



Dental Patient Utilization During the Covid-19 Pandemic at Mungkid Primary Health Centre in 2020

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Abstract. In early 2020, there was a discovery of the Covid-19 virus that could transmit very quickly through droplets, so it was eventually designated a pandemic. Dentists are always in contact with saliva and blood. They are susceptible to droplets and aerosols, so there are regulations regarding dental care services during a pandemic that can affect dental patient visits. This study aims to determine the utilization of dental patients during the Covid-19 pandemic at the Mungkid Primary Health Centre. The type of research was descriptive research with quantitative data. This research was conducted at the Dental Clinic of the Mungkid Primary Health Centre by taking data from medical records in the dental clinic during 2020 based on payment methods, demographics of age, gender, diagnosis, and treatment data. The data were analyzed and presented as a graphic presentation. The description of dental clinic patient visits at Mungkid Health Center in 2020 shows fluctuation, with the highest visits in February and the lowest in December. The most common diagnosis was pulp necrosis, and the most treatment conducted was through premedication. The pattern of the patient who visited the clinic, based on the demographics of most patients, was female and was dominated by patients of productive age. Payments with JKN dominated the visits of dental clinic patients at Mungkid Health Center. These results suggest a decrease in the number of dental visits during the year 2020 Covid Pandemic at the Mungkid Health Centre.

Keywords: Dental visit · Utilization · Covid-19 pandemic

1 Introduction

In early 2020, a severe acute respiratory syndrome coronavirus-2 (SARS-CoV-2) was discovered, which causes Coronavirus Disease (COVID-19). Along with a significant increase in cases of COVID-19 disease, on March 12, 2020, WHO declared this disease a pandemic [1]. This virus can occur quickly because it is spread through droplets when humans sneeze or cough. The incubation period of the SARS-CoV-2 virus is estimated at 5–14 days. Current research says that everyone is susceptible to being infected with this virus. People with direct physical contact with symptomatic and asymptomatic patients have a higher risk of infection, such as doctors, nurses, and other health workers [1, 2].

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Dentists are always in direct or indirect contact with the patient's blood and saliva. The spread of infection can occur by inhalation through the respiratory process, so dentists have a high risk for dangerous infectious diseases caused by viruses and bacteria [3]. Patients who cough, sneeze, or receive dental treatment using a high-speed hand-piece produce aerosolized secretions, saliva, or blood in the vicinity. Various pathogenic microorganisms can contaminate dental equipment after use or exposure to a contaminated clinical environment so that infection can occur through equipment or direct contact. Therefore, dentists need to carry out infection control to reduce the risk of contracting the SARS-CoV-2 virus [1].

Routine dental practice and non-emergency cases were suspended at the beginning of the COVID-19 pandemic. Dental practice only handles emergency cases, delays asymptomatic actions, and delays action using a bur/scaler/suction [4]. During the new normal period, the maximum volume of patients is determined based on the number of dentist's practice rooms, the area of the dentist's practice room, the layout of the infrastructure facilities used in the room, and the time required to clean and disinfect the infrastructure. It is necessary to take at least 15 min after finishing treatment and initiate cleaning and disinfection of the room before starting therapy on a new patient. In this new normal era, patient management is also considered by arranging patient arrival schedules, so that room occupancy is not more than 50%. All facilities and infrastructure patients can be disinfected regularly [5].

Public awareness of dental and oral health is still low. People generally do not visit the dentist because they feel it is not an obligation to have regular check-ups with the dentist. People must visit the dentist when problems arise, such as sick teeth or emergencies (pain that doesn't heal or trauma) and are already disturbed [6]. The survey shows that Magelang Regency has a relatively high number of dental and oral problems, namely 65.20% of the population aged more than three years. The survey also showed that the frequency of people in Magelang Regency who visited the dentist 1–3 times was 1.48%. 4–6 times 1.77%, and more than six times 0.98% [7].

The survey showed that 93.66% of respondents were aware of the New Normal policy, 42.27% were worried/very worried when going out of the house during the Covid-19 pandemic, and 52.23% were a bit/quite nervous when going out of the house during the Covid 19 pandemic in Magelang Regency [8]. The survey results also state that residents with health complaints choose Puskesmas/Pustu (36.69%) as the primary health facility they aim for [9]. This study aims to describe the visit of dental patients during the Covid-19 pandemic at the Mungkid Health Center, Magelang Regency.

2 Material and Method

The ethics committee of FKIK UMY has approved this research. The type of research used is descriptive research with quantitative data in the form of secondary data. The data taken from dental clinic patient visit data from January to December 2020 was obtained from the information system at the Mungkid Health Center (SIMPus). The variables in this study include the number of visits, disease diagnosis, treatment measures, payment methods, age, and gender. The data were analyzed and presented as a graphic presentation.

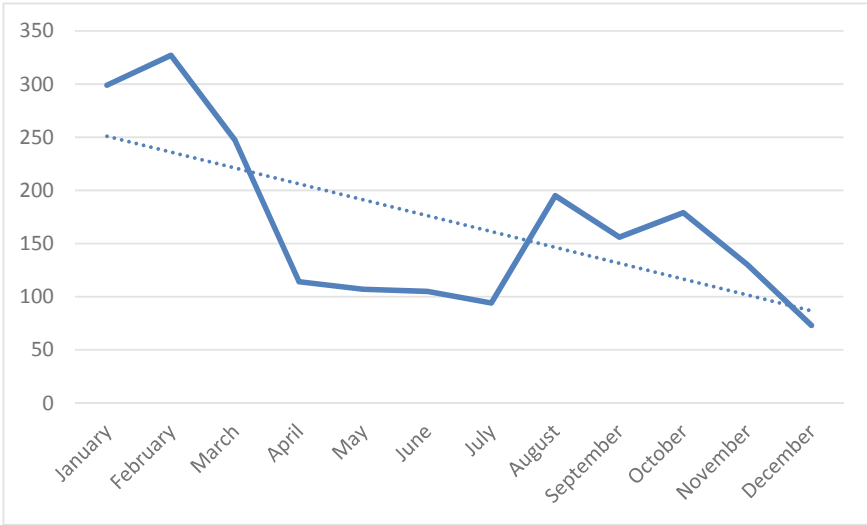


Fig. 1. Dental visit at Mungkid Health Center in 2020.

3 Result

The results showed that the highest number of dental visits at the Mungkid Health Center was in February, which was 355 visits (16.9%), while the lowest was in December, which was 73 (3.48%). New patients dominated patient visits with 1,828 or 87.2% of the total visits in 2020. The highest number of recent patient visits was in February, while the highest number of old patient visits was in August.

Female patients dominated patient visits at the Mungkid Health Center, with 68% of the total visits in 2020. Patients who visited the dental clinic at the Mungkid Health Center in 2020 were mainly in the age category 20–44 years, with a total of 684 visits (33.8%), while the lowest was in the age category 0–4 years, with a total of 35 visits (1.73%). Most of the patients who visited the dental clinic of the Mungkid Health Center in 2020 used JKN insurance based on the payment method, which can be seen from the total percentage of BPJS usage of 58%. The highest utilization rate at the Mungkid Health Center occurred in February at 0.64%, and the lowest in December at 0.15% (Figs. 1, 2, 3, 4, 5 and 6).

The most common disease diagnoses found at the Mungkid Health Center in 2020 were pulp necrosis with a total of 374 cases (20%) followed by chronic periodontitis with a total of 331 cases (17.7%), and Disturbances in tooth eruption with a total of 329 cases (17.6%). The most widely handled treatment action at the dental clinic of the Mungkid Health Center in 2020 was premedication treatment, which was 666 procedures, followed by permanent dental fillings with a total of 420 treatments. The minor treatment performed at the dental clinic at the Mungkid Health Center was permanent tooth extraction, with a total of 51 treatments.

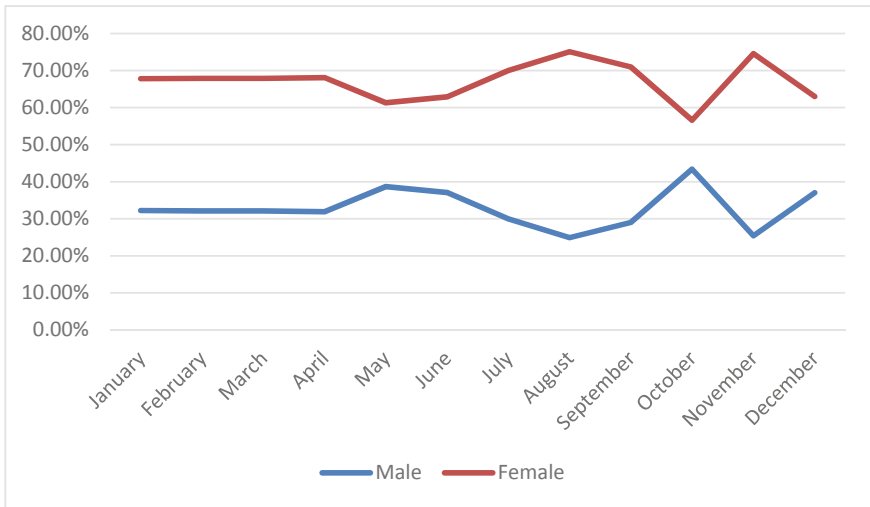


Fig. 2. Dental visit based on gender at Mungkid Health Center in 2020.

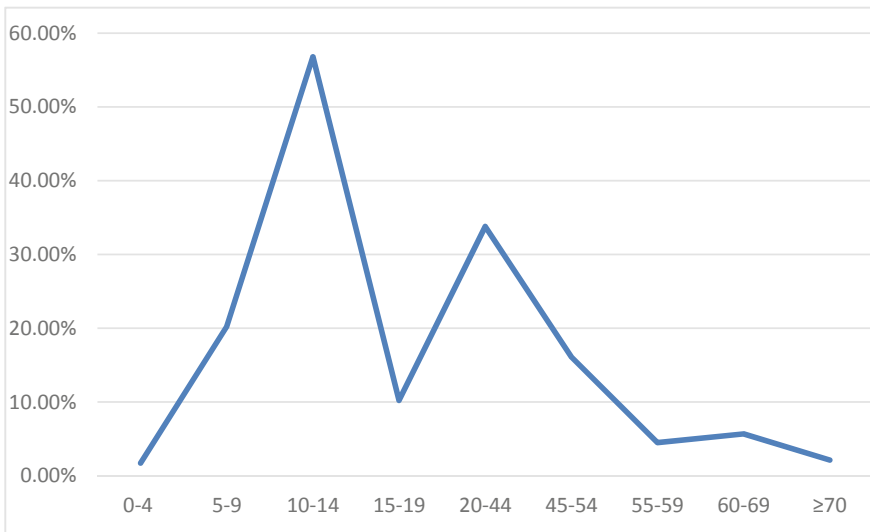


Fig. 3. Dental visit based on age at Mungkid Health Center in 2020.

4 Discussion

Dental clinic patient visits at the Mungkid Health Center experienced ups and downs throughout 2020. Dental clinic patient visits were the highest in February, while the lowest was in December. In March, when Indonesia began to declare a pandemic, dental clinic patient visits decreased by 3.95% from visits in February. In April-July, there was a significant decrease from the previous month. This decrease is because, in March

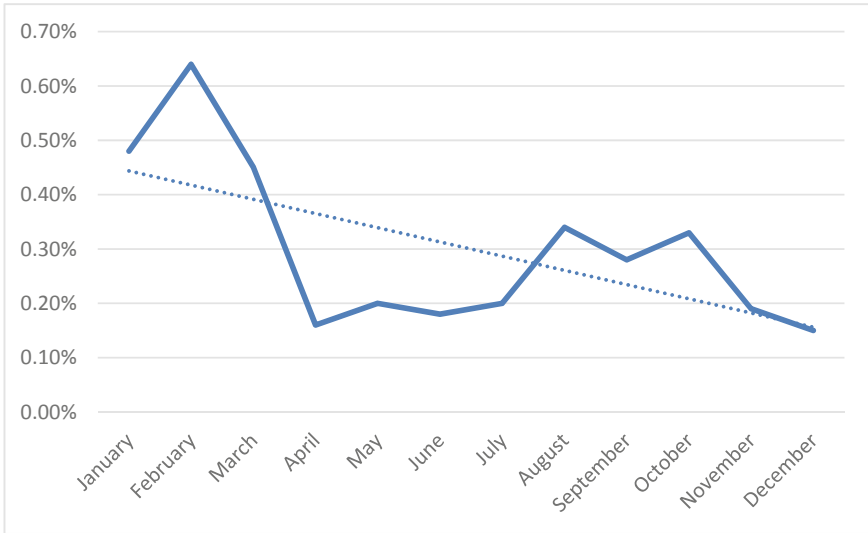


Fig. 4. Utilization rate of dental visit at Mungkid Health Center in 2020.

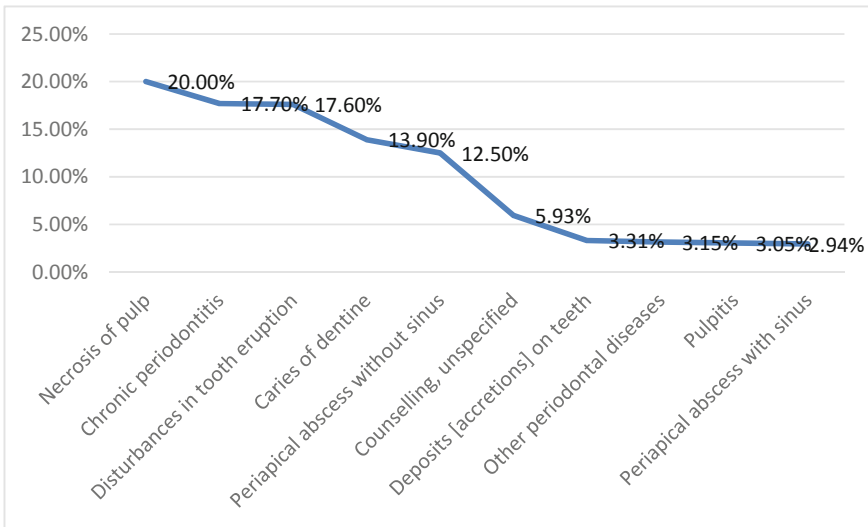


Fig. 5. Diagnosis of dental disease at Mungkid Health Center in 2020

2020, the Association of Indonesian Dentists issued Circular Number 2776/PB PDGI/III-3/2020 regarding restrictions on dental care during the Covid-19 virus pandemic, so in April, there was a significant decline from March.

In August there was an increase from the previous month by 5%. This increase is because dentists have begun to dare to treat patients with standards that follow the standards of dental patient care in the New Normal era issued by the Indonesian Dentist

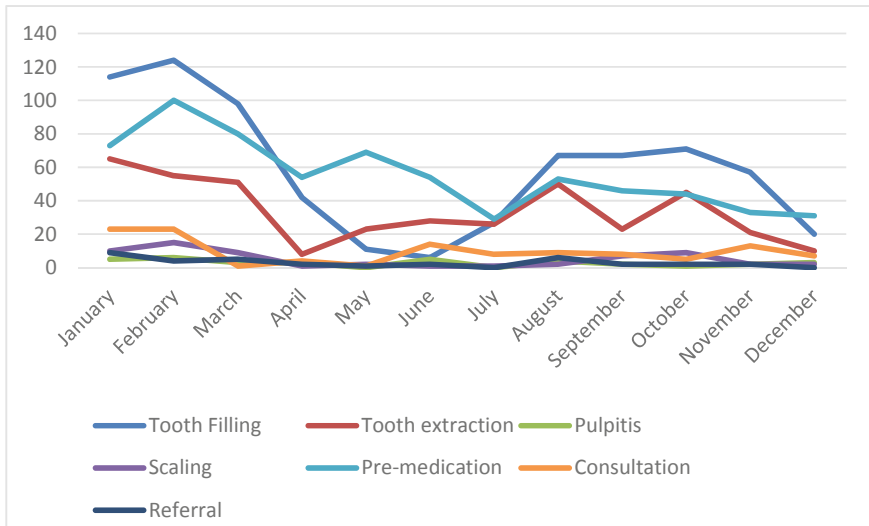


Fig. 6. Dental treatment at Mungkid Health Center in 2020.

Association. This August, the visits to the dental clinic between new and old patients were almost the same because old patients who had not been in control for a long time began to dare to have their teeth checked.

In December, patient visits were the lowest. Data from the Indonesian Covid 19 Task Force Team shows that in December, the number of cases in Indonesia increased significantly. Therefore, this can affect the trend of dental patient visits at the Mungkid Public Health Center. The condition of the development of Covid-19 cases affects the number of dental clinic patient visits at the Mungkid Health Center because there are several established rules. A survey from the Central Statistics Agency stated that the condition of the people of Magelang Regency who were not worried about leaving the house during the pandemic was only 5.31% [10]. The decrease in dental clinic patient visits can impact the incidence of chronic diseases such as pulp disease, periodontal disease, and the occurrence of abscesses.

Women dominated visits of dental poly patients at the Mungkid Health Center in 2020. Previous research state that women use health services more than men. Women pay more attention to dental and oral hygiene than men because women tend to care for their appearance [11, 12].

Most dental clinic patient visits at the Mungkid Health Center in 2020 were at the age of 20–44 years. The lowest number of visits was in the 0–4-year category. This is in line with data from Riskesdas which shows that the age group of 25–34 years and 35–44 years has the highest frequency of visits, while the age group of 3–4 years has the lowest frequency of visits [7]. Those of productive age have a high level of awareness in seeking health services when needed [11]. Previous research found that 14 out of 51 parents had never had their child's teeth checked by a dentist, so oral hygiene depended on the level of awareness and knowledge of the child's parents.

The national health insurance (JKN) patient dominated the dental visit at the Mungkid Health Center in 2020. The utilization of JKN participant dental patient visits at the Mungkid Health Center in 2020 is in the range of 0.15–0.64%. This figure is still under-utilization because the ideal monthly utilization rate estimate is 2%–3% for one dentist with 10,000 participants [13]. The under-utilization is because the service hours of the Mungkid Health Center are only limited to the morning, while not all people can go to the health center in the morning because of work. The work of the people in the Mungkid sub-district is dominated by students, laborers, private employees, civil servants, BUMN employees, and time-bound teachers, which usually must work in the morning too [9]. In addition, based on a survey conducted by the Central Statistics Agency, the people of Magelang Regency experience anxiety when going outside during the Covid-19 pandemic [10].

The highest number of diseases in the dental clinic at the Mungkid Health Center in 2020 were pulp necrosis and chronic periodontitis. Chronic periodontitis is a slowly developing infection that can prevent by maintaining good oral and dental hygiene and taking immediate treatment when gingival inflammation occurs so that the disease does not continue. The level of public awareness is still low, and most people come to the dentist when the dental condition is quite severe and requires further treatment [14]. Excellent and correct brushing behavior can influence dental and oral health care. In Magelang Regency, the aspect of proper brushing of teeth is only 3.19%; meanwhile, 32.64% of the people of Magelang Regency take self-medication when experiencing dental problems and mouth [7].

The dental diagnosis in Mungkid Health Center is dominated by pulp problems, periodontitis, abscesses, and dental caries. These conditions encourage patients to seek treatment even during the pandemic because of the pain. Patients come to seek emergency dental care when experiencing severe tooth pain, trauma, cellulitis, or abscess despite fear of the COVID-19 pandemic [15].

The most frequently performed treatment measures are premedication, permanent teeth filling, and deciduous teeth extraction. The diagnosis is dominated by chronic diseases such as pulp disease, periodontal disease, and the occurrence of abscesses that require emergency dental care so that patients require premedication first to relieve pain before and after the primary treatment. Health service use theory states that perceived needs influence health utilization behavior. If someone feels sick, they will take advantage of health services and vice versa. Someone who needs health services but feels healthy will not use them. Most people come to the dentist when the condition of the teeth is severe enough to require premedication before treatment [14]. The impact of the premedication will affect the mindset that people will not return to the dentist because they feel no longer sick due to the premedication.

5 Conclusion

1. The visits of dental patients at the Mungkid Health Center fluctuated but tended to decrease during the pandemic.
2. The utilization rate of JKN dental polyclinic patients at the Mungkid Health Center is underutilization.

- Demographically, patient visits were more female than male and dominated by patients of productive age.

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