Implementation of community dental and oral health care before COVID-19 pandemic to new normal period at Primary Health Care

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ABSTRACT

Introduction: Dental health services at primary health care (PHC) are the first and foremost effort to overcome dental health problems in the community, consisting of Individual Health Care (IHC), Community Dental Health Care (CDHC), and School Dental Health Care (SDHC). The COVID-19 pandemic in Indonesia has hampered dental health services at PHC. This study aims to describe the implementation of dental health Care at the PHC from before COVID-19 pandemic to the new normal adaptation period. **Methods:** Descriptive cross-sectional study conducted from January to February 2022. The sample consisted of 15 PHC in Bandung, West Java, Indonesia, interviewing dentists and doing a checklist on the rubric for each activity implementation. Data processing by the percentage of implementation. **Results:** The implementation of promotive before the pandemic was 100%, when the pandemic decreased and increased again by almost 100% during the new normal adaptation period. Before the pandemic, most preventive measures were just 56%. During the pandemic, there were nearly no activities, and during the new normal adaptation period, there was an increase, but the percentage was low. The curative implementation before the Pandemic was almost 100% implemented. At the beginning of the pandemic, the implementation decreased, but 100% was carried out for counseling and referrals. Most care has been implemented up to 100% during the adaptation period. The implementation of rehabilitation during the pandemic period was still low (40%). At the beginning of the pandemic 13%, and during the adaptation period, there was an increase according to the pandemic period (33%). **Conclusion:** Before the pandemic, promotive and curative services had been maximized, while preventive and rehabilitative services still needed to be maximized. During the beginning of the pandemic, almost all services stopped. During the new normal adaptation period, all services have increased again compared to the initial period of the pandemic.

Keywords: dental; oral health; primary health care; COVID-19; pandemic

p-ISSN: 1979-0201; e-ISSN: 2549-6212; Available from: http://jurnal.unpad.ac.id/pjd/article/view/ 40410
DOI: 10.24198/pjd.vol34no3.40410
Submission: July 1, 2022; Accepted: Nov 30 , 2022; Published online: Nov 30, 2022

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INTRODUCTION

One of the health problems in Indonesia and is often complained is dental and oral disease. Riskesdas in 2018 stated that dental and oral disease had a fairly large prevalence rate of 61%. The largest proportion of dental health problems is tooth decay/caries by 45.3%, while the largest proportion of oral disease problems is swollen gums caused by abscess by 14%.[1] The cause of the problem is certainly not from one factor alone, but from multiple factors. To overcome this, the most basic effort of the government is to establish a first-level primary health service facility, namely Primary Health Care (PHC) spread across regions in Indonesia.[2]

PHC as a primary service center in its working area in accordance with applicable regulations, is to provide basic health services for the community, including dental and oral health services. Basic dental and oral health services are divided into 4 service dimensions, namely the dimensions of promotive, preventive, curative, and rehabilitative services. In practice, in accordance the Guidelines for Dental and Oral Health Services at health centers, it is to provide basic dental health services including emergency management in dentistry, topical fluoride administration and socialization, treatment for caries fillings with minimal invasion or what is called Atraumatic Restorative Treatment (*ART*).[3] As for promotive services, it is stated and regulated by Permenkes no. 43 of 2019 concerning PHC article, and for curative services it is regulated implicitly in Permenkes no. 43 of 2019 article 51 paragraph 1 which contains the first level of Individual Health Care (IHC).[2]

The presence of the COVID-19 Pandemic in Indonesia has had a negative impact on all aspects of life, especially dental health services at health centers as a first-rate dental and oral health facility due to the transmission properties of COVID -19.[4] COVID-19 is an abbreviation of CO-rona VI-rus D-isease as a disease caused by a virus and 19 is the year the virus was identified, namely 2019. COVID-19 is a disease caused by infection with *SARS-CoV2* (*Severe Acute Respiratory Respiratory Syndrome). Syndrome CoronaVirus-2*) which is a family of *Coronaviridae*.[5] Main symptoms caused are asthenia, myalgia, nasal congestion, rhinitis, pharyngotympanic, and the most important is a dry cough and shortness of breath accompanied by fever.[6] Currently in Indonesia, the total number of people suffering from COVID-*19* is 5.96 million, with 5.6 million people declared cured and the death toll being 153,000. This number can increase or decrease depending on the efforts of all Indonesian people in stopping the transmission of COVID-19 infection.[5]

Transmission of COVID-19 becomes more intense in dental clinics because of their transmission properties. Human-to-human transmission of this virus has been studied in several studies, that is direct contact with COVID-19 sufferers. The main point of direct contact is the spread through respiratory droplets when a COVID-19 patient sneezes or coughs. The aerosol that is released when a COVID-19 patient coughs or sneezes will carry the virus with him. COVID-19 can survive in the air for approximately 3 hours and with a radius of about 1.5 meters before the virus finally dies.

COVID-19 that is inhaled by healthy people can infiltrate into the body through saliva, oral mucosa, eye mucosa, and respiratory mucosa before finally multiplying, spreading, and carrying out its pathogenicity, causing symptoms such as fever, shortness of breath, dry cough.[7] · Transmission of this virus can also be through inanimate objects because in several studies, this virus has a life span that varies outside the human body.[8]All dental procedures require the operator to be in close contact as the procedure can only be carried out less than 1 meter away.[10] An aerosol is a *by-product* that is often produced in most dental procedures,[9] especially in Ultrasonic Scaling *procedures* and tooth preparation using burs. This makes it very possible for dentists to be able to contract COVID-19 infection.[11] Therefore, special care are needed by dentists on duty at the PHC to control the transmission of COVID-19 so that patients, operators, and related parties are protected from the transmission of COVID-19.[10]

Based on the description above, through the Technical Guidelines for Services During the COVID-19 Pandemic Period issued by the Directorate of Primary Health Services, the Indonesian Ministry of Health requires that there be restrictions on dental procedures with several related conditions.[12] However, this remains an

obstacle for both the community and dentists in the practice of dental health services.[11] These obstacles are in the form of not all dental and oral health problems can be handled properly and immediately so that in the future, people can experience the same or even more serious problems than previous dental and oral health problems.[11]

In addition to IHC services at the dental clinic at the PHC, dental and oral health services outside the PHC building in the Community Dental Health Care (CDHC) and School Dental Health Care (SDHC) activities are also important to pay attention to regarding the implementation of health protocols during the COVID-19 pandemic. This is due to the risk of transmitting the virus from the assembled masses, so it is necessary to apply health protocols such as *Physical Distancing*, wearing Personal Protective Equipment (PPE) and diligently washing hands. Activities outside the building may have stopped at the beginning of the COVID-19 pandemic due to new government regulations regarding restrictions on community activities at the IHSP for CDHC implementation and student activities in schools for SDHC implementation.[12]

Procedures for dental health services at the PHC will certainly experience changes in line with Care to control the transmission of *SARS-CoV*2.[12] The purpose of this research is to find out and assessing the description of the implementation of dental health services provided by PHC as primary health services in the dimensions of promotive, preventive, curative and rehabilitative services before the pandemic (before March 2020), during the beginning of the pandemic (April 2020–April 2021), and after the pandemic lasted 1 year or during the new normal adaptation period (NNA Period) based on the reference to dental and oral health services at health centers issued by the Indonesian Ministry of Health.[13]

METHODS

The research method used is a descriptive *cross-sectional study* which seeks to find out the description of dental health services in the promotive, preventive, curative and rehabilitative dimensions at the PHC during the COVID-19 pandemic. The population of this research sample is health centers in Bandung Regency. The research sample amounted to 16 PHC, but 1 PHC dropped out due to some internal problem of the PHC. The sample was taken based on *purposive sampling* with the criteria that there was at least 1 dentist at the PHC and was representative of 63 PHC in Bandung Regency. The research was conducted in January-February 2022.

This research is in the form of interviews with dentists based on a research rubric consisting of demographic data, and the implementation of 4 service dimensions which are summarized in 3 activities of the dental health center, namely Individual Health Care (IHC), Community Dental Health Care (CDHC), and School Dental Health Care (SDHC). This research will also look at the implementation of these four service dimensions in 3 different time periods, namely before the COVID-19 pandemic (before March 2020), during the beginning of the COVID-19 pandemic, namely before the issuance of the technical manual for dental health services at the PHC (April 2020-April 2021), and during the new normal adaptation period or after the issuance of the latest reference for dental health services at PHC by the Indonesian Ministry of Health (May 2021 to January 2022).

The assessment is carried out by observing and doing a *checklist* in the research rubric, if the service is carried out, it is marked with a checklist (☐) in the Yes column, and in the No column if the service is not performed. The Reason column is filled if the service is not performed. Processing data using Microsoft Excel by presenting and finding the average value of each service and sorting the reasons if the service is not performed based on the largest number.

This research has obtained a research ethic exemption from the Research Ethics Commission of the Universitas Padjadjaran (No.1059/UN6.KEP/EC/2021), a research permit from the Dinas Kesehatan Kabupaten Bandung (No.070/1090/DINKES), and a research permit from the Badan Kesatuan Bangsa dan Politik Kabupaten Bandung (No.070/038/Bid.Wasbang).

RESULTS

Based on table 1, the largest target area is the Rancabali Health Center with an area of 11,219 hectares, and the largest population in the target area is the Bihbul Health Center with a population

Table 1. Demographic data of PHC (n=15)

Primary health center	Area of Development (Ha)	Resident (Soul)	Supported School			IHC	Dentist			Dentist	Dental Chair
			ES	JHS	HS		Amount	Age	Gender		
Cikalong	3260	40367	22	8	4	72	2	44	L	0	1
Pangalengan	6352.7	59938	24	4	5	85	1	27	L	2	3
Ciwidey	1519	45582	18	8	7	74	1	42	P	1	1
Pacet	6852.7	71704	40	18	14	80	1	26	P	1	1
Majalaya	1224.7	75858	35	11	10	87	1	43	P	1	1
Rancabali	11219	49586	33	8	5	78	1	38	P	1	1
Cicalengka	604.6	64100	31	12	13	82	1	28	P	2	2
Baleendah	896.5	83153	36	14	18	40	2	32	P	2	2
Cimenyan	2788.7	54459	21	7	3	79	1	47	P	1	2
Soreang	1047.3	83480	33	17	16	105	1	35	L	2	2
Sukajadi	1377	32691	16	4	1	65	1	34	P	2	1
Kiangroke	1336.66	62032	26	15	10	84	1	39	P	1	1
Katapang	620.92	47595	19	7	3	51	1	55	P	1	1
Kutawaringin	1375.1	60177	25	9	6	78	1	40	P	1	1
Bihbul	392.78	83574	32	7	3	53	2	50	P	2	2

Note: IHC=Individual Health Care; ES=Elementary School; JHS=Junior High School; HS=High School

Table 2. Implementation of promotive services in PHC (n=15)

Activity	Before the pandemic		During the beginning of the pandemic		New normal adaptation period	
	n	%	n	%	n	%
Individual Health Care						
Direct education to patients at the dental clinic 1.Chair-side talk 2. Dental and oral health education media	15	100	8	53%	15	100%
Community Dental Health Care						
Dental and oral health counselling 1. Pregnant women 2. Pre-school children 3. Seniors	15	100%	4	27%	15	100%
School Dental Health Care						
Dental and oral health counselling 1. Direct counselling 2. Educational media (poster/leaflet)	15	100%	1	7%	13	87%

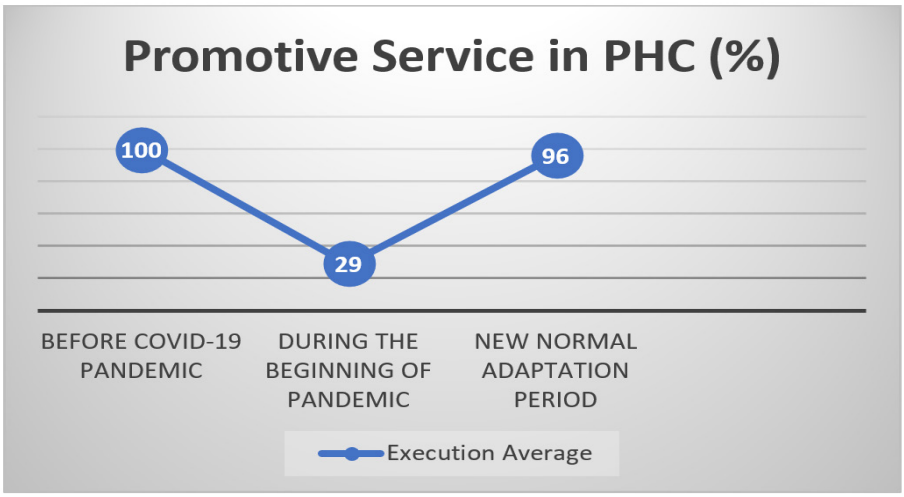

Diagram 1. Average execution of promotive services in PHC

of 83,574 people.Based on the research time period, promotive services are divided into 3 periods, in addition, promotive services are also divided into IHC, CDHC, and SDHC activities.

Based on table 2 above, promotive services both in IHC, CDHC, and SDHC were fully operational before the COVID-19 pandemic. Only 53% of promotive services at IHC ran during the beginning of the pandemic, and services almost completely stopped, only 7% of promotive services provided to SDHC during the beginning of the pandemic. Promotive services at IHC and CDHC have been running in all PHC, but promotive services at SDHC have only been running at 87% of PHC.

Table 3. Implementation of preventive services in PHC (n=15)

No.	Activity	Before the pandemic		During the beginning of the pandemic		New normal adaptation period	
		n	%	n	%	n	%
	IHC						
1	Pit & fissure sealant	10	67	1	7	7	47
2	Topical fluoride application	3	20	0	0	2	13
	CDHC						
3	Brushing teeth together	10	67	0	0	3	20
4	Dental and oral health screening	14	93	0	0	11	73
	SDHC						
5	Brushing teeth together	15	100	0	0	7	47
6	Fluorine gargle	4	27	0	0	2	13
7	Topical fluoride application	2	13	0	0	0	0
8	Pit & fissure sealant	3	20	0	0	0	0
9	Dental and oral health checks and screenings	15	100	0	0	14	93

Note : IHC=Individua Health Care; CDHC=Community Dental Health Care; SDHC=School Dental Health Care

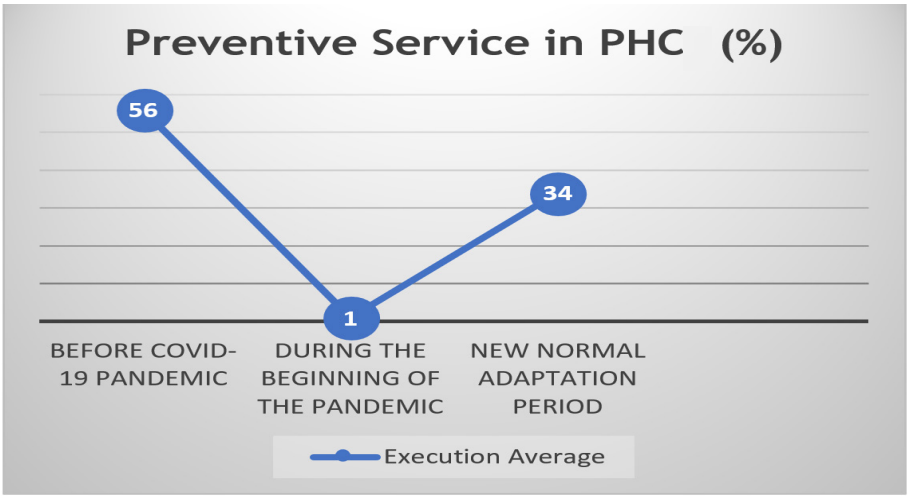

Diagram 2. Average execution of preventive services in PHC

The activities that 100% of PHC carried out were joint tooth brushing and dental and oral health checks and screenings at SDHC and the least implemented activities were topical fluoride application activities at SDHC, which was only 13% of health centers that carried out. Table 3 also shows that almost all PHC did not carry out preventive services during the early COVID-19 pandemic. Of all activities, only 1 activity was carried out and from that 1 activity, only 7% of the PHC carried it out, namely the service of *pit & fissure sealant* at IHC. Then during the NNA period, the most services carried out by the PHC were dental and oral health examinations and screenings at the SDHC at 93% and the least implementation was the application of *topical fluoride* and *pit & fissure sealants* at SDHC, which was 0%.

Table 4. Implementation of curative services (n=15)

No	Activity	Before the pandemic		During beginning Pandemic		New normal adaptation period	
		n	%	n	%	n	%
	IHC						
1	Uncomplicated tooth extraction	15	100%	3	20%	15	100%
2	Dental fillings/filling restorations	15	100%	1	7%	10	67%
3	Scaling (cleaning plaque and tartar)	15	100%	0	0%	5	33%
4	Pulp capping and root canal treatment (single rooted tooth)	13	87%	0	0%	7	47%
5	ART Restoration	15	100%	1	7%	11	73%
6	Oral medicinie treatment	15	100%	8	53%	15	100%
7	Traumatic Occlusion treatment	11	73%	0	0%	4	27%
8	Oral Urgent Treatment	15	100%	7	47%	14	93%
9	Counseling	15	100%	15	100%	15	100%
10	Reference	15	100%	15	100%	15	100%
	CDHC						
11	Reference	15	100%	8	53%	14	93%
	SDHC						
12	Basic Dental Care	8	53%	0	0%	5	33%
13	Reference	15	100%	7	47%	15	100%

Note : IHC=Individua Health Care; CDHC=Community Dental Health Care; SDHC=School Dental Health Care

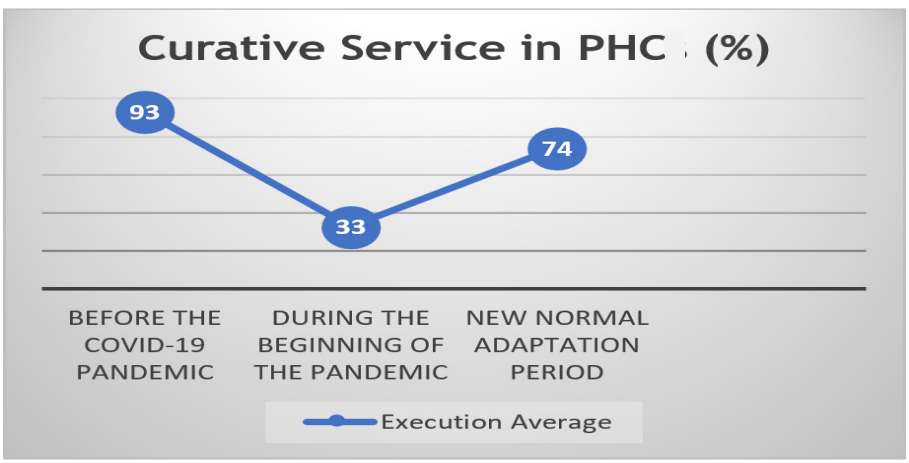

Diagram 3. Average execution of curative services in PHC

Based on table 4 above, almost all PHC have implemented all curative services, both at IHC, CDHC, and SDHC. However, there are also some services that are not carried out by several PHC, including pulp capping, traumatic occlusion treatment, and basic medical care for dentistry. During the beginning of the pandemic, services only concentrated on counseling and referrals which were carried out at all PHC, while other services only carried out a small number of PHC. During the NNA period, 100% of the PHC have provided revocation services, treatment of oral

Table 5. Implementation of rehabilitative services (n=15)

No.	Activity	Before the Pandemic		During the Beginning of the Pandemic		New Normal Adaptation Period	
		n	%	n	%	n	%
	IHC						
1	GTL and OH maintenance care for patients with GTL	6	40%	2	13%	5	33%

Note : IHC=Individua Health Care

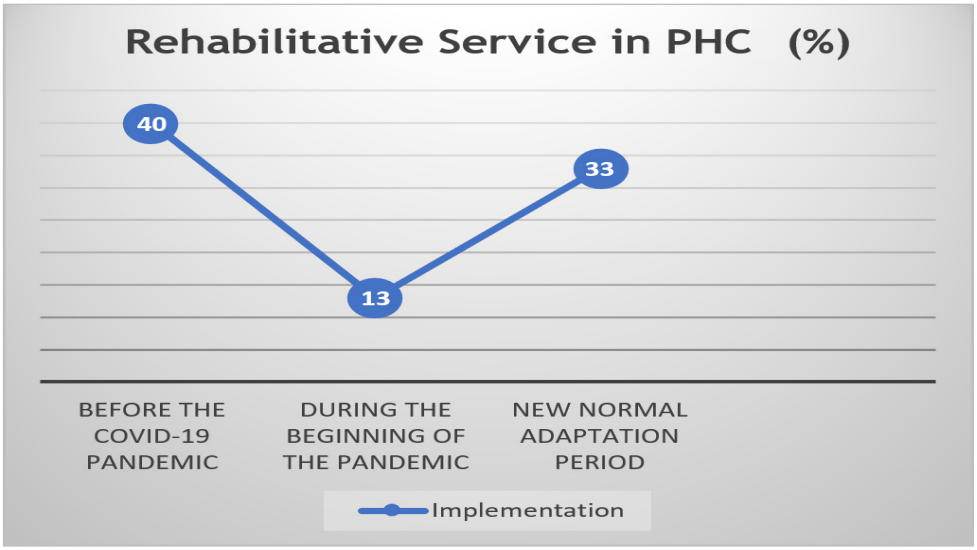

Diagram 4. Implementation of rehabilitative service in PHC

tissue diseases, counseling and referrals. While the least implemented is traumatic occlusion and scaling treatments, which are 27% and 33% in IHC. And basic medical treatment of dentistry at SDHC is 33%. For the rehabilitative dimension, the table 5 shows that only 40% of PHC provide treatment. During the beginning of the pandemic, 13% of PHC provided rehabilitative services. During the NNA period, only 33% of PHC provided rehabilitative services.

DISCUSSION

Table 1 shows that demographic characteristics of each PHC in Bandung Regency vary widely. The PHC with the largest area is Rancabali PHC and PHC with the largest population is Bihbul PHC. PHC with the largest number of school (from elementary school – high school) is Pacet PHC, and PHC with the largest number of Integrated Health Service Post (IHSP) is Soreang PHC.

Promotive services are services that seek to improve the health status of the community by enabling the community to be willing and able to maintain and improve their health independently.[14] The dimensions of promotive services that should be carried out by the PHC are in the form of direct counseling/education to patients who come to the dental clinic individually, dental and oral health counseling to pregnant women, preschool age children, and the elderly at IHSP in CDHC activities[3], and counseling/ education for school-age children is a SDHC activity[15]. Based on table 2, all PHC have carried out promotive services both in IHC, CDHC, and SDHC activities before the pandemic.

Based on table 2, at the beginning of the pandemic, which ranged from April 2020 to April 2021, based on government regulations and recommendations from the PDGI regarding the COVID-19 pandemic regarding guidelines for preventing and controlling COVID-19[10], that Puskesmas, especially dentists at Puskesmas, must limit patients and care for patients, the service provided promotion has decreased. In IHC activities, table 2 shows that only 53% of puskesmas conducted direct education to patients at the dental clinic.

Table 2 shows in CDHC activities, because the IHSP at the beginning of the pandemic did not work, only 27% of the PHC were providing dental and oral health education to the general primary. Counseling to the community at these health centers uses social media platforms such as WhatsApp Group and Instagram as a media for education, so that education can still be carried out. As for education for school children in SDHC activities, there is only 1 out of 15 health centers that continue to carry out these activities, of course with various adjustments to stop the transmission of COVID-19. Many PHC do not carry out these promotive services for several reasons. The main reason for the non-operation of these promotive services is because of the Ministry of Health regulations and PDGI recommendations related to the COVID-19 pandemic to limit each

service to stop the chain of transmission of COVID-19. The second reason is that the IHSP is not running, so there is no place for extension workers to provide counseling to the community. This is because concerns from extension workers and the primary regarding the risk of COVID-19 transmission from gathering activities make IHSP less likely to be carried out. The implementation of online schools makes SDHC activities must be adjusted so that the counseling continues but with a strict process. The implementation of schools is also limited by government regulations, as well as concerns from parents of students, plus almost all dental health services at the PHC have stopped.[16]

After the guidelines for the management of oral health services have been socialized to the PHC by prioritizing health protocols as a reference for dental and oral health workers in providing health services to the community, the PHC should have been able to resume direct counseling/education to patients at the dental clinic, to the community at IHSP activities. , as well as in SDHC activities in target schools.[12] Based on table 2, promotive services in IHC activities have been carried out by 100% of PHC, as well as promotive services in the form of direct education to the community, especially pregnant women, preschool children, and the elderly in CDHC.

Based on table 2, in contrast to the promotive services in the SDHC, the number of PHC that carry out these services is still 87% of the PHC. This is because the school schedule is still not fixed or the target school is still in the habit of learning offline after almost 2 years of online schooling. From all the data in table 2, 100% of the community health centers before the pandemic carried out promotive services, then the number of PHC decreased to 29% at the beginning of the pandemic due to government regulations and PDGI recommendations. The number of PHC that carry out promotive services in the IHC, CDHC, and SDHC increased again to 95.67% during the new normal adaptation period.

Preventive services are services that seek to prevent the occurrence of a disease by providing intervention to the community.[14] Similar to the dimensions of promotive services, preventive services for PHC are contained in three main activities of PHC, namely IHC, CDHC, and SDHC. Preventive services in IHC activities are in the form of providing *pit & fissure sealant* and application of topical fluoride for patients who come to the PHC.[3] Prior to the pandemic, table 3 shows that only 67% of PHC were administering *pit & fissure sealants*, while topical fluoride was only applied by 20% of PHC. This is due to the unavailability of materials and also the lack of interest of patients who come for these preventive measures.

Based on table 3, preventive services in CDHC activities in the form of shared toothbrushes for pregnant women, preschool children, and/or the elderly are only carried out by 67% of PHC, procurement of tools and materials, and inadequate Human Resources (HR) are the reasons for not carrying out these activities. Then for the examination and screening of dental and oral health at IHSP, 93% of the PHC have done it, the reason for not running one of the preventive services at one PHC is because of the unavailability of time so that it is not possible to do dental and oral health checks and screenings for the community. who came to the IHSP.

Preventive services in SDHC activities before the pandemic were running in accordance with the SDHC stage, which previously the PHC had set[15]. The SDHC stage consists of three stages, namely stage I for the minimal package, stage II for the medium package, and stage III for the optimal package.[15] Table 3 shows that joint tooth brushing activities and dental and oral health checks and screening activities, 100% of the PHC have done it. As for preventive services that require materials, the results are very varied. For fluoride mouthwash, 27% of health centers carried out fluoride, then 13% of health centers used fluoride topical application, and 20% of primary health centers for *pit & fissure sealant*. At least the PHC took this action due to unavailability of materials, inadequate human resources, insufficient time allotted by schools for SDHC, and lack of student interest in these preventive[15].

Based on table 3 at the beginning of the pandemic, from all existing preventive services, only 1 out of 15 PHC continued to use pit & fissure sealants in IHC actions. Other preventive services in IHC, CDHC, and SDHC are not carried out by all PHC. This is due to the implementation of Ministry of Health regulations and PDGI recommendations regarding the COVID-19 pandemic. Schooling is conducted online,

and IHSP is not operating during this period.[11] During the NNA period starting from May 2021, table 3 shows that preventive services in the IHC, CDHC, and SDHC began to increase. For preventive services carried out at IHC, *pit & fissure sealant* was carried out by 47% of PHC, while topical fluoride was only applied by 13% of[12]. The main reason for the lack of health centers that carry out this action in IHC is that the material is not available because it has expired, while the other reason is the lack of patient interest, and most patients who come have large cavities in their teeth so it is a contraindication to providing this service.

Table 3 shows that preventive services in CDHC activities during the NNA period also began to increase in line with the implementation of IHSP in the targeted areas of the PHC. For joint tooth brushing activities at IHSP, there are 20% of PHC that do. This is because tools and materials in the form of toothbrushes and toothpaste are inadequate, technically difficult considering that *physical distancing has to be enforced* during the activity, as well as inadequate human resources. However, for dental and oral health checks, 73% of PHC have done[17] The reason for not taking this action by a small number of PHC is due to inadequate human resources, and it is technically difficult to do considering the large number of people passing by during IHSP activities.

Based on table 3, along with the implementation of offline schools, preventive services for SDHC activities during the NNA period have begun to be tried by several PHC. The joint tooth brushing activity has only been carried out by 20% of PHC, the reason for the lack of PHC carrying out this activity is because *physical distancing* is difficult to do, inadequate human resources, there is too risk of transmission of COVID-19 from waste water after brushing teeth, and the focus of the PHC in this period is implementing vaccination of school-age children. In the implementation of preventive services that require materials, fluoride gargling is carried out by 13% of PHC, for the application of topical fluoride and *pit & fissure sealants,* all health centers have not done so. This was due to the unavailability of materials, limited SDHC time, lack of student interest, and the focus of the PHC was still on vaccinating school-age children.

Based on the overall preventive service table 3 data, the average preventive service before the pandemic was carried out by 56.33% of PHC. During the beginning of the pandemic, all activities were stopped and almost all PHC did not provide preventive services with an average of only 0.78% of PHC. And during the NNA period, preventive services were provided by 34% of PHC.

Curative services are services that seek to cure a disease and prevent the process of worsening a disease to a further stage, as well as prevent the occurrence of a disability or even.[18] Dental and oral health curative services at the PHC are primarily IHC activities at the dental poly at the PHC[3]. Other curative services are available in CDHC activities in the form of referrals from the IHSP to the dental clinic at the PHC[3], and in SDHC activities in the form of basic medical dental care and referrals from SDHC to the dental poly at the PHC.[15] Prior to the pandemic, based on table 4, the actions in the IHC at the following dental clinics had been carried out by 100% of the PHC. These actions include tooth extraction without complications, dental fillings/filling restorations, scaling (plaque and tartar removal), Atraumatic Restorative Treatment fillings , treatment of oral tissue diseases, Oral Urgent Treatment , counseling, and referrals to further dental and oral health facilities. Meanwhile, pulp capping and root canal treatment for single rooted teeth were carried out by 87% of PHC.[15] This is because Consumable Medical Materials (CMM) are not available and human resources are inadequate (does not have the expertise to carry out these actions). Table 4 shows that traumatic occlusion treatment was only carried out by 73% of PHC because CMM was not available.

In curative services in CDHC activities, namely referrals before the pandemic, 100% of the PHC have done it. Curative services in SDHC activities in the form of basic medical dental care are only carried out by 53% of PHC, due to inadequate tools and materials, as well as inadequate human resources. Meanwhile, 100% of the SDHC referrals to the dental clinic at the PHC have been carried out by the PHC. At the beginning of the pandemic, all curative activities were strictly limited considering that these actions were very risky in transmitting COVID-19 infection from patients to dentists. Table 4 shows

several actions at the dental clinic at the PHC that are still running, including uncomplicated tooth extractions carried out by 20% of PHC, dental fillings/fill restorations carried out by 7% of PHC, ART fillings carried out by 7% of health centers, treatment of tissue diseases. Oral treatment in the form of premedication was carried out by 53% of PHC, and Oral Urgent Treatment or emergency dentistry was carried out by 47% of PHC. Tooth extraction is still carried out by 20% of PHC with the condition that tooth mobility has reached *grade* II, and teeth with severe periodontitis. The *ART* procedure was still carried out by 1 PHC because it was considered non-invasive, while for dental fillings it was carried out without prior mechanical preparation and using Glass Ionomer Cement (GIC) filling material. Counseling and referrals from dental polyclinics to higher health facilities were carried out by 100% of the PHC.

Meanwhile, actions that are very risky and have a high complexity of treatment, namely scaling (cleaning of plaque and tartar), pulp capping and root canal treatment for single rooted teeth are not carried out by all PHC. The limitation of dental and oral health curative services is due to the new rules related to the COVID-19 pandemic from the Indonesian Ministry of Health. In addition, the readiness of the PHC, both in terms of infrastructure, human resources, and others, was not sufficient to be able to take curative actions at the dental clinic during the early COVID-19 pandemic, so the main focus of dental health services at IHC at the PHC was consultation and services that were premedication (non-invasive).

Based on table 4, in CDHC activities, curative services were also hampered because the IHSP was not running. Only 53% of PHC made referrals from the community to the dental clinic at the PHC. In SDHC activities, curative services in the form of basic medical dental care were completely discontinued in all PHC, and referrals from schools to dental clinics were only made by 47% of PHC. This is in line with the implementation of school rules that are implemented online.

Table 4 shows that the implementation of curative services both at IHC, CDHC, and SDHC has increased again in line with the normalization of activities again as was the case before the pandemic. In IHC activities at the dental clinic, several actions that have been carried out in all PHC are tooth extraction without complications, treatment of oral tissue diseases, counseling, and referrals. Actions that have not been carried out by all PHC include dental fillings/filling restorations carried out by 67% of PHC, scaling (plaque and tartar removal) by 33% of PHC, pulp capping and root canal treatment for single rooted teeth carried out by 47% of PHC, fillings *ART* was performed by 73% of PHC, traumatic occlusion treatment was carried out by 27% of PHC, and Oral Urgent Treatment was carried out by 93% of PHC.

The reason for not taking these actions from several health centers is because the availability of infrastructure such as negative pressure rooms, HEPA filters, and *aerosol suction* in several health centers is not sufficient. In addition, the availability of tools and materials is also inadequate, and there are still dentists in several PHC who are still afraid to take actions that produce aerosols even though the complete infrastructure to support treatment during the pandemic is available at the dental clinic.[12]

Based on table 4, curative services at CDHC in the form of referrals from the IHSP to the dental clinic at the PHC have not been carried out by all PHC. Referrals to CDHC have only been carried out by 93% of PHC. This is because the IHSP is not yet running. In SDHC activities, all PHC have not carried out basic dental medical treatment, while referrals from SDHC to the dental poly at the PHC have been carried out by all PHC. The basic medical treatment of dentistry has not been carried out as one of the curative services in SDHC activities because human resources and infrastructure, both from the PHC and from the target schools, are not yet adequate, so it is not yet possible to do this during the new normal adaptation period in the COVID-19 pandemic.

Based on the overall curative service table 4 data, the average curative service before the pandemic was implemented was 93%, then decreased during the beginning of the pandemic by 33%, and increased during the new normal adaptation period by 74%. Rehabilitative services are services that seek to restore health functions to their normal functions. (14)Rehabilitative services at the PHC only exist in IHC activities at the dental clinic at the PHC in accordance with applicable regulations, namely in the form of *maintenance* of

removable dentures and *Oral Hygiene Instruction* (*OHI*) for patients with removable dentures (2) (3). Table 5 shows curative services before the pandemic were carried out by 40% of PHC.

This is because the PHC financing is inadequate to *cover* the costs for these services, and there are no criteria for patients who come to get this action. Table 5 shows that rehabilitative services have decreased and are only carried out by 13% of PHC, this is due to regulations from the Indonesian Ministry of Health and PDGI recommendations related to the COVID-19 pandemic regarding restrictions on dental measures to prevent transmission of COVID-19. Rehabilitation services in IHC activities during the NNA period have increased and are carried out by 33% of PHC. The main reason for not doing this action by most PHC is still constrained by inadequate funding and the lack of interest in patients with removable dentures who want to have the procedure done.

The reasons for not doing some dental health services at the Bandung Regency Health Centers are purely the reasons for the PHC considering that there are no policies from the Bandung Regency Health Office that require service restrictions for both IHC, CDHC, and SDHC services. The policy for dental health services at the Bandung Regency Health Center implemented by the Bandung Regency Health Office is based on the Technical Guidebook for Health Services at the COVID-19 Pandemic Health Center for dental health services during the beginning of the pandemic and the Technical Manual for Dental Health in First Level Health Facilities during the New Habit Adaptation Period. published by the Ministry of Health. The basic policy basis is fully implemented without any adaptation or derivation of any points from the technical guidelines. Additional policies of the Bandung District Health Office regarding health services in general are in the form of a Decree of the Head of the District Health Office no. 800/14222/ Dinkes on Prevention of Infection Control in PHC.

Based on the basic reference of dental health service policies at PHC implemented by the Bandung Regency Health Office for each PHC in its target area, all dental health services, both at IHC, CDHC, and CDHC, should have been re-implemented by continuing to apply fixed health protocols for the targeted areas of the PHC with green and yellow zones. Curative services that are hampered by inadequate infrastructure for supporting dental and oral health services during the pandemic such as the availability *of external aerosol suction, HEPA filters,* negative pressure rooms, *UV sterilizers,* level 3 PPE for health workers, and others are entirely the responsibility of the PHC. This is because the PHC in Bandung Regency have been designated as Regional Primary Service Agency (BLUD), so that the procurement of equipment, health personnel, and CMM is fully the responsibility of the PHC independently under the supervision of the Bandung Regency Health Office.

The main problem is the inadequate procurement of tools and materials for dental health services during the COVID-19 pandemic is the problem of financing. The financing orientation of each PHC during the Adaptation of New Habits was still on handling the COVID-19 pandemic, such as vaccination, implementation of health protocols, and so on. Financing for dental health services is deemed not too important to do, resulting in many health centers that do not have the infrastructure to support dental health services at the PHC during the COVID-19 pandemic. If dental health services at thev Health Center refer to the same reference in this study, namely the latest technical manual for dental health services, then the SDHC and CDHC implementation should have been carried out as they should because IHSP and offline schools have also been implemented.

However, the implementation is still constrained by human resources, namely dental and oral health workers. The recruitment system for health workers at the Bandung District Health Center is also an independent responsibility of the PHC. Each PHC should fill out the Needs Planning (Renbut) formula provided by the Indonesian Ministry of Health for additional health workers so that the implementation of dental health services outside the PHC building can be more optimal with more adequate health personnel.

Based on the description above, several dental health services at the PHC that have not been implemented during the New Habit Adaptation period are purely due to internal factors from the PHC. The policies implemented by the Bandung District Health Office for PHC in its working area clearly regulate all dental

health service activities at IHC, CDHC, and SDHC, but in practice, the internal constraints of the PHC are the main reason the PHC does not provide some of these services. Also due to the COVID-19 pandemic, PHC have chosen to prioritize handling the COVID-19 pandemic rather than prioritizing dental and oral health services.

The difference between this study and previous studies is the comprehensiveness of the variables studied. Previous research conducted by the Yogyakarta University Faculty of Dentistry service team only examined the implementation of counseling as a promotive effort at CDHC in one place. Another study conducted by researchers from Fort de Kock University only examined the implementation of SDHC in the target area of the East Agam Health Center, Bukittinggi. Whereas in this study, the variables studied were the implementation of IHC, CDHC, and SDHC in 3 time periods, and in 4 service dimensions.

This research is of course still far from perfect and there are still shortcomings. The limitations of this study are that researchers do not simultaneously examine the achievements of each service, both at IHC, CDHC, and SDHC. This is due to the limited time of the study, the availability of data at the PHC, and the time of data processing. It is hoped that further research can complement the limitations of this study.

CONCLUSION

The implementation of promotive and curative services was maximized before the pandemic, but preventive and rehabilitative services were still constrained by the availability of infrastructure and lack of patient interest. During the beginning of the pandemic, almost all services were stopped due to the COVID-19 pandemic, *which* had to limit the implementation of dental and oral health services. After 1 year of the COVID-19 pandemic, and after the issuance of the Technical Manual for Dental Health Services in First Level Service Facilities during the New Habit Adaptation Period, the 4 dimensions of dental health services at PHC have not been implemented optimally.

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