

نشرة فصلية متخصصة في مجال الوبائيات تصدر عن: وزارة الصحة - وكالة الصحة العامة - الوكالة المساعدة للصحة الوقائية - برنامج الوبائيات الحقلية

Saudi Epidemiology Bulletin (SEB) is published quarterly by

The Deputy Ministry for Public Health Assistant Agency for Preventive Health and Field Epidemiology Program (FETP) of the Ministry of Health

Index

- 2 Burden and Associated Factors of Coronavirus Disease (COVID-19) in Al-Buraimi Governorate, Oman-2020.
- 4 Evaluation of the Cold Chain Expanded Program on Immunization at Governmental and Private Health Care Centers in Riyadh city, Saudi Arabia, 1442 H-2021 G
- 6 Outbreak of COVID-19 among healthcare workers at a Diabetic Center, Al-Ahsa, Saudi Arabia - April 2020.
- 8 The first Cluster of COVID-19 cases in the Sultanate of Oman in Muttrah District, 2020
- 10 Summary of the Studies in Arabic
- 14 Top twenty notifiable reported diseases

Burden and Associated Factors of Coronavirus Disease (COVID-19) in Al-Buraimi Governorate, Oman-2020.

Reported by: Dr. Hanan Al-Marbouai, Dr. Eman Elsayed

Covid-19 virus surfaced in December 2019 in Wuhan, China and the World Health organization (WHO) categorizes it among life-threatening diseases.¹ The virus transmits rapidly between humans, and has become a global pandemic. Consequently, the WHO issued a list of individuals at a higher risk of contracting the severe Coronavirus. It includes people suffering from chronic kidney disease, cardiovascular disease, chronic respiratory disease, hypertension, diabetes and people above the age of 65 years.² Additionally, it was found that men have a higher mortality rate than women.³

In Oman, by June 8, 2021, the country reported over 226,600 Covid-19 infections and 2,434 associated deaths.^{4,5} The rampant rise in Covid-19 infections has put immense strain on Oman's healthcare system, especially since it leads to death in severe cases.

The aim of this study was to assess the risk factors associated with Coronavirus infection for early detection and control and the burden it brought to Oman

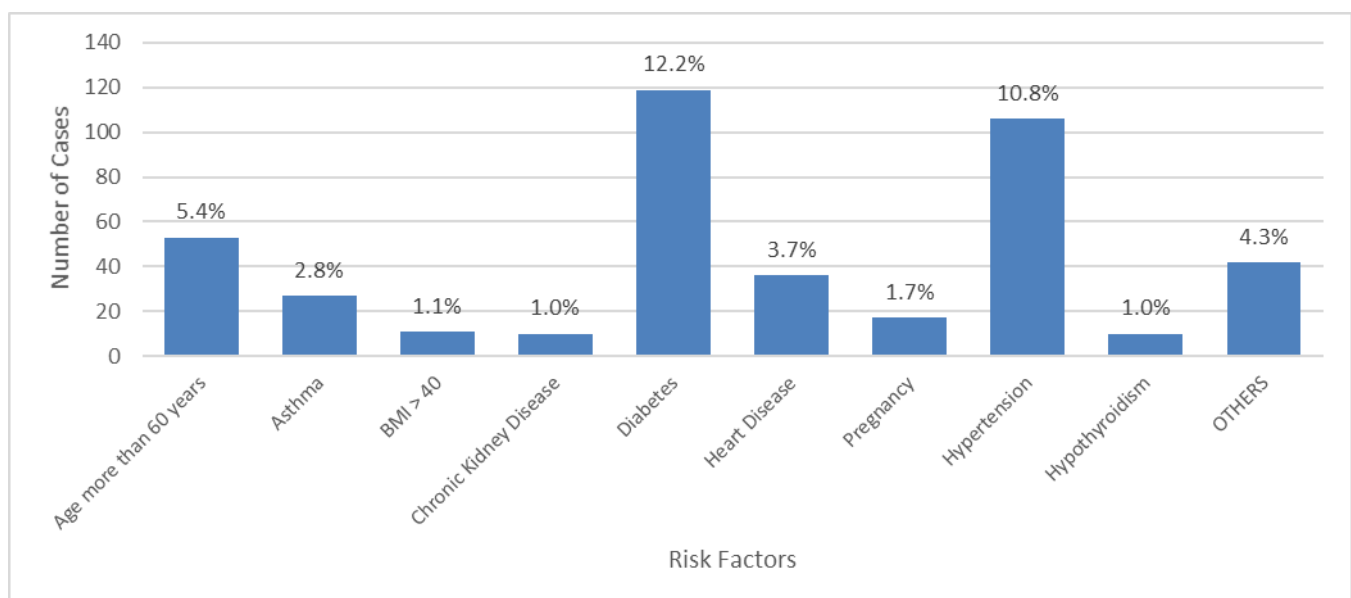
The study was conducted from February 1st, 2020, to August 31st, 2020 in Al-Buraimi Governorate, Oman. Al-Buraimi Governorate comprises of three Wilayats- Al-Buraimi, Al-Sunaynah, and Mahdha. The first two cases of Coronavirus in Oman were reported in February 24, 2020.⁴

The sample size was 977 Covid-19 patients within Al-Buraimi Governorate and our findings focused on the epidemiological and clinical features of individuals with

Covid-19 infections and the risk factors connected to the hospitalization and death rates in the Governorate. The findings showed that the Covid-19 infection rate was higher in men than women. The infection rate was 75.5 % in males and 24.5 % in females. However, we could not establish the main reason behind this difference of the infection rate. The findings indicate that Covid-19 infection rates are associated with specific risk factors which includes diabetes (12.2 %), hypertension (10.8 %), patients aged more than 60 (5.4 %), and heart disease (3.7 %). Other risk factors with lower infection levels, such as Asthma (2.8 %), BMI of above 40 (1.1 %), pregnancy (1.7 %), chronic kidney disease (1.0 %), and hypothyroidism (1.0%). Other illnesses had a combined percentage of 4.3 percent.

The people who have such underlying factors also had a higher risk of hospitalization. Out of 165 patients that suffered from the aforementioned risk factors, 67 needed admissions, while 14 required ICU admission. The risk of death for such patients is also relatively high. From these findings, we can deduce that risk factors are crucial when observing the patient's progression and the severity of the disease. The data indicates that some conditions increase the risk of hospitalization, ICU admissions, and mortality rates. WHO- guidelines such as using the disinfectant, wearing of facemask, avoid crowded places and isolation of symptomatic people should be implemented to minimize the virus spread. The study strengthens the World Health Organization's findings on the risk factors of Coronavirus.

Figure 1: The Distribution of COVID-19 Cases According to Risk Factors, Al-Buraimi, Oman, and February to August 2020.



Burden and Associated Factors of Coronavirus Disease (COVID-19) in Al-Buraimi Governorate, Oman-2020. Cont..

Editorial notes:

Numerous strains of the covid-19 have been launched in various nations throughout the world.¹ Therefore, people who have underlying risk factors must be included among the vulnerable population and protected from contracting the virus. Taking such measures will also help reduce the strain on Oman's healthcare services. Large-scale study should be conducted to address high risk groups.

References:

1. Mirimi, M., Najar, M., & Boukhatem, N. (2020). COVID-19 update: what's going on? *Journal of Materials and Environmental Science ISSN: 2028-2508 CODEN: JMESCN*, 11(6), 877-884.
2. Ahrenfeldt, L. J., Nielsen, C. R., Möller, S., Christensen, K., Lindahl-Jacobsen, R., Lindahl-Jacobsen, & Lindahl-Jacobsen. (2020). Burden and prevalence of risk factors for severe COVID-19 disease in the ageing European population – A SHARE-based analysis. doi:10.21203/rs.3.rs-73657/v1
3. Park, M. D. (2020). Sex differences in immune responses in COVID-19. *Nature Reviews Immunology*, 20(8), 461-461. doi:10.1038/s41577-020-0378-2
4. World Meters. (2020, August 20). Oman coronavirus: 83,769 cases and 609 deaths. Retrieved from <https://www.worldometers.info/coronavirus/country/oman/>
5. Khamis, F., Al Rashidi, B., Al-Zakwani, I., Al Wahaibi, A. H., Al Awaidy, S. T., Al Awaidy, ... Al Awaidy. (2020). undefined. *Oman Medical Journal*, 35(3), e145-e145. doi:10.5001/omj.2020.60

**The Saudi Epidemiology Bulletin welcomes reports from the regions.
Send correspondence, comments, calendar listing, or articles to:**

Saudi Epidemiology Bulletin

Editor-in-Chief

P.O. Box 6344

Riyadh 11442, Saudi Arabia

For Epidemiological assistance

☎ Call or Fax the FETP at 011-4939675 (Fax extension 206)

www.saudifetp.org

info@saudifetp.org

To access all published volumes of the **Saudi Epidemiology Bulletin**, visit the website:

<http://saudifetp.org/SEB.php>

Evaluation of the Cold Chain Expanded Program on Immunization at Governmental and Private Health Care Centers in Riyadh city, Saudi Arabia, 1442 H, 2021 G.

Reported by: Dr. Abdulrahman Alqahtani, Dr. Suhair Alsaleh

Immunization programs are widely used and most effective mode of health interventions.¹ The cold chain is a system for storing and transporting vaccines from the point of manufacture to the point of use while keeping them within an acceptable temperature range.² In order to work the cold chain system properly, there must be an assigned well-trained person to be responsible for vaccine storage and handling, EPI vaccine record, management and other operational issues.³

Across sectional, observational study was carried out in both governmental and private health care facilities in capital of Saudi Arabia, over a period of 3 months from March 2021 to May 2021 using structured self-administered paper-based questionnaires. Total number of primary health care facilities included in the study was 80 in which 40 were governmental and 40 were from private sector. It was found that 50% (n=20) of the government and 70% (n=28) of the private sector workers had experience of 5 years or less, while both of private and government sector workers had working experience over 6 years 20% (n=08).

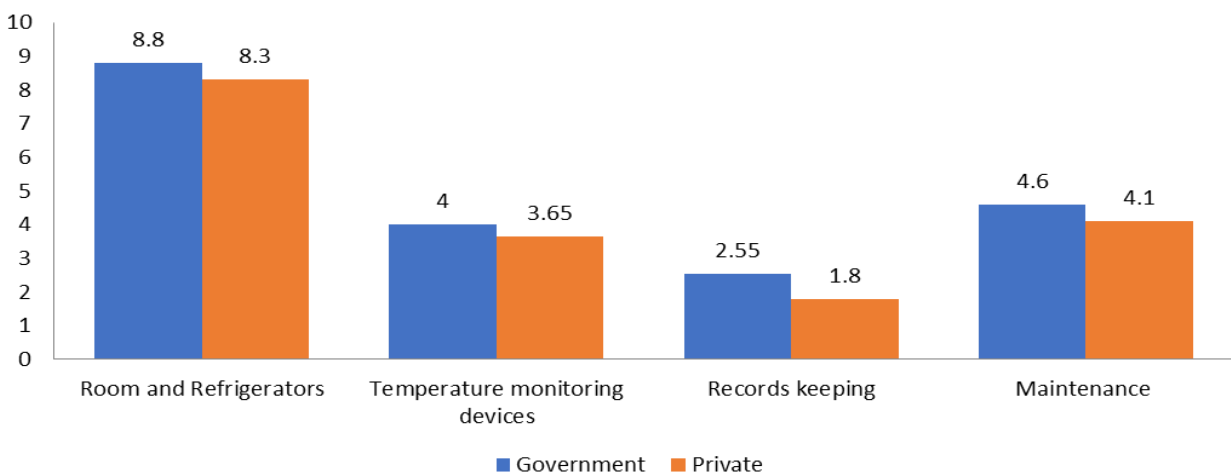
The availability of a separate vaccination room was found to be significantly higher in governmental PHCs than in private PHCs ($p=0.000$). In terms of ventilation availability, a significantly higher proportion of governmental (85%) PHC centers had both AC and ventilators/windows available, compared to (40%) of private centers ($p=0.000$). All private centers included in the study had only one refrigerator available to store vaccine while 80% of the governmental centers had two or more refrigerators available. In government PHC, 100% of facilities had thermometer to maintain and monitor the temperature of refrigerators while 95% of private PHC had the devices. Regarding placement of thermometer, 95% of government cen-

ters placed the thermometer in the shelf while 5% placed in the doors of refrigerators; in private centers 47.4% placed the device in the freezer compartment while 42.1% placed the device in the shelf.

The results showed that the mean score of Room and Refrigerator Elements for governmental PHCs was 8.8 (± 0.82), while it was 8.3 (± 1.86) for private PHCs. The overall average score of Room and Refrigerator Elements was 8.55 (± 1.14). The score for mean temperature monitoring device for government PHCs was 4.0 (0.0), and the 3.65 (± 0.92) for private PHCs centers. The overall average score of this section was 3.83 (± 0.67). Similarly, the mean temperature chart (record keeping) score for governmental PHCs was 2.55 (± 0.5) and 1.8 (± 1.2) for private PHCs. The overall average score of this section was 2.18 (± 0.98). The mean maintenance and operations score for governmental PHCs was 4.6 (± 0.49), while it was 4.1 (± 0.84) for private PHCs. The overall average score of this section was 4.35 (± 0.73). The average score obtained by government health care centers for each evaluated section was found to be significantly higher than that obtained by private health care centers. These results were similar to previous findings of Mugharbel KM et al, where results reported that all GHF clinics stored vaccines in a single refrigerator/freezer unit, while Private HC used small personal units contrary to MOH or WHO criteria.⁴

This study highlights the cold chain management programs in private and government facilities in the capital of Saudi Arabia. More importantly governmental PHC centers in the current settings comply with the standards to the guidelines, provided by Saudi Ministry of Health and WHO in comparison to private PHC centers. Study findings highlighted the need of staff training to improve the immunization room handling.

Figure 1: A comparison between government and private primary health care clinics average score for each evaluated area.



Evaluation of the Cold Chain Expanded Program on Immunization at Governmental and Private Health Care Centers in Riyadh city, Saudi Arabia, 1442 H, 2021 G. Cont...

Editorial notes:

Failure of critical management and equipment can result in the destruction of significant quantities of vaccine, resulting in enormous costs and putting an entire country's vaccination programs at risk. Once a vaccination's potency has been lost, it cannot be retrieved or restored, and the vaccine will no longer provide disease protection. As a result, disease prevalence in the population is increasing.

Regular visits and training by Ministry of Health will improve the performance of primary health care workers and adherence to cold chain management rules.

References:

1. WHO. Immunization, Vaccines and Biologicals: The Expanded Programme on Immunization. WHO. Available from: https://www.who.int/immunization/programmes_systems/supply_chain/benefits_of_immunization/en/. [Accessed 25th October 2020].
2. Organization WH. Global programme for vaccine and immunization: expanded programme on immunization: safe vaccine handling: cold chain and immunizations. Geneva: World Health Organization; 1998. p. 8-21.
3. World Health Organization regional office for the Eastern Mediterranean Alexandria, Egypt 1996. Report on the thirteenth inter-country meeting of national managers of the expanded program on immunization. Doha, Qatar 1996. WHO EM/EPI/118-E/L.
4. Mugharbel KM, Al Wakeel SM. Evaluation of the availability of cold chain tools and an assessment of health workers practice in dammam. *J Family Community Med.* 2009 Sep;16(3):83-8.

Field Epidemiology Training Program (FETP)

Dr. Adulaziz Saad Almeshal,
General Supervisor, FETP,
Editor-in-Chief

Dr. Suhair Saleh Alsaleh
Epidemiology Specialist, Bulletin Editor

Editorial Board:

Dr. Randa Nooh
Dr. Sahibzada Azhar Mujib
Dr. Shady Kamel

Outbreak of COVID-19 among healthcare workers at a Diabetic Center, Al-Ahsa, Saudi Arabia - April 2020

Reported by: Dr. Abdullah Ali Al Sayafi, Joanna Gaines

Coronaviruses are a broad family of viruses that can cause human illness, ranging from the common cold to more serious diseases such as severe acute respiratory syndrome. Most severe and fatal COVID-19 cases have occurred in the elderly or patients with underlying comorbidities, including obesity, cardiovascular diseases (CVDs), diabetes mellitus (DM), chronic lung and renal disease, hypertension, and cancer.¹

The aim of this study is to identify all COVID-19 cases, source of infection and mode of transmission at the Diabetic Center in Al-Ahsa in April 2020 to control the spread and to apply more control measures.

The Field Epidemiology Training Programme (FETP) visit was on April 3, 2020 and it involves a review of all the medical charts, an interview of the identified cases about their health status and their activities to identify the possible source of infection. All patients who visited the center during the time the infected healthcare workers at the center were identified by health electronic surveillance system (HESN) and the investigator called them every day for 14 days to inquire about their symptoms. In addition, the response plan was discussed with the Infection control department who suggested to test all employees to ensure there is no transmission among health care workers.

Facility A served approximately 700 patients regularly. In response to the first positive case, 45 employees in Facility A were tested for COVID-19 on Day 0 and Day 13. One additional case (2%) tested positive. The first case (index case) was a nurse who had a history of travel. She attended a conference in Riyadh around two weeks before symptom onset, during a time when COVID-19 cases in Riyadh were increasing. She estimated that more than 100 persons had attended the conference. She attended the first day of the conference before the conference was canceled as a COVID-19 prevention measure on the second day. The index case reported that she started to suffer from flu symptoms on March 22nd and was swabbed on March 28th. On April 2nd, the laboratory-confirmed COVID-19, and the patient was admitted to the isolation ward at KFHH for 8 days then transferred for a quarantine for 20 days before being discharged.

The second case was also a nurse at Facility A, but she did not attend the conference in Riyadh. She was tested positive on April 3rd and admitted to Al-Omran Hospital in Al-Ahsa. She was hospitalized for one day then transferred to the quarantine for 25 days before discharge. Both cases reported using shared cupboard clothes, the coffee machine, and chatting during their break time with no

personal protective equipment (PPE) for about 20 minutes or more daily. No additional laboratory-confirmed cases among patients or healthcare workers at the diabetes center, Facility A were identified. Follow-up calls with patients, and staff for 14 days using the MOH Contact Tracing Form was done.

Diabetic patients are more likely to develop complications in case they are infected with COVID-19, and special attention should be paid to ensure that the control measures are perfectly provided during the pandemic. Starting an immediate investigation after identifying the index case in a diabetes center can prevent further transmission. Continued surveillance for cases is critically important. The Ministry of Health (MOH) in the Kingdom of Saudi Arabia is very concerned about infection control and adapting new prevention measures. This is shown clearly in the Kingdom's successful development and implementation of guidelines to deal with MERS-CoV. The lessons learned by the Kingdom for controlling MERS-CoV directly relate to controlling COVID-19, given the similar methods of spread and recommended mitigation measures. These control measures are critically important given the infectious nature of COVID-19, and the large proportion of the population in KSA susceptible to worse outcomes.

Editorial notes:

The COVID-19 outbreak has caused numerous morbidities and deaths around the world, putting a significant strain on the health-care system. All health care organizations, including the World Health Organization and the Ministry of Health, are still struggling to control the infection through various precautionary measures such as the use of disinfectants, facemasks, and avoiding human-to-human contact. Many people around the world are still battling with different waves and variants of the virus.

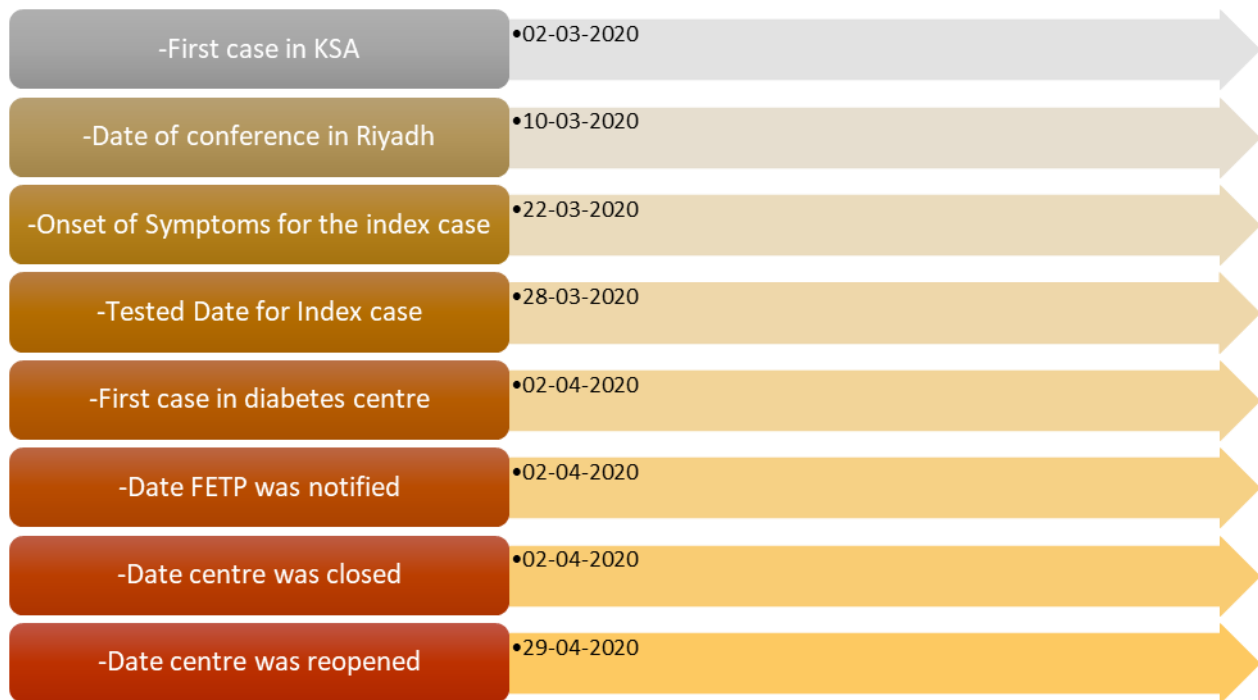
Patients with multiple comorbidities were more susceptible to COVID-19 infection, which leads to increased hospitalization and death. As a result, patients with chronic diseases such as diabetes and hypertension, as well as older patients, who exhibit COVID-19 symptoms, should contact their doctors immediately. In addition, to reduce the risk of COVID-19 transmission, facilities should implement new policies such as dividing break times among workers so that no more than four people in the same room at the same time and should be wearing PPE during that time.

Outbreak of COVID-19 among healthcare workers at a Diabetic Center, Al-Ahsa, Saudi Arabia - April 2020 Cont..

Furthermore, there should also be a mark on the seats and the floor to indicate the proper distance that the workers and the patients should maintain for social dis-

tancing. Visitors to the center must wear a mask at all times and are encouraged to practice hand hygiene on a

Figure.1 The timeline of the outbreak in facility A.



regular basis. Instruct patients to reschedule their appointments if they have COVID-19 symptoms.

References:

1. Zhu Z, Lian X, Su X, Wu W, Marraro GA, Zeng Y. From SARS and MERS to COVID-19: a brief summary and comparison of severe acute respiratory infections caused by three highly pathogenic human coronaviruses. *Respiratory research*. 2020;21(1):1-14.
2. Omrani A, Shalhoub S. Middle East respiratory syndrome coronavirus (MERS-CoV): what lessons can we learn? *Journal of Hospital Infection*. 2015;91(3):188-96.
3. COVID C. Overview and Infection Prevention and Control Priorities in Non-US Healthcare Settings. Centers for Disease Control and Prevention. 2020.

Field Epidemiology Training Program (FETP)

Dr. Adulaziz Saad Almeshal,
General Supervisor, FETP,
Editor-in-Chief

Dr. Suhair Saleh Alsaleh
Epidemiology Specialist, Bulletin Editor

Editorial Board:

Dr. Randa Nooh
Dr. Sahibzada Azhar Mujib
Dr. Shady Kamel

The first Cluster of COVID-19 cases in the Sultanate of Oman in Muttrah District, 2020.

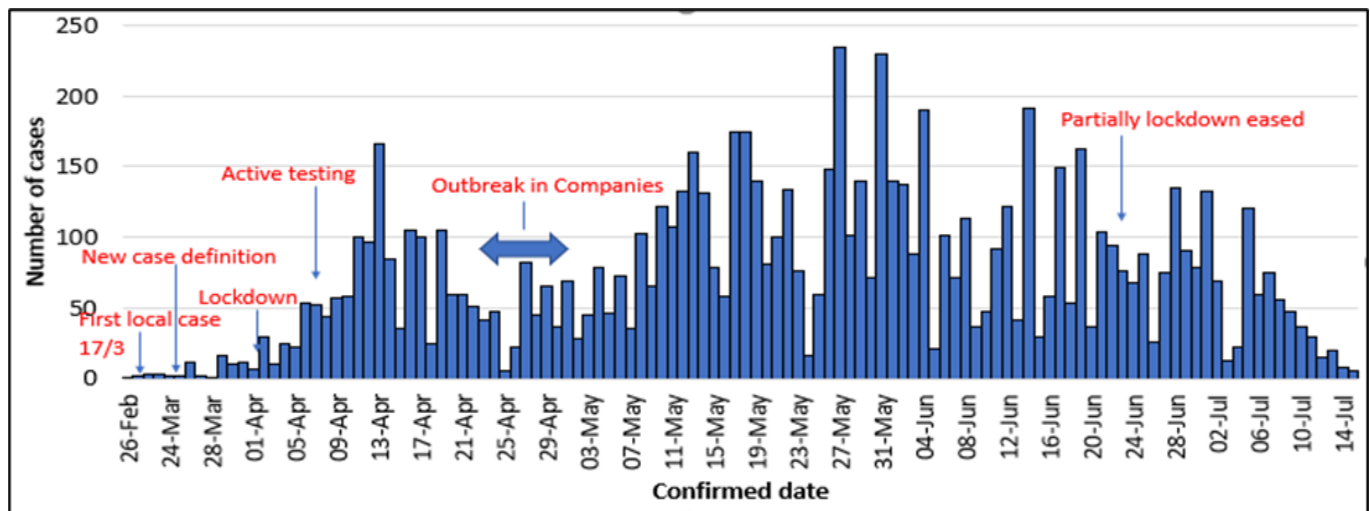
Reported by: Dr. Asim Mohammed AL Manji, Dr. Khalid Algaali

COVID-19 is an acute respiratory infection caused by SARS-CoV-2 that has been identified in December 2019, in China¹ and was declared as a pandemic by the World Health Organization on 11th March 2020.² An inhalation aerosol is the main mode of transmission, with fever, cough, muscle pain, sore throat, headache, or shortness of breath being the common symptoms.^{3,4}

The first two confirmed cases in the Sultanate of Oman were travel-related and were reported on 23rd February 2020 in Muttrah District. The first cluster of local transmission cases was reported on 15 March 2020 in Muttrah district. Until mid of July 2020, the total number of cases in Muttrah was 61,247. The first death was reported on 31st March 2020. Muttrah is one of the six districts of Muscat Governorate with a population of 269,507 (76% are expatriates). The district has a major seaport and a traditional market. The aim of this study was to describe the epidemiological investigation and interventions among the first cluster of COVID-19 cases in Muttrah district.

On 15th March, the Disease surveillance department in Muscat received a notification of an Omani positive case of COVID-19 who denied any travel history, any contact with positive COVID-19 case or contact with someone with recent travel history. Two days later, another two Pakistani couples with suspect local transmission were diagnosed. The number of cases with no travel history started to increase, indicating the local transmission. Demographic, clinical, and epidemiological data were collected by using specific forms and entered the notification system "Tarassud".

From 15th March to 15th July 2020, there were 8,400 cases and 51 fatalities were identified (CFR= 0.61%). The mean age was 37 (± 12.3) years; 85.6% were males. The most common symptoms were fever (48%), cough (34%), and sore throat (24%). A total of 17,202 tests were performed with 48.8% positivity rate. 77.5% of cases were non-Omani workers in the local market and seaport.



These patients had low socioeconomic levels and live in crowded housing. Most of the patients were Indians (35%) and Bengalis (33%).

All people in Muttrah district who developed symptoms were tested. RT-PCR tests on nasopharyngeal or oropharyngeal swabs were used to confirm diagnoses among the cases. On 10th April, active case finding and massive testing by outreach teams started. Community education, lockdowns, mass testing, and isolation of confirmed cases were applied to control the outbreak. Patient's houses, "Souq" area, compounds of the companies and municipal-

ities were visited to assess living conditions, hygiene and application of personal protective measures.

In conclusion, most of the early cases occurred among male migrants who worked at the old market or the seaport. They live and work in crowded environment and in contact with travellers. Adherence to control measures, encourage the people to undergo the test immediately after developing symptoms and put themselves under self-isolation are of paramount importance in outreach control and containment.

The first Cluster of COVID-19 cases in the Sultanate of Oman in Muttrah District, 2020. Cont..

Editorial notes:

A large-scale intervention should be implemented to slow the disease spread. Conducting sero-survey for people living in Muttrah as early as possible to estimate the real number of the infections (symptomatic and asymptomatic). Enhance the surveillance system for COVID-19 inside and outside Muttrah district and at the points of entry.

References:

1. Lockdown Contained the Spread of 2019 Novel Coronavirus Disease in Huangshi City, China: Early Epidemiological Findings Tuo Ji,^{1,a} Hai-Lian Chen,^{2,a} Jing Xu,³ Ling-Ning Wu,¹ Jie-Jia Li,⁴ Kai Chen,⁴ and Gang Qin^{5,6}
2. Zou L, Ruan F, Huang M, Liang L, Huang H, Hong Z, et al. SARS-CoV-2 viral load in upper respiratory specimens of infected patients. *N Engl J Med* 2020;382:1177-1179.
3. Gronvall G. Developing a national strategy for serology (antibody testing) in the United States. *The Johns Hopkins Center for Health Security*. 2020 Apr 22;37.
4. Kandel, N., Chungong, S., Omaar, A., & Xing, J. (2020). Health security capacities in the context of COVID-19 outbreak: An analysis of International Health Regulations annual report data from 182 countries. *The Lancet*, 395(10229), 1047-1053. doi:10.1016/s0140-6736(20)30553-5

**The Saudi Epidemiology Bulletin welcomes reports from the regions.
Send correspondence, comments, calendar listing, or articles to:**

Saudi Epidemiology Bulletin

Editor-in-Chief

P.O. Box 6344

Riyadh 11442, Saudi Arabia

For Epidemiological assistance

☎ Call or Fax the FETP at 011-4939675 (Fax extension 206)

www.saudifetp.org

info@saudifetp.org

To access all published volumes of the **Saudi Epidemiology Bulletin**, visit the website:

<http://saudifetp.org/SEB.php>

دراسة العوامل المؤثرة على زيادة حالات الإصابة بفيروس (كوفيد-19) وتأثيرها على النظام الصحي في محافظة البريمي، سلطنة عمان 2020.

إعداد: د. حنان المربوعي، د. إيمان السيد

كما تشير النتائج إلى أن معدل الإصابة بفيروس كوفيد-19 له صلة بعوامل خطيرة محددة على النحو التالي: مرض السكري بنسبة 12.2٪، وارتفاع ضغط الدم بنسبة 10.8٪، المرضى الذين تزيد أعمارهم عن 60 عام بنسبة 5.4٪، أمراض القلب بنسبة 3.7٪، الربو بنسبة 2.8٪، مؤشر كتلة الجسم فوق 40 بنسبة 1.1٪، الحمل بنسبة 1.7٪، أمراض الكلى المزمنة بنسبة 1٪، قصور الغدة الدرقية بنسبة 1٪ والأمراض الأخرى 4.3٪.

كما كان الأشخاص الذين لديهم مثل هذه العوامل أكثر عرضة لخطر دخول المستشفى. فمن خلال العينة كان هناك 165 مريضاً مصابين بأحد عوامل الخطورة المذكورة أعلاه. تم تنويم 67 مريضاً منهم إلى المستشفى، بينما احتاج 14 مريضاً إلى دخول وحدة العناية المركزة. كانت نسبة الوفاة عند هؤلاء المرضى مرتفعة نسبياً.

يمكننا أن نستنتج من هذه النتائج أن عوامل الخطورة تؤثر على تطور حالة المريض وشدة المرض ودخول المريض في وحدة العناية المركزة، ومعدل الوفيات. كما تعزز الدراسة النتائج التي توصلت إليها منظمة الصحة العالمية بشأن عوامل الخطر التي تؤثر على ارتفاع احتمالية الإصابة بفيروس كورونا وهذا يؤدي بدوره إلى اتخاذ الإجراءات اللازمة من قبل الرعاية الصحية في سلطنة عمان.

صنفت منظمة الصحة العالمية فيروس كوفيد-19 (2-CoV SARS) المسبب للالتهاب الحاد في الجهاز التنفسي ضمن الفيروسات الخطيرة المهددة على حياة الإنسان وأسرعها انتشاراً مما أدى إلى أنه يصبح وباءً عالمياً أثر على جميع الدول. وقد أعلنت دولة عمان في 8 يونيو 2021 عن إصابة أكثر من 226,600 شخص بفيروس كوفيد-19 وحدثت 2434 حالة وفاة اثر الإصابة بهذا الفيروس. وقد أدى الارتفاع الحاد في حالات الإصابة والوفيات بفيروس كوفيد-19 إلى زيادة الضغوط على نظام الرعاية الصحية في سلطنة عمان.

لذلك فقد أصدرت منظمة الصحة العالمية قائمة بالفتات الأكثر عرضه لخطر الإصابة بفيروس كورونا الشديد. تشمل القائمة فئة الأشخاص الذين يعانون من أمراض الكلى المزمنة، أمراض القلب والأوعية الدموية، أمراض الجهاز التنفسي المزمنة، داء السكري وارتفاع ضغط الدم. كما أوضحوا أن الأشخاص الذين تزيد أعمارهم عن 65 عاماً هم أكثر فئة عرضة للإصابة بفيروس كوفيد-19 الشديد ومعدل الإصابة لدى الرجال أعلى من النساء.

أن الهدف من هذه الدراسة هو تقييم وتحديد العوامل المؤثرة على زيادة حالات الإصابة بفيروس كورونا حتى تساعد في الحد من الإصابة والانتشار لهذا الفيروس. أجريت هذه الدراسة من تاريخ 1 فبراير 2020 حتى تاريخ 31 أغسطس 2020 في محافظة البريمي، في سلطنة عمان حيث تتكون محافظة البريمي من ثلاث ولايات - البريمي، والسنية، ومحضة.

تم الإبلاغ عن أول حالتين إصابة بالفايروس في سلطنة عمان في تاريخ 24 فبراير 2020. كان حجم العينة 977 مريض من مصابي فايروس كوفيد-19 داخل محافظة البريمي وتركزت النتائج على الأعراض البوائية والسريرية للأفراد المصابين بفيروس كوفيد-19 وعوامل الخطر المرتبطة بالاستشفاء ومعدل الوفيات في المحافظة. تشير الدراسة إلى أن معدل الإصابة بفيروس كوفيد-19 كان أعلى لدى الذكور 75.5% منه لدى الإناث 24.5%. لم يتم تحديد السبب الرئيسي لهذا الاختلاف.

Field Epidemiology Training Program (FETP)

Dr. Adulaziz Saad Almeshal,
General Supervisor, FETP,
Editor-in-Chief

Dr. Suhair Saleh Alsaleh
Epidemiology Specialist, Bulletin Editor

Editorial Board:

Dr. Randa Nooh
Dr. Sahibzada Azhar Mujib
Dr. Shady Kamel

Public Health Agency

Dr. Hani Jokhdar
Deputy Minister for Public Health,
SEB Supervisor.

Dr. Abdullah Assiri
Assistant Deputy for preventive health.

تقييم سلسلة التبريد لبرنامج التحصين الموسع بمراكز الرعاية الصحية الحكومية والخاصة بمدينة الرياض بالمملكة العربية السعودية 1442 هـ - 2020 م

إعداد: د. عبدالرحمن حسين الفحطاني، د. سهير الصالح

الاستنتاج

بالمقارنة مع مراكز الرعاية الصحية الأولية الخاصة ، فإن مراكز الرعاية الصحية الأولية الحكومية في مدينة الرياض أكثر توافقاً في تنفيذ الإرشادات التي وضعتها منظمة الصحة العالمية ووزارة الصحة السعودية. كما سلطت الدراسة الضوء على الحاجة إلى تدريب الموظفين الذي من شأنه أن يساعد على تحسين التعامل مع غرفة التحصين ونظام المراقبة وحفظ السجلات. بالإضافة إلى ذلك ، فإن الزيارات المنتظمة لموظفي وزارة الصحة ستساعد على تحسين الالتزام بالإرشادات المتعلقة بإدارة سلسلة التبريد من قبل عيادات الرعاية الصحية الأولية .

إن تخزين اللقاح بالطريقة الصحيحة ضروري جداً للحفاظ على فعالية اللقاح. ولذلك فإن نظام سلسلة التبريد عبارة عن سلسلة من روابط التخزين والنقل للقاح، مصممة لإبقاء اللقاح في درجة الحرارة الموصى بها حتى يصل إلى المستخدم النهائي.

إن الهدف من هذه الدراسة هو تقييم الوضع الحالي لسلسلة التبريد في البرنامج الموسع للتحصين في مراكز الرعاية الصحية الأولية الحكومية والخاصة في مدينة الرياض، المملكة العربية السعودية.

أجريت دراسة مقطعية في الفترة من مارس إلى مايو 2021 على عينة من 80 مركز رعاية صحية أولية حكومية وخاصة في مدينة الرياض بالمملكة العربية السعودية. تم استخدام طريقة أخذ العينات العشوائية الطبقيّة. كما تم إجراء جمع البيانات باستخدام قائمة التحقق الموحدة التي طورتها وزارة الصحة السعودية ومنظمة الصحة العالمية.

أظهرت النتائج أن متوسط درجات تقييم الغرفة والثلاجة الخاصة بالتطعيمات للرعاية الصحية الأولية الحكومية كان $8.8 (\pm 0.82)$ ، بينما كان $8.3 (\pm 1.86)$ للرعاية الصحية الأولية الخاصة. كان متوسط درجة الحرارة لثلاجات التبريد في مراكز الرعاية الصحية الأولية الحكومية ($4.0 (\pm 0.0)$) و $3.65 (\pm 0.92)$ لمراكز الرعاية الصحية الأولية الخاصة. كان متوسط درجة تسجيل درجة الحرارة (حفظ السجلات) لمراكز الرعاية الصحية الأولية الحكومية $2.55 (\pm 0.5)$ و $1.8 (\pm 1.2)$ للرعاية الصحية الأولية الخاصة. كان متوسط درجة الصيانة والعمليات للرعاية الصحية الأولية الحكومية $4.6 (\pm 0.49)$ ، بينما كان $4.1 (\pm 0.84)$ للرعاية الصحية الأولية الخاصة. اختلف متوسط درجات جميع مكونات سلسلة التبريد اختلافاً كبيراً بين المرافق الحكومية والخاصة. ($p = 0.000$)

Field Epidemiology Training Program (FETP)

Dr. Adulaziz Saad Almeshal,
General Supervisor, FETP,
Editor-in-Chief

Dr. Suhair Saleh Alsaleh
Epidemiology Specialist, Bulletin Editor

Editorial Board:

Dr. Randa Nooh
Dr. Sahibzada Azhar Mujib
Dr. Shady Kamel

تفشي كوفيد-19 بين العاملين في مجال الرعاية الصحية بمركز العناية بمرضى داء السكري، الأحساء، المملكة العربية السعودية - نيسان/أبريل 2020.

إعداد: د. عبدالله السيفي، د. جوانا جيمس

كان السبب الأرجح في إصابة الحالة الأولى بفيروس كوفيد 19 هو حضور المؤتمر بينما المشاركة في استخدام الخزائن وآلة تحضير القهوة بين العاملين سبب في انتشار العدوى بينهم.

تم وضع احترازاات اضافيه بين العاملين مثلا ارتداء الكمامة في السكن وهم خارج الرعاية المباشرة للمرضى. وعدم المشاركة في الأدوات. أغلق المرفق أثناء التحقيق وأعيد فتحه بعد تطبيق جميع تدابير الوقائية. ولم تحدث أي حالات إضافية لاحقا.

في الثاني من إبريل/نيسان 2020، طلب مركز العناية بمرضى داء السكري في الأحساء من برنامج الوبائيات الحقلية التحقيق في إصابة مؤكدة كوفيد 19- لأحد العاملين في مجال الرعاية الصحية في المركز، حيث أن مرضى السكري أكثر عرضه للمضاعفات الخطيرة الناجمة عن كوفيد-19.

توجه فريق من البرنامج الى المركز وكان هدفه هو الكشف عن أي حالات إضافية، معرفة مصدر العدوى، طريقة انتقالها، واتخاذ الاحتياطات اللازمة للحد من انتشار العدوى.

تم اجراء اختبار كوفيد-19 على جميع الموظفين (45) في المرفق؛ حيث ظهرت حالتان (4 في المائة) إيجابية. الحالة الأولى كانت ممرضة أبلغت عن حضورها مؤتمر في الرياض قبل عدة أيام من ظهور الأعراض. لاحقا تم اكتشاف حالة أخرى وهي ممرضه كانت تشارك الحالة الاولى باستخدام نفس الملابس الموجودة في الخزائن المشتركة، وآلة القهوة، والتحدث مع الحالة الاولى في غرفة استراحة الموظفين من دون استخدام ادوات الحماية الشخصية مثل الكمام أثناء الحديث. بينما كلا الحالتين أبلغتا عن ارتدائهما للكمام الجراحي أثناء رعاية المرضى. تم عزل الحالتين لمدة 3 أسابيع حتى شفيتا بنجاح. كما تم تحديد زوار المركز خلال فترة تواجد الحالتين في المركز وتم التواصل معهم هاتفيا يوميا لمدة أسبوعين للتأكد من عدم ظهور أي أعراض عليهم.

Field Epidemiology Training Program (FETP)

Dr. Adulaziz Saad Almeshal,
General Supervisor, FETP,
Editor-in-Chief

Dr. Suhair Saleh Alsaleh
Epidemiology Specialist, Bulletin Editor

Editorial Board:

Dr. Randa Nooh
Dr. Sahibzada Azhar Mujib
Dr. Shady Kamel

التفشي المحلي الاول لحالات كوفيد-19 في سلطنة عمان بمنطقة مطرح 2020.

إعداد: د.عاصم المنجى، د.خالد الجعلي

12.3) عاماً؛ 85.6% كانوا من الذكور. كانت الأعراض الأكثر شيوعاً هي الحمى (48%) والسعال (34%) والتهاب الحلق (24%). تم إجراء 17202 اختباراً مخبرياً حيث أظهر 48.8% نتيجة إيجابية. كان 77.5% من الحالات هم عمال غير عمانيين من الجنسية الهندية (35%) والبنغالية (33%) الذين يعملون في السوق المحلي والمناطق المحيطة بالموانئ وكانوا من مستويات اجتماعية واقتصادية منخفضة غالباً ما يعيشون في مساكن مزدحمة.

بدأ التفصي النشط عن الحالات والاختبارات المكثفة من قبل الفرق الميدانية في 10 ابريل وقد تم فحص جميع الأشخاص الذين ظهرت عليهم الأعراض في منطقة مطرح باستخدام اختبار RT-PCR على المسحات الأنفية أو الحلقية.

كما تم توعية العامة بأهمية تطبيق الاحترازات والحجر للحالات المؤكدة للسيطرة على تفشي المرض. كما قام الفريق بزيارة منازل المرضى ومنطقة "السوق" وأماكن إقامة عمال الشركات والبلديات لتقييم ظروف المعيشة والنظافة وتطبيق تدابير الحماية الشخصية. وقد أدت التدخلات التي تم تنفيذها على نطاق واسع إلى الحد وإبطاء انتشار المرض.

كوفيد 19 هو عدوى تنفسية حادة يسببها فيروس كوفيد المستجد التي تم تحديدها في ديسمبر 2019 في الصين. وأعلنت منظمة الصحة العالمية في 11 مارس 2020 على أنها جائحة. إن استنشاق الرذاذ الجوي هو الطريقة الرئيسية للانتقال. الأعراض الشائعة هي الحمى والسعال وآلام العضلات والتهاب الحلق والصداع وضيق التنفس.

منطقة مطرح هي واحدة من ست ولايات في محافظة مسقط حيث يبلغ عدد سكانها 269507 نسمة (76% من الوافدين). المنطقة بها ميناء بحري رئيسي وسوق تقليدي. كانت أول حالتين مؤكدتين في سلطنة عمان مرتبطة بالسفر وتم الإبلاغ عنهما في 23 فبراير 2020 في ولاية مطرح. تم الإبلاغ عن حالات انتقال العدوى محلياً في 15 مارس 2020 في ولاية مطرح. بلغ العدد الإجمالي للحالات في مطرح 61247 حالة حتى منتصف يوليو 2020 وقد تم الإبلاغ عن أول حالة وفاة في 31 مارس 2020.

تهدف هذه الدراسة إلى وصف التفصي الوبائي، بما في ذلك تعزيز التدخلات للحد من العدوى من حالات كوفيد 19 في منطقة مطرح.

في 15 مارس، تلقى قسم مراقبة ومكافحة الأمراض في مسقط إخطاراً بتشخيص امرأة عمانية أظهرت نتيجة إيجابية ل كوفيد 19. لم يكن هناك تاريخ سفر للحالة أو أي اختلاط بحالة إيجابية ل كوفيد19 أو اتصال بشخص لديه تاريخ سفر قريب. بعد يومين، تم تشخيص حالتين لزوج من الجنسية الباكستانية لم يكن لديهم أي تاريخ سفر مما يشير إلى انتقال العدوى المحلي. بدأ عدد الحالات التي ليس لها سجل سفر بالازدياد. تم جمع البيانات الديموغرافية والسريية والوبائية باستخدام نماذج محددة وتم إدخالها في نظام التبليغ الإلكتروني "ترصد".

كما تم تشخيص 8400 حالة و51 حالة وفاة (معدل الوفيات الإجمالي = 0.61%) من 15 مارس إلى 15 يوليو 2020. كان متوسط العمر 37 (±)

**The Saudi Epidemiology Bulletin welcomes reports from the regions.
Send correspondence, comments, calendar listing, or articles to:**

Saudi Epidemiology Bulletin

Editor-in-Chief

P.O. Box 6344

Riyadh 11442, Saudi Arabia

For Epidemiological assistance

☎ Call or Fax the FETP at 011-4939675 (Fax extension 206)

www.saudifetp.org

info@saudifetp.org

To access all published volumes of the **Saudi Epidemiology Bulletin**, visit the website:

<http://saudifetp.org/SEB.php>

Top Twenty Reported Diseases by Regions, Kingdom of Saudi Arabia, Q3 (Jul-Sep) 2021

Diseases	Riyadh	Makkah	Jeddah	Taif	Medinah	Qassim	Eastern	Ahsa	Hafr Al-Batin	Asir	Bisha	Tabuk	Hail	Al-Shamal	Jizan	Najran	Baha	Al-Jouf	Goriat	Gonfuda	Total	
Hepatitis B	230	78	319	78	63	25	143	38		49	6	54	2	10	96	20	18		8			1237
Salmonella infection	185	31	195	7	11		189	31		4	5		1		2	3	9					673
Pulmonary Tuberculosis	190	56	82	12	25	7	53	24	10	15	1	15	8	2	114	7	1	5	4	4		635
Brucellosis	157	70	28	70	63	37	53	7	8	9	27	11	27	3	4	17	4	3	3			601
Hepatitis C	122	61	58	18	20	33	64	2	3	29		8	3	1	19	7	12	2	7			469
Amoebiasis	54	5	30	17			261	18	2					1		15						403
Scorpion sting	18		10	235		45	1				10	10			1							330
Animal Bite	16		1	37		168	41				3	13			4	7	1					291
Chicken pox	46	7	8	25	11	11	69	11	10	6	13	5	1	3	1	11		1		1		240
VHF - Dengue fever		19	176	1	3								1		14	2						216
Extra-Pulmonary Tuberculosis	57	15	52	2	2	1	29	6		5		3	2		23		1	1	1			200
Malaria	32	9	25	11	26	8	37	4	2	6	2	3	4	1	7	4	3	1	1			186
Typhoid / paratyphoid fever	5		1		4		16			1			55									82
Leishmaniasis Cutaneous	2		1	3	14	11	2	7		2	2	9	2		1	4	6					66
Measles		45	10	1								1										57
Scabies	7	1	9		1	1	18				1	5			2		1					46
Meningitis - Other	16		3		2	1	4	4				3					1					34
Hand foot and mouth disease	3				1	7	14					1				3						29
Food Borne Disease-FBD		1				17	8															26
Hepatitis A	12	1	1	1	1	2	3	1														22

Top Twenty Reported Diseases by Gender, Age and Nationality, Kingdom of Saudi Arabia, Q3 (Jul-Sep) 2021

Diseases	Gender		Age Groups (Years)					Nationality	
	Male	Female	0-4	5-14	15-29	30-59	60 & above	Saudi	Non-Saudi
Hepatitis B	503	736	1	4	91	895	246	987	244
Salmonella infection	302	371	308	110	55	146	54	520	149
Pulmonary Tuberculosis	201	434	2	9	222	327	75	249	383
Brucellosis	149	455	9	73	140	300	79	476	119
Hepatitis C	209	260	3	1	47	262	156	347	119
Amoebiasis	138	265	59	52	100	176	16	245	157
Scorpion sting	97	233	14	61	119	115	21	252	75
Animal Bite	82	209	24	62	91	103	11	202	80
Chicken pox	100	140	85	41	63	48	3	187	50
VHF - Dengue fever	47	169	4	12	62	126	12	79	136
Extra-Pulmonary Tuberculosis	71	129	4	4	78	102	12	78	122
Malaria	28	158	2	5	80	94	5	19	161
Typhoid AND/OR paratyphoid	46	36		7	31	38	6	56	26
Leishmaniasis Cutaneous	8	58	5	6	19	27	9	40	25
Measles	28	29	47	1	3	6		3	54
Scabies	12	34	2	11	12	20	1	26	17
Meningitis - Other	12	22	15	8	2	5	4	23	10
Hand foot and mouth disease	11	18	24	4	1			27	2
Food Borne Disease-FBD	7	19	1		10	15		15	10
Hepatitis A	7	15	1	2	8	9	2	15	7

Top Twenty Reported Diseases, National Surveillance data and Trend, Kingdom of Saudi Arabia, Q3 (Jul-Sep) 2021

Diseases	Current Year 2021			Previous Year 2020		
	Quarter-3 Jul-Sep 2021	Cumulative total since 1st January	Current rate*	Quarter-3 Jul-Sep 2020	Cumulative total since 1st January	Previous rate*
Hepatitis B	1237	3361	9.32	915	2939	8.34
Salmonella infection	673	1533	4.25	431	1010	2.87
Pulmonary Tuberculosis	635	1699	4.71	576	1734	4.92
Brucellosis	601	1642	4.55	495	1929	5.47
Hepatitis C	469	1406	3.9	443	1386	3.93
Amoebiasis	403	1227	3.4	356	1135	3.22
Scorpion sting	330	607	1.68	122	259	0.73
Animal Bite	291	701	1.94	105	469	1.33
Chicken pox	240	651	1.81	105	1446	4.1
VHF - Dengue fever	216	1835	5.09	374	1966	5.58
Extra-Pulmonary Tuberculosis	200	565	1.57	178	523	1.48
Malaria	186	1053	2.92	88	1103	3.13
Typhoid AND/OR paratyphoid fever	82	197	0.55	88	245	0.7
Leishmaniasis Cutaneous	66	292	0.81	77	396	1.12
Measles	57	60	0.17	0	23	0.07
Scabies	46	250	0.69	74	594	1.69
Meningitis - Other	34	63	0.17	22	85	0.24
Hand foot and mouth disease	29	48	0.13	0	47	0.13
Food Borne Disease-FBD	26	34	0.09	0	10	0.03
Hepatitis A	22	68	0.19	21	65	0.18

* Rate per 100,000 Population

All above three tables are based on the HESN Data, Provided by Surveillance and Data Management unit, Ministry of Health Kingdom of Saudi Arabia

Data contained within these tables are based on available information extracted from HESN database by the time of publishing of the bulletin Issue. Please note that Covid-19 is excluded from the Top twenty diseases list.

Contributions to this publication are invited in the form of concise reports on surveillance issues or outbreak investigations. Please send contributions to: Surveillance and Data Management Unit, Assistant Agency for Preventive Health, Ministry of Health.

Top Twenty Reported Diseases by Regions, Kingdom of Saudi Arabia, Q4 (Oct-Dec) 2021

Diseases	Riyadh	Makkah	Jeddah	Taif	Madinah	Qassim	Eastern	Ahsa	Hafr Al-Batin	Asir	Bisha	Tabuk	Hail	Al-Shamal	Jizan	Najran	Baha	Al-Jouf	Gor'at	Gonfuda	Total	
Hepatitis B	218	230	280	59	61	36	150	31	1	50	2	83	8	9	172	18	18		6		1432	
Influenza (Seasonal)	554		110				6	61							51	1						783
Pulmonary Tuberculosis	200	66	120	4	26	3	71	13	5	18	3	12	6	2	121	10	5	1	2	6	694	
Salmonella infection	198	12	247	2	12	1	147	29		5		3			3	3	12				674	
Brucellosis	109	92	51	57	59	55	32	3	2	21	12	6	23	1	2	15	3	2	6		551	
Hepatitis C	89	94	73	21	9	21	72	3	1	30	5	15	5	4	12	10	11	2	7		484	
Amoebiasis	16	2	54	11		7	281	20	5	1		3	2			5	2				409	
Animal Bite	17			30		233	43				2	7			1	5	4				342	
VHF - Dengue fever	4	5	271		7		1								12	1					301	
Malaria	42	7	41	30	12	12	51	8	1	22	2	4	8	2	27	14	3	1		1	288	
Chicken pox	42	10	23	19	13	23	72	3	15	8	6	10			16	6	6	2		4	278	
Extra-Pulmonary Tuberculosis	45	11	50	4	6	2	16	6	1	11	1	4	2	2	31		1		2	1	196	
Scabies	11	6	38	1	4	2	46	5	4	10	1	6		1	5						140	
Scorpion sting	7		3	76		28	3				5	5			1						128	
Typhoid / paratyphoid fever	11		1		2	1	12			1			50				1	1			80	
Leishmaniasis Cutaneous			2	5	10	20	2	8		7		13			2	5	2				76	
Bilharziasis		64					2						1								67	
Hand foot and mouth disease	2					2	34					8		1							47	
Measles	2	34	2																	1	39	
Mumps	4		3	1	3		8				2	1	2	1		7				2	34	

Top Twenty Reported Diseases by Gender, Age and Nationality, Kingdom of Saudi Arabia, Q4 (Oct-Dec) 2021

Diseases	Gender		Age Groups (Years)					Nationality	
	Male	Female	0-4	5-14	15-29	30-59	60 & above	Saudi	Non-Saudi
Hepatitis B	604	831	7	8	117	1056	244	1145	279
Influenza (Seasonal)	376	407	229	157	94	178	125	669	99
Pulmonary Tuberculosis	214	480	9	14	244	348	79	233	446
Salmonella infection	311	364	288	110	73	150	53	532	140
Brucellosis	161	390	22	55	138	256	80	409	138
Hepatitis C	222	262	3	3	74	269	135	327	152
Amoebiasis	162	247	57	55	99	186	12	236	157
Animal Bite	88	254	17	79	95	134	17	218	120
VHF - Dengue fever	67	234	2	14	83	185	17	120	172
Malaria	42	245	2	11	129	134	12	185	93
Chicken pox	95	183	71	38	92	64	13	26	251
Extra-Pulmonary Tuberculosis	69	127		9	57	108	22	86	109
Scabies	49	91	6	24	43	62	5	70	64
Scorpion sting	34	94	3	23	44	51	7	98	27
Typhoid AND/OR paratyphoid fever	37	43	7	11	28	31	3	55	23
Leishmaniasis Cutaneous	25	51	4	10	16	41	5	43	31
Bilharziasis	11	56		4	14	41	8	24	42
Hand foot and mouth disease	19	28	40	7				40	7
Measles	19	20	28	2	4	4	1	5	32
Mumps	11	23	23	6	2	3		29	5

Top Twenty Reported Diseases, National Surveillance data and Trend, Kingdom of Saudi Arabia, Q4 (Oct-Dec) 2021

Diseases	Current Year 2021			Previous Year 2020		
	Quarter-4 Oct-Dec 2021	Cumulative total since 1st January	Current rate*	Quarter-4 Oct-Dec 2020	Cumulative total since 1st January	Previous rate*
Hepatitis B	1241	4796	13.23	1412	4351	12.27
Pulmonary Tuberculosis	635	2393	6.6	708	2442	6.89
Salmonella infection	673	2208	6.09	440	1450	4.09
Brucellosis	604	2193	6.05	452	2381	6.72
VHF - Dengue fever	216	2136	5.89	112	2078	5.86
Hepatitis C	469	1890	5.21	678	2064	5.82
Amoebiasis	404	1636	4.51	467	1602	4.52
Malaria	186	1341	3.7	369	1472	4.15
Animal Bite	291	1043	2.88	243	712	2.01
Chicken pox	240	929	2.56	202	1648	4.65
Influenza (Seasonal)	6	847	2.34	40	2514	7.09
Extra-Pulmonary Tuberculosis	200	761	2.1	214	737	2.08
Scorpion sting	330	735	2.03	101	360	1.02
Scabies	46	390	1.08	96	690	1.95
Leishmaniasis Cutaneous	67	368	1.01	153	549	1.55
Typhoid AND/OR paratyphoid fever	82	277	0.76	47	292	0.82
VHF - Dengue (severe) fever	5	124	0.34	16	199	0.56
Mumps	18	110	0.3	42	173	0.49
Measles	57	99	0.27	0	23	0.06
Hand foot and mouth disease	29	95	0.26	0	49	0.14

* Rate per 100,000 Population

All above three tables are based on the HESN Data, Provided by Surveillance and Data Management unit, Ministry of Health Kingdom of Saudi Arabia

Data contained within these tables are based on available information extracted from HESN database by the time of publishing of the bulletin Issue. Please note that Covid-19 is excluded from the Top twenty diseases list.

Contributions to this publication are invited in the form of concise reports on surveillance issues or outbreak investigations. Please send contributions to: Surveillance and Data Management Unit, Assistant Agency for Preventive Health, Ministry of Health.

