVID-19 is associated with a hypercoagulable state including acute inflammatory changes and laboratory findings that are specific to this disease
   ii) Some clinical reports describe patients ages 20-40 years presenting clinically with Venous Thromboembolism, i.e., a blood clot that starts in a vein, including Deep Venous Thrombophlebitis, Pulmonary Emboli, Strokes, or other thrombotic events despite only having a relatively mild COVID-19 illness
   iii) Recent reports also describe the risk of Venous Thromboembolism is quite high (≤40%) among ill patients requiring ICU care
a) For preparing safe drinking water (if potable water is not readily available)

i) The usual methods also kill viruses:
   (1) For example, rolling boil for 1 minute; 2 drops of fresh unscented Clorox per Liter; AquaTabs 33mg tablet in 4 Liters; 5 drops of 2% Tincture of Iodine per Liter (See ‘Helpful Links’ Page: 4 Protocols for Preparing Safe Drinking Water)

b) IPC (Infection Prevention and Control) Measures

i) Recommendation for outpatient care
   (1) The basic principles of IPC and standard precautions should be applied in all healthcare facilities, including outpatient care and primary care

ii) For COVID-19, the following measures should be adopted:
   (1) IPC (Infection Prevention and Control) Measures

   a) For preparing safe drinking water
      (i) 33mg tablet in 4 Liters; 5 drops of 2% Tincture of Iodine per Liter (See ‘Helpful Links’ Page: 4 Protocols for Preparing Safe Drinking Water)

   b) IPC (Infection Prevention and Control) Measures
      (1) Recommendation for outpatient care

   (i) Cardiac abnormalities including myocardial injury
      (1) The term “myocardial injury” encompasses all conditions causing cardiomyocyte death
      (i) Possible causes of myocardial injury in patients with COVID-19 include myocarditis, hypoxic injury, stress cardiomyopathy, ischemic injury caused by cardiac microvascular damage, and systemic inflammatory response syndrome (cytokine storm)
      (ii) The optimal management for myocardial injury associated with COVID-19 has not been determined and therefore focuses on appropriate supportive care

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ASSOCIATED CLINICAL ISSUES OF CONCERN CONTINUED... GUIDELINES FOR OTHER PROTECTIVE ACTIONS
e) HCWs caring for suspected or confirmed COVID-19
   i) Should wear the appropriate personal protective equipment (PPE):
      (1) i.e., gown, gloves, eye protection (NOT just eyeglasses), and a N-95 respirator mask
      (2) If supply of respirators is limited, the CDC acknowledges that:
         (a) Medical masks are an acceptable alternative (in addition to contact precautions and eye protection)
         (b) However, N-95 respirator masks should always be worn during aerosol-generating procedures, for example, intubation, bronchoscopy, etc.

   d) What about wearing Masks?
      i) Any type of mask, to be as effective as possible, must COMPLETELY cover the nose and mouth, create a seal around the nose and chin, and minimize any openings around the cheeks
      ii) Masks should not be touched or handled during use
      iii) Once placed on the face, the outside surface of the mask is considered contaminated and should never be touched
      iv) The “N-95 Respirator” masks
         (1) Should only be used for 3 categories of people (IF available):
            (a) Healthcare workers
            (b) Caretakers of COVID-19 patients whenever in the same room
GUIDELINES FOR OTHER PROTECTIVE ACTIONS CONTINUED...

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(e) A person with suspected COVID-19 infection (i.e., fever and cough)
   (i) In order to prevent their respiratory secretions from spreading prior to seeking medical attention

(2) To be effective, these masks must tightly fit around the nose and chin
(3) N-95 masks are disposable and should only be used once and then discarded
(4) Very important to remove the mask carefully (only touching the elastic straps that hold the mask on the face) to prevent cross-contamination

(5) The Medical/Surgical mask
   (1) Medical masks are defined as surgical or procedure masks that are flat or pleated (some are shaped like cups); they are affixed to the head with straps

(2) According to the WHO: use of a medical mask can prevent the spread of infectious droplets from an infected person to someone else and potential contamination of the environment by these droplets
(3) There is limited evidence that wearing a medical mask by healthy individuals in the households or among contacts of a sick patient may be beneficial as a preventive measure
(4) Unfortunately, there is currently no evidence that wearing a mask (whether medical or other types) by healthy persons in the wider community setting, including universal community masking, can prevent them from infection with respiratory viruses, including COVID-19
   (a) Nevertheless, the benefits of broad use of medical masks may include:
      (i) Potentially reducing contagiousness of pre-symptomatic individuals
      (ii) Reducing stigmatization of individuals wearing masks for source control
   (b) However, the following potential risks should be carefully considered:
      (i) Self-contamination that can occur by touching and reusing contaminated mask
      (ii) Depending on type of mask used, potential breathing difficulties
      (iii) False sense of security, leading to potentially less adherence to other preventive measures such as physical distancing and hand hygiene

(5) Patients with suspected COVID-19 or concerning mild symptoms should:
   (a) Wear a medical mask as much as possible
GUIDELINES FOR OTHER PROTECTIVE ACTIONS CONTINUED...

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(i) Follow instructions on how to put on, take off, and dispose of medical masks
(ii) The mask should be changed at least once daily
(iii) Self-isolate
(iv) Seek medical advice
(v) Follow all additional preventive measures, in particular, hand hygiene and maintaining physical distance from other persons

(b) Caregivers and those sharing living space should:
   (i) Wear a medical mask when in the same room

(6) Symptomatic patients visiting a healthcare facility should:
   (a) Wear a medical mask while waiting in triage or other areas and during transportation within the facility
   (b) HCWs at that healthcare facility should:
       (i) Wear a medical mask when entering a room where patients with suspected or confirmed COVID-19 are waiting

vi) Homemade (nonmedical) Cloth Face Covering / Mask
(1) According to the WHO:
   (a) Use of cloth masks by HCWs in a healthcare facility found that HCWs were at increased risk of infection compared with those who wore medical masks
   (b) Therefore, cotton cloth masks are not considered appropriate PPE for HCWs

(2) According to the WHO:
   (a) Nonmedical masks, in the community setting has not been well evaluated
       (i) There is no current evidence to make a recommendation for or against their use in this setting

(3) In the USA, the CDC in early April updated its position advising individuals to wear a cloth face covering (for example, homemade masks or bandanas) when in public settings where physical distancing is difficult to achieve, especially in areas with substantial community transmission

(4) When making Cloth Face Coverings they should:
   (a) Include multiple layers of fabric
   (b) Allow for breathing without restriction
   (c) Be able to be laundered and machine dried without damage or change to its shape

(5) Cloth Face Coverings should neither be placed on young children under age 2 years, nor used on anyone who has trouble breathing, is unconscious, incapacitated, or otherwise unable to remove the cloth face covering without assistance
(5) Replace the mask as soon as it becomes damp with a new clean, dry mask
(6) Do not re-use single-use masks
(7) Discard single-use masks after each use and dispose of them immediately upon removal
(8) Individuals should be instructed that the proper technique for removing ANY/ALL types of masks is as follows:
   (a) Avoid touching the eyes, nose, and mouth
   (b) Handle the mask by its straps only
       (i) Never touch the front surface of the mask
   (c) Practice hand hygiene immediately after handling the mask
   (d) If it is a Cloth Face Covering:
       (i) Launder the mask routinely in a washing machine
           1. If not available, vigorously scrub the material using soap and clean water
       (ii) Then either dry it in a drying machine or in the sun

vii) According to the WHO the following information on the correct use of ANY/ALL types of masks is derived from practices in healthcare settings:
   (1) When placing the mask, do so carefully, ensuring that it covers the mouth and nose
       (a) It must seal firmly across the bridge of the nose and under the chin
   (2) Tie the cords/secure the loops to minimize any gaps between the face/cheeks and the mask
   (3) Avoid touching the mask while wearing it
   (4) Whenever a used mask is inadvertently touched, immediately clean hands using an alcohol-based hand rub or soap and water
   (5) Avoid touching the eyes, nose, and mouth
   (6) Handle the mask by its straps only
       (i) Never touch the front surface of the mask
   (c) Practice hand hygiene immediately after handling the mask
   (d) If it is a Cloth Face Covering:
       (i) Launder the mask routinely in a washing machine
           1. If not available, vigorously scrub the material using soap and clean water
       (ii) Then either dry it in a drying machine or in the sun

viii) Clinicians should emphasize to patients that:
   (1) The use of ANY/ALL types of masks does not diminish the importance of other preventive measures, such as physical distancing and hand hygiene
   (2) The rationale for the homemade Cloth Face Covering is primarily to contain secretions of and prevent transmission from individuals who have asymptomatic or pre-symptomatic COVID-19 infections

e) What about wearing “Gloves” to prevent exposure in public?
   i) The CDC makes several recommendations on how to minimize the risks of COVID-19 when out in public:
   (1) Of course, this includes avoiding close contact with people, not touching your face, covering your nose and mouth with a mask, and washing your hands frequently
   (2) To date, the CDC has not recommended the use of gloves for general daily activities, although there are a few exceptions (if gloves are available):
GUIDELINES FOR OTHER PROTECTIVE ACTIONS CONTINUED...

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(a) Touching the buttons or handles on a gasoline/fuel pump when disinfecting wipes are not available

(b) While cleaning and disinfecting potentially contaminated surfaces

(c) When handling dirty laundry, kitchen items, or trash from someone who has the virus

(3) Even in these cases, gloves are only effective when proper procedures are followed

(a) Reminder: You are not protected if you touch your face with a gloved hand

(b) It is important to properly remove and discard the gloves (See 'Helpful Links' Page: How to Remove Gloves)

(i) This should always be followed with proper hand hygiene

REMINDER: YOUR GOAL IS NOT ONLY PROTECT YOURSELF

a) Think about family and friends who may at "higher risk" for COVID-19

b) If you are careless, you could easily become infected with this virus

c) And then, even if you have no symptoms, you could pass this infection to others who could become seriously ill with COVID-19

d) Some may be disabled or have special health problems making them extra vulnerable to serious complications if they develop COVID-19

e) They could benefit from you showing compassion to them by offering to help them with their shopping for food or other basic needs
WHAT TO DO IF SOMEONE IS SICK

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a) Calling ahead before seeking care - either at your Primary Care Doctor’s Clinic or at a Hospital’s Emergency Department - is very important in order to receive instructions and to allow them to properly prepare for your arrival
b) However, if very sick, you may need to call, then promptly go directly to the hospital

HOW TO IMPROVE YOUR GENERAL HEALTH

a) Remember that taking good care of yourself and your family can help support your family’s good health to better fight this viral infection
b) Suggestions include:
   i) Eating a good diet with a variety of food choices including fruits and vegetables
   ii) Drinking plenty of clean water every day
   iii) Getting a good night of sleep every night (7-8 hours if possible)
   iv) Getting regular exercise several times weekly
   v) Maintaining important social connections – even if by cellphone, rather than face to-face
   vi) Not allowing yourself to feel too much stress about COVID-19
   vii) AVOID: tobacco products/smoking; alcohol; or other drugs to deal with your emotions

SOCIAL STIGMA ASSOCIATED WITH COVID-19 (FROM WHO AND UNICEF)

a) During a Pandemic, this may mean people are labelled, stereotyped, discriminated against, treated separately, and/or experience loss of status because of a perceived link with a disease
b) Such treatment can negatively affect those with the disease, as well as their caregivers, family, friends and communities
c) It is understandable that there is confusion, anxiety, and fear among the public
   i) Unfortunately, these factors are also fueling harmful stereotypes
d) The Impact of Stigmas may:
   i) Drive people to hide the illness to avoid discrimination
ii) Prevent people from seeking health care immediately

iii) Discourage them from adopting healthy behaviors

e) HOW TO ADDRESS SOCIAL STIGMA

i) WORDS MATTER:

(1) When talking about COVID-19, certain words and language may have a negative meaning for people and fuel stigmatizing attitudes

(a) The way we communicate can affect the attitudes of others

(2) DO: talk about this new coronavirus disease (COVID-19)

(3) DON’T: attach locations or ethnicity to the disease, this is not a “Wuhan Virus”, “Chinese Virus”, etc.

(4) DO: talk about people “acquiring” or “contracting” COVID-19

(5) DON’T: talk about people “infecting others” or “spreading the virus” as it implies intentional transmission and assigns blame

(6) DO: speak accurately about the risk from COVID-19, based on scientific data and latest official health advice

(7) DON’T: repeat or share unconfirmed rumors

(8) DO: talk positively and emphasize the effectiveness of prevention and treatment measures

(a) For most people this is a disease they can overcome

(b) There are simple steps we can all take to keep ourselves, our loved ones and the most vulnerable safe

(9) DON’T: emphasize or dwell on the negative, or messages of threat; we need to work together to help keep those who are most vulnerable safe

ii) DO YOUR PART:

(1) Spreading the facts: Stigma can be heightened by insufficient knowledge about this disease

(2) Amplify the voices, stories and images of local people who have experienced the new coronavirus (COVID-19) and have recovered or who have supported a loved one through recovery to emphasize that most people do recover from COVID-19

iii) COMMUNICATION TIPS and MESSAGES:

(1) An “Infodemic” of misinformation and rumors is spreading more quickly than the current outbreak of the new coronavirus (COVID-19)

(a) This contributes to negative effects including stigmatization and discrimination

(2) Misconceptions, rumors and misinformation are contributing to stigma and discrimination which hamper response efforts

(3) Facts, not fear will stop the spread of novel coronavirus (COVID-19)

(a) Share facts and accurate information about the disease

(b) Challenge myths and stereotypes