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SPORT FACILITIES AND THE COVID-19 PANDEMIC TIME – SANITARY RESTRICTIONS

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A – Study design; B – Data collection;
C – Statistical analysis; D – Manuscript preparation;
E – Manuscript editing; F – Final approval of manuscript

Abstract

Introduction: The COVID-19 pandemic caused an unprecedented disruption of sport around the globe. The subject of the paper are the measures taken to reduce the risks of the sanitary safety of people practicing various sports or actively relaxing in open public areas.

Aim of study: The problem was considered in terms of the preparation of sports facilities in the new situation, in the extraordinary times when training and sports events were the subject of sanitary restrictions and of changing legal regulations. The authors made a diligent study and deep insight focused on the various consequences of the sanitary regime to sports (training and sports competitions, recreation and education), the obligatory rules of the sanitary regime introduced during the COVID 19 pandemic time and author's recommendations.

Materials and Methods: The research was based on critical reading of legal acts (government and local regulations), recommendations of UN WHO and IOC, published works of other researchers (desk research method). An important element of this research was the experience and participant observations of one of the authors focused on the impact of restrictions in the sports club in Warsaw. This way, quantitative and qualitative data (of secondary and primary character) were collected, on the basis of which, after the analysis and interpretation of the data – final conclusions were formulated in the form of author's recommendations for the principles of sanitary safety in sports facilities.

Results. The authors have been dealing with this issue since 2020, now so far for the third year already systematically collecting materials on sport, recreation and tourism during the Covid-19 pandemic. Undoubtedly the COVID-19 pandemic had extremely negative impact on the sports. Nevertheless, it should be said, that physical activity, practicing sports during the coronavirus outbreak – within the limits of the sanitary restrictions – had important role in developing physical and mental health, vitality and individual spirit.

The final *conclusions* included the effects of the COVID-19 outbreak on sport, sport facilities and discussion on how indoor and outdoor sport facilities should change in future to meet potential sanitary restrictions.

Key words: sport, sport facilities, COVID-19 pandemic, sanitary safety.

Introduction

Sport is an important segment of every society and play a significant role in achieving a high quality of life and healthy lifestyle. The role of sports in improving sustainable development throughout the world and its unique potential to promote active lifestyles and enrich well – being through health education and healthy diets, as well as helping gender equality (through equal participation of women in sports) and making the world a better place to live - are very well recognized [3, 5, 10, 15].

The outbreak of the COVID-19 virus had a profound impact on sport practicing, sport training and sport events: every element of sports was affected, sport clubs were closed, competitions were suspended.

The World Health Organization (WHO) defines a pandemic as: ‘an epidemic occurring on a scale that crosses the international boundaries, affecting people (as the COVID-19 pandemic) on a worldwide scale’ [25].

The COVID-19 pandemic (also known as the coronavirus pandemic) was first identified in 2019. In January 2020 by the WHO it was declared as public health emergency concern. So far, in March 2022, the pandemic had caused more than 6 million deaths, making it one of the most dangerous in our history [25].

The COVID-19 pandemic has

caused the most significant changes to the sport. In the most world regions (to the various degrees and ranges) sports training and sports events have been disrupted.

The most significant example was the Summer Olympic Games 2020 in Tokyo – rescheduled to the 2021 summer. What is more, although the Japanese government had taken several precautions to minimize the danger - spectators had no right to be present at the indoor sport facilities and watch the competitions.¹

As soon, as we became aware of how COVID-19 virus behaved and how to controlled it, sports clubs were re-opened with certain restrictions for athletes, although sporting events were held without spectators. Undoubtedly the COVID-19 pandemic had extremely negative impact on the sports.

Nevertheless, it should be said, that physical activity, practicing sports during the coronavirus outbreak - within the limits of the sanitary restrictions - had important role in developing physical and mental health, vitality and individual spirit.

Aim of the study

In our research, study the problem of sport during pandemic time was considered in terms of the indoor and outdoor sports facilities management in the new situation, as well as in terms of organization of

¹ However, there were some exceptions: a few countries (as Belarus, Hong Kong, Nicaragua) continued professional sporting calendar as it was planned [23].

training and sports events in the aspect of changing legal regulations.

Material and methods

In our research study the problem of sport during pandemic time was considered in terms of the indoor sports facilities management in the new situation, as well as in terms of organization of training and sports events in the aspect of changing legal regulations.

The questions, to which the authors were looking for answers, included the consequences of the sanitary regime on the sports (athletes' training and sports competitions, recreation and education), the rules of the sanitary regime introduced into the indoor sports facilities, and finally - some author's recommendations.

The research was based on critical reading of material consisted of legal acts (government regulations, local authorities, regulations for managing sports facilities), recommendations of WHO, PKOl and IOC, as well as the research works on the subject published by other scholars.

An important element of the research was the experience and participant observations (from the coach perspective) performed by one of the authors. They focused on the impact of sanitary restrictions introduced to the 'Syrena' sports club of the Youth Palace in Warsaw.

These new rules were introduced there in response to the COVID-19 pandemic threat and significantly influenced the program, schedule and rules of sports training, participation of athletes (swimmers and divers) in the planned sports events.

With these research methods,

quantitative and qualitative data (secondary and primary) were collected, on the basis of which, after the analysis and interpretation of the available data - final conclusions were formulated in the form of author's recommendations for the principles of sanitary safety in the indoor sports facilities.

In particular, the presented paper covers the results of studies on the following questions:

- Consequences of lock-down for indoor sport facilities;
- Athletes, coaches, viewers and staff infection risk;
- The limited use of indoor sport facilities during the pandemic;
- The role of principals of sanitary regime in reducing the virus transmission.

The authors have been dealing with these issues since 2020, now for the third year systematically collecting materials on sport, recreation and tourism during the Covid-19 pandemic.

The main goal of the research topic was to focus on aspects of the indoor sports facilities during the COVID-19 pandemic, especially including the use of indoor swimming pools and divers' trainings and competitions.

These studies considered athletes' (including sport professionals), as well as coaches, viewers, managers and staff perspective of indoor sport facilities in Poland and implemented safety measures.

Results

Sport in the COVID-19 pandemic time

The COVID-19 pandemic, caused by the corona-virus SARS - CoV-2, broke out in China in 2019,

spreading extremely rapidly around the world. In January 2020, the UN World Health Organization recognized it as a pandemic. By March 2022, over 300 million cases were recorded (in 192 countries) and over 6 million deaths had been reported worldwide [25].

The pandemic time has caused a series of unprecedented disruptions in our lives. The impacts on sport and recreation (active living) have been significant. Sports mega events were rescheduled (postponed were Summer Olympic Games Tokyo 2020, World Games 2021 in US, Summer World University Games in China, World Master Games in Japan), some were cancelled (Arctic Winter Games 2020). Moreover, fitness centres and sport clubs were closed [23, 24].

The lockdown included schools, what caused negative impact on physical education.² The loss of training facilities had potentially huge health consequences (physiological, psychological, social) for individuals.

Sport business suffered bankruptcy as sport clubs and sport professionals lost their source of income.

In all countries, including Poland, measures have been taken to protect the health and life of residents, and to stop the spread of infections.

The most frequently used treatments recommended by the UN WHO included limiting travel (on a national and international scale), introducing quarantine, curfew, closing shopping malls, restaurants, hotels,

cancelling cultural, religious and sports events; schools and universities were temporarily closed [25].

In individual countries (and even their regions), restrictions on the use of public facilities have been introduced and rules for staying in open zones of public space have been defined, including the use of sports facilities and open sports and recreational areas, parks and estate greenery [26, 27, 28, 29, 30].

All these activities aimed at ensuring sanitary safety had a dramatic and fundamental impact on the possibilities of practicing sports, organizing sports events, and the way of using sports facilities – especially indoor sport facilities.

Indoor swimming pool and safety measures

The outbreak of the COVID-19 pandemic has put managers of sports facilities, including swimming pools, in a situation of surprise and uncertainty. In addition to the global UN WHO recommendations, each country, taking into account the local epidemiological situation, constantly develops orders and regulations for safe behaviour during a pandemic in public places [6, 9, 25].

In Poland, the Ministry of Sport in this regard issued the first ordinances in March 2020. One of the first concerned was the ban on the organization of events in which over 1000 people participate, and ban on the organization of indoor sport over – with over 500 participants (Ministry of Sport, 'Coronavirus - recommendations', April

² The Summer Olympic Games in Tokyo were held for the first time in history without the presence of spectators. Nevertheless, the Tokyo citizens, worried about the COVID-19 danger, protested against the event, asking the authorities to suspend Olympics. In answer, the traditional Olympic motto 'Faster, Higher,

Stronger' was changed by the International Olympic Committee to 'Faster, Higher and Stronger – Together'. It was to communicate the necessary unity and solidarity of the world's people in these extraordinary and difficult time [23, 24].

10, 2020) [21].

Successive directives have emerged systematically, as the pandemic situation developed, and with possible new findings based on epidemiological knowledge. Their goal was to ensure security and stop the spread of the virus. Some of them were general recommendations, and some were already very specific regulations (for example, the Communication of the Ministry of Sport regarding restrictions in Olympic Preparation Centres of April 22, 2020).

Another change significantly affecting the use of swimming pools was the ordinance of the Council of Ministers of December 21, 2020, according to which sports facilities (including swimming pools) were closed for all users. Excluded from the ban were only members of the national team of Polish sports associations. The organization of sports events was allowed, but without the participation of the public [21].

Since then, several dozen more regulations have been published regulating the rules of using sports facilities, including training and organization of sports competitions, and the participation of the public in them.

In the years 2020 - 2021, we also experienced many months of lockdown and restrictions in the use of gyms, swimming pools - and even outdoor facilities, such as outdoor gyms and playgrounds for children. During these periods (for example, from March 20, 2021 to April 9, 2021), the operation of sports facilities, including swimming pools, was limited to professional sports only, and all events were organized without the participation of the public [29].

Undoubtedly, all swimming sports suffered significantly in the period when sports facilities were closed due to sanitary safety [6].

Today we now know, that the SARS-COV 2 virus spreads poorly in the aquatic environment (after contact with chlorinated water, the virus ceases to be active after 30 seconds) and the risk of infection is low.

Nevertheless, in 2020-2021 our knowledge was not so developed and swimming pools (recreational and sports, open and indoor), in times of epidemic threat were closed.

Today, new organizational rules are constantly modified, ensuring greater sanitary safety of indoor swimming pools users (because the infection can still be transmitted by droplets, from person to person, for example in the changing room of the facility) [21].

For example, the government recommendations of the Ministry of Development and Technology of October 2021, aimed at protecting the health of employees and users of public indoor swimming pools, include the following rules, in the form of a detailed protocol of behaviour and sport facilities management:

- ✚ In public sports facilities, including swimming pools, occupancy limits of 75% should be applied;
- ✚ The sanitary regime requires compliance with the limit of people 1 person / 10 m² in the rooms (locker rooms, toilets, showers, administration rooms);
- ✚ It is recommended to provide a maximum of 50% of the seats in the audience, with a distance of 1.5 meters between people;
- ✚ During activities and sports events



in open areas there is a limit of 500 people, seats in the stands are occupied in 50%;

- ✚ In commercial swimming pools, provide 1.5 meters distance of customers standing in line to the checkout or cloakroom (clearly marked waiting zones on the floor);
- ✚ Cabinets and keys should be disinfected after each user;
- ✚ A minimum distance of 1.5 meters between users of changing rooms, toilets and showers should be provided;
- ✚ You should regularly disinfect and ventilate common rooms, regularly disinfect frequently touched surfaces (e.g. door handles, light switches);
- ✚ In the swimming pool area, regularly disinfect the handrails of the ladders, benches, and the surfaces around the pool is required;
- ✚ In the hall and cloakroom, it is recommended to wear facemasks;
- ✚ Information on the sanitary regime should be placed in visible places, the purpose of which is to minimize the risk of infection;
- ✚ People with symptoms of acute respiratory infection must not come to the sport facility;
- ✚ Hand disinfection stations should be placed on the premises (at the entrance, in the cloakroom, in the room with showers);
- ✚ Obligatory, careful bathing before entering the swimming pool area is required;
- ✚ In the area of the changing rooms and showers there should be information and instructions on hygiene rules;
- ✚ Respecting the shoe and barefoot zones, access to the swimming pool

hall possible through the paddling pool for feet;

- ✚ The users swimming in the pool basin should be evenly distributed, strictly adhere to the recommended limits (10m² / swimmer);
- ✚ The number of participants in organized activities should be limited (training, swimming schools, rehabilitation classes, aqua aerobics - so as to keep a safe distance between participants);
- ✚ Encouraging limitation of stay in the facility (consideration of temporary closure of shops and restaurants);
- ✚ Employees should be trained in how to behave safely in the face of a pandemic threat;
- ✚ Personal protective equipment should be provided to employees;

The purpose of the above-mentioned rules of conduct and procedures resulting from the sanitary regime is primarily:

- Increasing the safety of employees and users of the swimming pool;
- Minimizing the risk of infection of employees and users of the facility;
- Limiting the number of contacts on the premises of the facility in a given period of time to protect against the risk of infection;
- Comprehensive action adapted to the stage of advancement of the epidemic

The above-mentioned guidelines, developed by the Ministry of Development and Technology and the Chief Sanitary Inspectorate, applicable to the operation of the indoor swimming pool during the epidemic period, have been divided into five parts and are effective from June 1, 2020.

It should be noted that since then (December 2021) the recommendations

have already been modified several times: September 1, 2020, October 13, 2021 and November 29, 2021 [21]

The outbreak of the pandemic in 2020 and the concern for safety brought about profound changes in the ways of using sports facilities, including swimming pools, as well as forced a number of innovations in already existing facilities and will probably affect new investment solutions in future.

For example, for reasons of sanitary safety, it was necessary to rearrange the traditional layout of the audience, leading to a reduction in capacity - and to increase the physical distance between seated spectators.

These changes, often subsequent ad hoc implemented, were often largely improvised and introduced without particularly large costs. These included a response to the limits of permissible users of the facility and the necessary corrections in the organization of changing rooms and sanitary facilities (changing rooms, showers, toilets) and were mainly introduced by administrative decisions of the facility managers [11].

Naturally, in this case, we can only talk about low investment costs, because restrictions on the number of swimming pool users or seats in the viewer's stands - have a direct and significant negative impact on the sport facility's budget, negative social impact - limiting access to sports infrastructure. It is also possible that in the future, in newly built facilities, these rules will be taken into account at the beginning of the project process [11].

A final reflection on the impact of the COVID-19 pandemic on swimming pool and is that, unlike other sports,

athletes training water sports cannot have an alternative place for sport activities, as may be possible in the case with, for example football players [1, 9].

For example, diving sports must be practiced in a swimming pool with the required technical parameters (pool size and depth of the basin), equipped with appropriate devices (tower, trampolines), due to the nature of the sport and the Federation Internationale de Natation (FINA) regulations [6, 22].

Hence, any disruptions to the schedule of these water sports activities, introduced due to pandemic threats, cannot be mitigated by transferring these sports activities to private spaces and private sports facilities.

As a consequence, these water sports disciplines, due to the specific conditions of their practice, are most severely exposed to the negative effects of the COVID-19 pandemic and the accompanying sanitary regimes.

Therefore, the re-opening of sports facilities in Poland (sports halls, swimming pools, tennis courts, sports fields, Olympic Preparation Centers), introduced by a government regulation from June 6, 2020, was such an important legal act for athletes and coaches who had no other opportunities to conduct classes than in those specially erected facilities, prepared for the purpose of training and sport events.

Currently, (in March 2022), sports facilities are still open (although their use is strongly limited by government restrictions) and the situation is constantly monitored by the world of sport. It is even difficult (if not impossible) to forecast the development of the situation even in the nearest future.

At this point, it should be

emphasized that the pandemic situation was so dynamic and unpredictable that only during the writing of this paper (December 2021 – March 2022) there were some other amendments to the regulations that were in force in Poland in connection with the state of the epidemic (Regulation of the Council of Ministers [in] Dziennik Act of November 29, 2021, item 2177).

Each had introduced a number of restrictions, also in respect to indoor swimming pools (including a change in the facility occupancy limit from 75% to 50%, and from December 15, 2021 a maximum of 30% occupancy was allowed) [21].

Users of indoor swimming pools, school swimming pools and recreational swimming pools are now fully aware that safety and social responsibility considerations may at any time affect not only the occupancy limits, but also the availability and access of these facilities [4, 9].

Then, for those disciplines for which it is possible - individual training or looking for alternative conditions (in non-public space, where restrictions do not apply) is recommended, and for team sports - limiting the number of people exercising at the same time.

According to the current recommendations (including the IOC suggestions), you should look for all possible solutions in such a situation, make far-reaching compromises and improvisations: starting from training on private property with the use of private exercise equipment, through virtual training, to reducing the number of exercisers in the sport team - practicing.

A new training strategy is then recommended, conditioned by the

current regulations and exercise possibilities on the one hand, and the discipline and willingness to maintain daily physical activity on the other hand [2, 9, 23,24]. For example, for athletes in quarantine, it is necessary to exercise only in a permanent place of residence, in a private home.

At this point, it should be emphasized that players practicing disciplines that require specialized equipment and training conditions in water sports (such as, for example diving) have very serious difficulties and are victims of extreme limitations.

As athletes can only exercise in private space – swimmers could hardly practice at all. Athletes and coaches are then left with stoic reconciliation - in this sphere of sports only being able to look for all possible solutions to continue training and participation in competitions, to the extent that is allowed in the given conditions.

It should also be noted that, in extreme cases, significant adjustments to the training program will probably be necessary, and one must take into account changes in the established calendar of sports events, forced by the unpredictable development of the pandemic situation [19, 20].

Overviewing the basic types of sports facilities (indoor and outdoor) and rules for their management for training and sports competitions in the period of a pandemic (indoor and outdoor swimming pools, stadiums, sports halls, gyms, playing fields) showed, that introduction of legal regulations and sanitary regime was often improvised and not effective.

For example, as it seems, too chaotic were some rules introduced for sports events with the participation of

fans - in order to increase the sanitary safety of athletes, fans and employees of these facilities (comparison of the situation of dynamic changes in 2020-2023).

Sport facilities management strategy with the respect to COVID-19

The outbreak of the pandemic made it necessary to introduce new restrictions on the use of sports facilities. During periods of increased sanitary risks, the changes concerned both professional sport (training and sports competitions) and general sport (as school sport classes).

Regulations of the Council of Ministers, local authorities, sports federations and sports facilities managers issued during the pandemic time, had regulated the use of both indoor and outdoor sport facilities, as well as and open sports and leisure areas. Their aim was, depending on the epidemic situation, to impose strict rules or to mitigate them.

As the situation, regarding sanitary safety, was changing over the course the three years of the pandemic (2020-2022), consequently the safety rules of the sanitary regime were subject to significant adjustments.

In periods of a significant increase in infections the Polish government decided to close all sports facilities (in spring 2020) and mass events were cancelled.

At that time, stricter safety rules were applied to swimming pools, gyms, ski slopes, sports clubs - with the exception of professional sports and sports infrastructure with a rehabilitation and treatment profile.

The situation in 2020 - 2022 continued to evolve in individual regions of the world; the schedule of

sports events was postponed, cancelled or restored. One of the most spectacular was the decision to reschedule the Tokyo 2020 Summer Olympics to the next year (in consequence they took place in the summer of 2021).

This evolving and changing pandemic situation also concerned Poland.

For example, from mid of February 2022, the permissible limit of 30% of people staying at the sports facility (indoor gym, sports club, swimming pool, aqua park, ski slope) did not include those vaccinated against COVID-19, provided that these people present:

- EU digital vaccination certificate
- Certificate of recovery after suffering COVID-19 based on a positive antigen test result
- Certificates of vaccination, test result and recovery

The above ordinance also regulated audience occupancy during sports events: no more than 30% of the seats in the stands, every second row and every second place. In the absence of designated seats in the audience - maintaining a distance of 1.5 m between spectators was necessary.

The exemption from the quarantine obligation, issued for participants in international sports competitions related to persons from outside the EU included in February 2022:

- Players
- Member of the training staff
- Doctors, physiotherapists
- Judges
- Accredited journalists.

The above exemption applied to people who took part in competitions

organized by:

- An international sports federation active in Olympic or Paralympic or other sport, subject to recognition by the International Olympic Committee (IOC);
- International sports organization with a continental range, belonging to the sports federation;
- Polish sports association.

In addition, players of the national team of Polish sports associations, members of the training staff, doctors, physiotherapists and sports judges returning to the country from competitions organized by international federations were released from the quarantine. The exemption also applied to people returning from the foreign sports training camps.

It should be noted that persons crossing the Polish border at that time were required to present to the Border Guard a letter issued by an authorized sports event organizer, containing data on the date of the competition and the nature of this person's participation.

In Poland, during the pandemic, legal restrictions on the rules of practicing sports, training and organization of sports events were regulated by the number of legal acts [26, 27, 28, 29, 30].

Conclusions

A real revolution in the management of sports facilities, including swimming pools, stadiums and sports halls, was caused by the biggest crises in sport. So far it was experienced especially in water sports, occurred by sanitary restrictions, introduced as a consequence of the COVID-19 pandemic.

The spectacular consequences of

the pandemic included, for example, the postponement of the Tokyo 2020 Summer Olympics Games to 2021. These games will also be recorded in history as a great sports spectacle without the direct presence of spectators - for reasons of sanitary safety, only athletes, their teams and technical staff of the facilities were permitted to be present.

The pandemic threat forced the introduction of specific functional changes in the existing sports facilities (for example, limiting the number of lockers in changing rooms, closing the stands to the public, limiting the occupancy of the stands).

Possibly in future, in the name of facilitating the maintenance of the sanitary regime, the changes introduced to the program of new sports investments will most likely concern the corrections of usable space (to facilitate the maintenance of the physical distance of users) and cubature of building (to improve ventilation of rooms) [11].

Other new solutions that can be expected will probably be considered as changes in terms of increasing the usable area of changing rooms and sanitary facilities, using other solutions of stands for spectators (greater spacing between rows, reducing the number of seats), increasing the quality of ventilation of rooms, using finishing materials that allow better effective disinfection and solutions minimizing the possibility of infection, including perhaps the increased role of non-contact solutions (e.g. automatic doors instead of traditional doors opened with a handle), avoiding lifts – replaced by escalators.

Possible rules for the safe use of air-conditioning systems are still being

discussed, in view of the difficulties of their constant disinfection, filter replacement and effective exclusion of virus transmission and infections conceived this way.

However, it is difficult to give up on them, ventilation and air conditioning devices are necessary for the proper functioning of the indoor swimming pools and sport halls. As a consequence, the design search for these installations is primarily aimed at a compromise, solutions allowing the safer use of these devices during pandemic threats [25].

The situation in which sport finds itself (limited opportunities for training and organization of large events) that we are currently experiencing during the COVID-19 pandemic, has raised some fundamental questions about the future of the swimming pools, stadiums and sports halls, in particular indoor, all-year-round facilities.

Undoubtedly, the leading tasks for future investors and designers of sport facilities, would be following questions to be satisfactorily solved:

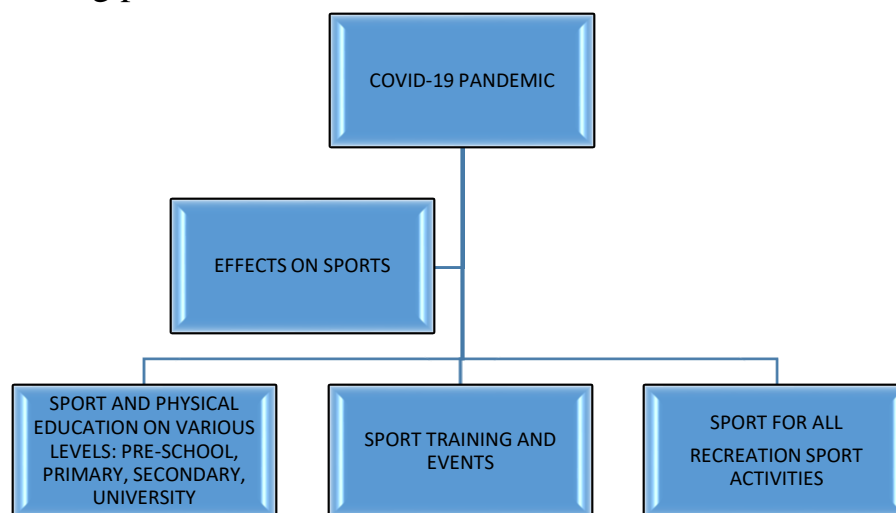
Already existing problems:

- Further concern of the pro-ecological regime: material and ecological savings, including energy-saving technologies, alternative energy sources, efficient management of water and energy resources;
- Searching for solutions desired for the multi-functionality of the facility (the use of flexible solutions that allow the building to be adapted, as needed, to completely new functions).

New elements, in the form of:

- + The need for solutions that have not been taken into account so far, in particular to ensure the sanitary safety of viewers, players and employees of the sport facility.

It should be emphasized here, that the latter question was not previously unknown or neglected problem - but so highly elevated sanitary regimes turned out to be necessary as a result of a particularly serious epidemiological threat (as the COVID-19 pandemic) in 2020-2022.



*Source: Elaborated by the authors on the base of the research 2019-2022 (Joseph Pilsudski Academy of Physical Education, Warsaw)

Figure 1. Sections of sport affected by the COVID-19 pandemic

Table 1

**The detailed recommendations of the sanitary safety rules
in the indoor swimming pools in Poland, considered with respect to athletes,
coaches, viewers and staff members perspective (2020 – 2022)**

The main segments of sanitary safety regime rules with respect to COVID-19 pandemic	
1	<p>Ensuring sanitary safety in the indoor swimming pool facilities - general recommendations for users, coaches, viewers and staff members</p> <p>a) In the entrance area / ticket office / reception / cloakroom of the swimming pool it is recommended to: place all relevant information in front of the main entrance (and at the reception / ticket office); in the case of non-automatic doors, it is recommended to leave it ajar (to avoid touching the door handles); one should mark 1.5 meter distances on the floor in front of the cash register / cloakroom / reception desk / information desk; 1 person can be present directly in front of the cash register; one should disinfect bracelets / keys / locker padlocks after each user; a limit on the number of seats in the swimming pool hall should be introduced, and a 1.5-meter space between the seats should be maintained; at the entrance to the facility, clear information should be posted that persons with symptoms of any respiratory tract infection are not allowed to enter the facility.</p> <p>b) In the changing rooms and swimming pool sanitary areas, it is recommended to: introduce a user limit in accordance with the current regulations of the Chief Sanitary Inspector (GIS), so as to allow the maintenance of an appropriate distance, introduce a limit of people using the changing rooms and the shower area, disinfection of the cabinets after each user is necessary.</p> <p>c) In the pool and sauna area, it is recommended to: regular disinfection of frequently touched surfaces (handles, doors, cupboard handles, shelves, benches, light switches, faucet taps, handrails, stairs, sanitary surfaces (walls, floors, washbasins, toilets), surfaces around the pool, ladders.</p>
2	<p>Ensuring sanitary safety for employees working in the indoor swimming pool</p> <p>Providing protective masks, gloves, hand disinfectants; providing protective shields for employees at cash desks, reception desk - as insulation screens at the workplace; ensuring a distance of 1.5 meters between work stations; regular and frequent disinfection of workstations (equipment) and their surroundings; regular and frequent ventilation of the premises; hand disinfection before starting work; use of remote communication, reducing meetings in contact (face to face replaced by on-line); organize training of employees focused on the sanitary regime and behaviours necessary in this situation;</p>
3	<p>Ensuring sanitary safety for athletes and other users in the indoor swimming pool</p> <p>Introducing user limits on the premises in accordance with the current legal regulations; maintaining a physical distance of 1.5 meters in the entrance area, cloakroom, shower room, toilets, sauna, Jacuzzi (use of visible information and directions); a dispatcher with a hand sanitizer at the entrance to the facility, in the cloakroom; obligatory careful bathing before entering the swimming pool hall; observing the discipline of zones: barefoot access to the swimming pool hall through the foot washbasin; compliance with the limits of people swimming in the pool; it is recommended to introduce chlorine for the disinfection of water in the swimming pool, paddling pool and jacuzzi; mandatory wearing of the mask on the premises (excluding when swimming / diving); limiting the length of stay in the facility; disinfection of changing rooms (shower rooms) and halls with regular agents recommended for this by the local sanitary regulations (excluding alcohol-based chemicals); posting in visible places instructions for the correct removal and putting on facemask and gloves, as well as for the correct washing and disinfecting hands; introduce limits for participants in group activities (training, swimming classes) to maintain a safe distance between participants;</p>

	limiting the activity of saunas (open if the regulations allow it; limits of users, keeping a safe distance, closing saunas that do not provide a temperature higher than 60 degrees C, obligation to use the sauna barefooted and without outerwear, except for a towel).
4.	Preventive procedures: suspected corona virus infection of an indoor swimming pool staff Staff members should be trained in sanitary safety and the required behaviour in an epidemiological emergency situation; in case of signs of infection, they should not come to work and stay home; in the event of the appearance of symptoms of infection during the performance of official duties - the employee should be isolated and sent as quickly as possible by individual transport to his or her place of residence or the sanitary services (hospital emergency) should be called in the event of serious symptoms; the workplace of an infected person should be scrupulously disinfected; it is recommended to establish a list of people who have had contact with an infected person; also others, additional procedures should be implemented (for example, contact with the sanitary and epidemiological station) in accordance with the current government or local regulations.
5	Procedures to be followed in the event of a suspected corona virus infection of an indoor swimming pool user (athletes, professional swimmers) In case of reasonable suspicion (signs of infection), such a person should not be allowed into the premises; should be instructed on the current procedures (for example, the regime of reporting to the nearest infectious diseases ward); an infected person should be scrupulously disinfected as well as facilities he or she was in contact with (handles, handrails, handles, seat); it is recommended to establish a list of people who have had contact with an infected person; also others, additional procedures should be implemented (for example, contact with the sanitary and epidemiological station) in accordance with the current government or local regulations.

*Source: Elaborated by the authors on the base of the WHO, FINA, Polish government regulations and Chief Sanitary Inspector recommendations in Poland with respect to the use of the indoor swimming pools during the COVID-19 pandemic

Table 2

**Comparison of the sanitary rules of using sports facilities
(sports hall, swimming pool and outdoor sport facilities)
during the COVID-19 pandemic in Poland**

Sanitary safety rules for the use of indoor and outdoor sport facilities	
1	General sanitary safety rules a) Entry to the premises of the facility only on condition that you read the regulations, read their content and accept the sanitary rigors introduced; the participation of the public in sports events must be governed by separate regulations; it is forbidden to use the devices and stay on the premises by people with a confirmed infection (in particular COVID-19) and security staff is obliged to control it; before entering the premises, hands must be disinfected using special dispensers, each person is required to wear a facemask covering the nose and mouth (disposable masks should be disposed of in special containers in the cloakroom, reusable - secured in a closed bag or backpack); in the cloakroom before and after using the individual locker - it should be disinfected (containers with liquid should be available); all personal belongings should be left in the locker. b) There must be social distance kept throughout the area, keeping a proper distance from other people (minimum 1.5 m), in particular this provision applies to: entrance hall, stands in front of the cash register, cloakroom, shower area, toilets, swimming pool hall, recreational pool with a paddling pool, the sport pool basin with the lanes, the beach area around the outdoor recreational swimming pools (people living together are exempt from the obligation to keep distance - however, they are obliged to keep distance from other people).

- c) It is forbidden to gather in the entire premises, after stopping the use of sports facility, the facility should be vacated as soon as possible.
- d) The users of the facility are obliged to observe and follow the instructions of the sport facility staff and be aware of the rules formulated by the facility manager

2 Indoor and outdoor swimming pool area

- a) At the entrance, the rules must be followed accordingly to regulations of point 1 'General rules for using the sports facilities'; in periods of particular intensification of sanitary restrictions, it is necessary to book the use of the facility by phone or on-line; the facility manager reserves the right to cancel the booking for objective reasons - about which the booking persons will be notified in advance.
- b) There can be only one person at the cash desk, people waiting in the queue are obliged to keep a required physical distance from other people; it is recommended to make payments at the checkout of the facility using a payment card.
- c) At the same time, the swimming pool hall may contain as many people as is allowed by current government or local regulations (the occupancy of the facility usually varies depending on the epidemiological situation); the provision also applies to organized groups (including swimming classes); entry to the swimming pool hall is possible (for individuals and groups) according to a pre-agreed booking schedule; entries and exits from the swimming pool hall should take place at strictly defined hours, in accordance with the current schedule of classes; these dates change depending on the permissible occupancy limits of the facility; the group supervisors (coaches, teachers) are required to lead the group to the swimming pool hall and supervise the group in the locker room; there should be a break between the entrances of individual groups, necessary for the disinfection of the changing rooms and showers; the locker keys handed over by a given group are disinfected.
- d) Each user of the pool is required to take a shower (carefully wash the body) before entering and after leaving the pool hall; after leaving the shower area, it is obligatory to put on a face mask before entering the cloakroom / changing room.

3 Sports hall and outdoor sports facilities

- a) At the entrance, the rules in force in the regulations of point 1 'General rules for using the sports team'
- b) In periods of particular intensification of sanitary restrictions, it is necessary to book the use of the facility by phone or on-line; the facility manager reserves the right to cancel the booking for objective reasons - about which the booking persons will be notified in advance.
- c) There can be only one person at the cash desk, people when waiting and queuing in line are obliged to keep a physical distance from other people, it is recommended to make payments at the cash desk using a payment card.
- d) Entry to the sports hall and the outdoor sports ground, use of outdoor sport facilities is possible according to a previously agreed reservation schedule.
- e) In the changing rooms and in the shower area, regulations apply in accordance with the posted there announcements.
- f) There should be a break between the entrances of individual groups, necessary for the disinfection of the changing rooms and showers; the locker keys handed over by a given group are disinfected; after leaving the shower area, it is obligatory to put on a face mask before entering the cloakroom / changing room.
- g) The person making the reservation (group guardian, school teacher, coach) should be responsible for compliance with the regulations and the behaviour of the group on the premises of the sports facilities

* *Source:* Elaborated by the authors on the base of the WHO, FINA, Polish government regulations and Chief Sanitary Inspector recommendations in Poland with respect to the use of the indoor swimming pools during the COVID-19 pandemic

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