



The burden, elimination efforts and implication for health policy of Gonorrhoea in Africa: an editorial

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Dear Editor,

Gonorrhoea, caused by the bacterium *Neisseria gonorrhoeae*, stands as a pervasive global health concern, particularly recognized as a prevalent sexually transmitted infection (STI). The WHO estimates an alarming 87 million new cases annually among adults aged 15–49 worldwide^[1]. Amid this global impact, Africa, in particular, faces distinctive challenges in addressing the burden of gonorrhoea, underscored by limited healthcare access, social stigma, and resource constraints. The region also grapples with high rates of other STIs, further complicating the management of gonorrhoea^[1,2]. The urgency to combat this STI in Africa is evident, considering its significant negative impact on individuals, public health, and the economy. Furthermore, the emergence of drug-resistant strains exacerbates the situation, posing not only a threat to effective treatment but also a global health security risk. In this context, addressing gonorrhoea in Africa demands immediate attention and tailored strategies to overcome the unique challenges faced by the region, safeguarding the well-being of its population and contributing to global health resilience^[3,4].

Sexually transmitted diseases (STDs) are the major public health problems which often lead to serious complications and sequelae, including infertility. Sub-Saharan Africa ranks first in yearly STD incidence compared to other world regions. The WHO has estimated that every year in Africa, there are 16 million cases of gonorrhoea^[3,5]. As of 2020, ~7.5 million people had gonorrhoea. The prevalence was higher in females, with about

4.3 million people infected, whereas the number of infections among males was 3.2 million^[6,7]. The precise global burden of *Neisseria gonorrhoeae* is difficult to establish because of a lack of diagnostic capability and/or reporting systems in many parts of Africa.

A major concern in combating gonorrhoea globally is the emergence of drug-resistant strains. The misuse and overuse of antibiotics, coupled with inadequate surveillance systems, have led to the rapid development and spread of antimicrobial resistance (AMR) in gonorrhoea^[2]. This poses a serious threat to effective treatment and necessitates the development of alternative prevention, diagnosis, and treatment strategies. The consequences to AMR are far-reaching. As drug-resistant strains proliferate, the efficacy of conventional antibiotic treatment diminishes, rendering once-effective medications, ineffective. The potential for untreatable cases amplifies the risk of infection spreading unchecked, contributing to increased morbidity and mortality. AMR increases this burden by prolonging the infection in more people and increasing the number of people with long-term complications of gonococcal infections^[8].

Gonococcal infections have critical implications for reproductive, maternal and newborn health, including a five-fold increase of human immunodeficiency virus (HIV) transmission, infertility, with cultural and social implications, inflammation leading to acute and chronic lower abdominal pain in women, ectopic pregnancy and maternal death, first trimester abortion, severe neonatal eye infections that may lead to blindness^[9]. The intricate relationship between the two infections—Gonorrhoea and HIV accentuates the urgent need for comprehensive management and prevention strategies to address this dual threat. Infertility stands as another significant health consequence of gonorrhoeal infections, particularly impacting reproductive and maternal health. The prevalence of gonorrhoea is 4–7% higher in women with tubal factor infertility. In women, untreated gonorrhoea can lead to pelvic inflammatory disease (PID). PID, in turn, can cause scarring and damage to the fallopian tubes, leading to infertility. The link between gonorrhoea and infertility underscores the importance of early diagnosis and treatment to mitigate the long-term reproductive consequences^[10].

The financial costs of these complications are very high for both individuals and healthcare systems. This STI has a profound impact on the health and lives of the African population. In order to adequately respond to this high burden of disease and in line with the 2030 Agenda for Sustainable Development, WHO has developed a global health sector strategy on STIs, 2016–2021^[11].

Gonorrhoea, mostly transmitted by sexual contact, can be prevented in various ways, including abstinence from sexual

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intercourse either via the vagina, anus or orally—the primary mode of prevention. It is also advisable to maintain a monogamous relationship with a faithful partner. Preventive measures further include avoiding sexual activity if there is a possibility of infection, using a barrier method of protection such as condoms, during vaginal or anal intercourse, using barrier methods of protection such as condoms during vaginal or anal intercourse, and using condoms or dental dams during oral intercourse. Consistent and correct use of latex condoms can significantly reduce the risk of gonorrhoea transmission.

The surest way to avoid transmission of gonorrhoea is to abstain from vaginal, anal, or oral sex or to be in a long-term mutually monogamous relationship with a partner who has been tested and is known to be uninfected. Prompt diagnosis and treatment of the infection are essential to prevent its spread. Identifying the sexual contacts of infected individuals and providing counselling or treatments for these contacts are crucial steps. Organizing workshops, seminars and outreach programs about safe sex and protection is a means of eliminating the spread of gonorrhoea, as many people lack sufficient sex education, let alone the awareness of the detrimental effects of the infection on health. Successful examples of such initiatives include private-public partnership, obtaining financial funding for AMR testing, and public outreach programs in the form of active field surveillance^[12,13].

Additionally, prior to every sexual act, a new condom should be used, taking care to handle it carefully and avoid damage with fingernails or sharp objects. Water-based lubricants should be used to prevent weakening the condom. While a cervical diaphragm can be used to protect against cervical gonorrhoea, it should not be relied upon as the sole preventive measure. It is imperative to avoid sexual contact with partners infected with gonorrhoea until they have completed their treatment and are cured before resuming sexual intercourse.

In the realm of prevention, ongoing research on gonorrhoea vaccines signifies a potential breakthrough in mitigating the health consequences of this infection. While vaccines for gonorrhoea are not yet available, the scientific community is actively exploring avenues to develop effective preventive measures. The advent of a gonorrhoea vaccine could revolutionize the landscape of STI prevention, offering a powerful tool to curb the transmission and subsequent health complications associated with this prevalent infection^[14]. In conclusion, the global impact of gonorrhoea, exacerbated by drug-resistant strains, necessitates urgent attention. Africa faces unique challenges, demanding tailored strategies to combat the significant negative impact on health and economies. The intricate relationship between gonorrhoea, HIV, and infertility underscores the need for comprehensive management. Prevention, including ongoing research on vaccines, holds promise in mitigating this pervasive health concern. Collaborative efforts are imperative for global health resilience.

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