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Introduction

Background

Coronavirus is a kind of common virus that causes an infection in the nose, sinuses, or upper throat. Most coronaviruses aren't dangerous. In early 2020, after a December 2019 outbreak in China, the World Health Organization identified SARS-CoV-2 as a new type of coronavirus. The outbreak quickly spread around the world. The new strain of coronavirus — COVID-19 — was first reported in Wuhan, China in December 2019. The virus has since spread to all continents. COVID-19 is a disease caused by SARS-CoV-2 that can trigger what doctors call a respiratory tract infection. It can affect the upper respiratory tract or lower respiratory tract (windpipe and lungs). It spreads the same way other coronaviruses do, mainly through person-to-person contact. Infections range from mild to deadly. SARS-CoV-2 is one of seven types of coronavirus, including the ones that cause severe diseases like Middle East respiratory syndrome (MERS) and sudden acute respiratory syndrome (SARS). The other coronaviruses cause most of the colds that affect us during the year but aren't a serious threat for otherwise healthy people (Riou and Althaus, 2019).

Further, the number of people infected changes daily. More than 197,500,000 people in the world have been infected. Over 4,900,000 people have died. Some 192 countries and territories on all continents have now reported cases of COVID-19. COVID-19 enters the body through your mouth, nose or eyes (directly from the airborne droplets or from transfer of the virus from your hands to your face). The virus travels to the back of your nasal passages and mucous membrane in the back of your throat. It attaches to cells there, begins to multiply and moves into lung tissue. From there, the virus can spread to other body tissues.

The time between becoming infected and showing symptoms (incubation period) can range from 2 to 14 days. The average time before experiencing symptoms is five days. Symptoms can range in severity from very mild to severe. In about 80% of patients, COVID-19 causes only mild symptoms, although this may change as variants emerge.

Ways through which the virus spread:

- The virus travels in respiratory droplets released into the air when an infected person coughs, sneezes, talks, sings or breathes near you (within 6 feet). You may be infected if you inhale these droplets.
- You can also get COVID-19 from close contact (touching, shaking hands) with an infected person and then touching your face.
- It's considered possible to get COVID-19 after touching a contaminated surface and then touching your eyes, mouth, or nose before washing your hands. But it's thought to be unlikely (Pierce, McManus, Hope, Hotopf, Ford and Hatch, 2021).

The best way to avoid spreading COVID-19 to others is to:

- Stay 6 feet away from others whenever possible.
- Wear a cloth mask that covers your mouth and nose when around others.
- Wash your hands often. If soap is not available, use a hand sanitizer that contains at least 60% alcohol.
- Avoid crowded indoor spaces. Bring in outdoor air as much as possible.
- Stay self-isolated at home if you are feeling ill with symptoms that could be COVID-19 or have a positive test for COVID-19.
- Clean and disinfect frequently touched surfaces.

Persons at greatest risk of contracting COVID-19 are:

- People who live in or have recently traveled to any area with ongoing active spread.
- People who have had close contact with a person who has a laboratory-confirmed or a suspected case of the COVID-19 virus. Close contact is defined as being within 6 feet of an infected person for a *cumulative* total of 15 minutes or more over a 24-hour period.
- People over age 60 who have pre-existing medical conditions or a weakened immune system.

Strategies in the UK

Corona Virus have had great impacts on the health and other important system in the UK, but the Government has taken action to minimise these. There has been a fall in total emergency admissions since the onset of the pandemic. Particularly early in the pandemic, some of these lower admissions may have been due to people's reticence to attend A&E and other NHS services. The Government and NHS have emphasised the importance of continuing to seek NHS treatment when needed, and since the summer the NHS has continued to provide full non-COVID-19 treatment in all areas except those where case rates are highest. There has also been a reduction in non-emergency procedures, as the NHS halted some elective activity to free capacity to deal with the first wave of COVID-19 (Davillas and Jones, 2020).

Major efforts have since been made to resume this activity, supported by action to control COVID-19, to minimise the negative health consequences. In the second wave, the NHS has sought to maintain elective surgery, only pausing it in those trusts where this is absolutely necessary. Non-emergency admissions are still lower than in 2019, 13 which reflects both the continued use of resources on COVID-19 and the importance of running hospitals in a COVID-19-safe way. GP appointments have also changed during the pandemic. Efforts to control spread of COVID-19, institute quarantine and isolation measures, and appropriately clinically manage patients all require useful screening and diagnostic tools. While SARS-CoV-2 is spreading, other respiratory infections may be more common in a local community. Earlier in the year, the number of appointments made fell drastically. They have since recovered and, compared to 2019, a larger proportion are now via telemedicine, a form of engagement that is supported by a majority of people in England. In terms of immediate impacts of social distancing, there have been a range of health effects, some positive and some negative. For example:

- ONS data indicates a sharp increase in anxiety rates in March 2020 as the pandemic spread, but these have subsequently fallen.
- There was a 7.1% decrease in 'active' adults from mid-March to mid-May 2020 compared to the same period in 2019. This improved subsequently, particularly when people have been able to access gyms and group exercise.
- Air pollution, a major source of ill health, has improved considerably during 2020.

England will move back into a regional tier system. This approach targets the toughest measures only in areas where the virus is most prevalent and which are seeing sharper increases in the rate

of infection, while maintaining a geographical scale that is pragmatic and reflects the interconnectedness of our local areas.

To maintain employment and to protect individuals and businesses from economic hardship, a coronavirus job retention scheme was implemented for the period between late March and the end of October 2021 to cover 80 percent of the regular salary of furloughed employees, up to a maximum of £2,500 per month. In April, the UK had more than 10,000 deaths related to COVID-19. In May, phased reopening of shops and schools was announced, and those who were unable to work from home were expected to return to the workplace.

Strategies in the Saudi Arabia

Following the WHO declaration, countries around the globe, including the Kingdom of Saudi Arabia (KSA), have been leaning on response plans to respond to the pandemic and contain the virus. Following the confirmation of its first case of COVID-19, on Monday 2 March 2020, the Saudi government has been vigilantly monitoring the situation and developing country-specific measures that are in line with the WHO guidelines in dealing with the outbreak. These includes suspending all inbounds and outbounds flights, closing all malls and shops in the country, except pharmacies and grocery stores, and closing down schools and universities. Umrah visas have been suspended, as have prayers at mosques, including the two Holy Mosques in Mekkah and Almadina. On 24 March 2020, the government imposed a nationwide curfew to restrict people movements for most of the day hours (WHO, 2020).

Despite the unprecedented national measures in combating the outbreak, the success or failure of these efforts is largely dependent on public behavior. Specifically, public adherence to preventive measures established by the government is of prime importance to prevent the spread of the disease (Parry, 2020). The health electronic surveillance network provided a robust online solution in response to the pandemic. The system was an integrated public health information system that created an extensive and easily accessible database on one platform to overcome the challenges of linking all health care sectors in the country. This network contributed to disease detection, response, prevention, control and community health monitoring, and enabled

decision-makers to implement necessary measures based on timely and high-quality data (Arab-News, 2020).

Saudi Arabia launched a mass screening programme for early detection and immediate control of the spread of COVID-19. The first stage focused on screening individuals in highly populated districts through field tests; this was implemented in 807 locations. The second stage was facilitated through the Mawid app self-assessment tool, which classifies users as low or high risk. The low-risk group was the targeted population and was screened in designated primary care centres (Alsofayan, Althunayyan, Khan, Hakawi, and Assiri, 2020). The third stage was screening suspected COVID-19 cases with no symptoms at specialized drive-through testing centres, so-called takkad centres (30) – 1 847 573 tests had been administered up to mid-August 2020. The implementation of Tetamman clinics (specialized fever clinics) was another initiative devoted to screening people suspected of having COVID-19 without prior appointments. This service was free of charge, and provided diagnostic tests and therapeutic options for people with suspected COVID-19 symptoms, such as fever, shortness of breath, cough and other common clinical characteristics of COVID-19 (Health Cluster, 2020).

All Saudi primary health care centres, hospitals and quarantine facilities were prepared to receive large numbers of suspected and confirmed cases of COVID-19. This high level of preparedness put the health care system under constant pressure. Personnel at these facilities were aware of the definition of COVID-19 and gave priority and appropriate care to patients at risk of infection. In the early phases of the pandemic, the General Directorate of Hospitals designated reference hospitals to receive COVID-19 cases and continuously assessed their readiness. Reference hospitals reported their estimated isolation capacity, intensive care beds and their occupancy rates. Moreover, the General Directorate of Hospitals monitored respirators and respiratory consumables, calculated the workforce required for escalation of cases and planned all necessary measures. Dedicated ambulance teams were allocated to transport confirmed and suspected cases to and from health facilities in cooperation with the Ministry of Health referral programme (Coronavirus disease 19 guidelines, 2020).

Ensuring that field hospitals were prepared and ready to support the health system was a priority at the early phases of the pandemic, as these facilities were used to provide COVID-19 vaccination in large numbers. Four field hospitals with a capacity of 1100 beds were put into operation in order to increase capacity during the pandemic. Psychological counselling and support were provided to patients, health workers and the community in the early stages of the

pandemic in cooperation with mental health teams (Alghamdi, Alqahtani and Aldhahir, 2020). In addition, private health care facilities, home medical care and telemedicine centres were activated to relieve the strain on Ministry of Health facilities.

Current public health policy approaches to reduce or control incidence

In health care settings, the main infection prevention and control (IPC) strategies to prevent or limit COVID-19 transmission include the following:

1. ensuring triage, early recognition, and source control (isolating suspected and confirmed COVID-19 patients);
2. applying standard precautions³ for all patients and including diligent hand hygiene;
3. implementing empiric additional precautions (droplet and contact and, wherever applicable for aerosol-generating procedures and support treatments, airborne precautions) for suspected and confirmed cases of COVID-19;
4. implementing administrative controls;
5. using environmental and engineering controls.

Recommendations

Based on current evidence, the COVID-19 virus is transmitted between people through close contact and droplets. thus, WHO recommends airborne precautions for these procedures. These are:

1. maintaining physical distance (a minimum of 1 metre) from other individuals;
2. performing hand hygiene frequently with an alcohol-based hand rub if available and if your hands are not visibly dirty or with soap and water if hands are dirty;
3. avoiding touching your eyes, nose, and mouth;
4. practicing respiratory hygiene by coughing or sneezing into a bent elbow or tissue and then immediately disposing of the tissue;
5. wearing a medical mask if you have respiratory symptoms and performing hand hygiene after disposing of the mask;
6. routine cleaning and disinfection of environmental and other frequently touched surfaces.

References

- Davillas A, Jones AM. The COVID-19 pandemic and its impact on inequality of opportunity in psychological distress in the UK. SSRN. 2020.
- Preparedness, prevention and control of coronavirus disease (COVID-19) for refugees and migrants in non-camp settings. Geneva: World Health Organization; 2020
- Health Cluster. COVID-19 response [Internet]. Geneva: World Health Organization; 2020(<https://www.who.int/health-cluster/news-and-events/news/COVID19/en/>, accessed 5 November 2020).
- Bedford J, Enria D, Giesecke J, Heymann DL, Ihekweazu C, Kobinger G, et al. COVID-19: towards controlling of a pandemic. *Lancet*. 2020;395(10229):1015–8. [https://doi.org/10.1016/S0140-6736\(20\)30673-5](https://doi.org/10.1016/S0140-6736(20)30673-5)
- Pierce M, McManus S, Hope H, Hotopf M, Ford T, Hatch SL, et al. Mental health responses to the COVID-19 pandemic: A latent class trajectory analysis using longitudinal UK data. *The Lancet Psychiatry*. 2021;8: 610–619
- Wu F, Zhao S, Yu B, Chen Y-M, Wang W, Song Z-G, et al. A new coronavirus associated with human respiratory disease in China. *Nature*. (2020) 579:265–9. doi: 10.1038/s41586-020-2008-3
- Alsofayan YM, Althunayyan SM, Khan AA, Hakawi AM, Assiri AM. Clinical characteristics of COVID-19 in Saudi Arabia: a national retrospective study. *J Infect Public Health*. 2020;13(7):920–5. <https://doi.org/10.1016/j.jiph.2020.05.026>
- Coronavirus disease 19 guidelines. Riyadh: Ministry of Health, Saudi Arabia; 2020. (<https://www.moh.gov.sa/en/Ministry/MediaCenter/Publications/Pages/covid19.aspx>, accessed 31 December 2020).
- Alghamdi S, Alqahtani J, Aldhahir A. Current status of telehealth in Saudi Arabia during COVID-19. *J Family Community Med*. 2020;27(3):208–11. https://doi.org/10.4103/jfcm.JFCM_295_20
- Riou J, Althaus CL. Pattern of early human-to-human transmission of Wuhan 2019 novel coronavirus (2019-nCoV), December 2019 to January 2020. *Eurosurveillance*. (2020) 25:2000058. doi: 10.2807/1560-7917.ES.2020.25.4.2000058
- Parry J. China coronavirus: cases surge as official admits human to human transmission. *BMJ*. (2020) 368:m236. doi: 10.1136/bmj.m236
- WHO. *Coronaviruses (COVID-19) 2020*. Available online at: <https://www.who.int/news-room/q-a-detail/q-a-coronaviruses> (accessed 1 April, 2020).