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PROFESSIONAL PAPER

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COVID-19 Impact on Access and Performing Dental Care in Bosnia and Herzegovina

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ABSTRACT

Background: The world was struck with a pandemic accompanied by maybe one of the most popular words out there right now, which is COVID-19. It has affected every aspect of life imaginable, especially in the medical sector particularly in our case dental care. **Objective:** This study goes on to analyse and assess the impact of COVID-19 on dental care in Bosnia and Herzegovina, varying from the staff, patients, supplies/equipment, and finances. **Methods:** An online survey and over-the-phone surveys were conducted, bringing in raw information to help with this study. **Results:** In total there were 10 different dental offices that information was obtained from. About 90% say that the pandemic has affected their patient flow, obviously due to some restrictions and regulations. And 60% say that the cost of PPE has increased since the pandemic started, while 40% said otherwise. Other data can be found in the rest of the study. **Conclusion:** Entering into the pandemic, dental practices quickly started to realize the seriousness of this situation, changing the way they do normal everyday work to accustom to this "new norm". During such a problem, both sides have to participate to act upon accordingly to bring health and safety for everyone.

Keywords: COVID-19, Dental care, Bosnia and Herzegovina.

1. BACKGROUND

A few months after newly discovered β -coronavirus named Sars-CoV2 which was firstly detected in Wuhan, China in December 2019 many countries faced with pandemic and introduced different epidemiology measures to prevent virus spread among population. Bosnia and Herzegovina has introduced rigorous epidemiological measures such as banning social

gatherings, limiting population movement inside and outside of the country, curfew from 8 pm to 6 am, suspension of public transportation, mandatory 14-day quarantine for people entering the country and self-isolation for people who have been in contact with positive cases and limiting working hours for various services—including dental practices were undertaken to minimize the transmission and death toll of COVID-19 in the country (1, 2).

The seventh member of the family of coronaviruses that can infect humans, which is identified as severe acute respiratory syndrome (SARS)-CoV-2 has not only left mark on the global economy, but also on the entire health-care system, including dentistry. Considering the fact that coronavirus spreads through droplets, fomite and contact, and that dental procedures involve proximity of the dental team with patients, the risk of COVID-19 transmission during dental treatments is increased (3).

During the pandemic escalation and global spread, the dental care sector has experienced numerous challenges and the global financial consequences. In order to minimise the risk of transmission, governments introduced several measurements that include lockdowns, quarantines, and other restrictions. Between mid-March and mid-May 2020, routine and preventive dental care in Bosnia and Herzegovina were suspended and only emergency procedures were allowed (1). After the re-opening, dentists have experienced probably the professional and personal challenge of the career.

Patient triage, management of social distancing in the dental office, use of personal protective equipment (PPE), adequate ventilation of dental office, disinfection procedures and similar activities became the new normal during

every dental procedure. It was required to adjust to many control protocols and recommendations related to dentistry that were instructed from the World Health Organization (WHO) and other professional associations (4). The lack of personal protective equipment, the shortage of disinfectants and the higher prices of dental materials were related to the long-term threat to dental care.

2. OBJECTIVE

The purpose of this study was to examine and assess the effect of the COVID-19 pandemic on access and dental treatment and services in Bosnia and Herzegovina with the viewpoint from dental employees in public and private sector.

3. MATERIAL AND METHODS

This study was carried out through email and some information was also obtained over the phone, verbally. Emails were found on the websites of all the dental offices, and the same applies with their phone numbers. Only one survey was made for the head figure of the dental office, which included 10 different types of questions to assess the impact of COVID-19 on them. The questions covered basic informational data that would help with this study. The survey included questions about employment, patients, equipment/supplies, and income. Google forms was used as the tool to make the survey.

4. RESULTS

In addition to the results that reveal the current status of dental practices, the survey has also covered the experiences and challenges during the COVID-19 outbreak. After dental practices have reopened in May 2020, dental teams were obliged to adapt their services to the new reality.

At the beginning of the COVID-19 pandemic, 70% of participants have experienced an increase in phone calls from patients. This increase has also made an impact on the use of tele dentistry, which offers an innovative solution to carry on with dental care even during pandemic. Besides the increase in phone calls, 60% of participants said they have experienced rising in the price of personal protective equipment (Figure 1). Access to appropriate and adequate amounts of personal protective equipment at the beginning of the COVID-19 pandemic has been identified as one of the biggest challenges. The survey shows that 60% of dentists reported face masks and gloves as the scarce item during the pandemic. About 30% of participants said that the access to disinfecting supplies represented an obstacle. Also, on the question Are you comfortable with the availability of PPE in your working environment to ensure the safety of you and your dental team throughout COVID-19 outbreak only 10% of participants answered that they are extremely

Question	Answer	Percentage
Have you used any type of COVID-19 Questionnaire for patients before making treatment decisions? The questionnaire includes the possible exposure to COVID-19, experienced signs or symptoms associated with the COVID-19 virus, etc.	Yes	80%
	No	0%
	Only at the beginning of pandemic	20%
Do you feel it is mandatory changing PPE (Personal Protective Equipment) before starting up every new patient?	Yes, of course	100%
	Only with high-risk patients	0%
	No	0%
Would you prefer the dentists/staff to be subject to routine rapid tests for COVID-19?	Yes	70%
	No	0%
	Only if paid by the government	30%
How many days has your office been closed during the lockdown?	Less than 30 days	0%
	30-60 days	90%
	More than 60 days	10%
Do you describe the financial impact of the COVID-19 outbreak on your income as significant?	Strongly agree	70%
	Somewhat agree	30%
	Neither agree nor disagree	0%
	Somewhat disagree	0%
Did you reduce the number of your employees as a result of lockdown?	Strongly disagree	0%
	Yes, temporarily	20%
	Yes, permanently	10%
	No	70%

Table 1. Detailed overview on survey question answers regarding COVID-19 impact on dental service

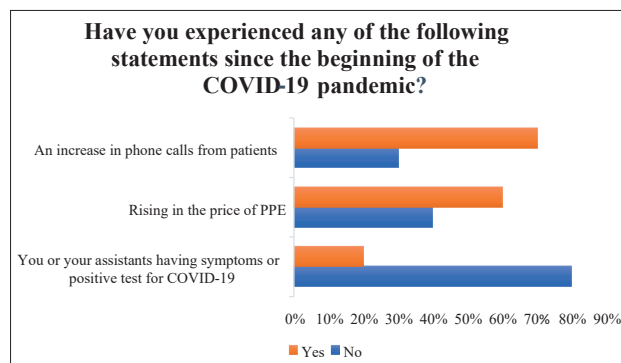


Figure 1. Experience and challenges during COVID-19 pandemic

comfortable with it. Most of the dentists (60%) said that the availability of PPE in their dental practices is somewhat comfortable. There is also 10% of participants that believe that the access to personal protective equipment in their dental practices is not really adequate.

Despite the fact that there are frequent infection control protocols and additional personal protective equipment, most of the dentists reported that COVID-19 pandemic has affected their patient flow. Significantly reduced patient volume was expected from 90% of dentists, whereas 10% of participants said that there was no significant change.

In Table 1 additional survey findings and detailed overview of the questions are provided.

5. DISCUSSION

COVID-19 pandemic affected many areas of the everyday life, including provision of specialty care and non-covid health conditions. In general, healthcare utilization for non-COVID-19 conditions has decreased almost universally, across both high- and lower-income countries (5).

Many professional dentist associations including American Dental Association (ADA) recommended that dental offices limit patient care to emergency cases in order to protect PPE for those on the frontlines battling the coronavirus and to keep patients at home (6).

The impact and perception of restrictive measures introduced by government regarding dental offices in Bosnia and Herzegovina has been examined in one study and showed fear among dentists of infecting their family members with COVID-19 and that the practice in which they work to be a place of the spread of infection (7), even CDC noted that no clusters linked to dental care facilities or employees have been identified, unlike medical care facilities and workers (8). The effects of this crisis on dental services, such as the restriction of dental practices to emergencies, the shutdown of many dental centres and the risks of infection transmission, can be major concerns of dental care providers (9).

Dental services were also deeply affected by the pandemic and a general reduction of working hours/week and during lockdown dental treatments were generally suspended, except for emergency care in Bosnia and Herzegovina and many countries (10). As shown in our study, 10% of practices reduced work staff permanently, 20% temporary and majority did not make any change, even number of services have been dramatically reduced. Dental practices, especially private one, have been closed in 90% cases for 30-60 days with strong negative impact on revenue which was the case in other countries like Canada (11).

Beside business segment, it is important to notice that lack of dental service could cause long term consequences on dental and oral health (12).

6. CONCLUSION

Measures introduced by many countries regarding COVID-19 including lockdown significantly affected dental care in Bosnia and Herzegovina and other countries across the world especially in the first wave of pandemic. Beside negative economic impact, long term impact on dental and oral health is present as well. There is minimal but still evolving data relating to COVID-19 and dental care. For future scenarios, sharing the experience of dentists from various countries would be a helpful source of further improvements.

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to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

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