Infection Control & Hospital Epidemiology (ICHE)

Coronavirus Disease 19 (COVID-19)
Objectives

To increase the awareness of Novel Coronavirus (COVID-19)

To update the audience on the magnitude of the problem

To communicate our preparedness toward COVID-19
• On 31 December 2019, the WHO China Country Office was informed of cases of pneumonia of unknown etiology (unknown cause) detected in Wuhan City, Hubei Province of China

• A novel coronavirus (COVID-19) was identified as the causative virus by Chinese authorities on 7 January
Large family of viruses that cause a range of illnesses in humans, from the common cold to the Severe Acute Respiratory Syndrome (SARS)

Primarily infect the upper respiratory and gastrointestinal tract of mammals and birds

Positive-stranded RNA viruses from the Coronaviridae family
• Human Coronavirus 229E
• Human Coronavirus OC43
• Severe Acute Respiratory Syndrome Coronavirus (SARS-CoV)
• Human Coronavirus NL63
• Human Coronavirus HKU1
• Middle East respiratory syndrome coronavirus (MERS-CoV), previously known as novel coronavirus 2012
• Novel coronavirus (COVID-19), also known as Wuhan pneumonia or Wuhan coronavirus
The mode(s) of transmission of the COVID-19 are currently unknown. Available information suggests that the COVID-19 is zoonotic and causes infections in humans through contact with infected animals.

Current data does suggest human-to-human transmission.

Airborne & Contact
Suspected COVID-19 case is defined as:

1. Patients with acute respiratory infection (sudden onset of at least one of the following: Fever or recent history of fever, cough, sore throat or shortness of breath) AND In the 14 days prior of onset of symptoms, met at least one of the following epidemiological criteria:

- Had a history of travel to areas with presumed ongoing community transmission of COVID-19 (China, Iran, South Korea, Japan, Singapore, Hong Kong, or any updated information added on CCC Website)

2. Adult with severe acute respiratory illness (ICU admission, ARDS* or CURB 65** score ≥3 points) AND all the following conditions fulfilled

• Testing for MERS-CoV or Influenza viruses were negative.
• Clinical assessment that patient is not improving and no clear underlying causes.
• With or without identified epidemiological link to COVID-19 cases.

** CURB-65 = Confusion, Urea nitrogen, Respiratory rate, Blood pressure, 65 years of age and older.
“Close Contact” is defined as:

- Health care associated exposure, including providing direct care for COVID-19 patients, working with HCWs infected with COVID-19, visiting patients or staying in the same close environment of a COVID-19 patient.
- Working together in close proximity or sharing the same classroom environment with a COVID-19 patient.
- Traveling together with COVID-19 patient in any kind of transportation.
- Living in the same household as a COVID-19 patient.
Surveillance Case Definition

• Confirmed 2019-nCoV is defined as:
  • A Confirmed case is defined as a suspected case with laboratory confirmation of 2019-nCoV infection
Laboratory Diagnosis

AT THIS STAGE, THE LABORATORY TESTING FOR (COVID-19) IS PERFORMED AT THE NATIONAL PUBLIC HEALTH LAB ONLY

TESTING IS PERFORMED TO CONFIRM A CLINICALLY SUSPECTED CASE AND TO SCREEN CONTACTS
Sample Collection and Transport

• Two upper respiratory tract specimens should be collected

• Each sample should consist of both (nasopharyngeal and throat swabs) utilizing the two swabs that comes with each viral transport medium.

• The small thin flexi swab is used for nasopharyngeal and the thick swab for throat. Both swabs should be placed in the same container.
By calling 1937 to report a notifiable infectious disease AND

Through the Health Electronic Surveillance Network (HESN) under “acute respiratory illness-unspecified”
Currently, there is no known treatment or vaccine available for either people or animals.

Intensive supportive care with the treatment of symptoms is the main approach to manage the infection in people.
Infection control in Healthcare Facilities

Hand hygiene

Visual triage at the entry point of the healthcare facility, for early identification of all patients with acute respiratory illness.

Practice Airborne & Contact precautions while handling 2019-nCoV patient (suspected/confirmed), or any related specimens.

wear a fit-tested N95 mask/PAPR, eye protection (i.e. goggles or a face shield), gloves and impermeable apron.
## Fit Test Kit

<table>
<thead>
<tr>
<th>Item</th>
<th>Picture</th>
<th>Item Code Number</th>
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<tbody>
<tr>
<td>3M Qualitative Fit Test Kit</td>
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<tr>
<td>3M Fit Test Solution</td>
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<tr>
<td>3M Sensitivity Solution</td>
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# N95 Mask Types

<table>
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<tr>
<th>N95 Mask</th>
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<tr>
<td>3M 1860-S</td>
<td><img src="image3.png" alt="Picture" /></td>
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<td>3M 1804</td>
<td><img src="image4.png" alt="Picture" /></td>
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<tr>
<td>Halyard (Duck Bill) – Regular Size 46767</td>
<td><img src="image5.png" alt="Picture" /></td>
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<tr>
<td>Halyard (Duck Bill) – Small Size 46867</td>
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</table>

3/12/2020
# Powered Air Purifying Respirator (PAPR)

<table>
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<tr>
<th>Item</th>
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<tr>
<td>Maxair Disposable Hood</td>
<td><img src="image2.png" alt="Maxair Disposable Hood" /></td>
<td>426031</td>
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<tr>
<td>Maxair Comfort Strip</td>
<td><img src="image3.png" alt="Maxair Comfort Strip" /></td>
<td>426099</td>
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</table>
Updated Situation

https://www.who.int/emergencies/diseases/novel-coronavirus-2019/situation-reports/
Updated Surveillance

https://gisanddata.maps.arcgis.com/apps/opsdashboard/index.html#/bda7594740fd40299423467b48e9ecf6
National Plan

On 31 December 2019, the WHO China Country Office was informed of cases of pneumonia of unknown etiology (unknown cause) detected in Wuhan City, Hubei Province of China. A novel coronavirus (2019-nCoV) was identified as the causative virus by Chinese authorities on 7 January.

https://www.moh.gov.sa/CCC/events/international/Pages/default.aspx
National Plan

Interim Guide to Novel Coronavirus Infection 2019-nCoV

Epidemiology

Novel (new) Coronavirus (2019-2019-nCoV) is a new strain of coronavirus that was first identified in a cluster of pneumonia cases in Wuhan City, Hubei Province of China. Most of the cases have had exposure to a large seafood and animal market.

# Hospital Plan

<table>
<thead>
<tr>
<th>Title:</th>
<th>Control and Management of Febrile Respiratory Illnesses (FRI)-Severe Acute Respiratory Illness (SARI)</th>
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<td>INFECTION CTRL &amp; HOSP EPID (Dpt)-R, MED &amp; CLIN AFFAIRS (Dpt)-R, NURSING AFFAIRS (Dpt)-R</td>
</tr>
<tr>
<td>Approved By:</td>
<td>HAIL ALABDELY</td>
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</tbody>
</table>

INFECTION CONTROL COMMITTEE (ICC), KFSH&RC (GEN. ORG.) - RIYADH

MBC: , Ext: 33801 , Fax: Click to edit

INTERNAL MEMO

TO: Distribution

FROM: Hail Alabdely, MD
Charman
Infection Control Committee (ICC), KFSH&RC (Gen. Org.) - Riyadh

DATE: 28 Jumada Al Awal 1441
23 January 2020

REF: C172/8/41

SUBJECT: CURRENT NEW EMERGING NOVEL CORONAVIRUS IN CHINA
Hospital Plan

Infection Control & Hospital Epidemiology (ICHE) Newsletter
Novel Coronavirus Infection 2019-nCoV
January 2020

Epidemiology:
Novel (new) Coronavirus (2019-nCoV) is a new strain of coronavirus that was first identified in a cluster of pneumonia cases in Wuhan City, Hubei Province of China. Most of the cases have had exposure to a large seafood and animal market.

Mode of Transmission:
The mode(s) of transmission of the 2019-nCoV are currently unknown. Available information suggests that the 2019-nCoV is zoonotic and causes infections in humans through contact with infected animals. Current data does not suggest sustained human-to-human transmission.

Clinical Feature:
Most of the cases have shown respiratory symptoms, fever, shortness of breath and pneumonia.

Treatment:
Currently, there is no known treatment or vaccine available for either people or animals. Intensive supportive care with the treatment of symptoms is the main approach to manage the infection in people.
Department of Infection Control and Hospital Epidemiology (ICHE)

Novel Corona Virus (2019-nCoV)

Key prevention for Novel Corona Virus (2019-nCoV):
- Rapid identification of suspected / confirmed cases
- Prompt initiation of the appropriate transmission based precautions (airborne & contact)
- Strict adherence to standard precautions including hand hygiene, personal protective equipment (PPE) use, environmental cleaning and others

Case Definition for Suspected Case (2019-nCoV)

1. Defined as a person with acute respiratory illness (fever with cough and/or shortness of breath) AND any of the following:
   - A history of travel to China in the 14 days prior to symptom onset
   - A close physical contact in the past 14 days with a confirmed case of 2019-nCoV infection

2. Sever Acute Respiratory Illness (SARI*) and testing for the common infectious etiologies were not revealing
   *SARI: An Acute respiratory illness with history of fever or measured temperature ≥38 C° and cough; onset within the last 10 days; and requiring hospitalization.

Contact Infection Control and Hospital Epidemiology (ICHE)
for further informations: Ext. 33811 / 33883

Novel Coronavirus Infection (2019-nCoV)
Hospital Plan

- Formulate of a task force (Completed)
- 2019-nCoV Guidelines (Ongoing)
- Update Adult & Pediatric SARI electronic form (Completed)
- Availability of the test in-house vs commercial (Completed)
- Increase the PPE supply (Completed)
- Education sessions (Ongoing)
- 2019-nCoV poster (Completed)
- Increase the fit test compliance (Ongoing)
Always practice hand hygiene, cough etiquette, respiratory hygiene, and isolation precautions

Be vigilant on respiratory symptoms

An ounce of prevention is better than a pound of cure
Thank you