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SA Rugby Policy on Human Immunodeficiency Virus (HIV) and Viral Hepatitis Management

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Background

South Africa is an epicentre of the global HIV pandemic; similarly, hepatitis B is highly prevalent and endemic. An increasing number of South Africans now play rugby union, and the need exists for a comprehensive document of progressive policies and management guidance for players both from a prevention as well as management perspective. This policy regarding the management of mostly blood borne virus infections replaces the preceding SA Rugby HIV management policy document that has been withdrawn.

Hepatologists, an infectious disease specialist, an ethicist, a player's representative and members from SA Rugby constitute the group that produced this document using a consensus-based approach. The document addresses all levels of rugby union players including school, club, provincial and national level.

Bleeding injuries including lacerations and abrasions are frequent during rugby games. Nonetheless, the risk during play of the transmission of blood borne viruses of hepatitis B, C or HIV infection is low, compared to other risk behaviours including sexual transmission. The guiding principles are player focused and respect player autonomy, privacy and confidentiality, with education and capacity development being a particular focus. Underpinning the policy is player wellness, with an emphasis on pre-emptively identifying any potentially manageable conditions and offering a preventive package of care including relevant screening, appropriate vaccinations and education around prevention. Furthermore, where players already have an HIV or hepatitis infection, the policy places emphasis on ensuring optimal treatment and respecting the right to privacy and confidentiality, while promoting steps to minimise the possible, albeit low likelihood, of transmission to other players. In summary, the primary aim is to offer care in the best interest of the player and to assist team doctors and management via a non-punitive and engaging process. The policy aims to be a reference document that provides a progressive approach by proactively addressing modern challenges.

General principles

- This document is a set of best evidence guiding principles regarding the potential risks of transmission of HIV or viral hepatitis in contact sport, and interventions that have been shown to mitigate these risks;
- These infections are caused by distinct human viruses, which can be transmitted from person to person - in some cases chronic infection can ensue;
- These principles apply at the time of writing and will be revisited from time to time as the need arises;
- It attempts to balance player safety, human rights and protection of privacy and confidentiality;
- The primary onus and ethical responsibility of confidentiality lies with medical staff, and they must have systems in place that can ensure confidentiality to protect players;
- Players should be offered screening for various preventable and manageable infectious diseases, as part of a general health and wellness package of care;
- Screening should be strongly encouraged and recommended as it is in the players' best interests, however it is not mandatory and should not preclude participation in rugby;

- The “MyPlayers” organisation is a resource in engaging all professional players and educating them about risks and recommendations.

Management Protocols

Hepatitis A

- Given its potential for prolonged negative physical effects and the effectiveness of the vaccine, hepatitis A vaccine must be routinely offered to all players who do not have documented prior vaccination or immunity
- Vaccination should be available to all players travelling to a country where hepatitis A vaccination is recommended
- Monovalent hepatitis A vaccination (Havrix 1440R; AvaximR 160) is given as 2 doses, 6 months apart
- If hepatitis A monovalent vaccine is unavailable, a hepatitis A/B combination vaccine (TwinrixR) can be given at 0, 1 and 6 months
- Passive vaccination (immune globulin) should be available to unvaccinated players who are inadvertently exposed to individuals with acute hepatitis A or are to travel to an endemic area in less than 2 weeks
- Vaccination records must be maintained

For more information on Hepatitis A see Annexure A

Hepatitis B

- With blood injuries, standard universal precautions as advised by World Rugby, must be practiced
- SA Rugby must insist that all national and provincial professional players are vaccinated against hepatitis B, and encourage that this is adopted at club and school level equally.
- Players must be educated about the transmission risk of viruses such as hepatitis B through sexual activity and about needle sharing during the use of drugs including anabolic steroids. The sharing of personal items such as razors, toothbrushes and nail-clippers, is not recommended
- Compliance with the recommended hepatitis B vaccination should be universally encouraged for all players and SA Rugby must encourage compliance with these guidance principles and recommendations
- Team medical personnel should use these recommendations as guidance principles and be responsible for their implementation
- Education around the importance of vaccination and general preventive health education will be presented by MyPlayers to all professional players

- As some players may have immunity to hepatitis B, via a prior silent infection, a blood test for antibodies to hepatitis B could be advised and vaccination would not be required for players who have both antibodies to the hepatitis B core antigen (anti-HBc) and antibodies to the hepatitis B surface antigen (anti-HBs). Alternatively, the policy below should be followed
- Vaccinated players should receive a hepatitis B vaccine booster if they have formal documentation of their vaccine schedule as children
- If unvaccinated or no documentation is available, the full 3-dose schedule (@ 0, 1 and 6 months) should be administered after testing for hepatitis B surface antibody (anti-HBs) titre (see below#)
- Players born outside of South Africa must be subject to the same policy
- One (1) month after the booster dose or completed 3-dose schedule, a blood test for anti-HBs titre must be performed to ensure a vaccine response. A titre >100 mIU/ml is deemed an adequate response#
- If anti-HBs titre >10 but <100 mIU/ml, give a single dose booster
- If the anti-HBs titre is <10 mIU/mL or undetectable, hepatitis B surface antigen (HBsAg) testing for the presence of hepatitis B infection should be performed
- If the HBsAg test is negative, an additional double-dose booster vaccine should be administered expeditiously and the anti-HBs test repeated again 1 month later
- If the response remains inadequate, specialist advice should be sought
- If the HBsAg test is positive, the player likely has undiagnosed chronic infection and must be referred to a hepatologist or gastroenterologist for further clinical evaluation and care
- Where players are identified to have chronic hepatitis B infection, access to standard of care antiviral therapy (e.g tenofovir, lamivudine) with clinical supervision must be facilitated so as to achieve viral suppression and attenuate any, albeit small risk of on-field transmission
- Players with chronic hepatitis B infection should be advised of the risk of transmission and appropriate advice given to reduce transmission; this advice would include for example the vaccination of sexual partners, and the use of condoms
- Antiviral therapy is available in the public sector for those unable to access private healthcare insurance or out-of-pocket funding
- Players with chronic hepatitis B infection must be ensured standard doctor-patient confidentiality with respect to their diagnosis
- The potential need for time free from play following a chronic hepatitis B diagnosis, can be assessed by the treating physician in conjunction with the affected player
- HIV-infected players must automatically be screened for hepatitis B (HBsAg) and if negative, vaccinated as part of routine standard of care

- If players are HIV and hepatitis B co-infected, referral to initiate appropriate combination antiretroviral therapy that treats both virus infections simultaneously, must occur. This is possible with current antiviral therapies
- Medical practitioners or “team doctors” must ensure that their own screening and vaccination schedules are complete and up to date
- Similarly, trainers whose routine responsibilities frequently expose them to blood should be offered prevention with hepatitis B vaccine. Equally, the same should be offered to staff at potential risk e.g. equipment handlers, laundry personnel and other persons at risk of exposure to athletes' blood

For more information on Hepatitis B see Annexure B

Hepatitis C

- Players identified as at-risk for hepatitis C should be screened
- If antibody to hepatitis C is negative, offer preventive education
- If positive, refer to a specialist versed in hepatitis C management for evaluation and therapy
- Hepatitis C therapy – usually 8–12 weeks in duration – is usually curative in 95% or more.
- If required, players should be allowed time free from play to complete therapy – this should be a joint decision between the physician and the player whilst ensuring that confidentiality is maintained
- Education and information will be provided via meetings with the MyPlayers organisation
- The general principles to prevent blood borne virus infections as elucidated for hepatitis B apply

For more information on Hepatitis C see Annexure C

Human Immunodeficiency Virus (HIV)

- It is strongly recommended that players have an annual HIV test at the end of each season
- HIV-positive players, ideally, should be allowed 3 months free from play to start ARVs for their own health and they may need time to come to terms with their diagnosis. This will also allow sufficient time for reduction of the viral load in their blood
- In line with the national HIV policy, ARVs should be started without delay in all HIV-infected players
- Consider a treatment regimen with minimal adverse effects on sporting performance, e.g. Efavirenz can cause dizziness, inattention and mood disturbances
- Players should be aware that good adherence to therapy is critical for ARVs to be effective

- The confidentiality of HIV-infected players who choose to disclose their status to the medical team and/or team management, must be protected without exception. Particular regard must be afforded to electronic patient notes or data records to ensure restricted access to confidential information
- HIV-negative players should receive educational counselling on HIV prevention (e.g. safe sexual practices), emphasising the importance of remaining negative
- SA Rugby should endeavour to maintain ongoing HIV-related education for players
- The general principles to prevent blood borne virus infections as elucidated for hepatitis B apply
- Education could include:
 - o Details about HIV
 - o The high risk of HIV transmission during unprotected sexual intercourse
 - o Routes of HIV transmission and how to prevent HIV infection including condoms, pre-exposure prophylaxis, post-exposure prophylaxis and avoiding multiple sexual partners
 - o The need for annual HIV testing
 - o The extremely low risk of HIV transmission on the rugby field
 - o The benefits of ARVs for health and for reducing risk of transmission
 - o Psychological aspects of living with HIV

For more information on Human Immunodeficiency Virus (HIV) see Annexure D

Annexures

Annexure A

A. Viral Hepatitis

i. Hepatitis A

- Hepatitis A is an infectious disease caused by the hepatitis A virus that can cause an acute hepatitis (inflammation of the liver) with jaundice (often called “yellow jaundice”)
- Infection typically occurs through ingesting, typically undercooked, infected food prepared by someone with an acute infection (who is likely unaware of their infection) or drinking contaminated water
- Travellers into countries where hepatitis A is common are at risk and mini-outbreaks can occur between people living in close proximity to each other, e.g. in dormitories
- A severe degree of liver inflammation can occur. However, the risk of dying from acute hepatitis A is low, although those developing acute hepatitis A are at risk of the prolonged effects of infection including fatigue, jaundice and poor physical performance

- In the case of professional sportspersons, the degree of debilitation may render the player physically incapable of active play, occasionally for several months
- Transmission of hepatitis A is not a risk in contact sport as such, but rather during travel. Infection is readily prevented by a safe and available vaccine; prevention is recommended as part of a general player wellness programme.
- An effective vaccine conferring long-term protection is available. However, it is currently not part of the routine vaccination programme for all children in South Africa, so many players are likely to be unvaccinated
- As a proportion of individuals born in South Africa may have pre-existing antibody to hepatitis A virus infection, a test before vaccination could be advised
- Currently in most Provincial Unions in South Africa only players travelling to a country where vaccination is recommended, receive hepatitis A vaccine

Annexure B

ii. Hepatitis B

- Hepatitis B infection is caused by the hepatitis B virus
- The disease is highly prevalent and endemic in South Africa with 6–8% of South Africans chronically infected (estimated at 6.9% currently)
- Other endemic regions include the rest of Sub-Saharan Africa, South and East Asia, Japan, all the Polynesian islands and among the indigenous peoples of Australia and New Zealand
- Chronic infection is associated with a significantly increased risk of developing cirrhosis and liver cancer, and can be associated with other conditions such as kidney disease.
- It is important to note that players with chronic infection typically do not have any particular symptoms until the disease is advanced
- In South Africa, transmission of hepatitis B occurs predominantly in childhood either between toddlers or, less frequently, from mother to child during childbirth or during the immediate post-childbirth period. Least frequently adult to adult transmission either via sexual or injection routes (e.g. shared needles, unsafe injection practices e.g. steroid drugs) may occur. Both heterosexual transmission and transmission in men who have sex with men can occur
- If infection occurs in childhood it is almost always “sub-clinical” with no symptoms, however the chance of spontaneously clearing the virus infection is low and developing chronic infection is very high
- When infection occurs for the first time in adulthood, clinical disease with an acute hepatitis and jaundice is more likely but conversely, the risk of developing chronic infection is far less and complete viral clearance is probable with the chance of chronic infection <10%
- The risk of player to player transmission on the field is very low but has been documented and given the contact nature of rugby as well as blood injuries, is a possibility. There are reports of transmission of hepatitis B via contact sports. These include an asymptomatic high school sumo wrestler in Japan who transmitted hepatitis B to other members of his team. In Swedish track finders, transmission was described

to have occurred by inoculation via a twig that wounded a preceding competitor, or by water, towels, soaps or brushes used by several people or person-to-person contact in steam baths. Transmission of hepatitis B among members of an American Football team was reported; and after team members were vaccinated and the index player identified, no new cases occurred and the outbreak was thought to be due to horizontal transmission in a training group

- Relaxing in a communal whirlpool or ice bath in those with an active bleeding wound, could theoretically result in exposure to hepatitis B
- An effective vaccine for hepatitis B has been available for more than 3 decades
- The vaccine was introduced into the South African Expanded Programme of Immunization in 1995 and theoretically all children born post-1995 should have received vaccine, however, full 3-dose vaccine coverage is only 77% in the South African programme

Annexure C

iii. Hepatitis C

- Hepatitis C infection is caused by the hepatitis C virus
- Hepatitis C has a significantly lower prevalence in South Africa than hepatitis B
- The transmission of hepatitis C is typically through the injection route either via a blood transfusion prior to 1992 or unsafe injection practices
- Less common modes of transmission include tattoos, traditional circumcision or traditional or cosmetic scarification. Sexual transmission has been documented in men who have sex with men.
- Of those infected, 45–75% will not spontaneously clear the virus and will develop chronic infection
- Chronic infection is usually without any symptoms but carries significant risk of developing cirrhosis and liver cancer after long-term infection
- As with hepatitis B, the on-field transmission risk is very low
- There is no effective vaccine for hepatitis C at present

Annexure D

Human Immunodeficiency Virus (HIV)

- HIV virus causes HIV-AIDS
- SA Rugby does NOT discourage or disallow HIV-infected people from playing rugby
- Approximately 7 million South Africans are infected with HIV, with a high burden of HIV infection among young adults
- The rugby playing population is comprised of young adults hence the likelihood exists that players also carry a similarly high burden of HIV infection
- HIV is spread by contact with tissue fluids from an infected individual. This may occur through sexual transmission, from mother-to-child, or through contact with blood or

blood products (e.g. shared use of needles for injecting drugs or performance enhancing substances)

- HIV **cannot** be transmitted through normal body contact, for example touching or using facilities such as locker rooms, bathrooms and toilets
- As with hepatitis B and C, there is a theoretical risk of blood-borne transmission of HIV on-field, if blood from an infected player comes into contact with an open wound or mucous membrane (e.g. the lining of the mouth) of another player
- The risk is **extremely low** and no cases of HIV acquisition on a rugby field have been documented
- The United States Center for Disease Control and Prevention (CDC) estimates the risk of HIV transmission in sport to be in the order of one potential transmission per 1 million games of sports, other than boxing
- A study of on-the-field bleeding injuries during professional (American) football competitions in the United States concluded that the potential risk for HIV transmission is extremely low
- Thus the risk of acquiring HIV infection is greater “off the pitch” than via contact sports. Players should be educated regarding this risk, as specified below
- The potential risk of HIV transmission is substantially lower if the infected person is on effective antiretroviral (ARV) therapy, thereby lowering the HIV load in the blood to undetectable levels. This is well documented for the prevention of mother-to-child and sexual transmission
- Given the low theoretical risk of HIV being transmitted on-field it would not be scientifically, legally or ethically justifiable to discourage or disallow HIV-infected people from participation
- Players are however strongly encouraged to be aware of their status so that they can take ARVs for their own health and to further reduce the transmission risk
- HIV has become a chronic manageable medical condition, similar to diabetes or high blood pressure. Therefore when properly managed with ARVs, HIV-infected players can maintain normal levels of health and fitness

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