Focus on the current outbreak of novel coronavirus (2019-nCoV)

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The coronavirus is typically associated with the common cold, as one of a variety of causative viral organisms.

However, the current outbreak of a novel coronavirus,[1] dubbed (2019-nCoV) began in Wuhan, China, on the 31st of December 2019, with a cluster of pneumonia cases. These cases were soon linked to a previously unknown virus that has since been identified as a novel coronavirus.

The coronavirus is typically linked to milder forms of respiratory (and sometimes also gastrointestinal) illness, but two specific examples from the past two decades or so, have been known to cause much more severe forms or respiratory illness, namely:

- The severe acute respiratory syndrome coronavirus, or SARS-CoV, which was also first identified in China, in 2003, and
- The Middle East respiratory syndrome coronavirus, or MERS-CoV, which was first identified in Saudi Arabia in 2012.

It was soon discovered that the initial cluster of pneumonia cases in Wuhan were all associated with a local market place, which sells seafood and live animals. Like the two previous examples, the novel CoV (2019-nCoV), is currently being suspected of having been caused by a so-called spill-over from an animal reservoir (yet to be definitively determined)—SARS-CoV was the result of a spill-over from the civet cat, and MERS-CoV from camels.

Since its initial appearance, the novel CoV (2019-nCoV) has been spreading rapidly, both within China, as well as beyond its borders—with family members, housemates and healthcare workers being easily infected due to close human contact. Person-to-person transmission is most likely taking place via the same mechanisms is illustrated in Figure 1.

The symptoms are very much influenza-like and may range from mild to severe. These include respiratory symptoms, fever, pneumonia and renal failure, and a number of patients have already died from this disease. The exact nature of the novel CoV (2019-nCoV), its symptomatology, virulence, associate mortality rate, and other aspects, are still being investigated.

A PCR-test is required to make a definitive diagnosis, and current treatment is aimed at symptomatic relief and the support of vital functions. Both potential treatments and possible vaccine candidates are currently being investigated and/or developed.

The most important measures in trying to contain the spread of novel CoV (2019-nCoV) are:

- Limit unnecessary contact with persons that exhibit signs and symptoms of this illness, or that have been positively diagnosed with this virus infection. People that feel unwell need to avoid unnecessary contact with other people but should seek medical assistance if needed.
- Regularly wash your hands with soap and water or use an alcohol-based hand sanitiser.
- When sneezing or coughing, cover your mouth and nose with a medical face mask, tissue paper or a flexed elbow (i.e. do not sneeze or cough into your hands), and wash or sanitize your hands immediately thereafter. Discard used face masks and tissues appropriately.
- Healthcare providers should consider the following when interacting with patients that are suspected of having contracted the novel CoV (2019-nCoV):
  - The use of protective measures that are aimed at organisms that spread through respiratory and droplet transmission.
  - The patient's recent travel history and unprotected contact with live animals, or the eating of uncooked or undercooked animal products.

It is recommended that healthcare workers regularly check for relevant updates on reputable health-related websites, such as those of the South African National Department of Health, the World Health Organization (WHO), or the United States Centers for Disease Control and Prevention (CDC).

Note that the novel coronavirus (2019-nCoV) was officially renamed as coronavirus disease (COVID-19), as announced by the Director-General of the WHO on the 11th of February 2020. During this announcement, the Director-General also mentioned that the COVID-19 death toll in China has risen to more than 1 000 victims of this rapidly-spreading disease, and that 42 708 confirmed cases have been reported in China so far. In addition, another 393 confirmed cases have been reported in 24 other countries, as well as one death outside of China.

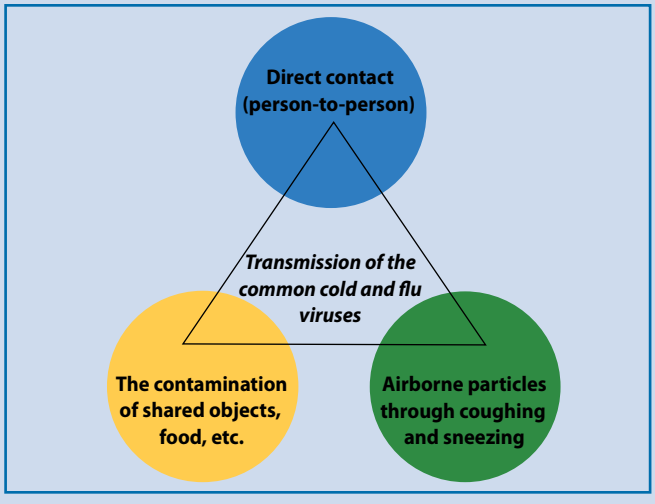

Figure 1: Transmission of viruses that cause common colds and flu[2]

References

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