



The Impact of the COVID-19 Pandemic on the Utilization of Outdoor Services at Secondary Care Hospitals of Punjab, Pakistan

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Significance: Common mass are much afraid of acquiring COVID-19 infection. This fear led to less patient flow in hospitals of diseases other than COVID-19. This study is a valuable addition to the literature as it is the pioneer study to determine the impact of COVID-19 pandemic and lockdown on the OPD services at secondary care hospitals located province wide in Punjab Pakistan.

ABSTRACT

Objective: The objective of the study was to assess the effects of COVID-19 and lockdown on OPD services.

Materials and Methods: A cross-sectional study was conducted at District Headquarter Hospital (DHQ) and Tehsil Headquarter (THQ) Hospitals of District Layyah. The data was collected from one DHQ hospital and six THQ hospitals. The OPD data of three years (the years 2018 to 2020) was extracted from District Health Information System (DHIS). Trends of outpatients' flow during months of March and April of three years were taken. The data were analyzed using SPSS version 24.

Results: The COVID-19 pandemic was declared by World Health Organization (WHO) on March 11, 2020, and all countries started lockdown nationwide which imposed a major impact on all areas of life. Fear of coronavirus spread and lockdown resulted in significant reduction in number of patients at outdoor services. In our study, we analyzed outdoor services of seven hospitals of district Layyah - one DHQ hospital and six THQ hospitals.

Conclusion: Fear of coronavirus spread and lockdown resulted in significant reduction in number of patients at outdoor services.

Introduction

In December 2019, an increase in pneumonia cases of unknown etiology was first reported in Wuhan city of Hubei Province, China. (1) After one month, researchers separated a novel coronavirus (nCoV) other than the viruses which cause severe acute respiratory syndrome (SARS), Middle East respiratory syndrome (MERS), avian flu, common flu, and other regular respiratory infections. (2,3) Later on, the novel coronavirus was named as severe acute respiratory syndrome – associated coronavirus-2 (SARS-CoV-2) and the following serious respiratory disorder as Coronavirus Disease 2019 (COVID-19). Since its flare-up, China reacted rapidly and took proactive general wellbeing measures to battle against the infection by serious reconnaissance, epidemiological examinations, dynamic treatment of affirmed as well as suspected patients, and prevention of rapid

transmission. Nonetheless, virus had taken off to other countries before China limited it to its country. On January 30, 2020, World Health Organization (WHO) announced the disease as a Public Health Emergency of International Concern (PHEIC). (4)

The mode of SARS-CoV-2 transmission is yet not well-understood and new information is continuously being added to the literature. What is clear to date is that the mode of transmission is through contact or droplets, albeit airborne transmission has not been excluded. Since late January 2020, the Chinese specialists prescribed limited exposure of public to crowded places in order to prevent cross-infection. The individuals' dread of COVID-19 due to its novel and quick transmission made them hesitant to go to open spots including clinical and dental medical clinics. Among clinics, dental clinics were thought to be at high risk of COVID-19 spread as numerous dental procedures produce droplets or beads contaminated with blood and microscopic organisms such as viruses and bacteria, polluting the dental workplace as well as the workforce. (5) Therefore, members of social welfare in China requested to the dental organizations to deal with emergency cases only while suspending all other general and elective dental treatments. Strategic elements and individual contemplations resulted in reduced visits to dental outdoor patient department (OPD). Besides the dental clinics, the fear of COVID-19 spread might have reduced the general OPD visits. This study was conducted to assess the impact of COVID-19 and lockdown on OPD services in Punjab, Pakistan.

Materials and Methods

A cross-sectional study was conducted at District Headquarter Hospital (DHQ) and Tehsil Headquarter (THQ) Hospitals of District Layyah. The data were collected from one DHQ hospital and six THQ hospitals. The OPD data of three years (2018 to 2020) was extracted from District Health Information System (DHIS). Trends of outpatient's flow during months of March and April of three years were taken. The data were analyzed using SPSS version 24.

Results

The patients' flow at OPD during month of March and April 2020 of all hospitals was compared with those of month of March and April of 2018 and 2019. The purpose of this comparison was to check the effects of lockdown on outdoor patients' flow at the given hospitals.

DHQ Hospital Layyah

On comparison of OPD data during month of March and April of DHQ Hospital Layyah, significant reduction in outdoor patients during lockdown was noted. During month of March, 44,266, 59,700 and

37,751 patients were reported in the years 2018, 2019 and 2020, respectively. During month of April, 38,141, 58,008 and 19,508 were reported in the years 2018, 2019 and 2020, respectively.

As WHO declared COVID-19 as a pandemic, all countries started lockdown nationwide which imposed a major impact on all areas of life. Fear of coronavirus spread, and lockdown resulted in significant reduction in number of patients at outdoor services. In our study, we analyzed outdoor services of seven hospitals of district Layyah: one DHQ hospital and 6 THQ hospitals. We compared the OPD data reported in the months of March and April of 2020 with the OPD data reported in the months of March and April of 2018 and 2019. When we compared the OPD data reported in March and April 2020 of DHQ Hospital Layyah with those of March and April of 2018, there was 14.7% and 48.9% reduction in outdoor patients, respectively. Similarly, when the OPD data reported in March and April 2020 was compared with those of March and April of 2019, there was 36.8% and 66.4% reduction in outdoor patients, respectively.

THQ Thal Hospital Layyah

When we compared OPD data reported in March and April 2020 of THQ Thal Hospital Layyah with March and April of 2018, there was 16.9% and 49.4% reduction in outdoor patients, respectively. Similarly, when we compared the data reported in March and April 2020 with those of March and April of 2019, there was 24.6% and 59.4% reduction in outdoor patients respectively.

THQ Hospital Karor

Comparison of OPD data of March and April 2020 of THQ Hospital Karor with March and April of 2018, there was 38.3% and 77.6% reduction in outdoor patients, respectively. Similarly, when we compared the data reported in March and April of 2020 with those of March and April of 2019, there was 34.2% and 80.6% reduction in outdoor patients, respectively.

THQ Hospital Kot Sultan

OPD data reported in March and April 2020 of THQ Hospital Kot Sultan was compared with March and April of 2018, there was 88.3% and 52.8% reduction in

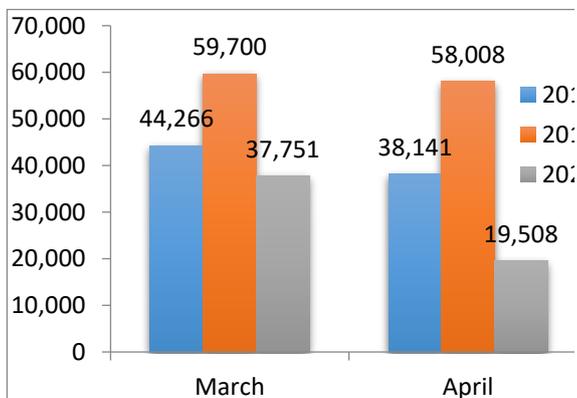


Figure 1: Comparison of outdoor patients of month of March and April of 2018, 2019 and 2020 at DHQ Hospital Layyah

Table 1: Effects of lockdown due to COVID-19 on outdoor services of hospital.

Hospital	No. of patients in 2020		No. of patients in 2019		No. of patients in 2018		Patient decline in comparison with 2018		Patient decline in comparison with 2019	
	March	April	March	April	March	April	March	April	March	April
DHQ Hospital, Layyah	37,751	19,508	59,700	58,008	44,266	38,141	-14.7%	-48.9%	-36.8%	-66.4%
THQ Thal Hospital, Layyah	15,938	9,838	21,143	24,226	19,177	19,420	-16.9%	-49.4%	-24.6%	-59.4%
THQ Karor	15,541	5,641	23,601	28,993	25,175	28,360	-38.3%	-77.6%	-34.2%	-80.6%
THQ Kot Sultan	11,807	4,626	120,913	125,614	100,846	980,25	-88.3%	-52.8%	-90.3%	-63.2%
THQ Choubar a	6,688	3,683	8,347	9,255	6,877	7,818	-2.8%	-52.9%	-19.9%	-60.2%
THQ Chowk Azam	16,438	9,838	20,557	24,159	22,028	22,880	-25.2%	-50.3%	-19.8%	-49.8%
THQ Fatehpur	9,841	23,934	16,475	17,415	17,837	17,703	-44.4%	135.2%	-40.3%	137.4%

outdoor patients, respectively. Similarly, when we compared OPD data reported in March and April 2020 with those reported in March and April of 2019, there were 90.3% and 63.2% reduction in outdoor patients, respectively.

THQ Hospital Choubara

While comparing OPD data reported in March and April 2020 of THQ Hospital Choubara with those reported in March and April of 2018, there was 2.8% and 52.9% reduction in outdoor patients, respectively. Similarly, when the OPD data reported in March and April 2020 was compared with those reported in March and April of 2019, there was 19.9% and 60.2% reduction in outdoor patients, respectively.

THQ Hospital Chowk Azam

Another comparison of OPD data reported in March and April 2020 of THQ Hospital Chowk Azam with those reported in March and April of 2018, there was 25.2% and 50.3% reduction in outdoor patients, respectively. Similarly, the comparison of OPD data reported in March and April 2020 with those reported in March and April of 2019 resulted in 19.8% and 49.8% reduction in outdoor patients, respectively.

THQ Hospital Fatehpur

Lastly, we compared the OPD data reported in March and March 2020 of THQ Hospital Fatehpur with those reported in March and April of 2018, we obtained surprisingly different results. There was 44.4% reduction in the month of March while 35.2% increase in number of patients in the month of April. Similar results were obtained when the data reported in month of March and April 2020 was compared with those reported in March and April of the year 2019, and significant reduction in the month of March (40.2%) and significant increase in month of April (37.4%).

Discussion

The purpose of this study was to assess the impact of COVID-19 pandemic and lockdown on the OPD services offered at secondary care hospitals. The study revealed significant reduction in patient outcome at OPD. During this deadly pandemic and lockdown, people were reluctant to avail OPD services.

According to our study results, the highest percentage of patient reduction was at THQ Kot Sultan (90.3%) in the month of March as compared to that of March 2019. A study by Guo et al. conducted at emergency dental services in China has reported 38% reduction in overall dental emergency patients. (6) Another study conducted by Lee et al. in South Korea in 2015 regarding MERS epidemic revealed 33.1% reduction in ER services during MERS epidemic 2015. (7) Similarly, a number of studies have revealed decline in utilization of healthcare services in different hospital settings. (8-10)

The present is a valuable addition to the literature as it is the pioneer study to determine the impact of COVID-19 pandemic and lockdown on the OPD services at hospitals in Punjab Pakistan. However, its limitations include its retrospective methodology and restricted single district study. However, studies at large scale might have revealed further insights on the outpatients' flow to the hospitals during COVID-19 pandemic and lockdown.

Conclusion

Fear of coronavirus spread, and lockdown resulted in significant reduction in number of patients at outdoor services. Reduction in OPD services during COVID-19 pandemic and lockdown at all hospitals was observed except at THQ Hospital Fatehpur where, interestingly, increase in number of outpatients was noted one month after lockdown. In a nutshell, COVID-19 pandemic and lockdown had significant impact on the OPD services at secondary care hospitals of Punjab, Pakistan.

Conflict of interest: Authors do not have any conflict of interest to declare.

Disclosure: None

Human/Animal Rights: No human or animal rights are violated during this study.

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