



## Covid-19 Affecting the Dental Care Utilization During Lockdown

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### Abstract

The purpose of this study was to assess the dental care utilization by the people in Sindh, Pakistan before and after lockdown announcement by Government of Sindh.

**Methodology:** Retrospective analysis was conducted with descriptive analysis of data of patients retrieved from register of Dental Clinic of Rural Health Centers of District Kambar Shadadkot before and after the announcement of lockdown. The patient's demographics were recorded along with diagnosis irrespective of age and gender.

**Results:** There were 969 patients constituting sum of all four RHCs with males comprised of 384 (39.6%) while females were 585 (60.37%) with frequencies described in Table. 28.17% decrease in patient visit was observed with respect to before lockdown period. Frequency of age groups is displayed in Table. Pulp and localized peri radicular periodontitis were more prevalent in Before 487 (64.41%) and After 153 (71.83%) Lockdown Period. The proportion of oral & maxillofacial trauma decrease significantly from 7.93% before lockdown to 1.40% after lockdown period. Figure.

**Conclusion:** Covid-19 is strongly influencing the utilization of dental services by public. Dentists need to change the norms of dental care during the Pandemic.

**Keywords :** COVID-19; Epidemics; Dental care;Emergencies

### Introduction

Coronavirus (COVID-19) is zoonotic single stranded RNA virus from family Coronaviridae. The scientific name to this virus is severe acute respiratory syndrome coronavirus (SARS-CoV). On January 30, 2020, the World Health Organization (WHO) declared SARS-CoV as Pandemic which affects the lower respiratory tract and manifests as

pneumonia in humans<sup>1</sup>. The transmission of COVID-19 is through contact and airborne transmission.<sup>2</sup>

According to WHO<sup>3</sup> on 24 May 2020 there are 5,105,881 confirmed positive cases and 333,446 deaths worldwide with 185,153 confirmed cases in South-East Asia and 52,437 confirmed cases in Pakistan<sup>4</sup> with 1,101 Deaths and 20,883 (39.82%) in Sindh than other provinces of Pakistan. (Figure 1)

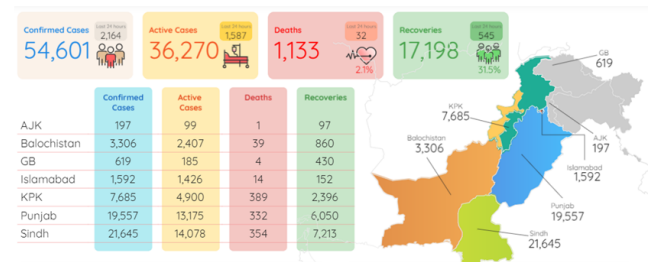


Figure 1: Covid - 19 Statistics in Pakistan on 24 - 05 – 2020

Government of Sindh imposed complete lockdown from 23 March 2020 to 31 May 2020 on movement except only emergency health utilization to limit the spread of corona virus. For this reason, outpatient department clinics were closed in public and private hospitals along with deferring elective surgeries except emergency department to prevent cross – infection. Dental procedures produce aerosols and droplets which can provide a route to transmit many infectious diseases.<sup>5</sup> For this reasons Dental Associations in Sindh ordered the public and private dental clinics should be stopped and provide only emergency dental services to public.

The purpose of this study was to assess the dental care utilization by the people in Sindh during lockdown visiting four Rural Health Centers of district Kambar Shadadkot, Sindh, Pakistan before and after lockdown announcement in Sindh.

### Methodology

This cross – sectional study with retrospective analysis was conducted with data of patients retrieved from register of Dental Clinic of Rural Health Centers of District Kambar Shadadkot – RHC Nasirabad, Wagan, Kubo Saeed Khan and Umed Ali Junejo. Between period of 1 – April – 2020 to 15 – May – 2020 after the lockdown announcement by Sindh Government. The comparison period was before lockdown between 01 – January – 2020 to 15 – February – 2020. The patient's demographics were recorded along with diagnosis irrespective of age and gender.

The data was entered and analyzed in SPSS 16.0 for descriptive analysis.

### Results

There were 969 patients constituting sum of all four RHCs with males comprised of 384 (39.6%) while females were 585 (60.37%) with frequencies described in Table 1.

	Total Patients	Gender	
		Male (%)	Female (%)
Before Lockdown	756	310 (41.00%)	446 (58.99%)
After Lockdown	213	74 (34.74%)	139 (65.25%)

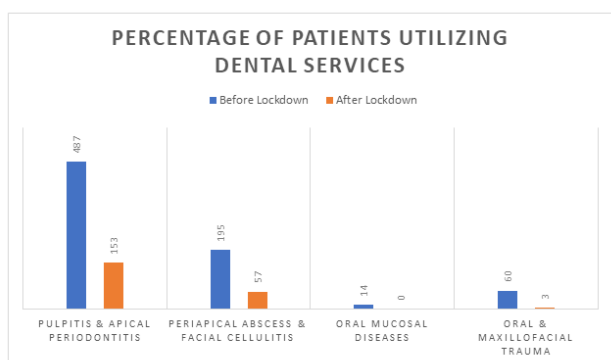
**Table 1:** Demographics with respect to Gender

28.17% decrease in patient visit was observed with respect to before lockdown period. Frequency of age groups is displayed in Table 2.

	<1 Year	1 – 4 Years	5 – 14 Years	15 – 49 Years	50+ Years
Before Lockdown	0 (0.00%)	11 (1.45%)	64 (8.46%)	545 (72.08%)	136 (17.98%)
After Lockdown	0	0	07 (3.28%)	166 (77.93%)	40 (18.77%)

**Table 2:** Demographics with respect to Age

Pulp and localized peri radicular periodontitis were more prevalent in Before 487 (64.41%) and After 153 (71.83%) Lockdown Period. The proportion of oral & maxillofacial trauma decrease significantly from 7.93% before lockdown to 1.40% after lockdown period. (Figure 2)



**Figure 2:** Description of Oro - Dental Problems

## Discussion

Our study utilized descriptive with frequency analysis in utilization of dental services by rural population visiting their nearest RHCs before and after lockdown period in Sindh.

Our results showed that there was significant reduction in patients visiting the dental clinics in the lockdown period due to closure of elective dental procedure only emergency dental services were utilized for dental problems extremely affecting the routine activities of patients.

There was significant increase in utilization of dental services in females with respect to males in before and after lockdown period which is in contrast with study done by Guo H et al <sup>6</sup> where ratio of female patient after lockdown was less than male, while before lockdown female utilized made dental visits more than males.

Irreversible pulpitis, chronic apical abscess and Fascial Space cellulitis were the frequent cause of dental clinic visits in lockdown period which is in support with the study conducted by Tramini P et al <sup>7</sup>. The frequency of trauma was decreased significantly after lockdown announcement in Sindh due to Ban on travel other than health emergencies, reduced child plays due to closure of schools and decreased outdoor games by adults due to complete ban on social gatherings.

Most of the current focus in dealing with coronavirus is based on preventing close contact and to decrease airborne transmission from person to person. Dentistry is inherently one of the major sources of airborne infections along with body fluid infections as mentioned above. This will result in fear among general population and dentist in managing routine oral health problems specially involving high speed hand pieces affecting the long-term dental services utilization.

No one knows when Covid-19 will be eradicated or managed to flatten the curve with medical treatment. Dentistry needs modification to maintain oral health and prevent dental disease progression during the Pandemic.

## Conclusion

With limitations to study, our results suggest that Covid-19 is strongly influencing the utilization of dental services by public. Dentists need to change the norms of dental care during the Pandemic.

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