

Athlete's Health Maintenance Management during a Pandemic Covid-19: A Case Study at a National Sport Hospital

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Abstract

Coronavirus disease 2019 (Covid-19) pandemic and Large-Scale Social Restriction (PSBB) policy in Indonesia caused health problems for athletes, such as mental, psychological, nutritional, decreased maximum oxygen consumption (VO₂Max), loss of strength and muscle mass. Athletes are also individuals who are at risk of being infected Covid-19 so they need health care services. This effort is being realized by the National Sports Hospital (RSON). This study aims to explain the athlete's health maintenance activities by RSON during the Covid-19 pandemic, to analyze the possible gaps, and how to overcome them. This research uses descriptive method and case study approach based on the experience of researchers as RSON medical staff and secondary data from March 1, 2020 to July 31, 2020 starting from the preparation stage with system approach (man, money, material, method, machine), implementation stage (promotive, preventive, curative, and rehabilitative), and output. The entire data was then analyzed based on literature. The results showed that RSON was able to make preparations that support athlete health care, such as socialization and screening for covid-19, treatment and rehabilitation of athletes both directly and online media. Some conditions that still have gaps such as the lack of athletes being screened, and not yet doing routine monitoring of athlete's health during the self training period can be overcome by resocialization and starting routine monitoring activities. Activities such as monitoring the athlete's diet, increasing the role in the prevention of covid-19 in disabled athletes, and collaboration with trainers and team management in the "return to play" program after the PSBB period can be started by RSON to optimize athlete health care services.

Keywords: Athlete; Case Study; Health Maintenance; Pandemic Covid-19; National Sport Hospital.

Manajemen Pemeliharaan Kesehatan Atlet selama Pandemi Covid-19: Studi Kasus di Rumah Sakit Olahraga Nasional

Abstrak

Pandemi *coronavirus disease 2019* (Covid-19) dan kebijakan Pembatasan Sosial Berskala Besar (PSBB) di Indonesia menimbulkan masalah kesehatan pada atlet, seperti mental, psikologis, gizi, penurunan konsumsi oksigen maksimal (VO₂Max), dan hilangnya kekuatan dan massa otot. Atlet juga individu yang beresiko terinfeksi covid-19 sehingga perlu upaya pemeliharaan kesehatan. Upaya ini sedang berusaha diwujudkan oleh Rumah Sakit Olahraga Nasional (RSON). Penelitian ini bertujuan untuk menjelaskan kegiatan pemeliharaan kesehatan atlet yang dilakukan oleh RSON selama masa pandemi covid-19, menganalisis kemungkinan gap yang terjadi, dan cara mengatasinya. Penelitian ini menggunakan metode deskriptif dan pendekatan studi kasus berdasarkan pengalaman peneliti sebagai staf medis RSON dan data sekunder sejak 1 Maret 2020 sampai dengan 31 Juli 2020 mulai dari tahap persiapan melalui pendekatan sistem (*man, money, material, method, machine*), tahap pelaksanaan (*promotif, preventif, kuratif, dan rehabilitatif*), dan *output*. Keseluruhan data kemudian dianalisis

berdasarkan studi literatur. Pada hasil didapatkan RSON mampu melakukan persiapan yang mendukung terlaksananya pemeliharaan kesehatan atlet yaitu berupa sosialisasi dan *screening* covid-19, pengobatan, dan rehabilitasi atlet baik secara langsung maupun media daring. Beberapa kondisi yang masih terjadi gap seperti kurangnya jumlah atlet yang terjaring di dalam *screening*, dan belum dilakukannya monitoring rutin kesehatan atlet selama masa latihan mandiri dapat diatasi dengan resosialisasi dan memulai kegiatan monitoring rutin. Kegiatan seperti pengawasan terhadap pola makan atlet, peningkatan peran RSON dalam pencegahan infeksi covid-19 pada atlet difabel, dan kerjasama RSON dengan pelatih dan manajemen tim dalam program “return to play” setelah masa PSBB juga dapat mulai dilakukan oleh RSON guna mengoptimalkan pelayanan pemeliharaan kesehatan atlet.

Kata kunci: Atlet; Pandemi Covid-19; Pemeliharaan Kesehatan; Rumah Sakit Olahraga Nasional; Studi Kasus.

INTRODUCTION

Coronavirus disease 2019 (often abbreviated as Covid-19) is an infectious disease caused by SARS-COV-2 (Severe Acute Respiratory Syndrome Coronavirus 2)(H *et al.*, 2020, p. 29; World Health Organization, 2020a, p. 9) which is a new type of coronavirus with the first case found in Wuhan, China, in December 2019(World Health Organization, 2020a, p. 9). WHO has declared covid-19 a world pandemic since March 11, 2020(World Health Organization, 2020c). WHO defines a pandemic as the global spread of a new disease in which there is little or no immunity in the human population (Mann *et al.*, 2020, p. 1).

The Covid-19 pandemic caused various countries to make policies to limit human interaction to break the chain of distribution, including the Indonesian government which issued a policy in the form of Government Regulation Number 21 of 2020 concerning Large-Scale Social Restrictions (PSBB) in the Context of Accelerating the Handling of Corona Virus Disease 2019 (Covid- 19) which at least includes: a. school and workplace entertainment; b. restrictions on religious activities; and / or c. restrictions on activities at public places or facilities(Presiden Republik Indonesia, 2020, p. 3).

Regarding sporting activities, the Ministry of Youth and Sports (Kemenpora) has compiled a Precautionary Protocol for the Prevention of the Covid-19 Outbreak for Sports Activities through Letter Number 3.17.4 / SET / III / 2020 on March 17, 2020 regarding Precautions against the Spread of the Covid-19 Virus to the World Sports in Indonesia, which contains, among other things, not to recommend Sports Committee Personnel and Sports Branch Organizations (here in after referred to as Kemenpora Sports Partners / “*Mitra Organisasi Kemenpora*”/ MOK) to travel to countries and / or cities in the world that have or have the potential to be exposed to the Covid-19 pandemic, both in order to try out, try in, or training camp or take part in international sports competitions; MOK is recommended to strictly review the restrictions on the implementation of Pelatnas in preparation for participating in international sporting events up to the deadline set by the Ministry of Health (Kemenkes) and the National Disaster Management Agency (BNPB). Even though there is a possibility of delaying the National Pelatnas, athletes are still asked to carry out training activities independently guided by a coach through long distance supervision on the responsibilities of MOK related to continuing to submit reports periodically to the Ministry of Youth and Sports; MOK is recommended to temporarily postpone the implementation of funding competitions or national and regional sports championships because of the spread of the Corona virus (Covid-19); MOK is recommended not to participate in international sporting events held in countries where there are confirmed citizens who have been infected with the corona virus positive (Covid-19)(Kementerian Pemuda dan Olahraga Republik Indonesia, 2020a). Then proceed with the issuance of the Circular of the Minister of Youth and Sports Number 6.11.1 / MENPORA / VI / 2020 of 2020, one of which contains technical implementation for participants (athletes, coaches and / or officials) for youth and sports activities to enable the participant's preparation training process (athletes, coaches and / or officials) through online facilities (video conference) guided by each participant in charge (Kementerian Pemuda dan Olahraga Republik Indonesia, 2020b, p. 4).

The implementation of independent athlete training raises several other problems experienced by athletes. The lockdown policy (or PSBB in Indonesia) due to the Covid-19 pandemic has negative

consequences for the mental health and psychological well-being of athletes (The British Psychological Society, 2020, p. 2) such as poor sleep quality, insomnia, addiction, loneliness, loss of mental toughness, and depression (Jukic *et al.*, 2020, p. 2). PSBB also has the potential to cause boredom and stress which is a threat to athletes. In addition, it causes athletes to lose their daily dietary patterns and adopt poor nutritional habits, such as occasional overeating or snacking, especially foods rich in sugar and fat, and processed foods (Schyns G *et al.*, 2020 in (Yousfi *et al.*, 2020, p. 212)) so that body fat levels increase and muscle mass decreases (Jukic *et al.*, 2020, p. 2). PSBB also leads to the absence of organized training and the cessation of competition, inadequate training conditions, a lack of adequate communication between athletes and coaches, the inability of athletes to move freely, and a lack of athletes getting adequate sun exposure (Jukic *et al.*, 2020, p. 2).

Long-term detraining, such as the PSBB mass will also cause a marked decrease in maximal oxygen consumption (VO₂max), loss of strength and muscle mass (Jukic *et al.*, 2020, pp. 2–3; Paoli and Musumeci, 2020, p. 1), and reduced muscle activation which can be seen with decreased electromyographic activity (EMG) so this can significantly increase the risk of injury. After a sudden detraining period will also cause changes in the organizational structure of the tissue and mechanical properties of the tendon resulting in a decrease in the normal tendon reaction to load applications (Paoli and Musumeci, 2020, p. 1).

On the other hand, athletes are also individuals who cannot be separated from the risk of being infected with Covid-19 because this virus can infect anyone, including an athlete. Based on information from the New York Times, 10 July 2020, there were 23 recorded N.H.L athletes who were covid-19 infected, 25 out of 351 N.B.A. players. Also infected with Covid-19, Major League Baseball also announced that 58 players and 8 staff had tested positive for Covid-19 out of 3,748 total samples examined (Keh, 2020). In Indonesia, one football player is also infected with Covid-19 (*Banyak Atlet Positif Terjangkit Virus Corona, Ternyata Satu Faktor ini yang Bisa Jadi Penyebabnya*, 2020). Covid-19 infection can seriously suppress the body's neuroendocrine immune system (Cao, 2020 in (Mehrsafara *et al.*, 2020, p. 1)). Covid-19 infection is associated with mental and neurological manifestations, including delirium or encephalopathy, agitation, stroke, meningo-encephalitis, impaired sense of smell or taste, anxiety, depression and sleep problems (World Health Organization, 2020a, p. 9). The presence of comorbid factors possessed by athletes can also increase the risk of athletes experiencing severe symptoms if they are infected with Covid-19. The Center for Disease Control and Prevention (2020) in Harmon *et al.* (2020) states that only 0.1% of deaths occur in Covid-19 sufferers aged 15-24 years. The occurrence of death in that age range was detected that 4% of sufferers had hypertension, 21% were obese, and 15% had diabetes (Harmon *et al.*, 2020, p. 1). Therefore, it is very important to maintain athletes' health in order to prevent athletes from contracting Covid-19 and other diseases.

In this case, the National Sports Hospital (abbreviated as RSON) as a government-owned public hospital (Kemenpora) which has excellent services in the field of sports medicine strives to continue to provide health care services for athletes during the Covid-19 pandemic so that athletes are always in good condition. Therefore, this study aims to explain how the health maintenance activities of athletes carried out by RSON during the Covid-19 pandemic, analyze the possibility of gaps that occur between conditions that have been carried out by RSON at this time and the expected conditions, and know how to overcome it based on literature studies so that the provision of health care services for athletes can be carried out optimally even in the covid-19 pandemic conditions.

METHODS

The method used in this research is descriptive qualitative with a case study approach located at the National Sports Hospital (abbreviated as RSON). A case study is an in-depth and specific study of a case (Surayya, 2018, p. 78). In this case is regarding athlete health maintenance activities carried out by RSON during the Covid-19 pandemic.

In this study, researchers who are medical staff at RSON were involved as partial participants by making repeated observations for some time, starting from March 1, 2020 to July 31, 2020, regarding how RSON maintained the health of athletes during the Covid-19 Pandemic, starting from the preparation stage through the systems approach (man, money, material, method, machine), the implementation stage (promotive, preventive, curative, and rehabilitative), and the resulting output. In addition to observations, researchers also reviewed documents as a method of obtaining qualitative

data. These documents include the policies of the Ministry of Youth and Sports as the owner of RSON, internal hospital policies, activity reports, patient registration reports, patient monitoring and evaluation reports, electronic information media in the form of websites and official social media of RSON.

What is meant by athletes is sportsmen who participate in regular training and championships with full dedication to achieve their achievements (Law of the Republic of Indonesia Number 3 of 2005 concerning the National Sports System, 2005, pp. 3, 27-29), both professional, amateurs, and sportsmen with disabilities, who need and get health services at RSON. All information and data obtained from the results of observations and document analysis are then analyzed in 3 stages, namely: data reduction, data display, conclusion drawing and verification. Data reduction is done by summarizing the data found during the study. Data presentation is done by displaying information in tabular form and clarified descriptively. Drawing conclusions and data verification is done by comparing the data and information found in the field (RSON) against the conditions that are expected to occur as written in the literature (journals, books, and government regulations). Health maintenance activities for athletes at RSON during the Covid-19 pandemic are declared appropriate if the data and information found in the field are in accordance with what is written in the literature, and vice versa. If the health care activities of athletes at RSON during the Covid-19 pandemic are declared inappropriate, then RSON needs to make continuous improvements slowly in accordance with the provisions set by the literature study.

RESULT

The discovery of positive cases of Covid-19 in Indonesia has had an impact on various sectors in Indonesia, especially the health sector. The Covid-19 pandemic forces hospitals to adapt quickly so that they can still provide optimal health services safely and comfortably. This is also what happened to RSON. As a public hospital with superior services in the field of sports, maintaining athlete's health has become a priority service provided by RSON even during the Covid-19 pandemic. Therefore, RSON has made several service modifications in order to continue to contribute to the maintenance of athlete's health as below.

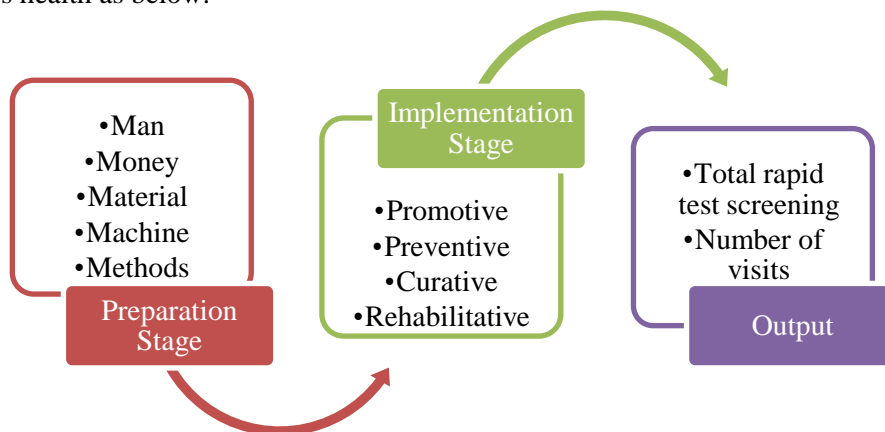


Figure 1. Stages taken by RSON in an Effort to Provide Health Care Services for Athletes During the Covid-19 Pandemic

Hospital is a health service institution that provides complete individual health services which include promotive, preventive, curative, and rehabilitative (Presiden Republik Indonesia, 2009, p. 2). Everything that was done during the preparation stage became capital for RSON at the implementation stage in providing health care services for athletes during the Covid-19 pandemic. The health care for athletes is carried out by RSON starting from promotive, preventive, curative, and rehabilitative as mandated by Law Number 44 of 2009 concerning Hospitals. Then, the results of the preparation and implementation stages can be seen in the output achieved by RSON. The three stages are further described in the following table:

Table 1. Stages taken by RSON in an Effort to Provide Health Care Services for Athletes during the Covid-19 Pandemic

The Steps Performed by RSON		Type of Activity
Preparation Stage	Man	<p><i>Man</i>, includes human resources at RSON who provide health care services for athletes during the Covid-19 pandemic, namely:</p> <ol style="list-style-type: none"> 1. Engaging RSON staff to follow the direction of the Governor of the Special Capital Region of Jakarta (DKI) regarding the prevention, control and update of the Coronavirus Disease (Covid-19) situation on Thursday, March 5, 2020 at the Great Hall of DKI Jakarta Province. 2. Outreach the results of the briefing to health workers in the RSON environment on March 6, 2020. 3. Always follow any changes in the management of Covid-19 set by the government so that every health worker at RSON has the latest information. 4. Involve his laboratory analyst staff to take part in training for nasopharyngeal and oropharyngeal swab taking in order to have the correct swab-taking skills. 5. Prior to the covid-19 pandemic, RSON had assisted some of its staff to become health workers for the Special School for Sports (SKO) and the Student Education and Training Center (PPLM), which were under the guidance of the Ministry of Youth and Sports (Kemenpora) with the aim of facilitating the coordination process. between the clinic at the athlete's training location and the case referral process that cannot be handled in the clinic with RSON as an advanced level health service facility. During the Covid-19 pandemic, these staff are still tasked with maintaining the health of athletes with service modifications (described in the implementation stage).
	Money	<p><i>Money</i>, is an RSON budget prepared to provide health care services for athletes during the Covid-19 pandemic. RSON is reallocating its budget to focus on handling Covid-19 activities.</p>
	Material	<p><i>Material</i>, includes all materials and consumables prepared by RSON to provide health care services for athletes during the covid-19 pandemic, namely:</p> <ol style="list-style-type: none"> 1. Prepare materials and consumables, starting from personal protective equipment (PPE) such as nurse cap, faceshield, google, surgical masks, N95 masks, operating room robes, hazmat, handschoen, shoe covers, boots, hand sanitizer, hand wash who are always available to meet the protection needs of RSON medical personnel. 2. Prepare a rapid test kit, syringe, needle, alcohol swab, tape, laboratory examination tube, radiological film paper for the needs of covid-19 detection tests. 3. Collaborating with the DKI Jakarta provincial health office and continued with the Center for Environmental Health and Disease Engineering (BBTKLP) in order to send nasopharyngeal and oropharyngeal swab samples for reverse transcription polymerase chain reaction (RT-PCR) examinations. 4. Prepare an internet network that will be used for coordination during the Covid-19 pandemic.
	Machine	<p><i>Machine</i>, includes all medical devices and RSON facilities used in providing health care services for athletes during the</p>

The Steps Performed by RSON		Type of Activity
		<p>Covid-19 pandemic, namely:</p> <ol style="list-style-type: none"> 1. Centrifuge machine, hematology probe, portable x-ray, oxygen. 2. Renovating the isolation rooms located in the Emergency Room and Inpatient Rooms. 3. Modifying the room in the basement area into a chest x-ray taking room and also the main lobby to become a post Covid-19 screening.
	Methods	<p><i>Methods</i>, covers all work procedures and methods, including regulations that are compiled and implemented in RSON as the basis for internal policies so that athletes' health care services during the Covid-19 pandemic run optimally, namely:</p> <ol style="list-style-type: none"> 1. Decree of Plt. Director of the Covid-19 Team at the National Sports Hospital. 2. Assignment Letter Number B.KP.05.00 / 4.3.2 / RSON / IV / 2020 concerning Covid-19 Control Services at the National Sports Hospital. 3. Standard Operating Procedures (SOP) for the Use and Removal of Personal Protective Equipment. 4. SOP for the Management of Covid-19 Patients with several revision stages in accordance with the dynamics of changes in the Guidelines for the Prevention and Control of Coronavirus Disease 2019 (Covid-19). 5. Submission of the draft Covid-19 Patient Service Standards or Covid-19 Suspects, which until the writing of this study has entered the stage of a public consultation forum.
Implementation Stage	Promotive	<ol style="list-style-type: none"> 1. Socialization of Covid-19 Prevention located at the RSON Sarengat Auditorium on March 11, 2020, in the form of: <ol style="list-style-type: none"> a. Information about the definition of Covid-19; b. Symptoms and signs of being infected with Covid-19; c. Mode of transmission; d. Prevention such as diligently washing hands with soap and running water or hand sanitizer if water is not found around the location; carry out the ethics of coughing and sneezing; wearing a mask; and keep your distance. <p>This socialization was carried out in collaboration between RSON and the Assistant Deputy for the Management of Sports Center and Special Schools for the athletes assisted by the Ministry of Youth and Sports at SKO.</p> 2. Online Seminar "Covid-19 Screening, Obligations or Needs?" on May 25, 2020 through the Zoom Meeting application to answer various questions about whether or not the Covid-19 screening is necessary and the benefits obtained from the implementation of the Covid-19 screening.
	Preventive	<ol style="list-style-type: none"> 1. Covid-19 screening checks aimed at officials and athletes from all parent sports organizations in Indonesia. 2. Ball pick-up activities, namely visiting athletes and coaches who are participating in events held by the Ministry of Youth and Sports to screen covid-19 using a

The Steps Performed by RSON		Type of Activity
		<p>rapid test. Rapid test followed by taking nasopharyngeal and oropharyngeal swab samples on the reactive rapid test results.</p> <ol style="list-style-type: none"> a. Rapid test by the RSON medical team for 40 athletes from rowing, pencak silat, taekwondo, rafting, and swimming in the athlete's potential and talent search activity which was held on Wednesday, July 1, 2020 in Bekasi. b. A rapid test by the RSON medical team for 125 trainers from wushu, bicycle, shooting, and football sports in an activity to increase the capacity of sports personnel which was held on Monday, July 13, 2020 in Jakarta. <p>3. Providing counseling related to health protocols, and ways to increase endurance (such as getting enough sleep, consuming vitamin D, a healthy diet, reducing stress and anxiety, and having mild to moderate physical activity (Yousfi et al., 2020), and avoiding moderate high activity so as not to harm the body's immune system (H et al., 2020, p. 35; Simões et al., 2020, p. 3)) to screening participants with non-reactive rapid test results. Participants were also given the results of rapid examinations and other supporting examinations, and were given additional multivitamins.</p> <p>4. Taking swab samples from screening participants with reactive rapid test results, and followed by providing management according to symptoms that arise, as well as being given health protocol counseling, ways to increase endurance (such as reducing stress and anxiety, having good hydration status, balanced diet, adequate rest and reduced activity until symptoms decrease (Elliott et al., 2020, p. 1)), and implementation of self-isolation for asymptomatic and mild symptoms; or increase their status to be a patient if they experience moderate symptoms, which is then referred to an emergency hospital.</p> <p>5. Through the medical staff who are seconded to SKO, RSON monitors the health of athletes who are currently being "discharged" temporarily, both indirectly through reports from coaches and clinic nurses if athletes experience health complaints, as well as direct communication with athletes through the media. online.</p> <p>But unfortunately, the only cases recorded were athletes who consulted about their complaints as well as patient registration reports, and no routine monitoring was recorded for each individual athlete.</p>
	Curative	<ol style="list-style-type: none"> 1. RSON continues to open emergency services for 24 hours for athletes who experience health complaints, both towards the symptoms of Covid-19 or not. Patients will be given management in accordance with the results of the history, physical examination, and supporting examinations performed by the doctor. 2. RSON temporarily closed specialist polyclinic services in outpatient installations. However, patients who need further consultation with a specialist doctor can still be

The Steps Performed by RSON		Type of Activity
		<p>given management through a general practitioner, then a general practitioner who will consult the patient's complaints and condition to a specialist, or with certain considerations or by appointment, a specialist doctor can come directly to examine the patient.</p> <p>3. RSON continues to open inpatient services for patients with a non-covid-19 diagnosis, while patients with Covid-19, suspected, probable, and confirmed Covid-19 symptoms are referred to an emergency hospital or to a referral hospital.</p>
	Rehabilitative	<p>1. RSON continues to open consultation services with physical medicine and rehabilitation specialists as agreed. Physiotherapy programs can still be carried out by physiotherapists on working days and hours. Athletes who are still domiciled in Jakarta and have made an appointment with a physiotherapist can come directly to physiotherapy to be served by implementing health protocols, namely: Athletes are subject to temperature checks → ask the athlete to wear a mask and fill out an epidemiological investigation sheet → interpretation by health personnel whether it is categorized as probable case, suspect, confirmation, close contact, and traveler → if not included in that category, the athlete is welcome to enter the environment RSON and perform physiotherapy.</p> <p>2. RSON physiotherapists monitor remotely through video calls to athletes who live outside Jakarta, especially those who are undergoing a post-surgery rehabilitation program. Currently, the physiotherapist is still monitoring the rehabilitation program for three postoperative athletes who have entered their fifth month. Monitoring is carried out routinely between physiotherapists and athletic patients every day where the athlete will provide progress reports in the form of self-training videos to the physiotherapist. Occasionally, the physiotherapist follows up directly by making video calls with the athlete's patient. The results of the report are then recorded in the patient progress sheet integrated in the patient's medical record status book.</p>
	Output	<p>1. Total number of athletes and officials who conducted the screening rapid test</p> <p>2. The total number of visits by athletes who came for treatment at RSON (detailed below)</p>

Output

In rapid test screening activities for athletes and officials during the period from 15 April 2020 to 31 June 2020, the total number of athletes and official sports organizations conducting the screening were 216 participants, consisting of 51 athlete and officials who came directly to RSON, and 40 athletes (rowing, pencak silat, taekwondo, rafting, and swimming) and 125 coaches (wushu, bicycle, shooting, and football) who were caught in the RSON pick-up activity by directly visiting athletes and officials at the hotel where they carried out their activities training (Bagian Medical Check Up Rumah Sakit Olahraga Nasional, 2020). All the results of the rapid test were declared non-reactive so that no further tests were carried out in the form of RT-PCR.

In addition, during the period from March 1, 2020 to July 31, 2020, the number of visits by athletes to RSON is as shown in the following diagram:

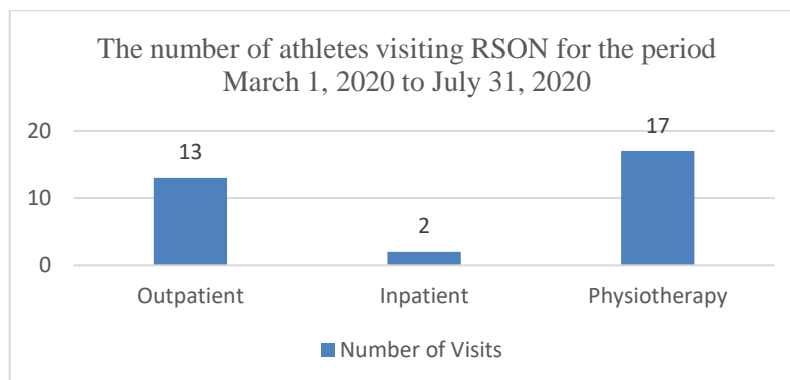


Figure 2. Number of Athletes Visits to RSON in the Period 1 March 2020 to 31 July 2020

Source: (Instalasi Gawat Darurat Rumah Sakit Olahraga Nasional, 2020; Instalasi Kedokteran Fisik dan Rehabilitasi Rumah Sakit Olahraga Nasional, 2020; Instalasi Rawat Inap Rumah Sakit Olahraga Nasional, 2020; Instalasi Rawat Jalan Rumah Sakit Olahraga Nasional, 2020)

DISCUSSION

The series of activity stages carried out by the National Sports Hospital in maintaining the health of athletes during the Covid-19 pandemic in general have followed the set recommendations. Health education efforts towards athletes help promote and shape expected and implemented behaviors (Hughes *et al.*, 2020, p. 645). This has been shown to reduce transmission and reduce the number of cases (Dalton, et.al, 2020; Zang J, et.al, 2020; dan Pan A, et.al, 2020 in (Hughes *et al.*, 2020, p. 642)).

The rapid test screening activities for athletes and officials carried out by RSON are expected to be able to find, detect, isolate and test any suspected cases, and treat early and timely for athletes who may be infected or confirm covid-19 but no symptoms, and also slowing down, stopping, and preventing the spread of infection transmission. This activity was strengthened by a circular from the Secretary of the Ministry of Youth and Sports (Sesmenpora) Number RO.06 / 4.15.1 / SET / IV / 2020 concerning the Notification of the Potential Corona Virus Checking Service regarding requests for official data updates and athletes who may be indicated to be affected by the Corona virus and regarding calls to the main sports branch organizations to carry out medical examinations, including rapid tests at the RSON starting April 15, 2020 (Sekertaris Kementerian Pemuda dan Olahraga, 2020). WHO recommends screening everyone at the first point of contact to identify individuals with suspected or confirmed of Covid-19 by carrying out a swab with samples from the nasopharynx and oropharynx which are then examined by RT-PCR (World Health Organization, 2020a, p. 11).

WHO does not recommend the use of the SARS-CoV-2 antibody test (rapid test) to diagnose Covid-19 infection (World Health Organization, 2020a, p. 11). Given the limited availability of media for swab taking and RT-PCR examination, RSON filter it through rapid tests where only participants with reactive rapid test results are prioritized for taking swab samples and RT-PCR examinations. Diagnosis through the RT-PCR laboratory test is also one of the cornerstones in the management of the Covid-19 pandemic, and allows the disease to be traced in the community, and identify clusters of cases (World Health Organization, 2020b, p. 19).

Unfortunately, the facilities provided by the Ministry of Youth and Sports through RSON have not been optimally utilized by various main sports branch organizations in Indonesia where only a total of 216 participants took advantage of this activity within 2.5 months. Meanwhile, there are at least a total of 70 sports which are members of the Indonesian National Sports Committee (KONI) and a total of 61 sports members of the Indonesian Olympic Committee (KOI) as regular members of the first or second category (Kementerian Pemuda dan Olahraga, 2018, pp. 2–6), where the average athlete and official who joined the Indonesia Gold Program (abbreviated as PRIMA) until the disbandment of the program in October 2017 amounted to \pm 14-29 athletes and officials per sport branches (Ketua Dewan Pelaksana Program Indonesia Emas, 2015b, 2015a), so that the total athletes and officials of all

sports listed in the Program are around 854-2,030 participants. Thus, even though the screening rapid test results were non-reactive, this was not sufficient to describe most of the health conditions of athletes and officials of every sport in Indonesia. Therefore, RSON still needs to approach and socialize the importance of screening for other sport branches that have not been educated.

In curative care, physicians must be able to make decisions about the investigation, treatment and management of patient health. Athletes / other personnel who feel unwell should always be informed of any respiratory symptoms. An athlete with a possible respiratory infection should refrain from joint training activities (even at home) until they are approved by a doctor, given the potential for worsening of the disease. Effective communication is needed to ensure athletes / other personnel understand their respective roles for the successful management of athlete's health maintenance (Hughes *et al.*, 2020, p. 653).

From the series of activities, there are several things that need to be fixed, enhanced, or considered to be implemented. For example, the implementation of RSON preventive efforts through medical staff who are seconded in the SKO environment where they do not have routine health monitoring records for each athlete as an individual while undergoing independent training. This causes the development and health condition of each athlete to be specifically and continuously unknown during activities and training in their respective homes so that information cannot be extracted more deeply based on the available data to be compared with the athlete's health history and comorbid factors before the pandemic. This is as explained by D. Hughes, *et. al* (2020) where it is recommended to add to the list of respiratory symptoms and daily health monitoring, especially if medical personnel are available, then regular screening of athletes should be considered.

A healthy diet provides all the nutrients needed and recommended during the quarantine process (PSBB for Indonesia) to boost the immune system. As previously explained, athletes are prone to poor diet. Therefore, as a health practitioner, apart from providing education on healthy nutritional intake (Yousfi *et al.*, 2020, p. 212) or if necessary, participate in monitoring the athlete's diet. Athletes must try to maintain the quality of food they normally eat, assuming that they used to have healthy nutrition. Additionally, they should consider changing their diet by fasting or exercising calorie restriction (Yousfi *et al.*, 2020, p. 212).

In addition, athletes with disabilities are also very important to pay attention to their health conditions during the Covid-19 pandemic considering that there can be an increased risk of serious symptoms due to comorbid diseases that previous athletes have had. (Dantas *et al.*, 2020, p. S32). Thus, RSON can also increase its role in the prevention of Covid-19 infection in disabled athletes.

Medical staff also need to work with coaches and team management to carry out a "return to play" program after the PSBB period ends because the cessation of training and competition activities during PSBB will cause athletes to be unable to program individual recovery immediately and experience slow returns to arrive at the athlete's condition. normal which increases the risk of injury. It is necessary to have proper training preparation and planning for the start of a new competition considering that it takes time for complete recovery after a skeletal muscle injury to an athlete (Paoli and Musumeci, 2020, p. 2).

After entering the new normal, RSON medical staff can also take the role of conducting health checks, daily symptom screening, conducting risk assessments, case management, providing information, and contact tracing in accordance with epidemiological investigation guidelines before restarting training with athletes in training centers while maintaining a tight distance (Kemp *et al.*, 2020, p. 2).

This research is a preliminary study that describes descriptively based on the researcher's own observations of the events that occur by looking at the contribution made by RSON in maintaining the health of athletes during the pandemic so that there may be some events that were missed from observation. This study also did not involve hospitals or other health service facilities that might provide similar services as those carried out by RSON so that it cannot be compared which service is better. The data and information obtained in this study also have not tested quantitative causal relationships so it is not known which stage has the most causal relationship to the success or failure of athletes' health maintenance activities carried out during the Covid-19 pandemic.

CONCLUSION

RSON has carried out a series of activities in the context of maintaining the health of athletes during the Covid-19 pandemic, starting from the preparation of resources, facilities, infrastructure and hospital facilities, implementation of outreach, screening, providing medication, and rehabilitation for athletes. Most of the activities have been carried out by RSON in accordance with WHO recommendations and the latest literature. There are several conditions that are expected to be carried out by RSON, such as resocialization of the importance of screening to main sports branches; routine health monitoring of athletes during independent training; supervision of athletes' diet; increasing the role of RSON in the prevention of Covid-19 infection in athletes with disabilities; RSON's collaboration with trainers and team management in the "return to play" program after the PSBB period and taking roles in health checks, daily symptom screening, risk assessment, case management, information provision, and contact tracing are things that can be a record of input for RSON to be applied in the provision of further services in order to reduce the gaps that still occur and optimize the health care services of athletes at RSON. In particular, the recommendations contained in this study are used for improvements in the internal RSON environment. However, this of course can also be a recommendation for improvement to hospitals and health service facilities that provide health services to athletes during the Covid-19 pandemic as was done by RSON. The success in maintaining the health of athletes during the Covid-19 pandemic is not only the responsibility of the hospital, but also a shared responsibility, from sports organizations to the athletes concerned, so that they consciously and voluntarily maintain and check their health conditions. Thus, this will make it easier for the hospital to carry out routine monitoring and provide management according to the health conditions found.

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