

BALLARD BRIEF

Sexually Transmitted Diseases Among Adolescents and Young Adults in Brazil

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Summary

Sexually transmitted diseases (STDs) are infections that are mainly transmitted through sexual contact.¹ These infections are typically caused by bacteria, viruses, or parasites and can affect anyone who is sexually active. Some of the most common types of STDs include chlamydia, gonorrhea, syphilis, and human papillomavirus (HPV).² STDs pose a significant global health problem, with young people in Brazil being particularly vulnerable. They are at a higher risk of contracting STDs due to several factors, including risky sexual behavior, substance abuse, and sexual violence. The consequences of contracting STDs in this population include cervical cancer, chronic pelvic pain, and pelvic inflammatory disease. A notable best practice for the prevention and management of STDs among young adults and adolescents in Brazil is screen testing, which can help identify and treat STDs early. Despite health facilities in Brazil offering tests to identify and treat STDs, many cases still go unnoticed, making it a public

health concern.

Key Terms

Adolescents—According to the World Health Organization, these are individuals that are aged between 10–19 years old.⁵

Chlamydia—A common sexually transmitted disease that is caused by the bacterium *chlamydia trachomatis* and is usually transmitted through intercourse, anal sex, and oral sex.⁶

Chronic Pelvic Pain—Pain that persists for 6 months or more in the region between the hips and below the belly button.⁷

DALYs—According to the World Health Organization, DALYs are a time-based measure that combines years of life lost due to premature mortality with years of healthy life lost due to disability.^{8,9}

Ectopic Pregnancy—When a fertilized egg implants and develops outside of the main uterus cavity, it is referred to as an ectopic pregnancy. Typically, this type of pregnancy happens within a fallopian tube, which is responsible for transporting eggs from the ovaries to

the uterus.¹⁰

Gonorrhea—A sexually transmitted disease (STD) that can infect the genitals, rectum, and throat. It is particularly prevalent among young people between the ages of 15 and 24. Gonorrhea can be contracted through vaginal, anal, or oral sex with an infected person.¹¹

Human Papillomavirus (HPV)—A viral infection that often results in the growth of warts on the skin or mucous membranes. With over 100 different strains, HPV can take various forms.¹²

Pelvic Inflammatory Disease (PID)—A clinical syndrome that occurs when microorganisms ascend from the cervix and vagina to the upper genital tract, resulting in inflammation. PID is a severe complication of sexually transmitted infections such as chlamydia and gonorrhea.¹³

Psychoactive Drugs—Psychoactive substances are compounds that can

impact various mental processes such as perception, consciousness, cognition, mood, and emotions when ingested or administered into the body.¹⁴

Sexual Violence—Any type of unwanted sexual contact. This includes use of force, threats, rape, sexual assault, and sexual harassment.¹⁵

Sexually Transmitted Diseases (STDs)—Sexually transmitted diseases (STDs) are viruses, parasites, or bacteria that can pass from one person to another person by means of blood, semen, vaginal, and other bodily fluids.¹⁶

Uterus cavity—The cavity of the uterus is a hollow space that is in the center of the uterus and is a reproductive organ in the female reproductive system.¹⁷

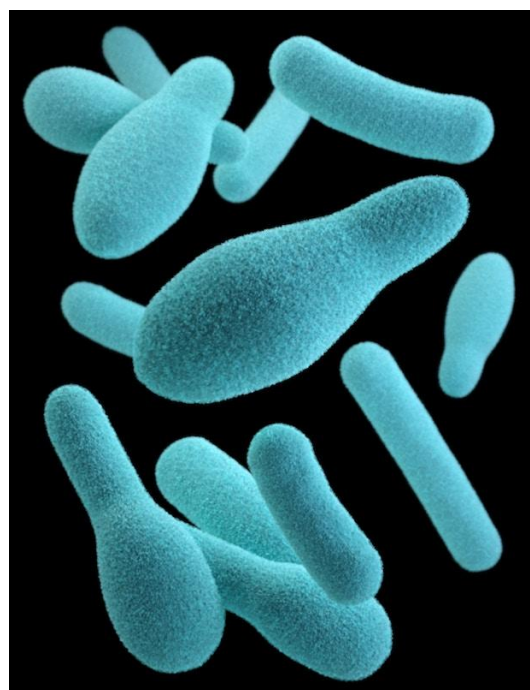
Context

Q: What are Sexually Transmitted Diseases (STDs) and which are of the greatest concern in Brazil?

A: Sexually Transmitted Diseases (STDs) are viruses, parasites, or bacteria that can pass from one person to another person by means of blood, semen, vaginal, and other bodily fluids.¹⁸ Sexually transmitted diseases can also be transmitted nonsexually, from mothers to their children during pregnancy or through blood transfusions and shared needles.¹⁹ In this brief, sexual means of transmission are emphasized. Several STDs exist, including syphilis, gonorrhea, chlamydia, HIV/AIDS, hepatitis, herpes, and chancroid.²⁰

There are various methods used to measure sexually transmitted diseases, which include laboratory tests (such as swab testing), clinical diagnoses, screening, and disability-adjusted life years (DALYs). Clinical diagnosing

identifies STDs according to the symptoms and examination of an individual and is often completed by collecting blood samples and urine tests.^{21,22}



The prevalence of STDs is also often linked with increased STD-related morbidity rates, especially in regions where access to healthcare is limited. In 2013, the most severe sexually transmitted disease in Brazil was syphilis, with approximately 26.5 DALYs lost (per 100,000 people), followed by chlamydia, with 19.1 DALYs lost.^{23,24} Recently, the year 2018 had the highest number of reported cases of syphilis in Brazil since 2010, with 76.2

cases per 100,000 inhabitants.²⁵

Q: Who is most at risk for contracting STDs, especially in Brazil and other developing countries?

A: Every year, there are approximately 333 million new cases of treatable STDs worldwide.²⁶ The age group with the highest incidence of STDs is 20–24 years, followed by those 15–19 years of age.²⁷ Globally, about 1 in 20 young people is estimated to acquire an STD annually, not including HIV and other viral infections.²⁸ STDs rank among the top ten causes of illness among young adult males in developing countries and are the second leading among young adult females.²⁹ Despite comprising only a quarter of the sexually active population, adolescents and young adults (ages 15–24) account for nearly half of all newly acquired STDs.³⁰ Therefore, STDs pose a significant threat to the growing population of adolescents and young adults. Generally, individuals in their adolescence and early adulthood (early

20s) are vulnerable to STDs due to a combination of biological and behavioral factors, which will be discussed more in the contributing factors section of this brief.³¹ These biological and behavioral factors are part of the reason that the HIV detection rate in 2019 was 7,370 cases for young men aged 13–19 years and 24,482 cases for young men aged 20–29 years.³²

Regarding the prevalence of sexually transmitted diseases (STDs) among adolescents and young adults in Brazil, the availability of precise information is challenging due to limited data.

However, existing studies highlight the vulnerability of this particular age group. For instance, a retrospective study conducted from 2012–2017 analyzed medical records of a cross-section of users from a public health services center in an interior county of southern Brazil.³³

Epidemiological, clinical, and laboratory data were analyzed, and a total of 3,448 patients were included, 49.39% of which fell within the 13–24 age range.³⁴ Among those aged 19–24,

86.56% were found to have at least one STD. The study reported the following prevalence rates of specific STDs: for condylomata, 35.40% among men and 47.67% among women; for herpes, 8.46% among men and 7.00% among women; for syphilis, 26.35% among men and 18.80% among women; and for urethral discharge syndrome, 20.06% among men and 6.27% among women.³⁵

Q: How has the prevalence of STDs changed over time?

A: The prevalence of chlamydial and gonococcal infections in Brazilian adolescents and young women remains relatively unknown due, in part, to the treatment approach followed by clinicians. Typically, when women present their vaginal discharge, healthcare providers in Brazil rely on national algorithms that are based on specific clinical signs and symptoms. As a result, comprehensive data on the prevalence of these infections among Brazilian young women and adolescents is limited.³⁶

Q: Where in Brazil is the problem most relevant?



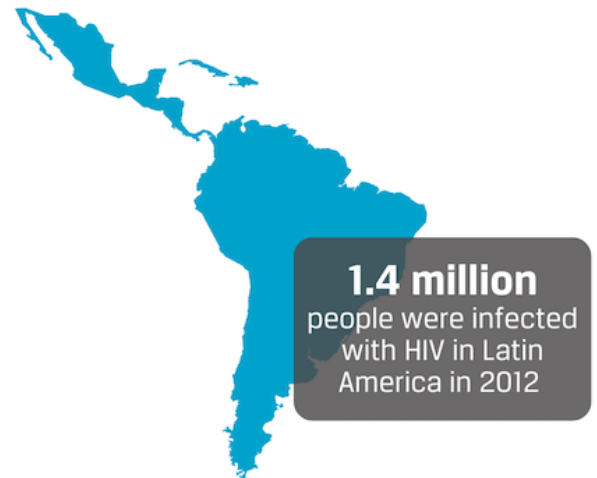
A: While there is variation in the rates of sexually transmitted diseases (STDs) across Brazil, a substantial amount of data is collected from the southern regions and the Amazon region. These regions are characterized by high population density. Moreover, a study conducted in 2019 focused on venereal diseases in the state of Pará, located in the Amazon region of Brazil.³⁷ It revealed that syphilis was present in 14.1% of the 184 cases among female sex workers (FWS).³⁸ The age of the individuals affected ranged from 15 to 56 years, with only 52.7% reporting regular condom use and 65.7% having less than eight years of formal education.³⁹ These findings suggest that

the areas where data is being collected are likely to be associated with lower-income and lower-education-level populations.

Q: How does the frequency of STDs compare with that of other Latin American Countries and the rest of the world?

A: The prevalence of STDs is a major global health burden, as indicated by high rates worldwide. The countries with the highest rates of STDs include South Africa, Botswana, Lesotho, Bermuda, and Brazil.⁴⁰ Although Africa has the highest STD rates globally, with 36,272.5 cases per 100,000 people (1 in every 2.75 people),⁴¹ Brazil has the fifth highest rate, with 31,745.5 cases per 100,000 people (1 in every 3 people).^{42,43} Evidence shows that STD rates in Brazil are high when compared to rates in other countries in Latin America.⁴⁴ An estimated 1.4 million people were infected with HIV in Latin America in 2012. Out of those 1.4 million people, more than half of the

cases were found in Brazil.⁴⁵



A comprehensive study conducted by the Institute of Health Metrics and Evaluation sheds light on Brazil's position when compared to other comparator countries. The study focuses on the ranking of age-standardized rates of disability-adjusted life years (DALYs) in 2010, specifically regarding STD, HIV, and AIDS rates.⁴⁶ The ranking is based on income per capita, with 1 indicating the lowest rank and 15 representing the highest.⁴⁷ In this context, Brazil obtained a ranking of 9 out of the 15 countries assessed.⁴⁸ Although some countries, such as South Africa, exhibited higher rates, when comparing Brazil to other Latin

American nations on the scale, such as Costa Rica with a 7th ranking, it becomes evident that Brazil still faces a pressing issue regarding disease prevalence.⁴⁹

Contributing Factors

Substance Abuse

Psychoactive drugs are substances that, when used, can alter one's perception, mood and emotions, consciousness, and brain functioning. These drugs can include substances like alcohol, nicotine, cocaine, and marijuana.⁵⁰ In Brazil, substance abuse increases the risk of contracting STDs among young adults and teenagers due to impaired judgment, disinhibition, and increased vulnerability to the immune system. Despite the absence of up-to-date statistics, previous records indicate that there were an estimated 15.5 million registered drug users in Brazil. The majority of these individuals were men aged between 15–65 years old.⁵¹ Furthermore, researchers investigated

the prevalence of drug use among adolescents and young adults between the ages of 12–24 in midwestern Brazil. The study found that within the past 12 months, the prevalence of illicit drug use was 27.6% among the participants.⁵² An example of an illicit drug is alcohol. A study of 74,589 adolescents in 124 high school municipalities shed light on the prevalence of psychotropic drug use, particularly alcohol.⁵³ The findings revealed that approximately one-fifth of the adolescents had consumed alcohol at least once in the last 30 days, while about two-thirds had consumed it on one or two occasions during that period.⁵⁴ Among those who consumed alcoholic beverages, 24.1% reported having their first experience with alcohol before reaching the age of 12.⁵⁵



Individuals involved in drug culture are more predisposed to engage in risky sexual practices that are associated with substance abuse. Substances like cocaine can impair an individual's perception of risk and judgment for safe sex, which can increase the likelihood of contracting STDs like HIV.⁵⁶ The effects of psychoactive drugs vary depending on the specific drug, but they can impair one's judgment, reduce inhibition, and increase sexual desire.⁵⁷ Drugs such as heroin can induce heightened sexual arousal, pleasure, and desire within the brain, which can result in more frequent and often unprotected sexual encounters.⁵⁸ Alcohol can lull a drinker into a "state of higher confidence and lower inhibition" which can lead to unprotected sex.⁵⁹ Research shows a relationship between alcohol consumption and the decision to initiate sexual relations, as well as increased engagement in risky sexual behavior, such as having multiple casual sex partners.⁶⁰ Furthermore, out of the 147 young adults studied in Southern Brazil, 56.5% of the

participants had participated in illicit drugs, and 83.7% reported excessive alcohol consumption.⁶¹ A study of Brazilian adolescents found that those who smoked or consumed alcohol were more likely to have had sex before the age of 14.⁶² Drug use has been linked to early sexual introduction, which increases the risk of contracting STIs.⁶³ Adolescents and young adults are vulnerable to developing STDs when they consume substances before having sex, as substance use leads to risky behaviors.⁶⁴

The utilization of substances like psychoactive drugs among adolescents and young adults augments the incidence of contracting STDs owing to their increased vulnerability to bacteria and diseases resulting from engaging in sexual activity in exchange for drugs. Although numerous drugs are consumed and misused by the general population, the younger demographic predominantly uses crack cocaine, commonly referred to as "crack".⁶⁵ Crack cocaine is more affordable, easily accessible, highly addictive, and in great demand, making it a highly marketable

drug compared to other drugs.⁶⁶ Substance use can disrupt the chemical balance in the body, leading to a craving sensation and ultimately resulting in dependency.⁶⁷ A study conducted on 75 female crack cocaine users in São Paulo ages 14–45 found that participants were engaging in transactional sex or “selling their bodies” to acquire drugs to satisfy their addiction.⁶⁸ Thus, desperation for psychoactive drug use encourages more sexual activity which in turn, increases exposure and risk for STDs. A study of 13 male, 53 transgender, and 449 female sex workers in Ribeirão Preto, São Paulo, indicated that the use of crack and injecting cocaine significantly heightened the risk of contracting HIV.⁶⁹ Sex workers who had engaged in illicit drug and alcohol consumption reported HIV, HBV, and syphilis at 8.8%, 23.1%, and 19.7%, respectively, which were lower than the average rates.⁷⁰

Risky Sexual Behaviors

Engaging in risky sexual behaviors such as unprotected sex and having multiple sexual partners allows for a higher

exchange of bodily fluids and infections, which increases the prevalence of STD rates among Brazilian young adults and adolescents. A study consisting of students aged 13–18 years examined condom use and found that only 69.2% of students reported using condoms during their last sexual encounter.⁷¹ These findings indicate that nearly 1 in 3 Brazilian adolescents do not use a condom during sex. In addition, a study conducted in southern Brazil found that out of 231 participants aged 10–21 years, about half had been on the streets and about 61.9% had not been using condoms.⁷² Researchers have indicated that the stigma associated with infidelity can have consequences for condom use. Individuals may be reluctant to use condoms due to the fear of being judged or exposed as engaging in infidelity.⁷³ This fear can lead to a neglect of condom use during sexual encounters.⁷⁴

A study conducted with a demographic similar to that of Brazil, characterized by low socioeconomic levels, examined the factors contributing to risky sexual behaviors among street children aged

10 to 18.⁷⁵ This study was conducted in Ethiopia and was included to demonstrate the similarities between the demographic and low socioeconomic levels in Ethiopia and Brazil, as these findings highlight the vulnerability and risky sexual behaviors experienced by street children in both contexts. The study identified two significant factors: transactional sex and condom use. The participants reported that street children engage in risky sexual behaviors on a daily basis for survival.⁷⁶ They explained that if they do not participate in survival sex, life on the streets becomes unbearable due to the lack of basic necessities such as food and clothing. They expressed the need to sell their bodies to meet these needs, stating, "We sell flesh to survive on the street".⁷⁷ Regarding condom use, the study found that inconsistent and nonuse of condoms were common practices among street children during sexual intercourse. The participants shared that condom usage depended on their partner's interest and that many partners, particularly strangers,

preferred to have sex without condoms.⁷⁸ Therefore, having unprotected intercourse allows for more diseases to spread and greater exposure to bacteria related to STDs.⁷⁹

Sexual Violence

Sexual violence is defined as any intentional act of sexual nature that is forced on another person.⁸⁰ Sexual violence can be conducted through physical force, humiliation, and taking advantage of one's ability to consent.⁸¹ This can include rape, stalking, sexual harassment, unwanted sexual comments, and sexual abuse.⁸² Although humiliation and verbal harassment are forms of sexual violence, this brief will primarily focus on the physical factors that contribute to the higher risk of STDs among adolescents and young adults in Brazil who have experienced sexual violence, such as rape.

Adolescents and young adults who experience sexual violence are at greater risk for STDs because coerced sexual relations can compromise developing reproductive tissues which

can lead to younger individuals contracting STDs. A cohort study conducted in Sao Paulo, Brazil examined the physical health of 135 adolescents aged between 10–19 years and 154 young women who had been exposed to sexual crimes such as rape. The study aimed to evaluate the physical consequences of sexual violence on these vulnerable populations.⁸³ The researchers found that genital damage sustained during sexual assault can interfere with the integrity of the genital tissues, which leads to a greater risk of contracting STDs. The study findings highlight an increased risk of sexually transmitted diseases (STDs) among women who were virgins at the time of a sexual crime, particularly due to potential hymenal membrane breakage. This risk is particularly relevant for adolescents, as they are more likely to be virgins and may face heightened vulnerability in such situations.⁸⁴

The use of condoms or other protective measures during sexual assault is unlikely, further increasing the risk of transmission. A study on condom use

assessed 841 sexual assault cases and found that only 11–15% of suspects were using condoms and that more than 4 out of 5 victims were raped without adequate protection.⁸⁵ To reiterate, 749 out of 841 participants were victims of forced, unprotected sex. Since rape is an act of violence and control, perpetrators may not use condoms as a means to exert power over their victims.⁸⁶ Rape is also often compulsive rather than premeditated, so it is unlikely that a perpetrator would have a condom readily available, leading to higher exposure to STDs.⁸⁷

Consequences

Pelvic Inflammatory Disease

Adolescents and young adults are at a greater risk of developing pelvic inflammatory disease (PID) as a result of STDs and their pathogens.^{88,89} PID is an infection of the female reproductive organs, including the uterus, fallopian tubes, and ovaries. It starts by forming in the cervix and the upper genital tract and is associated with various health issues. The three primary conditions

caused by PID are infertility, ectopic pregnancy, and chronic pelvic pain.⁹⁰ Moreover, the prevalence of PID in Brazil is likely underestimated as it is not mandatory to report cases, making it difficult to determine the exact number of affected women.⁹¹ Additionally, many cases of PID exhibit mild or few clinical symptoms that often go unnoticed, further affecting reported rates.⁹² Studies in Brazil indicate that 10–40% of women with cervicitis caused by *N. gonorrhoea* or *C. trachomatis* develop PID. However, the true prevalence of the disease in Brazil remains unknown.⁹³ To gain some insights, hospitalization data from the Brazilian National Health System Hospital Information System was examined. An average of 45,343 annual cases of women hospitalized with PID were recorded.⁹⁴ It is important to note that this data only represents severe cases requiring hospital care, which represents a small amount of the overall number of affected women. Most women with PID experience only mild or moderate symptoms or may be asymptomatic. Additionally, studies

have shown that, among women with a history of PID, a significant number experienced recurrent episodes. Specifically, 21.3% of women experience recurrence within seven years of the first episode, infertility is reported in 19% of cases, and 42.7% experience chronic pelvic pain.⁹⁵

Infertility

In Brazil, an estimated 10–50% of women who have untreated PID will experience fertility issues.⁹⁶ Since about 65% of the PID cases in Brazil are asymptomatic, the condition will remain untreated for long periods of time.⁹⁷ When PID is left untreated, it causes inflammation and scarring of the fallopian tubes, ovaries, and other organs in the reproductive tract. Over time, this damage causes infertility.⁹⁸ The inflammation and scarring caused by the infection can lead to blockages in the fallopian tubes, preventing the sperm from reaching the egg for fertilization.⁹⁹ For instance, STDs like *Mycoplasma genitalium* are capable of attaching to healthy cells in the reproductive tract.¹⁰⁰ This attachment

triggers cellular immune responses, leading to inflammation.¹⁰¹ The resulting inflammation can contribute to the development of tubal scarring, which can impair the normal function of the fallopian tubes and increase the risk of infertility.^{102,103} In some of the more severe cases, PID can also damage the ovaries, leading to ovulation disorders or premature ovarian failure.¹⁰⁴



Ectopic Pregnancy

The likelihood of young women experiencing adverse pregnancy outcomes such as ectopic pregnancy increases because of PID. Pregnancy begins with a fertilized egg. In a typical pregnancy, a fertilized egg attaches itself to the lining of the uterus,¹⁰⁵ but an ectopic pregnancy occurs when a

fertilized egg is implanted outside the main cavity of the uterus. The main function of the uterine cavity is to create an environment suitable for the implantation and development of a fertilized egg for the process of pregnancy.^{106,107} Furthermore, tubal pregnancy is the most frequent type of ectopic pregnancy, comprising more than 90% of all instances.¹⁰⁸ The main difference between tubal pregnancies and other ectopic pregnancies is in the actual location of the implantation.¹⁰⁹ An ectopic pregnancy will commonly occur in the fallopian tube of the woman's body and in doing so, leaves the fertilized eggs unable to survive and thus unfit for the development of pregnancy.¹¹⁰ Bacteria and pathogens from STDs like chlamydia allow PID to develop which infects the cervix up into the upper reproductive tract, causing inflammation and scarring of the fallopian tubes. For instance, inflammation can also affect the proper function of the fallopian tubes, which are responsible for moving the egg toward the uterus.¹¹¹ Chlamydia infections often alter the transit of the

sperm and leave postinfectious scarring in fallopian tubes which interferes with ovum capture.¹¹² STDs can also be transmitted from mother to baby during pregnancy or delivery, which can result in serious health consequences for the baby.¹¹³ Syphilis can lead to complications in pregnancy like the occurrence of stillbirths.¹¹⁴ During pregnancy, syphilis can be transmitted from the mother to the baby through the placenta, leading to congenital syphilis in the newborn because the bacteria can cross the placenta and infect the baby as it develops. The rate of stillbirths in Brazil was found to be 14.82 per 1000 births, which is marginally greater than the prevalence reported for Latin American countries as a whole (13.2 per 1000 births).¹¹⁵ The occurrence of stillbirths is more prominent among younger mothers, specifically mothers younger than 20.¹¹⁶

Chronic Pelvic Pain (CPP)

CPP is a multifactorial condition that affects an estimated 26% of women

worldwide.¹¹⁷ Chronic pelvic pain is linked most commonly with chlamydia.¹¹⁸ Although comprehensive data on the overall rate of chlamydia in Brazil is limited, small-scale studies conducted in specific regions have provided insights. One such study involved 303 individuals who were tested for both HPV and chlamydia.¹¹⁹ The findings revealed a prevalence of HPV infection at 15.5% among the participants. Notably, among women under the age of 25, 32.2% were recorded as having this infection.¹²⁰ These findings highlight the presence of HPV and chlamydia infections in certain populations within Brazil, particularly among young women.¹²¹ When left untreated, chlamydia can progress by causing inflammation causing chronic pelvic pain.¹²² An example of an STD that can cause PID and chronic pelvic pain is also gonorrhea.¹²³ If left untreated, gonorrhea can spread to the reproductive organs and cause inflammation and scarring.¹²⁴ However, unlike chlamydia, gonorrhea can also cause abscesses to form in the

reproductive organs, which can be very painful for the individual.¹²⁵

Cervical Cancer

Cervical cancer is one of the leading causes of cancer-related deaths in women globally.¹²⁶ While multiple factors can contribute to the development of cervical cancer, including genetics and lifestyle factors, STDs like HPV are significant risk factors because of their infectious pathogens and the abnormal development of cervical cells.¹²⁷ For instance, women with HIV have a 2–12 times greater risk of getting cervical cancer compared to women without HIV.¹²⁸ Cervical cancer stands as the predominant gynecological cancer in Brazil, ranking second among women's cancers, just after breast cancer. It holds the fourth position in terms of cancer-related mortality in the country, with approximately 15,590 new cases reported in 2014 and 5,430 deaths recorded in 2013.¹²⁹ The impact of Human Papillomavirus (HPV) infections is estimated to affect more than 5.7% of women in the

country, accounting for approximately 68% of cervical cancer cases. Cervical cancer carries significant consequences as it claims the lives of over 8,079 women annually in Brazil.¹³⁰



Practices

Screen Testing

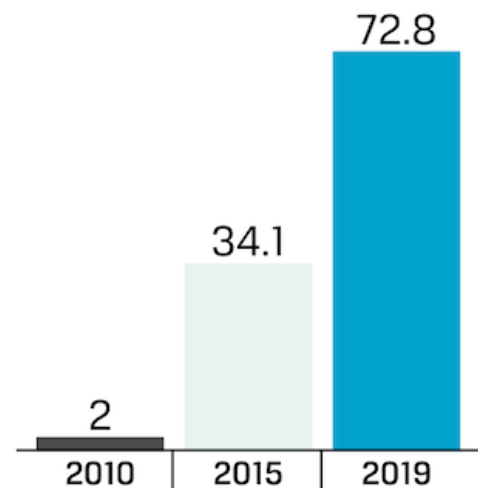
The implementation of STD screening programs in Brazil has led to the successful detection of specific STDs, enabling prompt treatment and intervention. For instance, in a remote area of Brazil known as Alto Solimões, a screening facility was introduced, resulting in the testing of 6,473 indigenous individuals within 3

months. This accounted for 25.9% of the total population of men and women of reproductive age.¹³¹ During this screening, a total of 165 syphilis cases were identified.¹³² It's important to note that this number does not include asymptomatic cases; however, it still demonstrates the effectiveness of detection. Additionally, assessments of treatment adherence and referrals showed that 86.7% of individuals who tested positive for syphilis initiated treatment after the rapid test, and all were referred for confirmatory testing.¹³³ These findings highlight the positive impact of STD screening programs in Brazil, enabling the early identification of infections, prompt treatment initiation, and appropriate referrals for further testing.

To test for chlamydia and gonorrhea, healthcare professionals will collect a sample of urine or use a swab to obtain a sample from the inside of the penis in men or the cervix in women.¹³⁴ These samples are then sent to a laboratory for analysis which can then be used to help men and women receive treatment and prevent future cases of STDs.¹³⁵ In

Brazil, there were 152,915 new cases of acquired syphilis reported in the general population in 2019, with a steady increase in cases over the past decade according to historical data.¹³⁶ The detection rates of acquired syphilis cases notably rose from 2 per 100,000 people in 2010 to 34.1 per 100,000 people in 2015, and 72.8 per 100,000 people in 2019.¹³⁷ This rise can be partly attributed to the enhancement of notification systems and the wider availability of rapid tests in primary care services (PCS).¹³⁸

Detected Rates of Syphilis per 100,000 people



STD screening plays a crucial role in supporting the health of young adults

and adolescents in Brazil by providing benefits such as rapid treatment, linkage to care, and prevention and education. Once results are provided to individuals, screening centers then start the treatment process with those that received their results allowing for better treatment in general.¹³⁹ In Brazil, the STD, AIDS, and Viral Hepatitis Department, which operates under the Ministry of Health's Surveillance Secretariat, serves as a notable organization that utilizes STD screening, particularly for HIV, to facilitate early detection and prevention.¹⁴⁰ The department focuses on educating two main target groups: young adults and individuals aged 45 and above.¹⁴¹ STD screening sites not only offer diagnostic tests but also facilitate linkage to care services. These sites actively promote prevention actions for STDs, viral hepatitis, and HIV/AIDS.¹⁴² They may conduct private or group counseling sessions to provide guidance and support to individuals that come.¹⁴³ Additionally, education about disease prevention is a key component of their services. To further

aid in prevention efforts, these sites often provide essential prevention supplies such as condoms.¹⁴⁴

Impact

The evaluation of the overall impact of STD screening on reducing STDs in Brazil is challenging due to the lack of comprehensive data. However, we can gain insights by comparing Brazil to countries with similar economic and sociological contexts, such as Mexico. In Mexico, STD screenings have been implemented successfully, as evidenced by the fact that STDs are recognized as the fifth-leading cause for seeking medical guidance.¹⁴⁵ Among individuals aged 15 to 44 years, STDs rank among the top 10 causes of general morbidity.¹⁴⁶ These findings suggest the importance of STD screenings in identifying and addressing the burden of STDs, emphasizing the need for similar approaches in Brazil to effectively combat the spread of STDs and mitigate their impact on public health.

Gaps

Despite efforts to improve STD

screening, significant gaps remain, with the most significant being that STD screening is not routine and will often not detect asymptomatic cases. The lack of knowledge of diseases and their risk factors, along with the limitations of health plans and preventive programs, often leads people to seek health services only when they become symptomatic. STDs are frequently asymptomatic, and even when symptoms do occur, they may not be recognized, allowing the infected individuals to unknowingly spread the disease through their sex partners.¹⁴⁷ For instance, most men with gonococcal urethritis exhibit symptoms, whereas a significant proportion of women with urogenital gonorrhea are asymptomatic or experience nonspecific symptoms.¹⁴⁸ Nonetheless, signs of infection can often be identified in the majority of women with urogenital gonorrhea. Failure to detect and appropriately treat infections can lead to significant complications and long-term health issues.¹⁴⁹ Ascending infections, such as epididymitis (bacterial infection in the urinary tract), can give rise to various serious

outcomes, including pelvic inflammatory disease (PID), chronic pelvic pain, ectopic pregnancy, and infertility.¹⁵⁰ It is crucial to identify and address infections promptly to prevent these complications and preserve reproductive health.

Campaigns

Campaigns play a prominent role in promoting awareness and knowledge while encouraging desirable attitudes and behaviors. An example of such a campaign is the "No Syphilis Project," which aims to combat syphilis by raising awareness and targeting specific populations which is done by recording syphilis tests taken and medication rates.¹⁵¹

Impact

In 2019, the number of syphilis blood tests witnessed an increase of 375.18% compared to 2015, even after accounting for population growth.¹⁵² This surge can be attributed to the influence of the "No Syphilis" campaign, which effectively encouraged individuals to seek testing and treatment for syphilis.¹⁵³

These findings highlight the effectiveness of campaigns in driving behavioral change and improving public health outcomes. By promoting testing, raising awareness, and facilitating access to treatment, such initiatives contribute to the overall control and prevention of specific STDs like syphilis.

Gaps

A central gap seen in campaigns for STD prevention in Brazil is the neglect of marginalized groups. There are few

studies that address unique challenges faced by groups like sex workers, same-sex cases, and those in more remote/ indigenous locations. Thus, the campaigns and tests are not tailored for these groups. By addressing these gaps, campaigns and tests alike can become more effective in reaching more populations and regions in Brazil, regardless of their social circumstances and background.

Endnotes

1. "Sexually Transmitted Diseases (STDs)," Mayo Foundation for Medical Education and Research, Mayo Clinic, July 17, 2020, <https://www.mayoclinic.org/diseases-conditions/sexually-transmitted-diseases-stds/symptoms-causes/syc-20351240>.
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