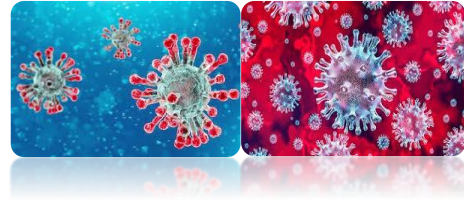


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## OVERVIEW OF COVID-19

**Corona** virus derives its name from spikes which are seen in electron microscope which resembles a crown. There are 7 types of corona viruses, i.e HKU1, NL63, 229E and OC43. These viruses cause symptoms of common cold mostly in children during winter and early spring. Outbreaks happen every 2 to 4 years and they can be identified in routine Respiratory viral panel in laboratory.

In comparison the novel corona viruses are combination of bat virus and virus of other mammals. There are 3 types and they are not part of routine viral panel in laboratories. They are

- severe acute respiratory syndrome (SARS)
- Middle Eastern respiratory syndrome (MERS)
- Coronavirus 2019 (COVID 19, SARS-COV-2)

Infection with Covid-19 started in Wuhan province in China in November, 2019 and so far 200 countries have reported the cases .WHO declared Covid-19 as an emergency on 30/01/2020, followed by USA on 31/01/2020 and WHO declared Pandemic on 12/03/2020. First case in Pakistan was reported on 26th Feb 2020 and as of today more than 2000 people are affected and close to 30 deaths have been reported from Pakistan.

**Infectivity:** virus spreads from person to person ,it is a droplet infection that can infect within 3 to 6 feet distance and has an incubation period of 2 to 14 days with median of 5 days , but incubation period may go up to 19- 24 days.

Infectivity of any disease is determined by ‘Basic Reproductive Number’ (Ro), i.e how many secondary cases are infected on average by each person who is infected. Ro for Corona virus is 2.5(2.2-3.5),It is more easily transmittable than SARS- CoV. In comparison, regular flu has Ro of 1.5-2, while Ro of measles is 7 or 8 persons.

**Clinical presentation:**Most common symptoms associated with Covid-19 are fever 88%, cough 68%, dyspnoea /SOB in 19%, sputum production in 33% and myalgias in 15% of patients. Other symptoms include sore throat, nasal congestion, nausea , vomiting. In children limited information is available as there are fewer pediatric cases with minimal deaths. Clinical presentation reported range from asymptomatic to mild upper respiratory symptoms to clinical presentation of pneumonia .Even in adults, 80% are asymptomatic or mild cases. Majority of hospitalized patient are over 60 years with co-morbidities like Diabetes and Hypertension. Case fatality in adults has been reported to be 0.5-3%. Death is usually from multi-organ failure which includes ARDS and kidney failure.

**Corona virus infection in children: ref: Dong.Y, et al: pediatrics 2020. Infection in Chinese Children.**

In recent epidemic in China 2,145 children with Covid 19 were reported out of total of 80,000 – to 90,000 cases, out of which 90% were either asymptomatic or mild or moderate with only 1 death reported due to lethality of the infection. Number of deaths divided by total number of cases under 18 years of cases is 0.05%.

In Italy total of 330 cases have been reported in children.

**Diagnosis:** Polymerase chain reaction (PCR) testing is the most definite testing recommended and testing centre should be co-ordinated with local and state authorities.

#### **COVID -19 and Pregnancy:**

147 pregnant women were suspected out of which 8% had severe disease, 1% were critical (as compared to normal population in which the incidence of severe disease is 14% and 6% are critical).

**ACOG STATEMENT:** In spite of low incidence in pregnant woman, ACOG is warning physicians that Pregnancy may be at highest risk of severe illness, morbidities and mortality compared with general population, reasons for which may be Physiological changes and relative immune-suppression in Pregnancy.

#### **COVID-19 in FETUS and Newborn:**

There is not enough data for vertical transmission of virus from mother to the fetus or newborn neither the virus has been found in amniotic fluid, umbilical cord blood or placenta. (Zhu et al 2020, Chen et al 2020; Zhang et al 2020; Lie et al 2020).

Few affected newborn have been reported (Qiao, 2020, Murphy, 2020).

#### **Breast feeding:**

Although No evidence of its passage through Breast feeding have been reported. **CDC** has issued precautionary guidance for mothers with COVID-19 who are Breast feeding as follows.

Resp. distress, premature labor and even death have been found in infants born to mothers with COVID-19. But no definite evidence that these are related to COVID -19 infection in their mothers.

#### **Royal College of Obstetricians ( RCOG).**

Data is lacking about increased risk of pregnancy loss.

Outcome for pregnant women is similar to women without pregnancy.

There is some evidence that it would be asymptomatic to life threatening.

**Conclusion:**

**ECDC{ European Centre For Disease Control}**: All Governments have to apply restrictive measures as follows:

- One should be vigilant for international travelers with respiratory symptoms.
- Take infection control precautions
- Collect nasal, pharyngeal and lower respiratory specimen from infected people.
- Save urine, stool, serum and resp. pathology specimen.
- All patients with resp. symptoms should be tested.
- Inform NIH, local and state health dept about suspected and diagnosed patients.