Quick Facts About the Novel Coronavirus 2019-nCoV Infection

Health Sector
Dhaka Ahsania Mission
What is a Coronavirus

- Round shaped RNA virus
- Attacks respiratory system
Coronavirus Infection

• Common human virus. There are seven types identified
• Causes mild to moderate upper respiratory symptoms
• Two newer human Coronaviruses, **MERS-CoV** and **SARS-CoV** have been known to cause severe illness and death
• Also infects camels, cats, bats. Sometimes a virus evolves and reproduces itself in other animals jumping species and causes severe disease
Two previous deadly Coronavirus strain attack

- **Severe Acute Respiratory Syndrome (SARS) CoV**
  - In 2002 and in 2004
  - Originated in China
  - There were also a small number of cases in several other countries, including 4 in the UK, plus a significant outbreak in Toronto, Canada.
  - There were 8,098 reported cases of SARS and 774 deaths
Two previous deadly Coronavirus strain attack

- Middle East Respiratory Syndrome (MERS) CoV
  - In 2012
  - First identified in Middle East and was most common in there
Novel Coronavirus 2019-nCoV: What happened in China

• On 31 December 2019, the World Health Organisation (WHO) was informed by China of cases of *pneumonia* caused by an unknown organism in Wuhan, central China

• On 9 January 2020, WHO announced that a *new Coronavirus* had been detected in patient samples in Wuhan. This virus is now referred to as Novel Coronavirus 2019-nCoV
Novel Coronavirus 2019-nCoV: Current Worldwide Situation

- **Globally**
  - 24,554 confirmed cases

- **China**
  - 24,363 confirmed cases
  - 3,219 severe
  - 491 death

- **Outside China**
  - 191 confirmed
  - 24 countries
  - 1 death

*As of 5 February 2020*
As of 5 February 2020

Distribution of 2019-nCoV cases as of 05 February 2020

[Map showing global distribution of 2019-nCoV cases as of 05 February 2020, with dense clusters in China and several other countries.]
Novel Coronavirus 2019-nCoV: Confirmed Cases

- **Western Pacific Region**
  China, Japan, Republic of Korea, Vietnam, Singapore, Australia, Malaysia, Cambodia, Philippines, Thailand,

- **South East Asia Region**
  Nepal (1), Sri Lanka, India (2)

- **Region of the Americas**
  United States and Canada

- **European Region**
  Germany, Italy, Russian Federation, Spain, Sweden, United Kingdom, Belgium

- **Middle Eastern Region**
  United Arab Emirates

As of 5 February 2020
Novel Coronavirus 2019-nCoV: Spread

• By large droplets through coughing, sneezing and kissing
• Contact with infected secretions (ie saliva)
• nCoV has been detected in blood, urine and feces
• nCoV showed human-to-human transmission, not just from animal to person
• nCoV can spread before a person shows any symptoms
Novel Coronavirus 2019-nCoV: Symptoms

• Pneumonia symptoms
  ➢ Fever (high grade)
  ➢ Flu-like symptoms such as coughing, headache
  ➢ Shortness of breath and breathing difficulties

• Diarrhea

• General body weakness and myalgia (fatigue)
Novel Coronavirus 2019-nCoV: Symptoms

- In severe cases, individuals elicit symptoms of pneumonia with:
  - Vomiting of blood
  - Decrease WBC count
  - Acute heart muscle injury
  - Kidney failure and
  - Eventually, death
2019-nCoV: Spread and Symptoms, at a glance
Novel Coronavirus 2019-nCoV: Diagnosis

• Specimens to identify nCoV
  - Nasal/oral swabs, sputum lavage from throat
  - Lung tissue from biopsy or autopsy
  - Whole blood
  - Urine

• Virus identification, CRISPR, RT-PCR

Collection of the samples should be done with CAUTION and all samples regarded as potentially infectious with regard to strict adherence to Infection Prevention and Control guidelines.
Novel Coronavirus 2019-nCoV: Treatment

• There is no effective medicine available to destroy the virus
• Antivirals are not particularly effective against this strain
• Medical staffs provide symptomatic treatment for the infection -
  ➢ Fever
  ➢ Cough
  ➢ Pain
  ➢ Breathlessness leading to decrease oxygen level in blood
Novel Coronavirus 2019-nCoV: Preventive measures

- Maintaining basic hand and respiratory hygiene
- Avoiding close contact with anyone showing symptoms
- Avoid contact with farm or wild animals such as bats
- Avoiding consumption of raw/undercooked animal products
- Staying home isolated from others when they are sick
- Cleaning and disinfecting frequently touched objects and surfaces
Inside-outside of a surgical mask

- Surgical mask is correctly worn only in one way
- **Blue side is liquid repellant** to keep fluids from leaking through into your nasal cavity. It is worn on the outside
- If it’s a standard 3 ply mask, neither the outer and inner layers filter any bacteria
- **The filtration is done by the center layer**
- White side absorbs exhaled fluids that would otherwise collect on the mask and decrease its effectiveness
Novel Coronavirus 2019-nCoV: Why it is dangerous

- nCoV might have the ability to jump species
- Not specified incubation period, although it has been identified to be around 14 days
- nCoV has been replicating itself in human body very rapidly
- Quick progression to worsening symptoms
- nCoV can spread even in asymptomatic conditions
- Source of the nCoV has not yet been clearly identified
Novel Coronavirus 2019-nCoV: Bangladesh Perspective

- Airport authority screened 6,789 passengers
- 837 individuals entered Bangladesh who were under scrutiny for nCoV
- Tests were conducted on samples from 39 individuals
- Suspected cases were *isolated* and *quarantined*

So far all tests ensure that there is no nCoV infection patient
Novel Coronavirus 2019-nCoV: Bangladesh Perspective

Institute of Epidemiology, Disease Control and Research (IEDCR) has circulated a plan to fight nCoV infection in Bangladesh in line with the WHO Global Strategic Preparedness and Response Plan.

It’s objectives are –

• To stop further transmission of the infection
• To ensure isolation of suspected cases, quarantine of nCoV patients
Novel Coronavirus 2019-nCoV: Bangladesh Perspective

IEDCR has opened hotlines to assist the patients with information and other necessary tests in suspected nCoV infection –

• 01937110011
• 01937000011
• 01927711784
• 01927711785
Demonstrations

Hand wash - https://www.youtube.com/watch?v=3PmVJQUCM4E
Mask wearing - https://www.youtube.com/watch?v=D8v3-IQambM
Sources of Information

- Hundreds of scientific papers have been published on nature, spread and other epidemiological factors of nCoV in last few days. Information on this presentation have been collected from the most recent and well accepted journal papers published in renowned platforms such as Nature, NEJM, Lancet
  - https://www.nature.com/articles/d41586-020-00180-8
  - https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(20)30304-4/fulltext
  - https://www.nejm.org/coronavirus?query=TOC&fbclid=IwAR3kd9bapF_dBk8GJfneUdCBIWma8JXna_5M0pfw-Ph6_jy6xtUvEkUs8fE
  - https://www.thelancet.com/journals/lanres/article/PIIS2213-2600(20)30056-4/fulltext
  - https://www.thelancet.com/journals/lanplh/article/PIIS2542-5196(20)30032-2/fulltext
- Communicable Disease Control (CDC) website (https://www.cdc.gov/coronavirus/)
- Surgical mask layers and protection criteria
  - https://www.ajicjournal.org/article/S0196-6553(08)00751-7/fulltext
Thanks all and stay safe!

A DAM Health Sector initiative against nCoV infection