

Original article

Strategy for the Implementation of Health Protocols on Mass Circumcision during a Pandemic in East Jakarta, Indonesia

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Abstract:

Background: Circumcision, a religious obligation for Male Muslims in Indonesia, is conducted at a high cost using health facilities. Meanwhile, while wanting to circumcise their children the pandemic situation reduces the economic capacity of the people. Therefore, it is necessary to conduct community service activities in the form of free circumcision performed en masse to help the poor. However, due to the coronavirus pandemic which has spread rapidly since the beginning of 2020, it is necessary to adhere to health protocols. Mass circumcision during a pandemic requires a health protocol strategy to ensure that activities are performed in a safe, comfortable, and satisfying state. East Jakarta has 2,937,859 people, with 486,110 people being children of age 0-19 years. The majority of residents in this city, about 96%, are Muslims. Meanwhile 3% percent of them, or 91,610 people, are considered poor. There is still a high need for the people of East Jakarta to conduct circumcision for their children during the pandemic, even though there is a decrease in their income. **Methods:** A free, safe, and comfortable mass circumcision is required with the implementation of health protocols. Out of 170 participants registered for the circumcision, 163 of them passed the Covid-19 screening, while two did not fulfill the indications for circumcision; hence only 161 children were circumcised using the smart clamp. Furthermore, the youngest, oldest, and most circumcised participants were 1, 15, and 5 – 9 years old (60 %), respectively. **Results:** The commonly used smart clamps were 13 in numbers, and the average circumcision time for each participant was 6 minutes. Furthermore, there were mild complications among 7 participants (4%). The participants' parents were satisfied and advised their relatives to partake in mass circumcision in the future. **Conclusion:** Meanwhile, there were no reports of participants, parents, health workers, and committee members being infected with the coronavirus after completing the activity. The health protocol implementation strategy was successfully conducted during the free mass circumcision in East Jakarta, which took place safely, comfortably, and satisfactorily

Keywords: community service; coronavirus, COVID-19; smart clamp, health protocol, poor people

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Introduction:

Circumcision is a surgical procedure of cutting the skin that covers the front of the male genitalia (foreskin)¹. It is an obligation of Male Muslim to participate in circumcision which is generally performed privately at health care facilities or homes. However, when it is performed on a group of children simultaneously,

it is called mass circumcision. This activity is usually free of charge, where the funding is supported by donors, both individuals, and institutions to help children that come from poor families.

Pandemics are not new to the world. History records that there have been several pandemics, for example the black death (bubonic plague), Ebola and SARS.

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the threat of new infectious diseases makes it very likely that pandemics will recur. Therefore it is important to carry out mitigation and adaptation in all sectors, especially in the health sector. The covid 19 pandemic can be used as a lesson if a pandemic occurs again in the future ². The pandemic has greatly affected the economic capacity of the people ³. As a result of the emergence of this virus from Wuhan, China, many people have been exposed and eventually died. Furthermore, this has affected people in various parts of the world, including Jakarta ⁴.

The pandemic has several caused impacts, such as fear, a decrease in people's income, and an increase in the cost of health services. Nevertheless, there is still a need for people to circumcise their children.

The danger of transmitting COVID-19 requires the implementation of new health protocols, such as the washing of hands, wearing of masks, maintaining distance, and avoiding crowds ⁵⁻⁷. The protocol for performing surgical procedures in hospitals also requires various initiatives, including screening and testing of patients and their companions, as well as health workers ⁶. We prepare the mental state of patient and their family by telemedicine consultation ⁶. Most of the participants come from poor and low-income communities. Low financial income factors, inadequate knowledge, and limited access to basic medical needs hinder the implementation of health protocols ⁸.

Based on these conditions, a new strategy is needed for mass circumcision during the pandemic, where the priority lies in the application of health protocols during the entire process and the use of short methods. This short method involves the use of a smart clamp that is made of plastic and consists of a protective tube and clamp which protects the glans penis and clamps the blood vessels of the cut tissue respectively. The size of the smart clamp varies depending on the size of the penis (Figure 1) and it is a disposable device that is left on the circumcised genitals and removed a

week after the circumcision ¹.

The strategy of health protocols is necessary to achieve a safe, comfortable, and satisfying mass circumcision. Furthermore, the implementation also requires the support and cooperation of various parties such as funders, facility providers, community leaders, and other related parties. This study aims to report the strategies taken for an implementation of a safe, comfortable, and satisfying mass circumcision during a pandemic. Meanwhile, this is the first study that reports the strategy of mass circumcision during the pandemic.

Problem situation

Jakarta Timur (East Jakarta), is area with the highest number of COVID-19 exposures in Indonesia (Figure 2). This city is 188.03 km² or 28.39% of the total area of Jakarta Province. Furthermore, *Jakarta Timur* is divided into 10 sub-districts with a population of 2,937,859 people, out of which 486,110 are boys of the age 0-19 years old. The region also has a density of 15,920 people/km² (Table 1-2). The highest number of poor people is discovered in the area of East Jakarta is 91,610 people or 25% of the total poor population in Jakarta. In addition, the Muslim population in this city is 2,937,859 (96%) ¹⁰.

Table 1. Population by sex and sub-district

Sub Distrik	Gender		Number
	Female	Male	
Pasar Rebo	110942	110216	221 158
Ciracas	150764	149 581	300 345
Cipayung	141699	140 661	282 360
Makasar	101968	102 627	204 595
Kramat Jati	148637	149 484	298 121
Jatinegara	142232	133 580	275 903
Duren Sawit	197 478	202 117	399 595
Cakung	275 537	262 219	537 756
Pulogadung	132 152	134 047	266 199
Matraman	75 994	75 833	151 827
East Jakarta City	1477494	1460365	2937859

Source: ¹⁰



Figure 1. Smartclamp number 10, 13, 16, 20. Tube (blue) and clamp (white) Source: ⁹

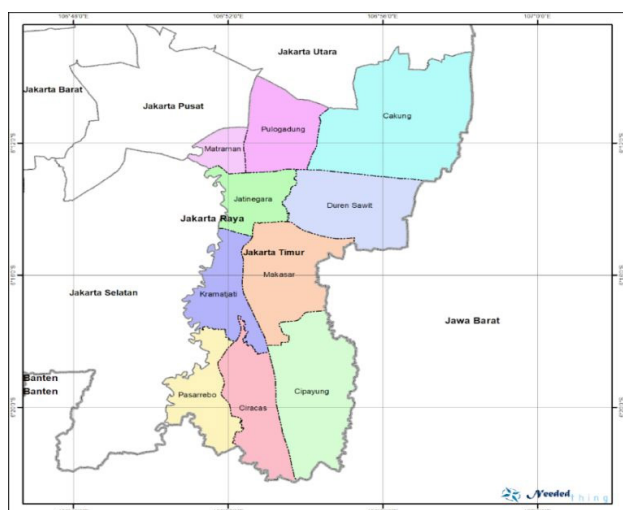


Figure 2 . Map of Jakarta Timur Municipality ¹⁰

Table 2. Male children population by age group in

Age Group	Number	Cumulative
0 – 4	131.795	131.795
5 – 9	138.925	270.720
10 – 14	116.841	387.561
15 – 19	98.549	486.110
19 +	898.378	1.384.488
Number	1.47.494	1.477.494

Source: ¹⁰

Methodology:

This study is a non-experimental study based on secondary data from reports of circumcision activities at Al Fauzan Hospital, East Jakarta. The data is processed, analyzed, and presented according to the provisions of the scientific article. The activity was carried out based on Work Order Number MAIBUA/SUM/000/2020 and Work Agreement No.006/Sek/SPK/JIH/XII/2020).

All Participants were given a full explanation of the circumcision; all participants understood the explanation, and each participant signed informed consent. All of that has followed the ethical provisions that apply in Indonesia, namely the Regulation of the Minister of Health of the Republic of Indonesia Number 290 /MENKES / PER / III / 2008, and Government Regulation of the Republic of Indonesia Number 21/2020 concerning Large-Scale Social Restrictions in the Context of Accelerating the Handling of CoronaVirus Disease 2019 (COVID-19).

2.1. Study participants

The study was conducted in Al Fauzan Hospital, East

Jakarta based on Hospital Report. The participants are the residents of East Jakarta.

2.2. Study stage

The activity is conducted in three stages, such as preparation, implementation, and post-implementation (Figure 3). All stages follow the health protocol by using online or offline media depending on the type of activity.

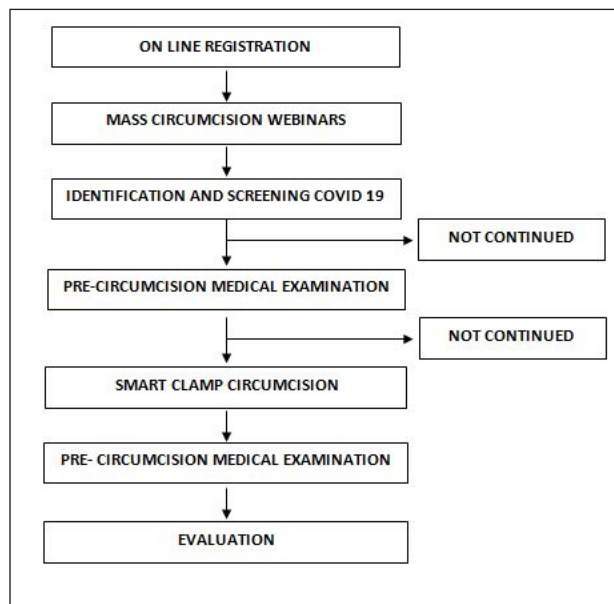


Figure 3. Mass circumcision flow

Preparation Stage

The preparation activities include partnerships, participant registration, parent-child preparation, screening, and medical examinations. Partnerships are conducted through the help of donors, hospitals, and community leaders in providing financial support, facilities, and other form of gurantees that ensure the activities run smoothly. Participant registration is conducted online and followed by online socialization which prepares parents and participants for the circumcision.

COVID-19 screening, including temperature measurement, risk factor detection, and rapid testing are performed offline on participants, companions, and committees by hospital medical personnel after which the participants were examined medically.

Implementation Stage

The parent/companion signs the action agreement and this activity is conducted in three periods of time. Hence, there are three groups of around 50 children respectively. Each child is accompanied by

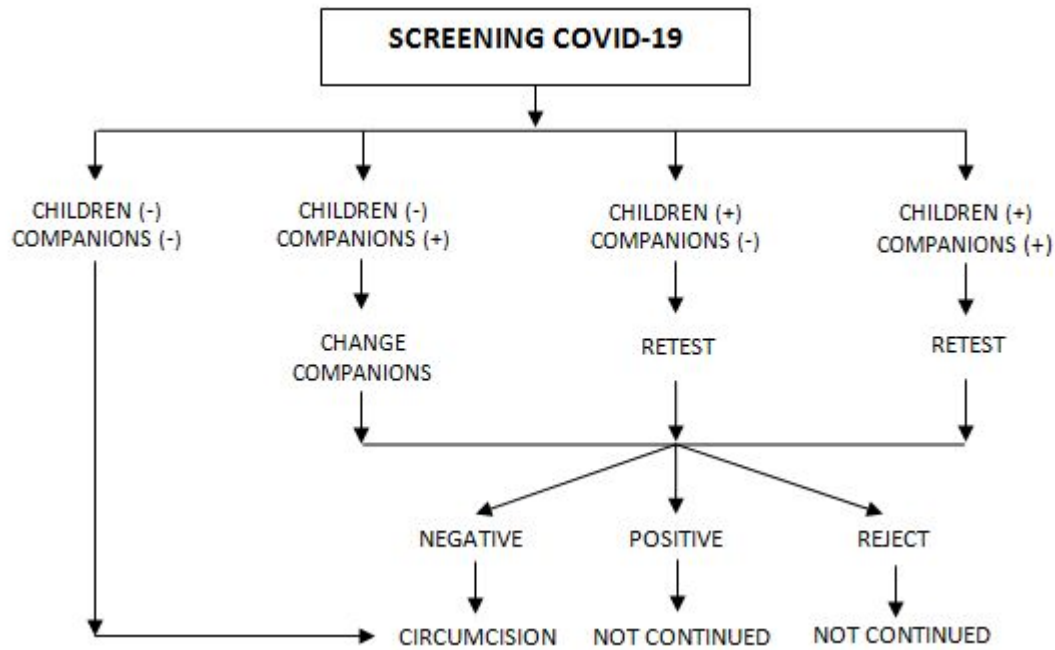


Figure 4. COVID-19 screening flow

a maximum of one companion. In each circumcision period, 2 treatment rooms are provided with a distance of 50 meters. Each room has a medical team and medical equipment that was sterilized before and after circumcision. Furthermore, all medical teams wash their hands and wear surgical gowns, sterile gloves, and a level 3 personal protective equipment. The circumcision procedure starts from asepsis, antiseptics, local anesthesia, measurement, and insertion of smartclamp, foreskin cutting, circumcision area cleaning, and observation. Afterward, the child goes home with a gift when there is no bleeding and urinary problems.

Post-Implementation Stage

Post-mass circumcision activities include medical examinations, complaint management, and activity evaluation. Medical examinations include the recording of complaints, health checks, genital conditions, and smartclamp. Furthermore, the committee creates a WhatsApp group to convey and share the schedule of activities and other important information such as complaints from the child, which is then followed up by the medical person in charge. The committee makes an online assessment using a gform which is used by parents in providing evaluation.

Ethical Clearance: Ethics Approval was obtained from Al Fauzan Hospital Scientific Research and

Publication Ethics Committee (01.00.00.EA.MR).

Results:

Partnerships with donors, hospitals, and community leaders

The partnership with donors was conducted in collaboration with the Mandiri Amal Insani (MAI) Foundation by collecting and distributing *zakat*, *infaq*, and *sadaqah* funds to the community. It provides operational funds which covers the cost of rapid tests, circumcision, consumption, and gifts. Furthermore, another partnership was conducted with Al Fauzan General Hospital, Jakarta. This hospital, with the help of its emergency room, intensive care room, operating room, laboratory, ambulance, medical screening and examination rooms, circumcision rooms, laboratory services, medical devices, video conferencing software and others, has assisted health workers as well as the administrative staff. The partnership was conducted with religious and community leaders that help register and assist participants in the hospital when participating in a mass circumcision.

Participant registration

Participants who registered were 170 children of which 98 (58%) registered via the gform and 72 (42%) registered directly.

Child and parent preparation

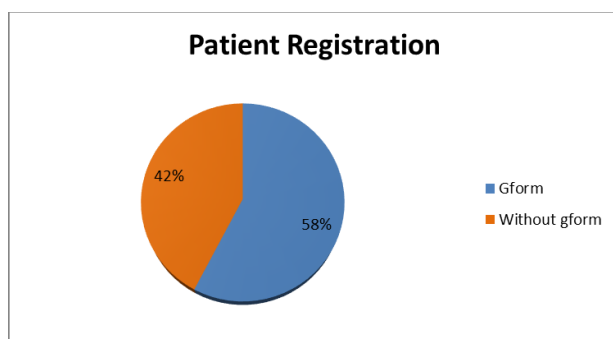


Figure 5. Patient registration Source: ⁹

The child and parent preparation was conducted through a webinar with materials related to COVID19, health protocols, circumcision procedures with smartclamps, technical implementation of mass circumcision, explanations for approval of actions, as well as questions and answers. The activity was conducted in three waves which include December 11, 28, and 25, 2020, and the participants attended the event enthusiastically, which was evidenced by the questions and answers during the activity.



Figure 6. Online socialization of health protocols and mass circumcision Source: ⁹

COVID-19 Screening

The screening activity was performed on 16, 23, and 28 of December 2020 before the mass circumcision. In addition, a rapid test was conducted on 170 participants and 170 companions. The results were divided into four categories (Table 3). The first category consisted of 156 children in which the rapid test of the children and their companions was not reactive, therefore, the next stage is applied. However, the second category consisted of 4 children whereby the rapid test of the children was

not reactive but their companions were reactive. The solution is to replace the companion with someone healthy and non-reactive, then the child follows the next stage. The third category was 1 child where the rapid test of the child was reactive and the companion was not reactive. This group was offered the next test (antigen swab) but the child was not present, hence, they did not proceed to the next stage. Meanwhile, the fourth category consisted of 9 children where the rapid test of the children and their companions was reactive where this group was offered an antigen swab test. However, six of the children were absent, hence, they did not continue the next stage. Three children came with their companions for an antigen test and the results were negative, hence, they continued to the next stage. In the end, 163 (96%) participants proceeded to the next stage.



Figure 7. Screening of mass circumcision participants and their companions

Source: ⁹

Pre-circumcision medical examination

The examination was conducted in stages on 17, 24, and 29 December 2020, where a total of 163 participants were examined and 2 failed to fulfill the indications for the circumcision because one had the congenital abnormality of hypospadias and the other had been previously circumcised.

Mass circumcision implementation

The implementing officers were 36 in numbers, including 1 specialist, 5 general practitioners, 2 junior doctors, 9 paramedics, 2 pharmacists, 3 pharmacist assistants, 2 laboratory analysts, 5 administrative officers, 4 patient administrators, and 3 documentation officers.

A total of 161 participants with various characteristics were circumcised, in which 11 children(7%) were non-Muslim. Most of the participants came from the sub-districts of Kramat Jati (58 children

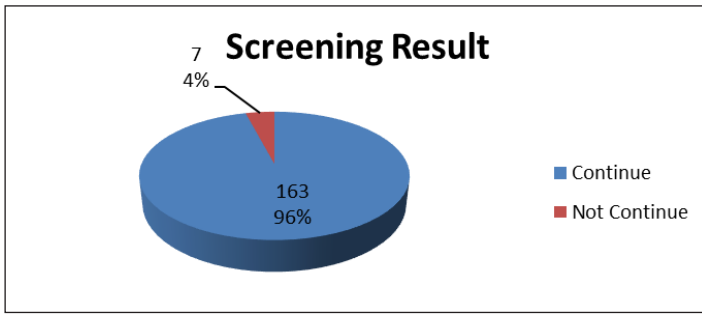


Figure 8: Screening results for mass circumcision participants Source: ⁹

Table 3. Categories of mass circumcision participants and their companions based on the rapid test results

Category	Rapid test results	Number	Suggestion	Continuation	Number
1	Non-reactive participant and nonreactive companion	156	Continue	Precircumcision check	156 (92%)
2	Non-reactive participant and reactive companion	4	Continue, Change Companion	Precircumcision check	4 (2%)
3	Reactive participant and non-reactive companion	1	Antigen test	<i>Not continue</i>	1 (0.0%)
4	Reactive participant and reactive companion	9	Taking the antigen test with negative results Not taking the test	Precircumcision check <i>Not continue</i>	3 (2%)
Total		170			6 (1%) 170

Source: ⁹



Figure 9. Implementation of mass circumcision in the circumcision room (a – b) Source: ⁹

or 36%) and Ciracas (45 children or 28%) (Table 4). Furthermore, their ages varied from 1 to 15 years, but the majority (96 children or 60%) were 8 years old (5–9 years) (Figure 11). Mass circumcision also took place in an orderly and fast manner with an average time of 6 minutes for each participant (Table 5). The number of smartclamps used varied but were at most 13 (Figure 12).

Table 4. Number of mass circumcision participants by sub-district origin

No	Sub-district	Number of participants	Percentage (%)
1	Cakung	4	2
2	Cipayung	2	1
3	Ciracas	45	28
4	Duren Sawit	5	3
5	Jatinegara	7	4
6	Kramat Jati	57	36
7	Makasar	2	1
8	Matraman	0	0
9	Pasar Rebo	9	6
10	Pulogadung	0	0
11	Outside East Jakarta	21	13
12	Outside Jakarta	9	6
	Total	161	100

Source: ⁹

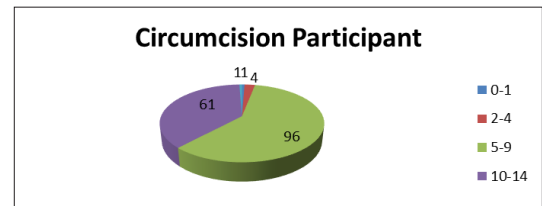


Figure 10. Number of participants by age group Source: ⁹

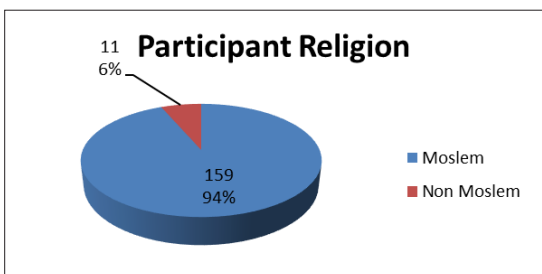


Figure 11. Religion of mass circumcision participants Source: ⁹

Table 5. Number of mass circumcision participants by time and circumsision room

No	Date	Circumcision day hour	Minute	Number of participants		Total
				Room1	Room2	
1	17 Dec 2020	07.00-09.30 12.30	10.00- 15.00	13	13	26
				14	13	27
2	24 Dec 2020	07.00-09.30 12.30	10.00- 15.00	13	12	25
				14	13	27
3	29 Dec 2020	07.00-09.30 12.30	10.00- 15.00	15	14	29
				14	13	27
Total			900	83	78	161
Average length of circumcision per participant (minutes)				900/161= 5.6		

Source:⁹

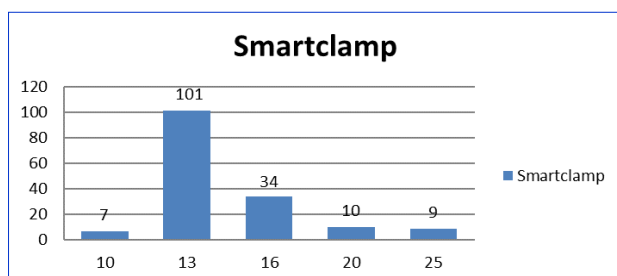


Figure 12. Number of smartclamp usage by size

Source:⁹



Figure 13. A participant in mass circumcision who got a gift Source: ⁹

Post-circumcision medical examination

All participants were in good condition with no fever and urinary disturbances. The smartclamp was still attached except for two children. Furthermore, there were all satisfied with the results of the circumcision except for seven children (Figure 16). Based on the post-mass circumcision report, none

of the participants, parents, health workers, or committee members were infected with COVID-19.

Table 6. Number of participants for mass circumcision based on complaints

Complaint	Number	Percentage
Swelling of the genitals	3	1,9
Cosmetic Complaint	3	1,9
Less cut foreskin tissue	1	0,6
Total	7	4,4

Source:⁹

Complaint management and evaluation

Complaint. The complaints from the post-circumcision participants included pain, soreness, and fear

of urinating. Meanwhile, the complaints after the removal of the Smartclamp were soreness, itching, swelling, and a little dry blood. These were resolved with the consultation, information, and education from the medical doctor in charge.

Evaluation. A total of 60 parents of participants (37%) filled out the evaluation form, and they all expressed satisfaction towards the performance of the committee, the implementation of the mass circumcision, and the smartclamp technique. Therefore, when there is another activity of mass circumcision, almost all parents (97%) advised their relatives/family to partake in it.

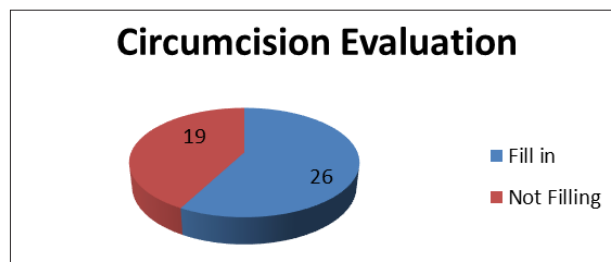


Figure 14. The number of participants who filled out the evaluation gform.Source:⁹

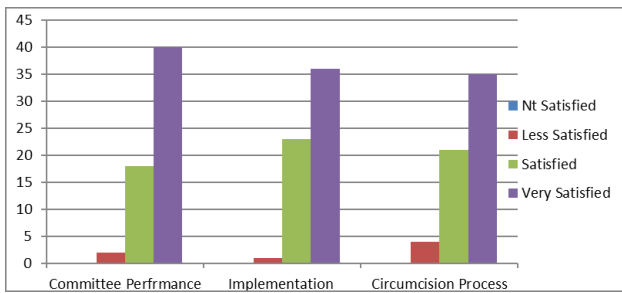


Figure 15. Evaluation of participants on the committee performance, the implementation, and the circumcision process

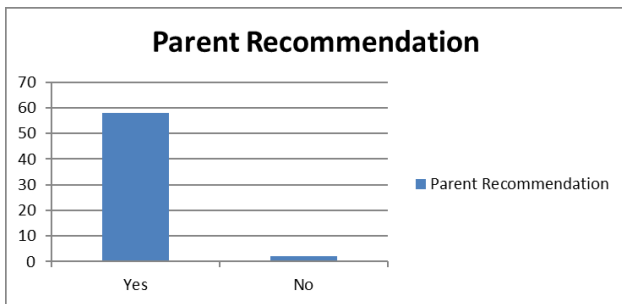


Figure 16. Recommendations from the parents of the participants for the next mass circumcision Source:⁹

Discussion:

In this paper we discuss the strategies how to conduct a mass circumcision in a pandemic situation. This becomes an important lesson for such actions in the future. For future medical practice even though the covid-19 pandemic has subsided. However, no one can guarantee that a pandemic situation like the past will not reappear in the future. Therefore this lesson remains important. Nothing is wasted.

The activity of mass circumcision during the pandemic was different. The COVID-19 pandemic is an unprecedented health care emergency ¹¹. However mass circumcision during the pandemic must be conducted safely and comfortably. We have no experience of conducting mass circumcisions in such circumstances. There has never been a health protocol regulating this. The situation is very dynamic. Therefore, we modified the existing surgery protocol in hospital and adapted it so that mass circumcision can be carried out successfully. This requires a new strategy to implement health protocols in administration, methods, infrastructure, equipment, and human resources aspect. The Covid-19 pandemic has a psychological impact ¹². Causing boredom, stress, anxiety, and depression

among health workers ¹³. This situation has an impact on their performance, therefore this activity begins with preparation activities including socialization and briefing to medical personnel, patients and their families. The registration and socialization of procedures online were conducted during the preparation stage. On the day of implementation, patients and companions were identified and tested for COVID-19. The circumcision was performed by minimizing the execution time and physical contact through the help of several circumcision rooms and an implementation team which was provided for each of the rooms. Furthermore, arrangements were made for the arrival of participants and companions to prevent crowds. The actions were performed on several children at the same time without deviating from the standard of surgical care.

To prevent the spread of the COVID-19 virus, health workers, circumcised children, and their families must have awareness of complying with health protocols⁷. The level of awareness is dependent on the level of trauma and that household income is a statistically-significant predictor of awareness ¹⁴. In this strategy, health education is carried out at the preparation stage through webinars to increase awareness of the importance of complying with health protocols during procedures. The child and parent preparation was conducted through a webinar with material about COVID-19, health protocols, and circumcision procedures ^{15,16}.

The free mass circumcision activity was successful as a result of support and cooperation from various parties, including donors, hospitals (hospital staff, doctors, paramedics), and community leaders. Community service activities do require collaboration with various parties ¹⁷. Due to the pandemic condition, the activities were conducted both online and offline. Several activities were conducted online to avoid physical contact, crowds, and the risk of COVID-19 transmission. Meanwhile, screening, medical examination, and circumcision were conducted offline depending on the nature of the activities.

The online registration of participants provides convenience, security, and comfort for all parties. This method reduces mobility, physical interaction, and disease transmission ¹⁵. However, a majority do not register online because of lack of smartphones,

computers, and data packages. According to Maspero, online registration requires these facilities¹⁶. Therefore, this matter needs the committee's attention and anticipation in the future.

The surgery is a potentially stressful and scary experience that occurs before or during the operation. Children are vulnerable to stress and anxiety because of limited cognitive function, weakness of self-control, high dependence on parents, lack of experience, and understanding of health services. Parents also experience the same thing and it indirectly affects their children. Therefore, children and parents need to be prepared and strengthened psychologically to face surgery which in turn improves postoperative recovery¹⁸. Webinars before mass circumcision are a solution to this problem since the activity allows communication, information, and education between the committee with the participants and their parents. There is a positive response to the socialization material because participants become aware of the importance of preventing the COVID-19 transmission as well as the procedures and benefits of the circumcision which in turn has a positive impact. Hence, ensuring the mass circumcision activities run smoothly and comfortably.

The presence of participants and companions that failed the screening proves the potential for COVID-19 transmission. This result is in accordance with the conditions in East Jakarta which has many high positive cases rate¹⁹. According to Joshua, COVID-19 infection has the potential to cause morbidity and mortality²⁰. Therefore, screening before mass circumcision is very important for the safety of participants, families, health workers, officers, and the community. This activity was conducted in several ways, such as filling out risk factor screening forms, clinical condition assessments, and doing rapid tests. Meanwhile, the PCR test was not used due to budgetary constraints, technical implementation, as well as psychological conditions of children and parents. However the rapid test results are aligned with risk factors and clinical conditions. Therefore, only participants with companions that pass the screening can proceed to a pre-circumcision health examination. Infection control is very crucial⁷. Especially for surgical procedures such as mass circumcision activities during a pandemic. Measures to prevent transmission of virus contamination are

very important during a pandemic. Attendants should use PPE and they and patients should be screened. Screening can use the rapid test method²¹. All these things we did during mass circumcision.

There was one participant with congenital hypospadias which is a contraindication to circumcision. According to the American Academy of Pediatrics, there are many more contraindications such as abnormalities of the cord, a fusion of the penis and scrotum, as well as a buried

penis²². Therefore, it is necessary to ensure that all participants have no contraindications for their safety. This shows the importance of pre-circumcision medical examination. Furthermore, mass circumcision was conducted in the hospital due to the pandemic conditions that require the implementation of health protocols that facilitates infection control.

The characteristics of participants in mass circumcision are quite diverse in terms of domicile, religion, and age. Based on domicile, some are from various sub-districts in East Jakarta but some are also from outside East Jakarta because this area is bordered by South Jakarta and Depok, West Java¹⁰. Furthermore, the religious backgrounds of the circumcised participants are not all Muslims. This happens because there are several reasons for parents to circumcise their children in addition to religious obligations, namely cultural traditions, health, cleanliness, family identity, and others²³. Based on the age group, the majority of the participants are of the age 2-4 and 5-9 years although some are of the age 1 and 15 years. The variation in the age of these participants is a natural thing as the Prophet Muhammad SAW recommended circumcision at an early age (seventh day of birth) of up to 7 years²⁴. Medically, there is no consensus regarding when a child needs to be circumcised but there is a recommendation for it to be conducted at the neonatal age^{25,26}.

In the practice of Indonesian society, the age variations of child circumcision include newborns, 3, 4, 6 years old, or school age. According to Bicer et al., there was no significant difference in terms of complications between circumcision at the age of 1 and more than 1 year²⁶. In the perspective of medical ethics, circumcision is recommended to be

performed at a not too young age hence the child gives the consent²⁵. The age range of participants to undergo mass circumcision is in accordance with the advice and culture of Islam as well as the traditions of the Indonesian people, namely when the child is at elementary school age. It is commonly conducted during the school holidays. The procedure of mass circumcision has followed the recommendations for safe surgical practice during the pandemic namely the use of personal protective equipment and operating room management. Other initiatives include sterilization of the operating room and the use of sterile equipment for each patient²⁷.

Circumcision in this activity took place quickly for about 6 minutes for each child. Furthermore, this time is faster than Karadag, which circumcised 125 children aged 4–8 years with 7 minutes per child¹. This was performed rapidly because the smartclamp does not require bleeding control and/or wound suturing. The team of doctors in this activity is experienced in doing circumcision. The role of the doctor is very important, especially in the selection and installation of equipment. The size of the smartclamp used is 13, which corresponds to the age of most participants (5-9 years). This number represents the diameter of the penis diameter of circumcised children and is approximately similar to the results of Wang's study on 2974 children in China. Wang stated that the penis diameter of children aged 5 – 9 years ranged from 13.1 ± 1.1 mm (5 years) to 14.4 ± 1.6 mm (9 years)²⁸.

A post-circumcision examination was performed seven days after circumcision to determine the process of wound healing and the condition of the smartclamp. Smartclamp circumcision has many

benefits but also has risks such as swelling and excess mucosal tissue residue. Furthermore, it causes anxiety in parents because of concerns that the device attached to the child's genitals results in pain and discomfort¹. These complaints were also noted among participants of mass circumcision, but the number was low, around 4.4% and were properly resolved. The complication rate is almost the same as Shabanzadeh which obtained 3.84% from the meta-analysis of 351 studies and more than four million participants²⁹. The smartclamp is very useful in helping the mass circumcision process during the pandemic and has proven to be safe, comfortable, easy, and fast. Participants and parents like this tool

because the process is fast, without dressings and wound care. Furthermore, children can bathe and play as usual. In general, parents are satisfied with the process, performance, and implementation of mass circumcision.

Mass circumcision during the pandemic was conducted by implementing health protocols which are performed in various activities, such as registration arrangements, identification of risk factors and screening for COVID-19, use of personal protective equipment, sterilization of the action room, use of smartclamps, regulation of the movement of health worker, the timing of the action, and restrictions on companions. This activity can also be successful because of the support of zakat foundation funds of a government bank in Jakarta. Indeed, every institution does have a social obligation for its people³⁰. The foundation's support enables quality but free of charge mass circumcision activities. This is a lesson for all of us on how to maximize the role of institutional social responsibility for community health activities, especially during a pandemic.

Conclusion:

The activity of free mass circumcision community service during the pandemic was successfully conducted due to collaboration with donors, hospitals, and the community. Furthermore, the implementation of health protocols has been proven to be effective in protecting the safety of patients,

their families, and all staff. After the mass circumcision, none of the participants, parents, and health

workers were infected with COVID-19. In addition, the smart clamp has been proven to be safe, easy,

fast, and comfortable for use. Mass circumcision has no significant complications as all parents were satisfied and recommend their family or relatives to participate in the next activity.

The limitations of the activity include a lack of parent participation in the use of online media and rapid tests for screening. Therefore, there is a need for improvement in the next activity by using a better test. Free mass circumcision that is safe and comfortable during the pandemic is recommended to fulfill the desire of the underprivileged in circumcising their children.

Declarations

Author contribution statement

Basuki Supartono: conceived, designed, and held the study; wrote the paper

Dyah Utari: wrote the paper, editing

Prita Kusumaningsih : provide revisions to scientific content of manuscript

Sarah Primadani Kaurow : provide access to crucial research component

Dewi Fatimah Zahra : wrote the paper, editing

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Data availability statement

Data will be made available on request.

Declaration of interests statement

The authors declare no conflict of interest.

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