

## Sexually transmitted infections keep rising up

Sexually transmitted infections (STIs) continue to rise almost everywhere. The surge recognized following the 1<sup>st</sup> year of the COVID-19 pandemic is far from stopping yet. Increases in casual sex encounters, online appointments throughout websites, concomitant drug use (chemsex), and a perceived false protection under HIV pre-exposure prophylaxis (PrEP) have all built a perfect storm for the unprecedented ongoing STI outbreak (*Pedrosa et al. AIDS Rev 2024; 26: 121-9; Soriano et al. AIDS Rev 2023; 26: 127-35*).

More than a decade ago, fear about HIV acquisition prompted to reduce multiple sex partnerships and use condoms. However, following the success of PrEP with oral tenofovir to prevent HIV contagion, a “compensatory effect” has occurred with rising numbers for other sexually transmitted agents, such as *Neisseria gonorrhoeae*, *Treponema pallidum*, *Trichomonas vaginalis*, and *Chlamydia trachomatis* (*Nguyen et al. AIDS 2018; 32: 523-30*).

The role of drugs and alcohol potentiating sexual risk behaviors also plays an important role in the current STI surge. For instance, the 2022 outbreak of monkeypox among men having sex with men was largely associated with multiple sex encounters in events where chemsex was widely used (*Santos et al. Public Health Nurs 2024; 41: 589-601; Kowalski et al. J Med Virol 2023; 95: e29172*).

The promotion of new prevention strategies, such as using doxycycline as pre or post-exposure prophylaxis (doxy-PEP) in persons engaged in high-risk sex practices, is not enough to content the current STI surge, given its limited efficacy (*Boschiero et al. Sex Transm Dis 2024; Editorial. Lancet Infect Dis 2024; 24: 1059*). Furthermore, major concerns exist with doxy-PEP about the risk of selecting and spreading tetracycline resistant gonococcus (*Reichert et al. Lancet Microbe 2024*) and other bacteria (*Chu et al. Nat Med 2024*).

The benefit of PrEP reducing HIV acquisition needs to be counterbalanced with the compensatory effect and unprecedent STI rise, especially among men having sex with men (*Torres-Silva et al. Lancet HIV 2024; 11: e670-9*). This is the group that largely drives the current and alarming STI epidemic. There is an urgent need for tailored interventions to mitigate STI burden effectively. Provision of PrEP pills to high-risk individuals should be accompanied by proper information about the risks of multiple sex partnerships and the convenience of condom use. Ultimately the benefits will be for these persons and the entire society.

Another way to confront the STI surge may derive from expanding testing. Since most STIs are often clinically silent, early diagnosis and treatment of persons at risk would reduce the chances of transmission from asymptomatic carriers. In the United States, pioneer studies have demonstrated the benefit of performing universal screening for active syphilis (rapid plasma reagins testing) in all adults attended at emergency departments (*Stanford et al. OFID 2024*). Rapid tests, including home tests, have been developed for some STI, such as syphilis.

Early diagnosis of STI is crucial, especially among pregnant women. In the United States, 207,255 cases of syphilis were reported in 2022, an increase over 17% in just 1 year, according to the Centers for Disease Control. Of those cases, 3761 were congenital syphilis, linked to 282 stillbirths and infant deaths (*McDonald et al. MMWR 2023; 72: 1269-74*). Testing and treatment gaps were present in the majority of cases.

## STI rising in Spain

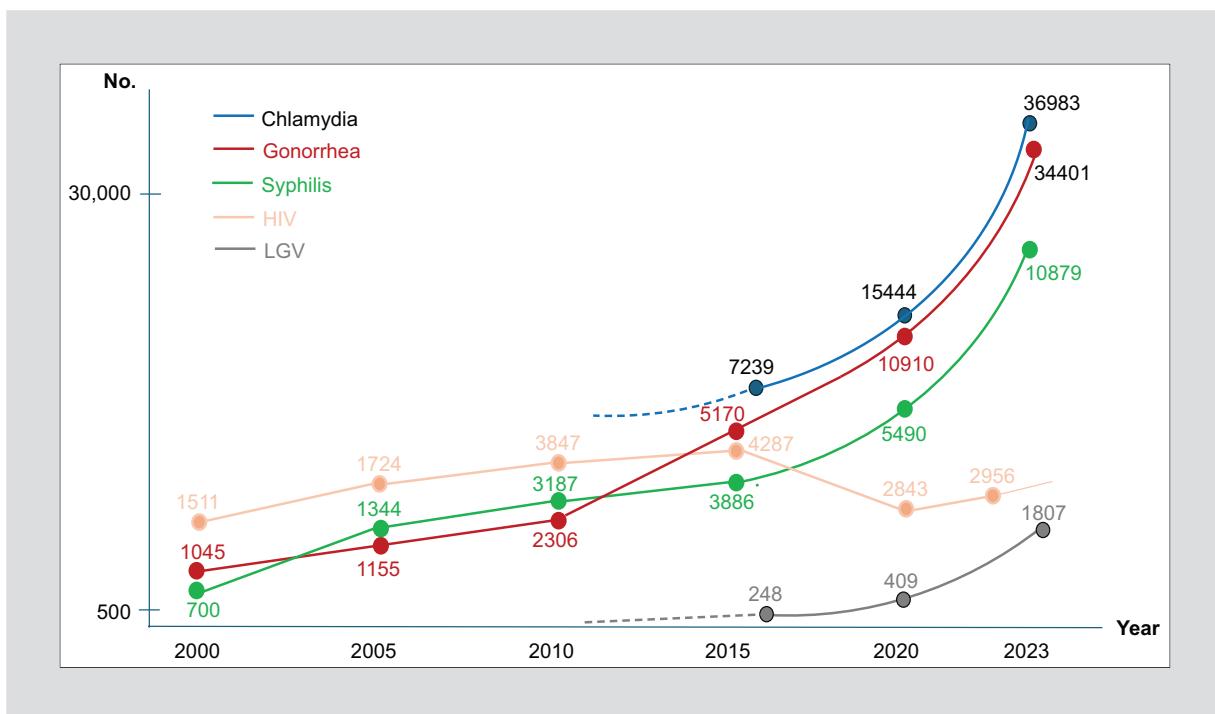
The Spanish Ministry of Health has recently released STI figures for year 2023 ([https://cne.isciii.es/documents/d/cne/vigilancia\\_its\\_1995\\_2023-2](https://cne.isciii.es/documents/d/cne/vigilancia_its_1995_2023-2)). A significant increase has been recorded for chlamydia, gonorrhea, syphilis, and lymphogranuloma venereum (LGV) (Fig. 1). Along with trends for these sexually transmitted agents, the report about new HIV infections shows a rebound since the COVID-19 pandemic, halting the previous slow down largely associated with the expanding of PrEP.

In comparison with 2021, which was the 1<sup>st</sup> year after COVID-19 home confinement, increases in Spain in 2023 for gonorrhea have been of 43%, for syphilis of 24%, and for chlamydia of 21%. Up to 80% of all STI during 2023 were reported in male. However, they were significant differences being men 98% of cases of LGV, 88% of syphilis, and 80% of gonorrhea, but only 53% of cases of chlamydia.

By age, chlamydia was the STI more frequently diagnosed in persons younger than 25 years old in Spain. Gonorrhea also had a peak in youth between 20 and 24 years old. Syphilis was diagnosed at older ages, with a median of 34 years old in men and 37 years old in women. A total of 7 cases of congenital syphilis were diagnosed in Spain during 2023.

## How to face the current STI pandemic? – Education and testing

Besides acute clinical symptoms, lifelong consequences of STI include pelvic inflammatory disease,



**Figure 1.** Incidence of major sexually transmitted infections in Spain.

infertility, and cancer. Health authorities should promote cultural and social behaviors that protect citizens from harmful effects. Proper information should be provided on time, repeated periodically, and tailored to distinct populations. Messages for adolescents and youth in schools should be different from information given to adults already engaged in sexual risky behaviors and attending clinics. Education on sexuality and affectivity should be prioritized in adolescents at schools whereas information on prevention and early recognition of STI should be primarily delivered at health sites.

STIs produce important sexual, reproductive, and maternal-child health consequences. Interventions

aimed to promote healthier sexual behaviors while respecting individual freedom are needed to control STI, alike it has been undertaken with tobacco, alcohol, diet, and lifestyle. Therefore, it is urgent to address new approaches in sexual health education and management that would translate in clear benefits for individuals and society.

Vicente Soriano and Ana Treviño  
UNIR Health Sciences School and Medical Centre,  
Universidad Internacional de La Rioja, Madrid, Spain

Received in original form: 23-10-2024  
Accepted in original form: 30-10-2024  
DOI: 10.24875/AIDSREV.M24000077