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INTRODUCTION

With the widespread onset of Covid-19 in March 2020, hospitals and surgery centers in the US and internationally had to quickly adapt to address public safety concerns. The initial approach of pausing all elective surgeries was not sustainable, which led to creation of new protocols to maintain a functioning health system. The practice that many organizations adopted to both keep staff safe and meet patient needs was the pre-operative Covid-19 test, to be completed by the patient in the days leading up to the surgery appointment. Goals were to protect staff from exposure while enabling elective care to continue.

At the inception of this research project, two studies were found in review of the literature. The first detailed the on-going evaluation of hospital guidelines in Covid-19 pre-procedural testing guidelines. The second article discussed the rate of positive cases in a pediatric general surgery hospital. Further studies such as this are indicated so that the efficacy of pediatric Covid-19 pre-procedural testing and the potential barriers to care it creates can be better understood and addressed. No evaluations of pre-operative covid-19 testing requirements specific to dentistry were found in reviewing the literature.

The available literature emphasizes how current protocols were created through continual process evaluation. With the unknowns of when the next pandemic may occur, evaluations of systems that evolved from the Covid-19 pandemic are needed so that we may understand best approaches for the future.

PURPOSE

The purpose of this study was to analyze data trends in operating room appointment cancellations due to the pre-operative requirement of obtaining a negative Covid-19 PCR test for dental cases at Our Lady of Fatima Hospital in North Providence, RI. Cancellations due to either positive test result or failure to complete testing prior to procedure were included. Our hypothesis was that the addition of required pre-operative Covid-19 PCR testing created a barrier to care for patients seeking dental services from St. Joseph's Dental Clinic in the operating room setting, leading to delayed dental treatment.

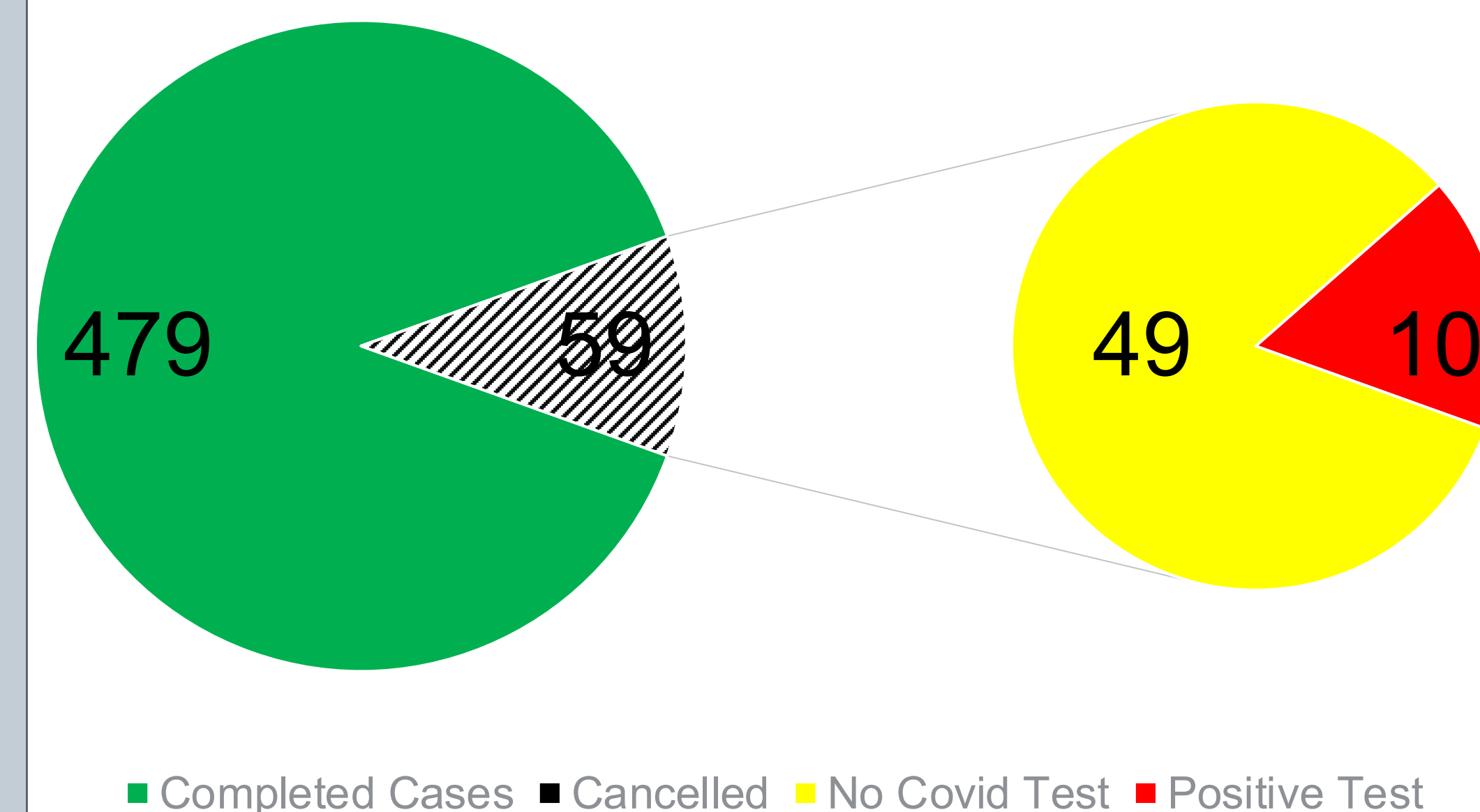
METHOD

A retrospective chart review of cancelled cases from August 2020 through March 2022 at a community hospital in Rhode Island was conducted. Inclusion criteria were: OR appointments scheduled by St. Joseph's Dental Clinic at the operating rooms within Our Lady of Fatima Hospital that were cancelled due to Covid-19 testing requirements from August 2020 through March 2022. Exclusion criteria were: any appointments during the study period that were cancelled for reasons unrelated to Covid-19.

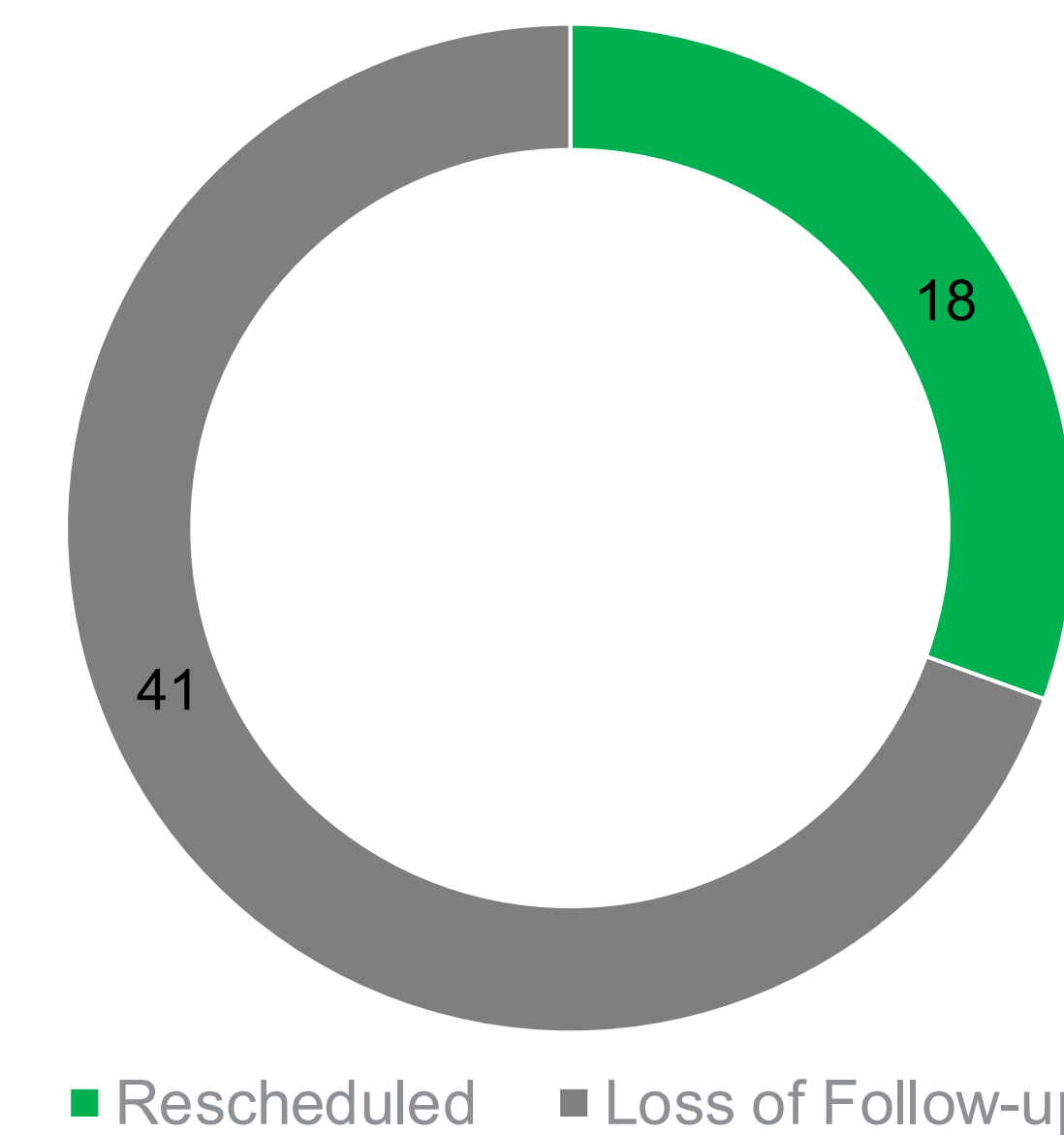
No subjects were recruited or screened for this study as data analysis pertained only to the OR appointment itself, not the individual for which the appointment was scheduled for.

Data analysis included total number of appointments cancelled due to Covid-19 testing requirements, number of appointments cancelled due to positive Covid-19 test vs failure to meet testing requirements, number of appointments rescheduled and their average wait time to be rescheduled, number of cases lost to follow-up, and a comparison of the data set to total number of cases completed in the OR during the study period.

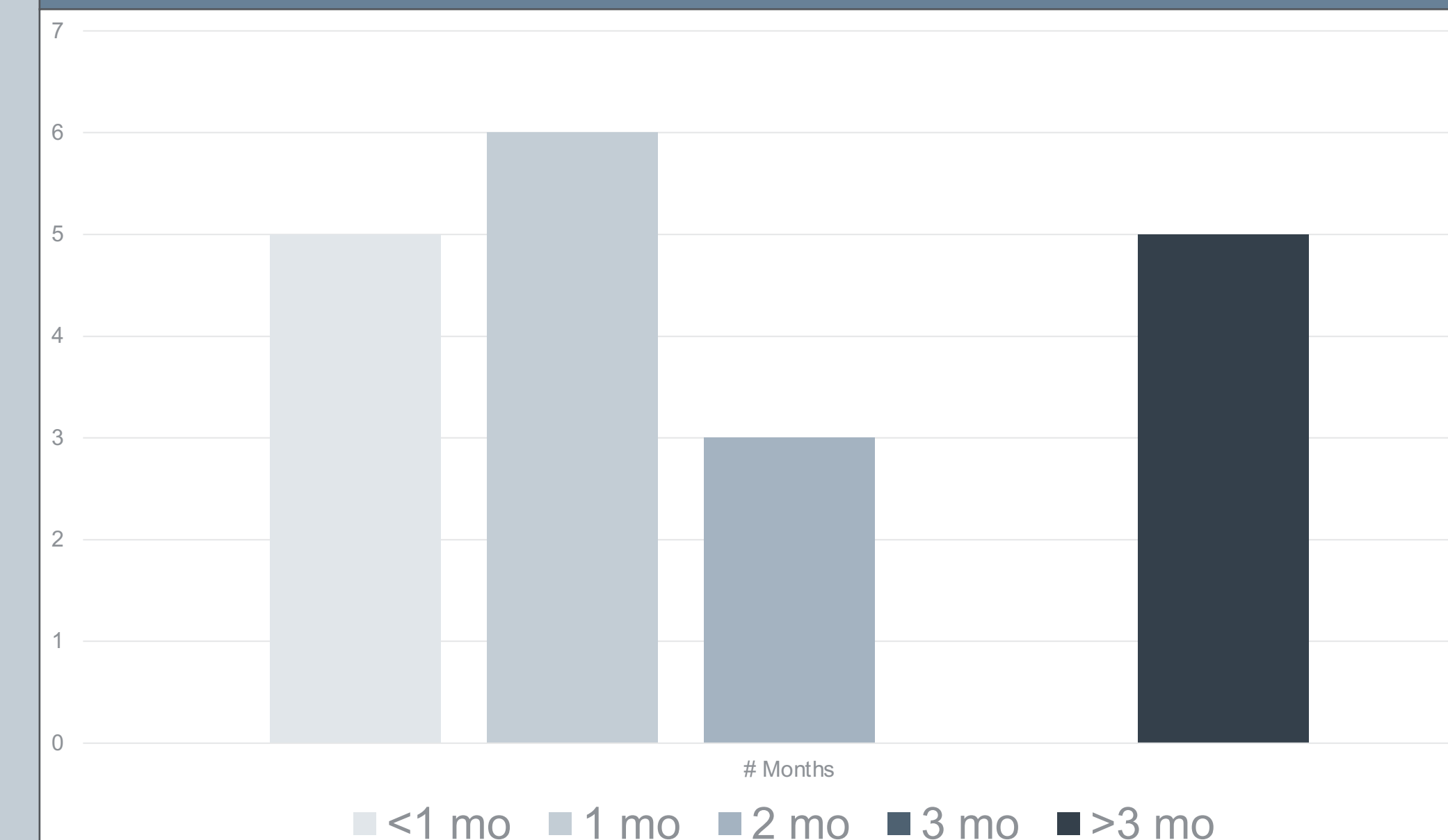
Cause of Cancellation vs Completed Cases



Loss to Follow-Up After Cancelled Appointment



Delay in Treatment Resulting From Cancellation



RESULTS

During the study period 59 patients had their appointments cancelled due to requirements summarized by study parameters. During this period, 538 total general anesthesia cases were completed, meaning that 11% of appointments during the study period were cancelled due to Covid-19 pre-procedural testing requirements. 10 cancellations in the study population (2% of total cases) were due to positive covid test and 49 (9% of total cases) were due to not obtaining the covid test. Of the 59 cancelled appointments, 18 patients rescheduled and 41 were lost to follow-up. 50% of rescheduled patients were seen within less than 2 months of initial cancellation.

CONCLUSIONS

In total, 41 patients (70%) failed to reschedule care after appointment cancellation. Inversely, 7 (70%) of patients that initially tested positive did successfully reschedule. This illustrates that act of obtaining a pre-procedural covid-19 test was not inherently a barrier to care, but that in a general sense, the added pre-procedural requirements did pose additional difficulties in adherence for some patients. Patients who had already followed protocol once but tested positive, were more likely to follow protocol the second time for the rescheduled appointment.

Over this study period, covid-19 testing protocols helped to mitigate exposure risk of anesthesia and dental personnel to the 2% of covid-positive patients that would have otherwise been seen, if not for screening. It simultaneously contributed to 9% of patients not receiving care due to failure to comply with protocols. Assuming an average appointment time of 2 hours, the 59 cancelled appointments lead to roughly 118 hours of lost time for delivery of dental care. Upon adding in the 18 rescheduled appointments and their effect of slowing progression through with seeing unscheduled patients on the waitlist, the total effective cost to chairside hours reaches 154.

For most of the study period, our organization required 7 day's quarantine after testing positive. While impossible to empirically quantify what provider contraction rates would have been, assuming 40 hours of lost chairside time per ill provider, it would have only taken 3 instances of patient-to-provider infection for the total number of lost provider hours due to quarantine to surpass the lost hours due to cancelled appointments. The addition of pre-operative covid 19 testing requirements did create an observable barrier to care in our patient population. However, when reducing this situation to availability of chairside hours, there would have been a very small margin of error in which not acting out of an abundance of caution could have resulted in fewer chairside hours lost.

REFERENCES

1. Bence CM, Jarzembowski JA, Belter L, Berens R, Henrickson KJ, Hoffman GM, et al. Covid-19 pre-procedural testing strategy and early outcomes at a large tertiary care children's hospital. *Ped Surg Int.* (2021) 37:871-880.
2. Si CKS, Lee JA, Nah SA. Early experience with universal preoperative and pre-procedural screening for Covid-19 in low-risk pediatric surgical patients requiring general anesthesia. *Ped Surg Int.* (2020) 36:1407-1411.