

Novel Corona Virus Outbreak in Palestine

Neveen Shalalfa^{1*}, Mai kaila², Kamal shakhra³, Ahmad Odah⁴, Ibrahim Al Heeh⁵, Wael Amro⁶

¹Epidemiologist, Family Medicine Specialist, Ministry of Health, Palestine

²PhD Public Health, Ministry of Health, Palestine

³Dermatologist, Ministry of Health, Palestine

⁴Dentist and Oral Surgeon, Ministry of Health, Palestine

⁵Family Medicine Specialist, Ministry of Health, Palestine

⁶Pediatric Urological Surgeon, Ministry of Health, Palestine

Address for correspondence:

Neveen shalalfa, Epidemiologist, Family Medicine Specialist, Ministry of Health, Palestine

Submitted: 24 July 2020

Approved: 27 July 2020

Published: 28 July 2020

How to cite this article: Shalalfa N, kaila M, shakhra K, Odah A, Heeh I. A., Amro W. Novel Corona Virus Outbreak in Palestine. G Med Sci. 2020; 1(3): 013-017. <https://www.doi.org/10.46766/thegms.virology.20072407>

Copyright: © 2020 Neveen Shalalfa, Mai kaila, Kamal shakhra, Ahmad Odah, Ibrahim Al Heeh, Wael Amro. This is an open access article distributed under the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

ABSTRACT

The novel corona virus (2019-nCoV, or COVID-19) epidemic started in Bethlehem/Palestine and spread to many Palestinian cities and villages. The numbers of new infections in Palestine are increasing, which have activated all the public health, governance and even private concerns.

A series of mandatory actions have been taken by the ministry of health (MOH), governmental and community support, such as cases detection, contact details and tracing, COVID-19 hospital establishment, restriction of movement and travels across cities all over Palestine and implementation of health measures for travelers. Schools and universities were also closed, quarantine, awareness-raising in the population and risk communication, health promotion, education and guidance to the public and population.

Depending on the level of community spread, PHC implement strategies and develop recommendations for public health functions to identify cases and conduct contact tracing, diagnosis, and care in a patient centered, complete, comprehensive and continuity manner to ensure prevention, follow up and outbreak complete investigation.

Challenges such as scares of resources, logistic issues have much alleviated with the solidarity of the whole society.

The pandemic as considered by WHO, will definitely be decremented with the continuous both national and international multispectral efforts that the WHO appreciate in the Palestinian emergency plane.

Key words: Novel corona virus, 2019-nCoV, COVID-19, Outbreak, Pandemic, Palestine.

Introduction

Since December 2019, in Wuhan, China, a new type of virus called novel corona virus (2019-nCoV, or COVID-19) was identified. The COVID-19 has then rapidly spread to all over China and entire world. It causes many symptoms including fever, difficulty in breathing and cough [1] and many others.

Although corona virus infections are mild in generally but the epidemics of the previous beta corona virus were severe [2]. The WHO on January, 2020 declared the corona virus as a public health emergency of international concern [3] and later on considering it as a pandemic.

According to the Palestinian Central Bureau Statistics (PCBS) annual report, 2019, among Palestine Population of 4,976,684, 60.1% of them in WB (2,986,714), 39.9% in GS (1,989,970), and the Population proportion according age is 0-14 yrs.: $\approx 38.4\%$, 15-29 yrs. old: $\approx 28.9\%$, 30 - 70 yrs.: $\approx 28\%$

PHC Provides health services through 14 Districts in WB (418 clinic and center), also there is 10 peripheral clinics in Jericho, 57 in Ramallah and 4 emergency centers.

COVID-19 was diagnosed for first time in 5/3/2020 after a group of tourists visited Palestine from Greece who diagnosed positive at their home land.

The purpose of this article is to have a brief report of current development, challenges, and characteristics of the corona virus in Palestine.

A total of 12412 cases of corona virus are positively detected among Palestinian people, with 73 death cases.

Palestine responses

Palestine gave progressive emergency responses in addressing the epidemic fastest to its ability to control and mobilize resources combined with its governance structure and solidarity of the whole society.

Control of the epidemic can be achieved through a combination of public health measure and strategic objectives.

Strategic objectives for this response are as follows:

- To keep the overall Palestinian population in good health
- Limit human-to-human transmissions and the infections among close contacts, specifically, all contacts in-general.
- Healthcare workers prevention.
- Early cases detection, management and care
- Improving and adapting the research in MOH
- Communicating the risk and event information to all communities
- Increasing the level of health promotion and prevention issues
- Decreasing the mortality and complication of COVID-19

The main MOH actions in COVID-19 emergency plane:

I. According to the sixth version of the guidance for diagnosis and treatments for COVID-19 issued by the National Health Commission of China, SARS-CoV-2 was transmitted through respiratory aspirates, droplets, contacts, and feces, also, aerosols transmission is highly possible [4], so, emergency plane is applied in Palestine that included Population mobility restriction from the next day of first confirmed case appearance. The restriction of movement was applied by law, schools and universities were closed and the online learning was applied.

II. Restricting the movement of people in the public health emergencies conditions may affect the needed materials and businesses with some negative social and economic outcomes. However, Palestine authority decide to restrict the movement of people to prove useful cutting of the links between virus, human, community and environment.

III. MOH developed a guidance protocol to deal the COVID-19 cases, based on country queries and resources. The protocol is giving an early understanding of the key important epidemiological and medical characteristics of the COVID-19.

IV. Laboratory investigation included genomic sequencing, RT-PCR, and serological methods (such as Enzyme-linked immunoassay, ELISA). Additionally, manifestations of the novel corona virus pneumonia is diverse and changed rapidly the radiographic images for early detection and evaluation of disease severity and follow-up of patients is heavily depended on experience [4]. Kits are supplied by MOH to the medical team and swaps are collected for the cases and the contact people at their homes to avoid travelling and spreading of the virus and quarantine is applied for 14 days even if the result is negative, the test repeated for the confirmed cases and considered negative post 3 repeated negative results.

V. Ministry of health and the local authorities are trying to control the epidemic by isolation of suspected cases of close monitoring, advising and support them and their families, also training of all of the medical team in on the diagnostic and treatment procedure.

VI. COVID-19 Hospitals have been designated in each city by the government and local community support to treat the infected patients.

VII. In addition, hotels and many places are used as a quarantine to provide care for the confirmed asymptomatic infected patients and the suspected cases.

VIII. All recommendations that are needed about risk factors and preventive measures and very effective to prevent the infection such as washing hands, wearing masks and goggles were given to the public by various means such as mass media, phone messages and written brochures, depending on what is evidenced based about the virus and its transmission through droplets, contact, aerosol, etc.[1]. Human-to-human transmission is considered as a major transmission mode [4].

IX. MOH prepared the biomedical equipment, medicines, swaps, protective personal equipment and supplies necessary for patients with 2019-nCoV and cases early detection.

X. MOH communicate with many countries and sharing information with them.

XI. Establishing COVID19 research center for data gathering, analysis and research to help in vaccine development.

Table 1: Working process in the context of COVID-19 care

Health facility	Staff	Activity
Triage	Healthcare workers	Screening and classification of patient, not involving direct contact
Consultation room	Healthcare workers	Physical examination of patient with or without respiratory symptoms, PCR
Laboratory	Lab technician	Manipulation of swap samples.
Temporary isolation area	healthcare workers	Observation, assessment and regular check vital sign
Patient room in COVID19 hospital	Healthcare workers	Providing direct care and treatment of symptomatic COVID-19 patients. Perform aerosol-generating procedures
Ambulance	Healthcare workers and driver	Transporting suspected COVID-19 patients to the referral center

XII. Establishing mobile emergent family medicine and non-communicable disease clinic that deal with the more susceptible COVID19 infection patients [5] as:

- Blood disorders (e.g., sickle cell disease or on blood thinners)
- Chronic kidney, including receiving dialysis
- Chronic liver disease. (e.g., cirrhosis, chronic hepatitis)
- Compromised immune system, such as chemotherapy or radiation, received an organ or bone marrow transplant, taking high doses of corticosteroids or other immunosuppressant medications, HIV or AIDS
- Current or recent pregnancy in the last two weeks
- Endocrine disorders (e.g., diabetes mellitus)
- Metabolic disorders (such as inherited metabolic disorders and mitochondrial disorders)
- Heart disease (such as congenital heart disease, congestive heart failure and coronary artery disease)
- Lung disease including asthma or chronic obstructive pulmonary disease (chronic bronchitis or emphysema) or other chronic conditions associated with impaired lung function or that require home oxygen
- Neurological and neurologic and neurodevelopment conditions (including disorders of the brain, spinal cord, peripheral nerve, and muscle such as cerebral palsy, epilepsy (seizure disorders), stroke, intellectual disability, moderate to severe developmental delay, muscular dystrophy, or spinal cord injury)

Challenges

- It is the first time for the COVID-19 to infect humans and can be transmitted from person to person and the incubation period can be 2 weeks and even longer which means that the virus can spread during the incubation period or recessive infection, which makes it difficult to identify those suspected cases without clinical symptoms [1].
- Diagnosis of COVID-19 has been facing difficulties because laboratory detections and radiographic images are not always matched the clinical features and histories of patients [4].
- The high risk of medical professionals getting infected because of the contagiousness of the new virus and the lack of the medical facilities, personnel and protective supplies so many medical staff cannot get fully protected.
- Lack of intensive care units' facilities and specialists.
- Effective drugs have yet to be developed to treat the COVID-19. Temporarily, Lopinavir/Ritonavir, Nucleoside analogues (e.g. ribavirin), Neuraminidase inhibitors (e.g. oseltamivir), Remdesivir, abidol hydrochloride, RNA synthesis inhibitors (such as Tenofovir disoproxil fumarate, TDF), anti-inflammatory drugs (such as hormones and other molecules) are being used as treatment options for COVID-19, but their efficacy and safety of these drugs are yet to be clinically observed in treatments. chloroquine phosphate has recently been recommended [1] [4], but not all of these medications are available in Palestine.

Conclusion

- International guidelines and policies must be continued to overcome this pandemic
- The government of all levels tries to have strong leadership to combat the outbreak even though the lack of human resources, equipment's and funds.
- With community support, knowledge and working together, it is undoubtedly the COVID-19 will be treated and this pandemic will be controllable.
- Both national and international comprehensive work, with supportive healthy attitudes will be important to proceed towards the solution.

Abbreviation

1. 2019-nCoV or COVID-19: Novel corona virus
2. CDC: Center for Disease Control and Prevention
3. MERS: Middle East respiratory syndrome
4. SARS: Severe Acute Respiratory Syndromes
5. TDF: Tenofovir Disoproxil Fumarate
6. WHO: World Health Organization
7. PHC: primary health care

References

1. Phelan AL, Katz R, Gostin LO. The Novel Coronavirus Originating in Wuhan, China. *Jama*. 2020;6:2019-2021. doi:10.1001/jama.2020.1097
2. Huang C, Wang Y, Li X, et al. Clinical features of patients infected with 2019 novel coronavirus in Wuhan, China. *Lancet*. 2020;395(10223):497-506. doi:10.1016/S0140-6736(20)30183-5
3. Guan W-J, Ni Z-Y, Hu Y, et al. Clinical Characteristics of Coronavirus Disease 2019 in China. *N Engl J Med*. 2020:1-13. doi:10.1056/NEJMoa2002032
4. Wang Y, Wang Y, Chen Y, Qin Q. Unique epidemiological and clinical features of the emerging 2019 novel coronavirus pneumonia (COVID-19) implicate special control measures. *J Med Virol*. 2020:0-1. doi:10.1002/jmv.25748
5. HHS, CDC. Implementation of Mitigation Strategies for Communities with Local COVID-19 Transmission. 2020:1-10. www.cdc.gov/COVID19.