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ISBN 978-92-4-012036-5 (electronic version)
ISBN 978-92-4-012037-2 (print version)

Suggested citation. WHO consolidated operational handbook on sexually transmitted infections. Geneva: World Health Organization; 2026. Licence: CC BY-NC-SA 3.0 IGO.

Cataloguing-in-Publication (CIP) data. CIP data are available at https://iris.who.int/.

Contents

Acknowledgements

The World Health Organization (WHO) gratefully acknowledges the contributions of all individuals that supported the development of the *WHO consolidated operational handbook on sexually transmitted infections*.

The handbook was produced and drafted by Ismail Maatouk and Daniel McCartney, working under the guidance of Matteo Zignol and the overall direction of Tereza Kasaeva, Director of the WHO Department for HIV, Tuberculosis, Hepatitis and Sexually Transmitted Infections.

This consolidated operational handbook represents the final output of the *WHO comprehensive guidelines for the prevention, diagnosis, treatment and care of sexually transmitted infections*, developed under planning clearance approved by the WHO Guideline Review Committee in 2021. The guideline development process was coordinated by Teodora Wi (2021–2024) and Ismail Maatouk (2025–2026).

WHO extends its sincere thanks to Teodora Wi and Francis Ndowa, retired WHO staff members, for their longstanding leadership in the field of sexually transmitted infections and for their valuable feedback on the concept, structure and content of the handbook. WHO also gratefully acknowledges Meg Doherty, former Director of the WHO Department of Global HIV, Hepatitis and Sexually Transmitted Infections Programmes, for her leadership and support during the guideline development process.

WHO acknowledges with gratitude the experts who provided technical input and comments during the review process: Henry J.C. de Vries (Amsterdam Sexual Health Clinic, Netherlands (Kingdom of the)), Pâmela Gaspar (Ministry of Health, Brazil), David Lewis (Western Sydney Sexual Health Centre and University of Sydney, Australia), Saiqa Mullick (Wits Reproductive Health and HIV Institute, University of the Witwatersrand, South Africa), Lon Sayheng (National Center for HIV/AIDS, Dermatology and STD, Cambodia), Barbara Van Der Pol (University of Alabama at Birmingham, United States of America) and Janet Wilson (International Union against Sexually Transmitted Infections, the United Kingdom of Great Britain and Northern Ireland).

WHO staff members and consultants from headquarters, regional and country offices also contributed to the review of this handbook, including: Moubadda Assi (WHO Country Office in Lebanon), Serongkea Deng (WHO Country Office in Cambodia), Van Thi Thuy Nguyen (WHO Country Office in Viet Nam), Remco Peters (WHO Department for HIV, Tuberculosis, Hepatitis and Sexually Transmitted Infections) and Abhishek Royal (WHO Country Office in India).

Abbreviations

EGASP	Enhanced Gonococcal Antimicrobial Surveillance Programme
GASP	Gonococcal Antimicrobial Surveillance Programme
GRADE	Grading of Recommendations Assessment, Development and Evaluation
HPV	human papillomavirus
HSV	herpes simplex virus
ICD-11	International Classification of Diseases, 11th revision
NAAT	nucleic acid amplification test
PHC	primary health care
PrEP	pre-exposure prophylaxis
STI	sexually transmitted infection

Executive summary

This consolidated operational handbook provides practical, adaptable guidance to strengthen the prevention, diagnosis, treatment and care of sexually transmitted infections (STIs) across health systems. It translates existing WHO recommendations into operational approaches to support countries in implementing, integrating and sustaining STI services within primary health care and universal health coverage frameworks.

The handbook responds to growing recognition that the global burden of STIs remains high and that many countries face persistent challenges in prevention and control. These include weak service integration, shortages of trained health-care workers, limited access to diagnostics and essential medicines, antimicrobial resistance, stigma and discrimination and inequities driven by social and structural determinants of health. This handbook aims to help countries address these gaps through practical, people-centred solutions aligned with WHO normative guidance and global strategies.

The handbook does not introduce new recommendations but refers to existing WHO STI guidelines published between 2016 and 2025 and to other relevant guidance. It consolidates operational considerations from these normative sources and aligns them with WHO's broader frameworks for primary health care, antimicrobial resistance and the global health sector strategies on HIV, viral hepatitis and sexually transmitted infections, 2022–2030.

The content is structured around the STI prevention and care cascade, which provides a framework for understanding how people interact with the health system across prevention, diagnosis, treatment and follow-up. Each component serves as a practical entry point for strengthening service delivery and includes guidance on core interventions, implementation considerations and relevant WHO resources. The eight components are:

- primary prevention of STIs
- managing symptomatic STIs
- identifying asymptomatic STIs
- diagnostics for STIs
- treatment for STIs
- managing partners
- monitoring, evaluation and surveillance
- enabling service delivery for STIs.

Cross-cutting implementation considerations are integrated throughout, emphasizing integration across health platforms, provider capacity and supervision, rights-based and equitable approaches, using data for decision-making and community engagement. These principles reflect WHO's commitment to delivering people-centred, high-quality and sustainable STI services that uphold dignity, confidentiality and informed choice.

The final section situates STI prevention and care within the broader framework of primary health care and universal health coverage, highlighting how integrated, multisectoral approaches can advance health equity and health system resilience. It underscores the importance of community leadership, digital innovations, task-sharing and sustainable financing as key enablers of effective services delivery.

This consolidated operational handbook is intended for programme managers, policy-makers, service providers, civil society and community organizations and partners supporting national STI responses. It aims to guide practical implementation, support strategic planning and strengthen accountability towards achieving the 2030 targets for ending STIs as a public health threat and ensuring equitable access to sexual health services for all.

1. Introduction

1.1 Background

Sexually transmitted infections (STIs) remain a major global public health concern, affecting health, the quality of life and well-being. More than 1 million new, curable STIs are acquired every day worldwide *(1)*. In 2020, there were an estimated 374 million new cases of four curable infections among people aged 15–49 years globally: gonorrhoea (82.4 million) caused by *Neisseria gonorrhoeae*; chlamydia (128.5 million) caused by *Chlamydia trachomatis*; trichomoniasis (156.3 million) caused by *Trichomonas vaginalis*; and syphilis (7.1 million) caused by *Treponema pallidum (1)*. In 2022, the estimated number of new syphilis cases increased to 8.0 million globally, with about 700 000 cases of congenital syphilis *(2)*.[1]

Viral infections also contribute substantially to the global STI burden. In 2020, an estimated 520 million people aged 15–49 years were living with herpes simplex virus type 2 (HSV-2), the main cause of genital herpes *(3)*. An estimated 300 million women have human papillomavirus (HPV) infection, which affects both men and women and is the leading cause of cervical cancer and an important cause of anogenital and oropharyngeal cancers *(4)*.

If left undiagnosed or untreated, STIs can lead to severe and often irreversible consequences. These include reproductive complications (infertility and ectopic pregnancy); adverse pregnancy and neonatal outcomes (stillbirth, prematurity and congenital anomalies, especially caused by syphilis); cancer caused by HPV infection; and systemic complications such as neurological or cardiovascular disease. Many STIs, especially those causing genital ulcers, also increase the risk of acquiring and transmitting HIV (see Fig. 1). STIs also have social and psychological impacts, including stigma, discrimination and effects on mental health and interpersonal relationships. These impacts may be more pronounced among people experiencing marginalization. Key populations – including men who have sex with men, transgender people, sex workers, people who inject drugs and people in prisons and other closed settings – are disproportionately affected *(5)*.

Vulnerability to STIs is shaped by a range of social and structural determinants that influence exposure, health-seeking behaviour and access to services. These include socio-economic disadvantage, gender inequalities, limited access to education and health information, and legal or policy environments that restrict access to care for some populations. Addressing these determinants requires coordinated, multisectoral action across the health, education, social protection and justice sectors, in line with the WHO framework on the social determinants of health *(6)*.

Fig. 1. Importance of addressing STIs.

Supporting **sexual health and well-being** for all, including young people

Reducing the **burden of infertility** caused by gonorrhoea and chlamydia

Preventing **adverse pregnancy and neonatal** outcomes caused by syphilis

Eliminating **cervical cancer** caused by HPV infection

Reducing **HIV transmission** associated with herpes and other STIs

Tackling **antimicrobial resistance** in *N. gonorrhoeae*

Source: adapted from *WHO global research priorities for sexually transmitted infections* (7).

[1] The most up-to-date STI estimates are available from the WHO Global Sexually Transmitted Infections Programme.

1.2 Key challenges in STI control

Despite decades of prevention and control efforts, overall STI incidence is not declining globally. While several countries have achieved notable progress through well-resourced and integrated programmes, many others continue to face persistent barriers, including:

- resource constraints, limited political commitment, inadequate laboratory capacity and shortages of trained personnel and essential medicines, which hinder scale-up, especially in resource-limited settings *(2)*;
- weak surveillance systems, which limit the availability of timely and reliable data for programme planning and evaluation *(2, 8)*;
- antimicrobial resistance, especially for *N. gonorrhoeae* and *Mycoplasma genitalium*, which reduces the effectiveness of available treatments *(9-11)*;
- asymptomatic infections, which often remain undetected and sustain transmission *(12)*; and
- stigma and discrimination, which deter health-seeking and disproportionately affect key populations and adolescents *(5)*.

In addition, the global funding landscape is evolving, with many countries experiencing reductions or reallocation of external financing for HIV, viral hepatitis and STI programmes *(13)*. These shifts pose risks to the long-term sustainability of essential STI services, particularly in settings that rely heavily on donor support. Strengthening strategic planning and increasing domestic investment are therefore critical to safeguard progress toward national and global health targets *(13)*.

1.3 Global frameworks

The global response to STIs is anchored in several WHO-endorsed global strategies, frameworks and normative guidance publications.

Key strategic frameworks include:

- the *Global health sector strategies on HIV, viral hepatitis and sexually transmitted infections for the period 2022–2030*, which call for reducing gonorrhoea and syphilis incidence by 90% and eliminating congenital syphilis as a public health problem by 2030 *(14)*;
- the *Operational framework for primary health care: transforming vision into action*, which emphasizes integrated, people-centred services *(15)*;
- the *UHC compendium of health interventions for universal health coverage*, which identifies STI services as part of essential health service packages *(16)*;
- the *WHO framework for implementing triple elimination of mother-to-child transmission of HIV, syphilis and hepatitis B*, which supports integrated interventions to prevent vertical transmission *(17)*;
- the *Global action plan on antimicrobial resistance*, which highlights gonococcal antimicrobial resistance as a critical global health threat *(18)*; and
- the *WHO operational guidance for sustaining priority services for HIV, viral hepatitis and STIs in a changing funding landscape*, which supports continuity of essential STI services *(13)*.

In addition to these strategic frameworks, this consolidated operational handbook draws together and operationalizes all relevant WHO normative and technical guidance on STI prevention, diagnosis, treatment, surveillance and programme management (see Annex 1). It ensures coherence across existing WHO STI guidelines and supports countries in implementing these recommendations within the broader global health agenda.

Together, these documents provide a comprehensive framework for STI prevention and control, aligned with Sustainable Development Goal 3 on ensuring health and well-being for all *(19)*.

1.4 Purpose and target audience

This consolidated operational handbook provides a framework to support the implementation of existing WHO recommendations across prevention, diagnosis, treatment and care for STIs. It does not introduce new recommendations but refers to existing WHO STI guidelines, translating their content into practical operational approaches that can be adapted to country contexts.

The handbook is designed to guide policy and programme decision-making, helping countries to update, align and implement clinical and programmatic guidance in accordance with global recommendations and local epidemiology. It aims to strengthen STI service delivery and integration within primary health care (PHC), HIV services, community services and sexual and reproductive health services – including family planning, adolescent health and maternal and child health – by providing a structured operational approach to address key gaps across the STI prevention and care cascade.

The handbook is intended primarily for national and subnational programme managers overseeing STI policy, planning and monitoring and for health workers at all levels who deliver STI services – including clinicians, nurses, midwives, pharmacists, community health workers and lay providers. It is also relevant for community-led and civil society organizations (especially those working with or led by key populations), public health practitioners (particularly those involved in surveillance and programme monitoring and evaluation), and donors, development partners and policy-makers responsible for health system financing and strategic priorities.

1.5 Guiding principles

The development and application of this guidance are informed by the following principles:

- **public health approach:** scale up simple, effective interventions to reach everyone who needs them;
- **human rights and equity:** protect rights, reduce stigma, address the social and structural determinants of health, promote gender equity and ensure the voluntary use of services;
- **people-centred and community-led services:** adapt services to people's needs and involve communities in designing and delivering services and accountability;
- **health system strengthening:** align with PHC, universal health coverage and integrated service delivery models;
- **antimicrobial stewardship:** promote rational antibiotic use in accordance with the WHO Model List of Essential Medicines and access, watch and reserve (AWaRe) categorization *(20)*; and
- **contribution to global goals:** advance progress toward the 2030 targets of the Global Health Sector Strategies and Sustainable Development Goal 3 *(14)*.

1.6 Development process

A series of modular WHO guidelines on the prevention, diagnosis, treatment and care for STIs form the technical foundation of this consolidated operational handbook. All recommendations in these guidelines were developed through a structured and consultative process, in accordance with procedures outlined in the WHO handbook for guideline development *(21)*. Evidence was collected through systematic reviews and modelling, where applicable, and the certainty of the evidence was assessed using the Grading of Recommendations Assessment, Development and Evaluation (GRADE) approach.

A Guideline Development Group comprising international experts, programme managers, clinicians, researchers and community representatives reviewed the evidence and formulated recommendations, taking into account values and preferences, acceptability, feasibility and resource implications across diverse settings. The specific methods and recommendations are described within the respective guidelines.

The resulting consolidated operational handbook provides practical and adaptable guidance to support countries in strengthening STI services, improving health outcomes and accelerating progress towards eliminating STIs as a public health threat by 2030. It serves as an operational framework to support implementation of the published guidelines.

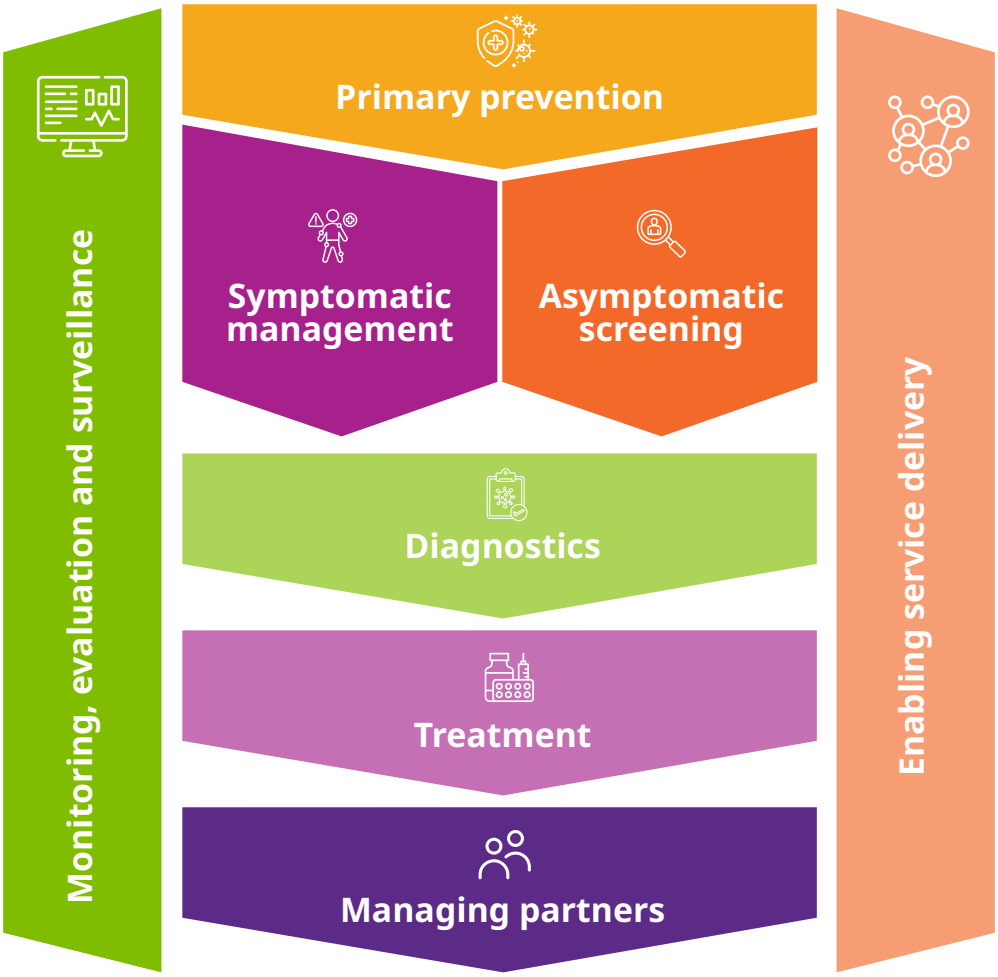
This consolidated operational handbook underwent external peer review by experts selected to ensure geographical and gender balance and to reflect a broad range of perspectives, including academia, national programmes, technical agencies, policy and research institutions, programme managers, in-country end users and community organizations. The detailed methodology used for the development of this handbook is provided in Annex 2.

1.7 The STI prevention and care cascade

The STI prevention and care cascade provides a practical framework for understanding how people engage with prevention, diagnosis, treatment and care and how programmes commonly fall short. It highlights operational gaps in which people are often lost to follow-up or services fail and identifies opportunities to strengthen the continuity, quality and equity of care. The cascade can guide both planning (to design equitable, responsive services) and monitoring (to identify bottlenecks and improve performance).

Each step represents a key interaction between people and the health system. Disengagement may occur at any point because of stigma, cost, lack of knowledge, distance, untrained providers or weak systems, resulting in missed opportunities for prevention, treatment and control. The cascade therefore reflects two complementary perspectives: for people, it illustrates the continuum of care; for programmes, it emphasizes the responsibility to ensure continuity, quality and equity (Fig. 2).

Fig. 2. The STI prevention and care cascade.



1.8 Structure of the handbook

This consolidated operational handbook is structured around eight interlinked components of the STI prevention and care cascade:

- **primary prevention of STIs:** promoting sexual health and well-being through preventive interventions;
- **managing symptomatic STIs:** ensuring timely recognition and treatment for people presenting with symptoms;
- **identifying asymptomatic STIs:** detecting and treating infections that would otherwise go undiagnosed;
- **diagnostics for STIs:** confirming infections and guiding treatment through quality-assured aetiological testing;
- **treatment for STIs:** providing effective antimicrobial and other therapies while supporting antimicrobial stewardship;

- **managing partners:** preventing reinfection and interrupting transmission by treating sexual partners;
- **monitoring, evaluation and surveillance:** measuring progress, improving quality and informing programmes and policy; and
- **enabling service delivery for STIs:** creating supportive systems and innovative models for equitable, people-centred STI care.

Although each component is presented separately (Sections 2–9), in practice they are interdependent. Effective prevention reduces the need for diagnosis and treatment, and strong surveillance and service delivery enable continual improvement across the cascade. Together, they operationalize the Global Health Sector Strategy on sexually transmitted infections, 2022–2030, supporting the goals of reducing STI incidence, eliminating congenital syphilis and achieving equitable, people-centred sexual health services for all *(14)*.

Each of these eight sections follows a common structure to ensure consistency and ease of use:

- **overview:** summarizes the purpose, rationale and key operational challenges of each cascade component;
- **core components:** outlines the key interventions, services or programme and service delivery approaches aligned with WHO recommendations;
- **implementation considerations:** provides practical guidance on adaptation, integration, equity, ethics and quality assurance; and
- **relevant WHO guidelines and tools:** lists current normative and operational guidance.

This format enables programme managers, policy-makers and service providers to identify key operational priorities, adapt them to local epidemiology and health-system capacity and ensure coherence across the STI prevention and care continuum.

1.9 Common implementation considerations

Successful implementation of STI services depends on several cross-cutting enablers that apply to all components of the cascade:

- **integration across health platforms:** STI prevention, diagnosis, treatment, partner services and surveillance should be embedded within PHC, HIV services, community services and sexual and reproductive health services – including family planning, adolescent health and maternal and child health – to maximize reach and efficiency;
- **provider capacity and supervision:** regular training, mentorship and supportive supervision for health workers at all levels – including clinicians, nurses, midwives, pharmacists, community health workers and lay providers – are essential to maintain competence, respectful communication and quality assurance;
- **equity, confidentiality and rights-based approaches:** STI services must be voluntary, confidential, stigma-free and grounded in human rights and gender equity, with particular attention given to key populations, adolescents and people affected by discrimination, marginalization or restrictive legal and policy environments; addressing underlying social determinants – such as poverty, gender-based violence and inequality – requires collaborating with other sectors and communities;
- **monitoring, surveillance and data use:** routine, disaggregated monitoring integrated within national health information systems is needed to inform programme quality improvement and policy decisions; and
- **community engagement:** community- and peer-led mechanisms strengthen accountability, improve acceptability and help identify and address barriers to access.

These considerations underpin the specific implementation guidance provided in Sections 2–9.

1.10 Common systemic challenges

Persistent systemic challenges affect multiple stages of the STI prevention and care cascade. Weak integration across programmes, shortages of trained personnel, stigma and discrimination, interruptions in supply chains for essential commodities and fragmented data systems contribute to gaps and inequities in services. Addressing these cross-cutting constraints is critical to ensure continuity and quality across all components.

These issues are revisited in Section 9, which focuses on the system-wide enablers required for sustainable and equitable care and are further expanded in Section 10, which situates the cascade within the broader framework of PHC and universal health coverage, outlining how STI prevention, testing, treatment and partner services can be embedded within national health systems for long-term impact and sustainability.

1.11 Programme reviews and strategic planning

WHO provides guidance to support countries in reviewing and strategically planning their national STI responses. Programme reviews help countries to assess progress, identify bottlenecks and set priorities for actions that accelerate the achievement of national and global targets. Periodic reviews strengthen accountability, evidence-informed decision-making and continual improvement, as outlined in the *Guide to conducting programme reviews for HIV, viral hepatitis and sexually transmitted infections (22)*.

Strategic planning involves developing or updating national STI strategies that are participatory, evidence informed and aligned with global goals. WHO encourages collaboration among ministries of health, other sectors, civil society and affected communities to ensure coordinated and sustainable responses, as detailed in the *Guidance for national strategic planning (NSP): health sector response to HIV, viral hepatitis and sexually transmitted infections (23)*.

2. Primary prevention of STIs

2.1 Overview

Primary prevention aims to stop infections before they occur by increasing awareness of STIs, including HIV, and by enabling people, especially those at increased risk, to protect themselves. Prevention interventions combine behavioural, biomedical and structural approaches delivered through community platforms and integrated health services.

Although effective prevention tools exist, uptake and coverage vary across countries and populations. Challenges may include limited or inconsistent condom use, gaps in HPV vaccination uptake and insufficient integration or financing of STI prevention within PHC, HIV services, community services and sexual and reproductive health services – including family planning, adolescent health and maternal and child health *(1, 24)*. Expanding access to comprehensive, integrated prevention packages can reduce new infections and lower costs to the health system. Priorities include ensuring universal access to condoms and condom-compatible lubricants; expanding access to HPV and hepatitis B virus vaccination; embedding prevention within related health services; and using digital and peer-led interventions to extend reach. Effective prevention reduces downstream demand for testing and treatment (see Section 6) and should be central to integrated service delivery models (see Section 9).

2.2 Core components of interventions and services

Behavioural and educational interventions

Peer-led and community-based approaches can enhance engagement and acceptability, especially for key populations and other groups who may face barriers in accessing formal health services. Counselling and information-sharing, focused on supporting understanding and informed decision-making rather than behaviour change, are important for engagement when delivered in a non-judgemental and culturally appropriate manner *(5)*. Comprehensive sexuality education in schools and youth programmes, as well as brief sexuality-related communication in primary care, can strengthen knowledge, skills and health-seeking behaviour *(25-27)*.

Condoms and lubricants

Correct and consistent use of male (external) and female (internal) condoms is highly effective in preventing the sexual transmission of most STIs, including HIV, and provides dual protection against unintended pregnancy *(5, 28, 29)*. Condom-compatible lubricants improve comfort and safety, especially for anal sex, and should be widely available *(5, 28, 30)*. Programmes should ensure education, demonstration and reliable supply chains, in accordance with the specifications of WHO and the United Nations Population Fund for condoms and lubricants *(31)*.

Vaccination

Vaccines are powerful tools for preventing STIs. WHO recommends HPV vaccination for girls aged 9–14 years, before becoming sexually active, as the primary strategy for eliminating cervical cancer *(32, 33)*. People living with HIV should also be considered a priority group, and secondary target groups – such as women 15 years and older, boys, older men and men who have sex with

men – may be included when resources allow *(33-35)*. Hepatitis B vaccination is part of universal immunization and is recommended for key populations, including people living with HIV who are not yet immune *(5, 35, 36)*. Hepatitis A vaccination is recommended in low-endemicity settings for key populations at increased risk, including men who have sex with men and people who inject drugs *(5, 37)*. Mpox vaccination may be considered for selected populations at higher risk of exposure, such as sex workers and men who have sex with men with multiple sexual partners *(38)*. Research into vaccines for other STIs – including herpes, chlamydia, gonorrhoea, syphilis and trichomoniasis – is ongoing *(7)*. Emerging evidence suggests that meningococcal B vaccines may offer some cross-protection against *N. gonorrhoeae*, but current data remain insufficient to inform WHO recommendations *(39)*. Research is ongoing, and the WHO Strategic Advisory Group of Experts on Immunization continues to monitor the evidence.

Biomedical prevention

Post-exposure prophylaxis for preventing STIs is recommended in cases of sexual assault or abuse, alongside HIV post-exposure prophylaxis and emergency contraception *(40, 41)*. Evidence on doxycycline post-exposure prophylaxis is still emerging, with WHO guidance forthcoming *(42)*. Voluntary medical male circumcision forms part of a comprehensive HIV prevention package in settings with high HIV prevalence and low circumcision coverage, as it reduces the risk of acquiring HIV during vaginal intercourse *(43)*. Evidence also indicates lower rates of some other STIs among circumcised men and their female partners; however, it is not currently recommended primarily as an STI prevention intervention.

Maternal and newborn prevention

Preventing the vertical transmission of STIs is essential. Routine syphilis testing for all pregnant women at the first antenatal care visit, with timely treatment of those who test positive, can prevent congenital syphilis, a major cause of stillbirth and neonatal death *(44, 45)*. Topical neonatal ocular prophylaxis applied immediately after birth is recommended to prevent gonococcal and chlamydial ophthalmia neonatorum *(46, 47)*. Partner management during pregnancy is also critical to prevent reinfection (see Section 7).

2.3 Implementation considerations

Implementation of primary prevention should follow the cross-cutting considerations outlined in Section 1 and the specific points below:

- **availability and access:** ensure consistent and affordable access to condoms, condom-compatible lubricants and vaccines through multiple delivery channels, including health facilities, pharmacies, schools and community-based outlets;
- **cultural and contextual adaptation:** tailor prevention messaging, sexuality education, counselling and other communication materials to local languages, literacy levels and social norms, ensuring that they are non-judgemental and rights based;
- **targeted approaches:** give priority to delivery to key populations, adolescents and young adults and other groups with higher STI burden or barriers to access;
- **ethical and rights-based delivery:** all preventive services must be voluntary, confidential and stigma-free, ensuring informed choice in the uptake of condoms, vaccines and counselling; and
- **linkage to care:** prevention services should establish clear referral pathways to testing, diagnosis, treatment and managing partners when indicated.

2.4 Relevant WHO guidelines and tools

The following key WHO guidelines and tools (listed in alphabetical order) provide normative and operational guidance related to tthe primary prevention of STIs:

- Brief sexuality-related communication: recommendations for a public health approach *(27)*
- Consolidated guidelines on HIV, viral hepatitis and STI prevention, diagnosis, treatment and care for key populations *(5)*
- Country guidance for planning triple elimination of mother-to-child transmission of HIV, syphilis and hepatitis B virus programmes *(45)*
- Global accelerated action for the health of adolescents (AA-HA!): guidance to support country implementation *(26)*
- Global strategy to accelerate the elimination of cervical cancer as a public health problem *(32)*
- International technical guidance on sexuality education: an evidence-informed approach *(25)*
- Preventing HIV through safe voluntary medical male circumcision for adolescent boys and men in generalized epidemics: recommendations and key considerations *(43)*
- Responding to children and adolescents who have been sexually abused: clinical guidelines *(41)*
- Responding to intimate partner violence and sexual violence against women: clinical and policy guidelines *(40)*
- WHO guideline on self-care interventions for health and well-being *(28)*
- WHO fact sheet on condoms [website] *(29).*

3. Managing symptomatic STIs

3.1 Overview

Although many STIs are asymptomatic, some cause symptoms such as discharge, ulcers or lower abdominal pain that often prompt people to seek care. Early identification and effective management are essential to prevent complications and interrupt transmission. Syndromic management, based on standardized flowcharts, enables same-day treatment without laboratory testing and remains the primary approach in many resource-limited settings. Aetiological diagnosis, where available, allows pathogen-specific treatment and supports antimicrobial stewardship *(48)*.

In some settings, people with symptoms may face barriers to timely care, including concerns about privacy, cost or stigma. Clinical management may also be affected by gaps in provider training, diagnostic capacity or referral pathways. Strengthening the management of symptomatic STIs therefore requires a comprehensive, people-centred approach that ensures respectful, confidential and inclusive care; use of syndromic flowcharts adapted to national context; integration of diagnostic testing when feasible (see Section 5); and functional referral systems that support continuity and quality of care.

3.2 Core components of interventions and services

Promoting health-seeking behaviour

Timely presentation for care is vital to reduce morbidity and prevent transmission. People should be encouraged to recognize common symptoms and seek care promptly. Health promotion campaigns, peer-led interventions and community-based education can raise awareness and address stigma, which often deters care-seeking *(48)*.

Clinical assessment

Comprehensive history-taking and physical examination form the foundation of symptomatic STI management. This includes medical and sexual history, assessment of risk factors and targeted examination such as anogenital inspection, bimanual pelvic or speculum examination and, when indicated, anoscopy or proctoscopy. In complex cases, further evaluation (such as lumbar puncture for suspected neurosyphilis or laparoscopy for severe pelvic inflammatory disease) may be warranted. The absence of symptoms or a recognized syndrome does not exclude infection *(48)*.

Syndromic management

In many primary care and resource-limited settings, syndromic management remains the most practical approach to treating STIs. It groups symptoms and signs into common syndromes and uses flowcharts to guide same-day treatment, enabling prompt care at the first visit and reducing loss to follow-up. Flowcharts may be adapted to local epidemiology and informed by aetiological and antimicrobial resistance surveillance. Although this approach enables immediate treatment, it can sometimes lead to overtreatment or missed infections; incorporating diagnostic testing when feasible improves the accuracy and appropriateness of care *(48)*.

WHO provides syndromic management flowcharts for managing the following common syndromes, which countries may adopt or adapt to their context (see Annex 3) *(48)*:

- **urethral discharge:** commonly caused by *N. gonorrhoeae* and/or *C. trachomatis*; persistent or recurrent urethral discharge after appropriate treatment may reflect reinfection, treatment failure or other causes (such as *M. genitalium* or *T. vaginalis*), and should prompt further assessment or referral to a centre with laboratory capacity;
- **vaginal discharge:** commonly caused by vaginal infections such as *T. vaginalis*, bacterial vaginosis or *Candida albicans*, and may also result from cervical infections due to *N. gonorrhoeae* or *C. trachomatis* (alone or in combination); syndromic management often combines treatment for trichomoniasis and bacterial vaginosis, with additional therapy as indicated;
- **genital ulcer disease:** may be caused by HSV or syphilis, although chancroid, donovanosis and lymphogranuloma venereum remain relevant in some regions; syndromic treatment should cover HSV and syphilis, with additional coverage adapted to local epidemiology:
- **lower abdominal pain:** typically caused by *N. gonorrhoeae*, *C. trachomatis* and/or anaerobic infections; immediate empirical treatment is essential to prevent infertility and ectopic pregnancy; and
- **anorectal discharge:** associated with receptive anal sex and often caused by *N. gonorrhoeae* and/or *C. trachomatis*; if ulceration is present, follow the flowchart for genital ulcer disease and additionally consider lymphogranuloma venereum.

Optimizing syndromic management

Where laboratory capacity is available, pathogen-specific testing – such as nucleic acid amplification testing (NAAT) for *C. trachomatis* and *N. gonorrhoeae* and molecular assays for *T. pallidum* (syphilis) and HSV – can complement syndromic management to provide definitive diagnosis and enable targeted treatment *(48, 49)*. This improves accuracy and supports antimicrobial stewardship. Offering self-collection of samples (such as vaginal or anorectal swabs) can expand access and acceptability, especially for populations affected by stigma *(28)*. When same-day results are unavailable, syndromic management should still be provided to ensure timely treatment, and diagnostic results can inform partner management, follow-up and surveillance *(48)*.

Comprehensive case management

Effective management extends beyond diagnosis and treatment. Ideally, each consultation should include counselling on risk reduction and adherence; routine provision of condoms and condom-compatible lubricants; and voluntary, confidential partner notification and treatment to prevent reinfection. Integrating HIV and syphilis testing, along with linkage to broader sexual and reproductive health services, promotes holistic, prevention-focused care (see Fig. 3 and Box 1) *(5, 48)*.

Follow-up and referral

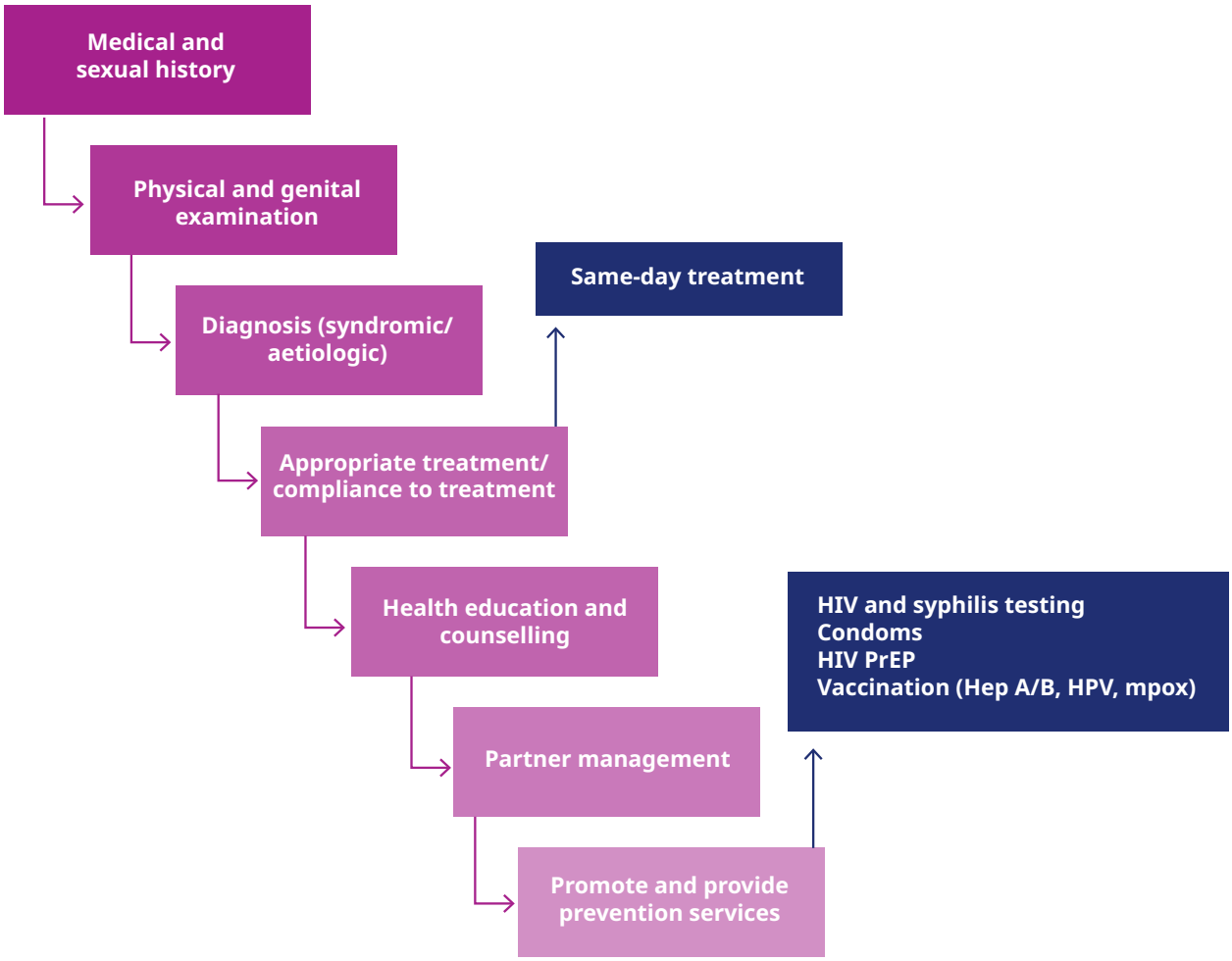
Routine follow-up is often unnecessary for most syndromes if treatment is completed and symptoms have resolved. However, people should be encouraged to return for review after one week if symptoms persist or recur. Follow-up is recommended in cases of pelvic inflammatory disease, persistent urethral, vaginal or anorectal discharge or suspected treatment failure – to confirm cure, assess treatment adherence, identify reinfection and consider antimicrobial resistance. Clear referral pathways should be in place for individuals with persistent, recurrent or severe symptoms, or where complications are suspected, to ensure timely access to appropriate facilities with higher-level diagnostic or clinical capacity *(48)*.

3.3 Implementation considerations

Implementation of symptomatic STI management should follow the cross-cutting considerations outlined in Section 1 and the following specific points:

- **use of syndromic flowcharts:** syndromic management remains essential in primary care and resource-limited settings but requires regular review and local adaptation based on current epidemiology and antimicrobial resistance trends;
- **progressive diagnostic optimization:** countries can strengthen laboratory and diagnostic capacity over time and expand the use of aetiological testing where feasible, informed by local disease patterns, aetiological data and antimicrobial resistance surveillance;
- **provider training and supervision:** regular training in syndromic flowchart use, respectful communication and case management, supported by ongoing supervision and mentorship, ensures quality and consistency; and
- **referral and follow-up systems:** establish clear referral mechanisms for complex or recurrent cases and promote follow-up for treatment failure to support the continuity and quality of care.

Fig. 3. Comprehensive STI case management.



Box 1. Elements of comprehensive STI case management.

- Prompt, appropriate diagnosis
- Provision of effective treatment for STIs with minimal delay after presentation
- Education and counselling on:
  - » the nature of the infection
  - » mode of transmission
  - » the need for adherence to treatment
  - » risk-reduction measures
  - » correct use of condoms
  - » the need for treating all sexual partners
  - » recommendations for HIV and syphilis testing
  - » the need to use condoms with all partners for three months and to (re)test for HIV
- Provision of condoms and demonstration of correct condom use
- Managing partners
- Opportunity for follow-up examination to assess treatment outcome

3.4 Relevant WHO guidelines and tools

The following key WHO guidelines and tools (listed in alphabetical order) provide normative and operational guidance related to managing symptomatic STIs:

- Consolidated guidelines on HIV, viral hepatitis and STI prevention, diagnosis, treatment and care for key populations *(5)*
- Guidelines for the management of symptomatic sexually transmitted infections *(48)*
- Laboratory and point-of-care diagnostic testing for sexually transmitted infections, including HIV *(49)*
- Training modules for the syndromic management of sexually transmitted infections *(50).*

4. Identifying asymptomatic STIs

4.1 Overview

Many STIs are asymptomatic and remain undetected without targeted screening. Infections that commonly present without symptoms include chlamydia (especially among adolescents and young women), gonorrhoea (often asymptomatic among women and at extragenital sites among key populations) and latent syphilis. Without treatment, these STIs can lead to infertility, pelvic inflammatory disease, adverse pregnancy outcomes and increased susceptibility to HIV *(48, 51)*.

Screening is often limited to people accessing HIV or antenatal care services. Stigma, resource constraints and variability in evidence of population-level benefit have restricted wider implementation. Expanding targeted screening in populations and settings with higher prevalence or likelihood of detection – such as antenatal care, HIV pre-exposure prophylaxis (PrEP) programmes and key population services – can increase case detection *(5, 51, 52)*. Integrating self-sampling, self-testing and quality-assured point-of-care diagnostics can further enhance reach and acceptability (see Section 5). Screening strategies should be evidence informed, prioritizing populations and settings with the greatest yield, feasibility and impact.

4.2 Core components of interventions and services

Syphilis screening

All pregnant women should be screened for syphilis at the first antenatal care visit, regardless of local prevalence *(44, 51)*. Repeat testing later in pregnancy may be considered in settings with a higher syphilis burden or ongoing risk of acquisition *(17, 45)*. Periodic serological testing for syphilis is recommended for key populations, including men who have sex with men, transgender people and sex workers *(5, 51)*. People using HIV PrEP and people living with HIV may also be offered syphilis testing as part of integrated HIV services, where feasible *(35, 52)*. Syphilis testing can be offered to individuals presenting with other STI symptoms, as coinfection is common *(48, 51)*. Rapid diagnostic tests, including dual HIV and syphilis tests, can facilitate same-day diagnosis and treatment in settings with limited access to laboratory-based testing; test selection should consider local prevalence and service availability *(44, 53)*.

Gonorrhoea and chlamydia screening

Screening for gonorrhoea and chlamydia may be considered for asymptomatic pregnant women and for people aged 10–24 years in settings with high prevalence and adequate resources *(51)*. Screening is also suggested for asymptomatic men who have sex with men, transgender people and sex workers, with anatomical sites informed by sexual behaviour *(5, 51)*. People using HIV PrEP and people living with HIV may also be offered screening as part of integrated HIV services *(35, 52)*. These are not universal screening recommendations and should be applied selectively based on local epidemiology, resources and public health priorities.

HPV screening

Screening for oncogenic types of HPV is the preferred approach for preventing cervical cancer and can be integrated into broader sexual and reproductive health and HIV services *(32)*. Women living with HIV are at substantially increased risk of cervical cancer and other HPV-associated outcomes and should be prioritized for screening *(34, 35)*. HPV DNA testing is suggested as the primary screening method, generally starting at 25 years of age, with repeat testing every 3–5 years *(54, 55)*. Where HPV DNA testing is not yet available, alternative screening methods such as cytology (Pap smear) or visual inspection with acetic acid (VIA) may be used *(54)*. For individuals at elevated risk – such as men who have sex with men and people living with HIV – anal cancer screening using anal cytology or HPV DNA testing may be considered where services are available *(5)*.

Self-sampling and self-testing

Self-collection of samples (such as vaginal, anorectal or urine samples) and self-testing for syphilis can improve reach and acceptability, especially for key populations facing stigma or logistical barriers to facility-based care. Evidence shows that these approaches are acceptable, feasible and effective in increasing testing coverage *(28, 53)*.

Managing partners for asymptomatic cases

Sexual partners of people diagnosed with an asymptomatic STI may be offered testing and/or treatment as part of a range of voluntary partner service options. Expedited partner therapy, in which a person diagnosed with an STI is provided medication or a prescription for their sexual partner(s) without prior clinical examination, may be considered where permitted by national policy and where safety can be ensured *(51, 53)*. Effective partner services help prevent reinfection and reduce onward transmission (see Section 7).

4.3 Implementation considerations

Implementation of asymptomatic STI screening should follow the cross-cutting considerations outlined in Section 1 and the specific points below:

- **screening thresholds:** for infections where WHO applies prevalence-based criteria (such as gonorrhoea and chlamydia), use the recommended thresholds when determining whether to implement screening (combined gonorrhoea and chlamydia prevalence ≥10% among pregnant women or ≥15–20% among sexually active adolescents and young adults) to balance case yield with available resources *(51)*;
- **screening frequency:** determine how often to offer asymptomatic screening based on local epidemiology, individual risk and service capacity; suggested intervals in Table 1 are provided as guidance and are not prescriptive, and should be adapted to local context;
- **choice of tests:** use quality-assured molecular assays (such as NAAT) where available, or validated rapid diagnostic tests (with ≥80% sensitivity and ≥90% specificity) in settings with limited laboratory capacity;
- **sampling approaches:** specimen collection should follow manufacturer instructions, with anatomical site sampling (urethral, vaginal, anorectal and oropharyngeal), self-sampling and pooled sampling considered where appropriate;
- **linkage to treatment and partner services:** ensure that all individuals with confirmed infection are promptly linked to treatment and partner services to prevent reinfection and sustain programme effectiveness (see Sections 6 and 7); and
- **ethical and rights-based delivery:** screening must be voluntary and based on informed consent, accompanied by counselling, confidentiality and privacy must be safeguarded and mandatory testing avoided as a condition for accessing other services.

Table 1. Screening approaches for asymptomatic STIs[a].

Population group	Screening approach	Suggested frequency	Guidelines
Pregnant women	Syphilis testing at first antenatal care visit, regardless of prevalence; repeat later in pregnancy in settings with high syphilis burden or ongoing risk; consider gonorrhoea and chlamydia screening in high-prevalence settings (≥10%), where resources allow	First antenatal care visit; repeat in 3rd trimester or at delivery, where feasible and appropriate	*(44, 51)*

Population group	Screening approach	Suggested frequency	Guidelines
Men who have sex with men and transgender people	Serological testing for syphilis; screening for gonorrhoea and chlamydia at anatomical sites (urethral, anorectal and oropharyngeal) guided by sexual behaviour	Based on local epidemiology, risk and service capacity; many programmes offer annual or more frequent screening	*(5, 51)*
Sex workers	Serological testing for syphilis; screening for gonorrhoea and chlamydia at anatomical sites guided by exposure	Based on local epidemiology, risk and service capacity; many programmes offer annual or more frequent screening	*(5, 51)*
Adolescents and young adults (10–24 years)	Screening for gonorrhoea and chlamydia in high-prevalence settings (≥15–20%), where resources allow	Opportunistic; periodic screening may be considered in high-prevalence settings	*(51)*
People with STI symptoms	Offer syphilis and HIV testing as part of syndromic or aetiological management	At presentation	*(48, 51)*
People living with HIV	STI screening can be integrated into HIV care, including testing for syphilis, gonorrhoea and chlamydia guided by exposure and local epidemiology	Opportunistic during routine care; frequency may be adapted based on risk	*(5, 35)*
People using HIV PrEP	Syphilis, gonorrhoea and chlamydia screening may be offered as part of PrEP services, guided by local epidemiology, feasibility and sexual behaviour	Often aligned to PrEP follow-up visits (e.g. every 3–6 months), but intervals should reflect setting and capacity	*(5, 52)*

[a] All screening programmes should be evaluated in accordance with the *Guidelines for the management of asymptomatic sexually transmitted infections (51)*.

4.4 Relevant WHO guidelines and tools

The following key WHO guidelines and tools (listed in alphabetical order) provide normative and operational guidance related to identifying and managing asymptomatic STIs:

- Consolidated guidelines on HIV, viral hepatitis and STI prevention, diagnosis, treatment and care for key populations *(5)*
- Guidelines for the management of asymptomatic sexually transmitted infections *(51)*
- Laboratory and point-of-care diagnostic testing for sexually transmitted infections, including HIV *(49)*
- Updated recommendations for the treatment of *Neisseria gonorrhoeae*, *Chlamydia trachomatis* and *Treponema pallidum* (syphilis), and new recommendations on syphilis testing and partner services *(53)*
- WHO guideline for screening and treatment of cervical pre-cancer lesions for cervical cancer prevention *(54)*
- WHO guideline on syphilis screening and treatment for pregnant women *(44)*.

5. Diagnostics for STIs

5.1 Overview

Accurate and timely diagnosis is essential for effective STI prevention and care. Although syndromic management remains a pragmatic approach in settings with limited diagnostic capacity, aetiological confirmation improves diagnostic precision, guides appropriate treatment, supports antimicrobial stewardship and strengthens surveillance *(48, 49)*.

In many settings, diagnostic capacity is constrained by insufficient laboratory infrastructure, shortages of trained personnel and inconsistent supply of test kits. Delays in returning results and lack of anatomical site-specific testing can contribute to missed infections and loss to follow-up. Expanding access to quality-assured molecular, serological and rapid diagnostic tests – including NAAT for *C. trachomatis* and *N. gonorrhoeae*, dual HIV and syphilis rapid tests and gonococcal culture with antimicrobial susceptibility testing – is critical (see Annex 4). Self-collection of specimens can improve acceptability and uptake, especially among people facing stigma or logistical barriers *(28)*. Robust quality-management systems are essential to ensure reliability and accuracy across all levels of care *(48, 49, 51)*. Strengthened diagnostic capacity supports effective treatment (see Section 6) and high-quality surveillance (see Section 8).

5.2 Core components of interventions and services

Laboratory-based diagnosis

Laboratory testing enables pathogen-specific confirmation and offers higher diagnostic accuracy than syndromic management *(48, 49)*. In addition to molecular assays (see below), this includes:

- **microscopy:** wet-mount microscopy can detect *T. vaginalis* or *C. albicans* and supports the diagnosis of bacterial vaginosis, and Gram staining enables presumptive diagnosis of gonorrhoea among men and is especially useful when immediate treatment decisions are required;
- **serology:** used primarily for diagnosing syphilis, with testing typically combining a non-treponemal test (such as rapid plasma reagin and Venereal Disease Research Laboratory), which detects antibodies to non-specific antigens, with a treponemal test (such as *T. pallidum* haemagglutination, *T. pallidum* particle agglutination and enzyme immunoassay), which detects antibodies specific to *T. pallidum*; and
- **culture:** especially important for *N. gonorrhoeae*, since it enables antimicrobial susceptibility testing to guide treatment and monitor resistance trends.

Molecular assays

Molecular assays are also laboratory-based diagnostics but require expanded laboratory infrastructure and technical capacity. NAAT is the gold standard for detecting *C. trachomatis* and *N. gonorrhoeae* and is the only suitable diagnostic test for *M. genitalium*. These assays can detect infection from urine or swab specimens and are highly effective for identifying asymptomatic and extragenital infections *(49)*. Despite higher cost and infrastructure requirements, NAAT is critical for accurate diagnosis and should be scaled up when feasible, especially in high-prevalence settings and among key populations *(5, 48, 51)*.

Rapid and point-of-care tests

Point-of-care tests, including rapid diagnostic tests and microscopy performed in clinical settings, enable same-day diagnosis and treatment, reducing loss to follow-up. Currently, only syphilis point-of-care tests, including dual HIV and syphilis rapid tests, are WHO prequalified and recommended for screening, especially in antenatal care and for key populations *(53, 56)*. Vaginal pH testing using indicator paper is another simple point-of-care method that can help differentiate common causes of vaginal discharge *(49)*. WHO has developed target product profiles outlining minimum and optimal performance criteria for point-of-care tests for chlamydia, gonorrhoea, trichomoniasis and syphilis *(57)*. Commercial rapid tests for several of these pathogens are available or in development; however, none are currently WHO-prequalified, and performance varies across products *(57, 58)*. Multiplex platforms that can detect multiple STI pathogens offer potential future benefits *(7)*. Programmes should use only validated, quality-assured tests that meet national or global regulatory standards.

Specimen collection

Accurate diagnosis depends on high-quality specimen collection. Recommended specimen types include urine or urethral swabs for men and vaginal or cervical for women. Extragenital specimens (such as anorectal, oropharyngeal or lesion swabs) may be collected based on clinical assessment, which may include reported symptoms, sexual behaviour or examination findings. Specimens should be collected using quality-assured methods and handled appropriately to maintain integrity *(49)*. Self-collection of specimens is feasible and provides results comparable to provider-collected samples when clear instructions are followed (see below).

Self-sampling and self-testing

Self-collection of specimens (such as vaginal, anorectal or urine samples) and self-testing for syphilis can increase uptake and reduce barriers such as stigma, inconvenience and lack of privacy. Evidence shows that these approaches are acceptable, feasible and effective, especially for key populations and adolescents *(28, 53, 59, 60)*. Programmes should use quality-assured tests, provide clear and appropriate instructions and ensure linkage to confirmatory testing, treatment and partner services where required.

Quality assurance systems

All diagnostic services, including laboratory and point-of-care testing, should operate within a quality management system to ensure testing accuracy, reliability and safety. This includes participation in external quality assessment schemes, regular supervision and accreditation to internationally recognized standards such as International Organization for Standardization (ISO) 15189 *(49)*.

5.3 Implementation considerations

Implementation of STI diagnostic services should follow the cross-cutting considerations outlined in Section 1 and the specific points below:

- **strengthening diagnostic capacity:** build and maintain laboratory and diagnostic capacity, ensuring reliable supply chains and progressively expanding access to quality-assured molecular assays and rapid diagnostic tests as resources permit;
- **quality assurance:** implement quality-management processes for all diagnostic services, including internal quality control, participation in external quality assessment and adherence to recognized standards to ensure accuracy and reliability of testing;
- **anatomical site-based testing:** use clinical assessment (symptoms, examination or sexual history) to guide extragenital sampling (such as anorectal or oropharyngeal swabs) where appropriate, and consider pooled sampling to improve efficiency when allowed by test instructions;

- **linkage with surveillance systems:** ensure that diagnostic data feed into national antimicrobial resistance surveillance, congenital syphilis elimination tracking and overall STI trend monitoring to support programme responsiveness; and
- **ethical and rights-based delivery:** maintain voluntary and confidential testing with informed consent, avoiding mandatory or coercive testing and training health-care providers to address stigma, discrimination and bias.

5.4 Relevant WHO guidelines and tools

The following key WHO guidelines and tools (listed in alphabetical order) provide normative and operational guidance related to diagnostics for STIs:

- Consolidated guidelines on HIV, viral hepatitis and STI prevention, diagnosis, treatment and care for key populations *(5)*
- Guidelines for the management of asymptomatic sexually transmitted infections *(51)*
- Guidelines for the management of symptomatic sexually transmitted infections *(48)*
- Laboratory and point-of-care diagnostic testing for sexually transmitted infections, including HIV *(49)*
- Point-of-care tests for sexually transmitted infections: target product profiles *(57)*
- The diagnostics landscape for sexually transmitted infections *(58)*
- Updated recommendations for the treatment of *Neisseria gonorrhoeae*, *Chlamydia trachomatis* and *Treponema pallidum* (syphilis), and new recommendations on syphilis testing and partner services *(53)*
- WHO guideline on self-care interventions for health and well-being *(28)*
- WHO list of prequalified in vitro diagnostic products [website] *(56)*.

6. Treatment for STIs

6.1 Overview

Effective and timely treatment cures STIs, prevents complications and reduces transmission and antimicrobial resistance. Treatment should be initiated as early as possible, ideally at the first point of contact with a health-care provider and on the same day as diagnosis. Syndromic management remains important when diagnostic testing is unavailable, but access to aetiological diagnosis enables pathogen-specific treatment and supports antimicrobial stewardship *(48)*.

In many settings, treatment services may be affected by intermittent medicine supply, variable adherence to national protocols, limited provider training or increasing antimicrobial resistance, especially for *N. gonorrhoeae*. Ensuring reliable availability of WHO-recommended treatment regimens, inclusion of key medicines in national essential medicines lists and regular updating of national treatment guidelines informed by local epidemiology and antimicrobial resistance data are important for maintaining quality and effectiveness *(48, 53, 61-63)*. Effective counselling, adherence support and partner services (see Section 7) are also essential to sustain care and prevent reinfection.

6.2 Core components of interventions and services

Providing treatment

Treatment should be provided at the same visit as diagnosis to maximize adherence and reduce loss to follow-up. National treatment protocols should align with WHO recommendations and, where feasible, be adapted to local epidemiology, aetiological surveillance and antimicrobial resistance data. Treatment regimens should be selected based on local antimicrobial resistance data (if available), and programmes should review and adjust recommended regimens when resistance to a given antibiotic exceeds acceptable thresholds (for example, ≥5% for first-line gonorrhoea treatment) to maintain high treatment effectiveness and limit the emergence of antimicrobial resistance *(53, 61, 63)*. Table 2 summarizes first-line treatment options for common STIs, and Annex 5 outlines all WHO-recommended treatment regimens, including effective substitutes, for all STIs covered in the guidelines.

Counselling and adherence support

It is important that every consultation includes counselling on the importance of completing treatment, managing potential side-effects and preventing reinfection. People should be offered condoms and condom-compatible lubricants; advised to abstain from sex until both they and their sexual partners have completed treatment and symptoms have resolved; and informed about prevention options such as HIV PrEP and vaccination, when appropriate *(48)*.

Managing partners

Managing the sexual partners of individuals diagnosed with an STI is essential to prevent reinfection and interrupt transmission. All partners should be offered voluntary, confidential partner services. Expedited partner therapy, where permitted, may be considered for curable STIs such as gonorrhoea and chlamydia, in accordance with national policy and programme context (see Section 7) *(53)*.

Follow-up and retesting

People with persistent or recurrent symptoms should be reassessed to identify possible causes of treatment failure, including reinfection, incorrect treatment, antimicrobial resistance or other underlying conditions. A test of cure may be performed in situations where treatment failure or antimicrobial resistance is suspected *(48, 63)*. Retesting can be considered for people at ongoing risk of reinfection, such as key populations, based on local epidemiology and service capacity *(5, 51)*.

Managing chronic STIs

Some STIs require long-term management rather than single-course treatment. HSV infection can be managed through episodic or suppressive antiviral therapy to reduce the frequency of recurrence and risk of transmission *(64)*. HPV infection is addressed through preventive vaccination, treatment of anogenital warts and screening and management of precancerous lesions within cervical and other HPV-related cancer prevention programmes *(54, 61)*. These chronic infections, similar to HIV, require sustained programmatic approaches that integrate prevention, treatment and health promotion. Strengthening primary prevention (see Section 2) remains critical to reducing the long-term burden and transmission of these chronic viral infections.

6.3 Implementation considerations

Implementation of STI treatment services should follow the cross-cutting considerations outlined in Section 1 and the specific points below:

- **antimicrobial stewardship:** promote rational prescribing practices and adherence to WHO-recommended or nationally adapted guidelines and monitor treatment outcomes and suspected treatment failure to minimize the emergence and spread of antimicrobial resistance;
- **evidence-informed treatment protocols:** ensure that national treatment guidelines are informed by local epidemiology and antimicrobial resistance trends (if available), update recommended treatment regimens when resistance to a given antibiotic exceeds acceptable thresholds (for example, ≥5% resistance for first-line gonorrhoea treatment) and use surveillance data to periodically update syndromic management flowcharts and aetiological treatment protocols;
- **access to essential medicines:** maintain uninterrupted availability of WHO-recommended medicines through national essential medicines lists, effective procurement systems and, when feasible, subsidized access to reduce financial barriers to treatment;
- **provider training and supervision:** train health-care workers on current treatment guidelines, counselling, partner management and antimicrobial resistance risk; ongoing supportive supervision ensures consistent protocol adherence and quality of care;
- **surveillance and monitoring:** collect and analyse data on treatment outcomes, tests of cure and antimicrobial resistance, especially for *N. gonorrhoeae*, to inform continuous quality improvement and periodic guideline updates; and
- **ethical and rights-based delivery:** ensure that treatment is voluntary, confidential and equitable and delivered in a respectful, non-coercive manner, with services for partners protecting the safety and dignity of all people receiving STI care.

Table 2. WHO-recommended first-line treatment regimens for common STIs[a].

Infection	Adults and adolescents	Pregnant and breastfeeding women	Guidelines and notes
Gonorrhoea	Ceftriaxone, 1 g, intramuscularly, single dose	Same as adults	*(53)* Discuss pain and option of using lidocaine as diluent with injection
Chlamydia	Doxycycline, 100 mg, orally, twice daily for seven days	Azithromycin, 1 g, orally, single dose	*(53)* Extended-release doxycycline may be an alternative
Syphilis	Benzathine penicillin, 2.4 million units, intramuscularly, single dose (early syphilis); once weekly for three consecutive weeks (late syphilis)	Same as adults	*(53, 65)* If the stage of syphilis is unknown, treat for late syphilis
Trichomoniasis	Metronidazole, 400 or 500 mg, orally, twice daily for seven days	Same as adults	*(61)*
***M. genitalium* infection**	Doxycycline, 100 mg, orally, twice daily for seven days followed by: Azithromycin, 1 g, orally on day 1, 500 mg once daily for three days[b] or Moxifloxacin 400 mg, orally, once daily for seven days[c]	Pristinamycin, 1 g, orally four times daily for 10 days	*(61)* [b]In settings with low or suspected low resistance to macrolides or when testing shows that *M. genitalium* is susceptible to macrolides [c]In settings with high or suspected high resistance to macrolides (such as where azithromycin is frequently used) or when testing shows that *M. genitalium* is resistant to macrolides

Infection	Adults and adolescents	Pregnant and breastfeeding women	Guidelines and notes
Genital herpes	For first clinical episode: Acyclovir, 400 mg, orally, three times daily for 10 days or Acyclovir, 200 mg, orally, five times daily for 10 days For recurrent clinical episodes:[d] Acyclovir, 400 mg, orally, three times daily for five days or Acyclovir, 800 mg, orally, three times daily for two days or Acyclovir, 800 mg, orally, twice daily for five days	Same as adults	*(64)* [d]Episodic therapy; consider suppressive therapy for recurrent episodes depending on frequency and severity (see Annex 5)
Anogenital warts (HPV)	Podophyllotoxin, 0.5% solution or 0.5–1.5% cream, self-applied topically, twice daily for three days, followed by four days with no treatment (can be repeated up to four times) or Imiquimod, 3.75% or 5% cream, self-applied topically overnight, three times weekly (wash off after 6–10 hours) for up to 16 weeks	Cryotherapy, with liquid nitrogen	*(61)*
Bacterial vaginosis	Metronidazole, 400 or 500 mg, orally, twice daily for seven days	Same as adults	*(61)*

Infection	Adults and adolescents	Pregnant and breastfeeding women	Guidelines and notes
Candidiasis	Fluconazole, 150–200 mg, orally, single dose or Clotrimazole, 500 mg, intravaginally, single dose, or 200 mg, intravaginally, once daily for three days, or 10% cream, intravaginally, single dose or Miconazole, 1200 mg, intravaginally, single dose, or 400 mg, intravaginally, once daily for seven days or Econazole, 150 mg, intravaginally as a single dose or Nystatin, 100 000 units, intravaginally, twice daily for 15 days	Clotrimazole, 100 mg, intravaginally once daily for seven days or 1% cream intravaginally once daily for seven days or Nystatin, 100 000 units, intravaginally, twice daily for 15 days	*(61)* Choice of treatment may depend on preferences for intravaginal administration (which may also reduce vulval itching and soreness) or oral administration and the cost in different settings

[a] Annex 5 outlines all WHO-recommended treatment regimens for STIs, including first-line options and effective substitutes, as covered in the guidelines.

6.4 Relevant WHO guidelines and tools

The following key WHO guidelines and tools (listed in alphabetical order) provide normative and operational guidance related to treatment for STIs:

- Enhanced Gonococcal Antimicrobial Surveillance Programme (EGASP): supplementary protocols *(63)*
- Guidelines for the management of symptomatic sexually transmitted infections *(48)*
- Recommendations for the treatment of *Trichomonas vaginalis*, *Mycoplasma genitalium*, *Candida albicans*, bacterial vaginosis and human papillomavirus (anogenital warts) *(61)*
- The selection and use of essential medicines, 2025: WHO Model List of Essential Medicines, 24th list *(20)*
- Updated recommendations for the treatment of *Neisseria gonorrhoeae*, *Chlamydia trachomatis* and *Treponema pallidum* (syphilis), and new recommendations on syphilis testing and partner services *(53)*
- WHO guidelines for the treatment of *Chlamydia trachomatis* *(46)*
- WHO guidelines for the treatment of genital herpes simplex virus (HSV) *(64)*
- WHO guidelines for the treatment of *Neisseria gonorrhoeae* *(47)*
- WHO guidelines for the treatment of *Treponema pallidum* (syphilis) *(65)*.

7. Managing partners

7.1 Overview

Partner management is an essential component of STI prevention and care. It helps prevent reinfection, interrupts transmission and supports timely diagnosis and treatment among the sexual partners of people diagnosed with STIs. Partner services should be offered for all diagnosed infections, regardless of symptoms or the setting in which care is provided *(48, 53)*.

Implementation varies widely across settings. Health-care workers may have limited time, training or tools to provide partner services, and the absence of aetiological confirmation in syndromic management settings can make communication with partners more challenging. Concerns about confidentiality, stigma, safety and referral pathways may further influence uptake. Strengthening partner management therefore requires structured, people-centred approaches that offer a range of voluntary notification options – including patient referral, provider referral and expedited partner therapy, where permitted – tailored to local context and individual preferences *(5, 24, 48, 53)*. Antenatal care services also offer an important opportunity to reach partners of pregnant women, offer testing for HIV, syphilis and hepatitis B virus and promote shared responsibility for prevention and care *(45)*.

7.2 Core components of interventions and services

Education and counselling

Education and counselling can support effective partner management by helping people understand the importance of notifying partners, completing treatment and preventing reinfection. Health-care providers can help explore potential barriers – such as concerns about stigma, safety, violence or relationship strain – and, where relevant, discuss strategies to reduce risks. People should also be advised to avoid sexual contact until they and their partners have completed treatment and symptoms have resolved, where feasible. Providing condoms and condom-compatible lubricants, as well as information on other prevention options such as HIV PrEP and vaccination, can further support prevention efforts *(48, 53)*.

Partner notification approaches

Partner services should be offered to people diagnosed with STIs as part of a range of voluntary options, tailored to their needs and preferences and delivered within a comprehensive package of STI testing, care and prevention *(53)*. Partner notification should be voluntary, confidential and supportive, with the choice of approach guided by individual preference and what is feasible in the local context. WHO outlines a number of partner notification approaches (see Annex 6) *(53)*:

- **patient referral:** the person diagnosed with an STI (index person) notifies their partner(s), often using referral slips or cards;
- **provider referral:** with the individual's consent, a health-care provider contacts partners directly (for example, by phone or secure message);
- **contract (delayed provider) referral:** the individual agrees to notify partners within an agreed period, after which the provider contacts partners if notification has not occurred; and
- **expedited partner therapy:** the person diagnosed with an STI is provided with medication or a prescription for their partner(s) without prior clinical examination, where permitted by national policy.

Digital and peer-led approaches

Digital tools – such as text messaging, secure web-based messaging and mobile applications – can facilitate confidential notification, especially among key populations *(24)*. Community-led and peer-driven interventions can further expand reach, especially when stigma or marginalization limits access to formal health services *(5)*. Social network approaches, in which individuals at higher risk invite their sexual or social contacts for testing, have also proven effective in identifying undiagnosed infections and reaching populations less likely to seek care *(53, 66)*.

7.3 Implementation considerations

Implementation of partner management services should follow the cross-cutting considerations outlined in Section 1 and the specific points below:

- **setting epidemiological priorities:** scale up partner services for infections and populations with the highest burden and potential for severe outcomes – such as syphilis in pregnancy and gonorrhoea among men who have sex with men and other key populations;
- **provider training and supervision:** train health-care workers in sensitive, non-judgemental communication, confidentiality and using partner notification tools, and supportive supervision and clear referral mechanisms help to build confidence and ensure high-quality implementation;
- **monitoring and quality improvement:** track partner notification, treatment uptake and reinfection rates to evaluate programme performance and identify opportunities for improvement; and
- **ethical and safety considerations:** partner management must always be voluntary, confidential and non-coercive, and health-care providers should assess the potential risks of intimate partner violence and implement appropriate safety planning and referral options.

7.4 Relevant WHO guidelines and tool

The following key WHO guidelines and tools (listed in alphabetical order) provide normative and operational guidance related to managing partners:

- Consolidated guidelines on HIV, viral hepatitis and STI prevention, diagnosis, treatment and care for key populations *(5)*
- Guidelines for the management of symptomatic sexually transmitted infections *(48)*
- Network-based testing services for HIV, viral hepatitis, and STIs [website] *(66)*
- Recommendations on the delivery of health services for the prevention and care of sexually transmitted infections *(24)*
- Updated recommendations for the treatment of *Neisseria gonorrhoeae*, *Chlamydia trachomatis* and *Treponema pallidum* (syphilis), and new recommendations on syphilis testing and partner services *(53)*
- WHO guideline on contact tracing *(67).*

8. Monitoring, evaluation and surveillance

8.1 Overview

Monitoring, evaluation and surveillance provide the evidence base for improving STI programme quality and tracking progress toward national and global targets. Monitoring focuses on service delivery and coverage; evaluation assesses whether interventions achieve intended objectives; and surveillance describes disease burden, trends and antimicrobial resistance *(8)*.

In many settings, surveillance and information systems face challenges such as incomplete case reporting, limited data disaggregation and insufficient antimicrobial resistance monitoring, especially for *N. gonorrhoeae (8, 62, 63)*. Strengthening these functions requires coordinated, quality-assured systems that integrate diagnostic data (see Section 5), treatment data (see Section 6) and programme indicators within national surveillance platforms. Robust systems enable timely analysis, support antimicrobial stewardship and enhance accountability *(8)*. Participation in the WHO Enhanced Gonococcal Antimicrobial Surveillance Programme (EGASP) can also strengthen standardized monitoring of gonococcal antimicrobial resistance and improve global comparability *(62, 63)*.

8.2 Core components of programme monitoring and surveillance

Routine case reporting

Routine clinical case reporting complements other monitoring and evaluation activities by documenting the number of people presenting with STI symptoms at health facilities. Priority should be given to syndromes with higher specificity, such as urethral discharge and genital ulcer disease. If feasible, laboratory-confirmed cases of syphilis, gonorrhoea and chlamydia should also be reported. Integrating case reporting into national health information systems promotes sustainability and alignment with other disease programmes *(8, 48, 51)*.

Prevalence monitoring

Prevalence monitoring provides deeper insight into infection burden and distribution. Routine syphilis screening data from antenatal care can be used to track trends among pregnant women, and sentinel surveillance among key populations – such as sex workers and men who have sex with men – helps to monitor infection trends in the populations disproportionately affected. If feasible, population-based surveys can generate broader prevalence estimates *(8)*.

Aetiological assessment and syndromic validation

Periodic aetiological studies using molecular diagnostics help to identify the pathogens underlying common STI syndromes. Such studies should be conducted every 2–3 years to update national syndromic management flowcharts and ensure that treatment algorithms reflect local epidemiology and resistance patterns, especially in settings that primarily rely on syndromic care *(8, 48)*.

Antimicrobial resistance monitoring

Surveillance of *N. gonorrhoeae* resistance patterns is a global priority. Countries are encouraged to participate in WHO's Gonococcal Antimicrobial Surveillance Programme (GASP) and enhanced EGASP protocols, which use standardized methods to monitor antimicrobial resistance and inform national treatment guidelines. Molecular tools, including whole-genome sequencing, are

increasingly valuable for detecting emerging threats and characterizing transmission networks *(8, 62, 63)*.

Programme monitoring

Monitoring service delivery performance along the STI prevention and care cascade helps to identify bottlenecks and guide corrective actions. WHO recommends a core set of iindicators (see Fig. 4 and Annex 7), including:

- syphilis testing and treatment coverage in antenatal care;
- congenital syphilis case rates;
- STI testing coverage and positivity among key populations;
- availability of essential commodities (such as benzathine penicillin G and rapid diagnostic tests); and
- condom distribution and other prevention indicators.

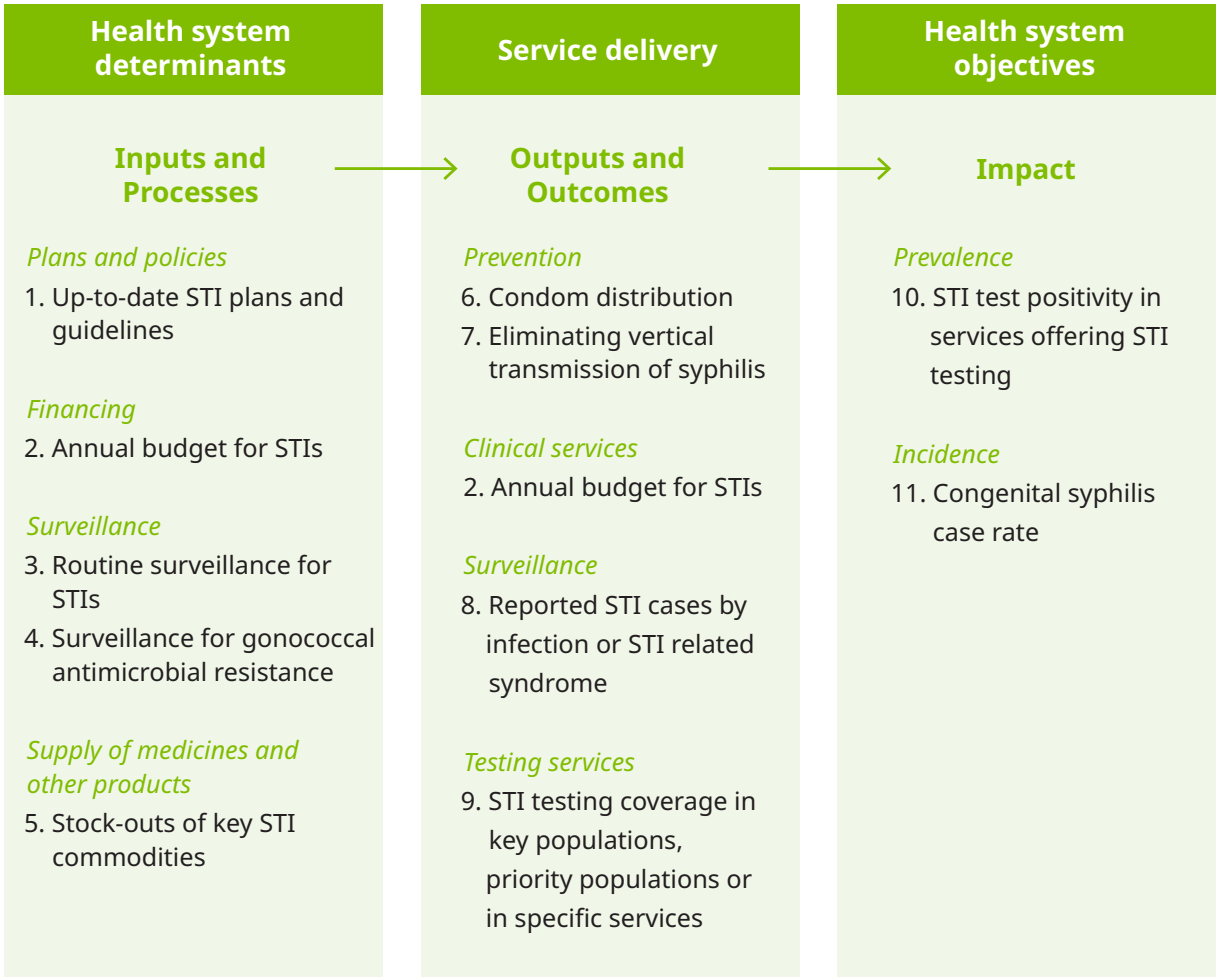
These indicators should be applied at the national and subnational levels to guide investment, strengthen accountability and demonstrate progress toward strategic targets *(8)*.

8.3 Implementation considerations

Implementation of monitoring, evaluation and surveillance activities should follow the cross-cutting considerations outlined in Section 1 and the specific points below:

- **system integration**: embed STI indicators and data flows within national health information systems, including HIV, maternal health and digital health platforms, to ensure sustainability, interoperability and comparability across programmes;
- **standardization**: apply WHO-recommended indicators and case definitions, aligned with the International Classification of Diseases, 11th revision (ICD-11), to ensure consistency and facilitate global reporting and benchmarking;
- **data disaggregation**: collect and analyse data disaggregated by sex, age, key population and geography to identify inequities, inform targeted interventions and strengthen accountability for equity;
- **capacity strengthening and quality assurance**: invest in human resources, diagnostic and laboratory infrastructure and antimicrobial resistance monitoring capacity and establish quality assurance mechanisms and ensure timely feedback to support evidence-informed decision-making;
- **community engagement and accountability**: involve civil society organizations and key population networks in community-led monitoring and in interpreting and using findings for improving programmes and for advocacy; and
- **ethical and rights-based safeguards**: maintain confidentiality and privacy in data collection, management and use, and participation in surveillance and monitoring activities must be voluntary, non-coercive and designed to avoid stigma, discrimination and harm.

Fig. 4. National monitoring framework for STIs and the 11 core indicators.



Source: *Framework for monitoring sexually transmitted infections and strengthening surveillance* (8).

8.4 Relevant WHO guidelines and tools

The following key WHO guidelines and tools (listed in alphabetical order) provide normative and operational guidance related to monitoring, evaluation and surveillance:

- A tool for strengthening STI surveillance at the country level *(68)*
- Enhanced Gonococcal Antimicrobial Surveillance Programme (EGASP): general protocol *(62)*
- Enhanced Gonococcal Antimicrobial Surveillance Programme (EGASP): supplementary protocols *(63)*
- Framework for monitoring sexually transmitted infections and strengthening surveillance *(8)*
- Global guidance on criteria and processes for validation: elimination of mother-to-child transmission of HIV, syphilis and hepatitis B virus (*70*)
- International Classification of Diseases, 11th revision (ICD-11) [website] *(69)*
- WHO congenital syphilis estimation tool [website] *(71)*.

9. Enabling service delivery for STIs

9.1 Overview

Enabling service delivery supports all components of the STI prevention and care cascade by ensuring that services are accessible, high quality and people centred. Upholding confidentiality, human rights and informed choice fosters trust and encourages care seeking, and targeted interventions help address inequities among populations most affected. Integrated, decentralized and differentiated service delivery models – supported by task sharing, digital tools and self-care approaches – can enhance reach, efficiency and quality, and align STI services with broader goals of universal health coverage and PHC *(15, 24)*.

Across many settings, STI services face persistent challenges such as incomplete integration with HIV, sexual and reproductive health and PHC; shortages of trained health workers and essential supplies; and stigma or discrimination that discourages service use. Strengthening delivery systems through decentralization, integration within essential health service packages and greater use of community- and peer-led approaches can improve access, quality and sustainability *(5, 13, 24, 28)*. These approaches complement broader health-system reforms described in Section 10.

9.2 Core components of innovative programme and service delivery approaches

Integration of services

Integrating STI services within PHC, HIV services, community services and sexual and reproductive health services – including family planning, adolescent health and maternal and child health – reduces missed opportunities and increases efficiency (see Fig. 5). In settings with a high burden of STIs, this may include embedding syphilis testing within antenatal care, offering HIV testing within STI services and incorporating asymptomatic STI screening into HIV and PrEP programmes *(5, 24, 52)*. Although integration enhances efficiency, reduces duplication and promotes equity, it may not reduce short-term costs. Cost–effectiveness depends on the setting and delivery model, but over time integration strengthens overall system performance and sustainability *(24)*.

Decentralization

Shifting STI services from specialist clinics to PHC and community settings brings care closer to people and reduces access barriers, especially in rural or underserved areas. Innovative delivery models – including pharmacy-based provision, mobile outreach and community-led testing – can expand coverage, and specialist centres remain essential for complex case management, training and research *(5, 15, 24)*.

Task sharing

Redistributing responsibilities to nurses, midwives, community health workers and trained lay providers increases accessibility and acceptability. Safe implementation requires training, supportive supervision and the use of digital learning tools. Shared tasks may include symptom screening, rapid testing, support for specimen self-collection, counselling and partner notification *(24)*.

Digital health interventions

Digital platforms – such as text-message reminders, teleconsultations, appointment scheduling and digital partner notification tools – can enhance access, privacy and continuity of care. These tools should be designed to ensure accessibility, inclusivity, equity and data protection and should complement rather than replace in-person services *(24, 72)*.

Self-care interventions

Empowering people to manage aspects of their sexual health increases autonomy, privacy and service coverage. Recommended self-care interventions include self-collection of specimens, syphilis self-testing and consistent use of condoms and condom-compatible lubricants. Self-care models can reduce stigma, improve efficiency and extend reach to populations facing barriers to facility-based care *(24, 28, 53)*.

Capacity and workforce support

High-quality STI care requires a skilled and supported workforce. Training, mentoring and supportive supervision are essential, complemented by blended approaches such as electronic learning and simulation-based training. Workforce development should include both professional and lay providers to promote comprehensive, community-linked care *(24, 73)*.

Commodity security and financing

Reliable access to essential medicines, diagnostics and prevention tools underpins effective STI programmes. Monitoring stock-outs of priority commodities – such as benzathine penicillin G and rapid syphilis diagnostic tests – serves as a key performance indicator. Strengthened procurement systems, pooled purchasing mechanisms and digital supply chain monitoring can improve sustainability *(8, 13, 24)*.

Surveillance and strategic information

Service delivery points are critical sources of data for surveillance and continuous quality improvement. Linking these data to national health information systems and digital dashboards enables real-time monitoring, and community-led monitoring provides insights on service quality, accessibility and equity *(8, 24)*.

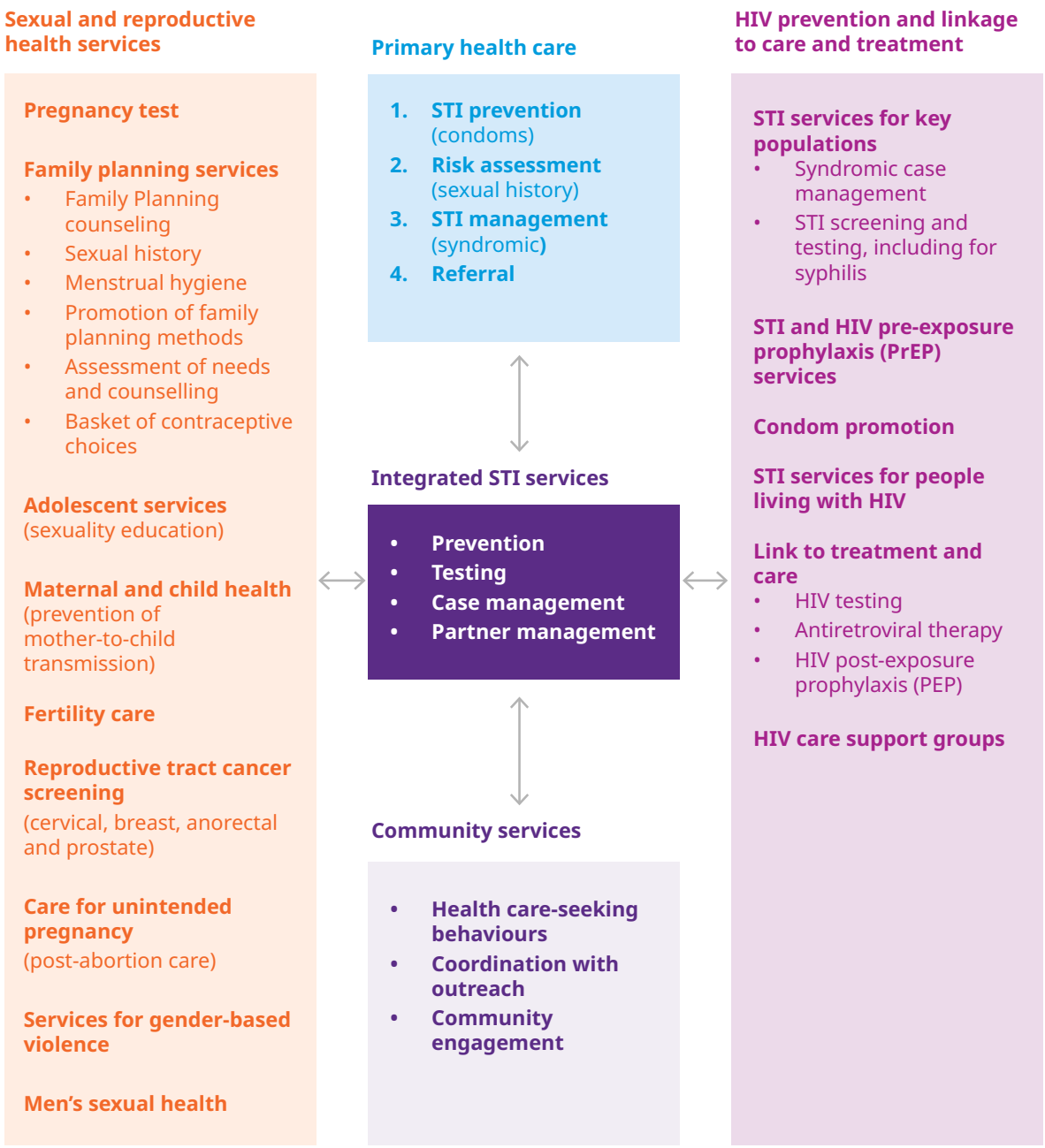
9.3 Implementation considerations

Implementation of enabling service delivery interventions should follow the cross-cutting considerations outlined in Section 1 and the specific points below:

- **provider capacity and support:** invest in training, mentorship and continuous professional development across all levels of health workers, including lay and community providers, to ensure competent, respectful and high-quality care; supportive supervision and performance feedback strengthen motivation and consistency;
- **monitoring and quality improvement:** use service delivery data to monitor coverage, equity, commodity availability, treatment outcomes and antimicrobial resistance and align monitoring with national health information systems to strengthen accountability and inform programme improvement;

- **equity and rights-based approaches:** ensure that all services are confidential, voluntary, non-coercive and stigma-free, address barriers arising from discrimination, gender inequality or criminalization and uphold dignity and informed choice at every level of service delivery;
- **reaching key and priority populations:** tailor service delivery models to the needs of key and priority populations – including adolescents, sex workers, men who have sex with men, transgender people, people who inject drugs and those in prisons or humanitarian settings – to promote equitable access and uptake; and
- **financing and sustainability:** integrate STI services into universal health coverage benefit packages and national essential medicines lists to ensure sustainable financing, reduce out-of-pocket costs and maintain consistent supply of essential commodities and diagnostics.

Fig. 5. Integrating STI care.



9.4 Relevant WHO guidelines and tools

The following key WHO guidelines and tools (listed in alphabetical order) provide normative and operational guidance related to enabling service delivery for STIs:

- Consolidated guidelines on HIV, viral hepatitis and STI prevention, diagnosis, treatment and care for key populations *(5)*
- Global curriculum guide for community health workers [website] *(73)*
- Operational framework for primary health care: transforming vision into action *(15)*
- Recommendations on the delivery of health services for the prevention and care of sexually transmitted infections *(24)*
- Sustaining priority services for HIV, viral hepatitis and sexually transmitted infections in a changing funding landscape: operational guidance *(13)*
- UHC compendium: health interventions for universal health coverage [website] *(16)*
- WHO guideline on self-care interventions for health and well-being *(28)*
- WHO guideline: recommendations on digital interventions for health system strengthening *(72)*
- WHO implementation tool for pre-exposure prophylaxis (PrEP) of HIV infection: integrating STI services *(52)*.

10. Integrated approaches to STI control within PHC

Building on Section 9, which described the enablers for effective delivery of STI services, this section situates STI prevention and care within the broader framework of PHC and universal health coverage. Effective STI control requires moving beyond vertical, disease-specific programmes towards coordinated, system-wide approaches embedded in PHC *(15, 16, 24)*.

Integrating STI prevention, testing, treatment and partner services into PHC strengthens access, continuity and resilience while contributing to achieving universal health coverage and the Sustainable Development Goals. It also enables countries to expand equitable, people-centred care and achieve the 2030 target of ending STIs as a public health threat *(14, 15, 24)*.

This section provides practical guidance for policy-makers and programme managers on operationalizing STI integration within PHC. It outlines synergy with the PHC framework, identifies enablers and barriers, describes models of care across service levels and provides a practical checklist for action.

10.1 Synergy with PHC

The Global Health Sector Strategies for HIV, viral hepatitis and sexually transmitted infections, 2022–2030 call for scaling up prevention, integrating services into PHC, expanding people-centred care, closing funding gaps and accelerating innovation *(14)*. These priorities align closely with the 14 levers of PHC (see Table 3), especially those focused on service delivery, community engagement, governance, financing and multisectoral action *(15)*.

10.2 Core components of integration

STI service packages

Every PHC system should guarantee access to an essential package of STI services across the life-course, including prevention, screening, diagnosis, treatment, partner services and follow-up. Embedding these services in national essential health service packages ensures financing, sustainability and equity.

Multisectoral coordination

Effective STI control requires collaboration beyond the health sector. The education, social protection, justice, labour and youth sectors all have critical roles in addressing social and structural determinants of health that shape vulnerability to STIs. PHC provides a natural platform for such multisectoral engagement, linking STI responses to human rights, gender equality and broader social policy frameworks and ensuring that no population is left behind.

Empowered people and communities

Communities – especially key populations, adolescents and young adults and other marginalized groups – are central to STI service design, delivery and monitoring. Community-led and peer-led approaches extend reach, enhance acceptability and strengthen accountability within PHC systems.

Table 3. Synergy between PHC levers and controlling STIs.

PHC lever	Synergy with controlling STIs
Strategic levers	
Political commitment and leadership	Elevates STIs as a public health priority; drives policy, resources and accountability
Governance and policy frameworks	Embeds STI services into national health strategies; supports multisectoral coordination and oversight
Sustainable financing	Ensures predictable domestic funding; includes STI care in universal health coverage benefit packages
Community engagement	Reduces stigma; empowers key populations and promotes participatory governance
Operational levers	
Models of care	Integrates STI services across PHC, HIV, sexual and reproductive health and community platforms
Workforce	Builds skilled, culturally competent health-care providers at all levels
Infrastructure	Ensures safe, accessible facilities for equitable service delivery
Medicines and diagnostics	Secures access to quality-assured STI tests, medicines and preventive commodities
Private sector engagement	Harnesses clinics, laboratories and pharmacies to expand reach
Purchasing and payment systems	Provides incentives for preventive services and early treatment
Digital health	Enables partner notification, telehealth and surveillance.
Quality improvement	Aligns STI service standards with continuous quality improvement systems
Research	Advances operational research, innovation and vaccine development
Monitoring and evaluation	Integrates STI indicators and surveillance (such as EGASP and case reporting) into national health information systems

10.3 Enablers and barriers

Enablers

- PHC systems maintain service continuity during crises such as the coronavirus disease 2019 (COVID-19) pandemic.
- Integration within universal health coverage benefit packages reduces financial barriers to care.
- Community-based PHC promotes equity and trust among underserved populations.
- Digital tools and self-care innovations expand reach, privacy and autonomy.

Barriers

- Weak political commitment or fragmented governance delays service integration.
- Overstretched PHC facilities may lack adequate staff, commodities or infrastructure.

- Workforce shortages and high turnover undermine service quality.
- Stock-outs and fragile supply chains limit access to diagnostics and medicines.
- Donor-driven vertical funding perpetuates siloed STI programmes.
- Stigma, discrimination and punitive laws deter people from seeking care.

10.4 Models of care

Integrated models of care ensure that STI services are available across all levels of the health system – from community to specialist referral centres – maximizing equity, accessibility, quality and efficiency while safeguarding confidentiality and human rights (see Box 2) *(24)*.

PHC-based facility interventions integrate STI prevention, diagnosis, treatment and partner services as part of routine, people-centred care:

- **minimum service package:** sexual history and risk assessment; targeted screening; syndromic management; diagnostic testing where feasible; same-day treatment; partner services; HPV and hepatitis B virus vaccination in accordance with national policy; contraception and PrEP linkage; and harm-reduction referrals (see Table 4);
- **set-up and staffing:** train clinicians and nurses in STI management; apply task-sharing to community health workers; and ensure privacy, confidentiality and stigma-free reception;
- **diagnostics and medicines:** maintain reliable access to quality-assured NAAT or rapid diagnostic tests (including support for self-collection) and WHO-recommended medicines, and apply WHO guidance on targeted screening in high-prevalence settings;
- **care pathways:** provide same-day treatment if possible; offer multiple partner notification options; and consider expedited partner therapy, if permitted by policy and if safety can be ensured;
- **digital support:** use teleconsultations, text-message reminders and integrated digital reporting systems for monitoring and surveillance;
- **linkage:** integrate with HIV, sexual and reproductive health, antenatal, contraceptive, mental health and gender-based violence services; and
- **quality and antimicrobial resistance safeguards:** use STI cascade indicators; conduct tests of cure if treatment failure is suspected; and contribute to antimicrobial resistance surveillance.

10.5 Cross-cutting strategic enablers

The following cross-cutting strategic enablers are applicable across all service levels:

- **policy and governance:** embed STI services into PHC and national universal health coverage strategies and plans;
- **services delivery:** implement WHO recommendations on decentralization, integration, task sharing and digital health;
- **asymptomatic screening:** apply WHO's targeted screening guidance, especially for key populations and in high-prevalence settings;
- **partner services:** offer multiple notification approaches, including expedited partner therapy if appropriate and safe; and
- **surveillance and quality improvement:** align with PHC levers and integrate STI indicators and antimicrobial resistance monitoring into broader health information systems.

Box 2. Checklist for advancing STI integration within PHC.

- ☐ **Conduct a situation assessment of the STI and PHC policy environment.**
- ☐ **Align national STI strategic plans with PHC and universal health coverage frameworks.**
- ☐ **Define and cost an essential STI service package at all levels.**
- ☐ **Ensure a trained and supported workforce, including community health workers and peers.**
- ☐ **Maintain uninterrupted supplies of diagnostics, medicines and prevention tools.**
- ☐ **Secure sustainable domestic funding for STI services.**
- ☐ **Institutionalize community engagement in governance and monitoring.**
- ☐ **Strengthen surveillance, monitoring and evaluation systems with disaggregated data.**
- ☐ **Use digital health tools for service delivery, monitoring and partner notification.**
- ☐ **Invest in operational and implementation research and share the lessons learned.**

Table 4. Proposed models of STI service delivery.

Level	Purpose	Core package of services	Key enablers
PHC facilities	Make STI services routine and integrated into first-line care	Sexual history; risk assessment; targeted screening; syndromic management; diagnostics if feasible; same-day treatment; partner services; HPV and hepatitis B virus vaccination; HIV and PrEP linkage	Task-sharing, staff training, commodity security, digital support
Community-based delivery	Reach underserved populations; reduce stigma and structural barriers.	Outreach and mobile clinics; self-collection for NAAT; rapid HIV and syphilis testing; condoms and lubricants; peer navigation; vaccination campaigns	Peer-led models, co-design with civil society organizations, linkage pathways to PHC
Referral and specialist services	Manage complex cases, complications and antimicrobial resistance surveillance	Advanced diagnostics (culture, antimicrobial susceptibility testing and whole-genome sequencing); management of treatment failures, congenital syphilis and severe infections; antimicrobial resistance stewardship; provider mentorship	Specialist hubs, laboratory quality assurance, referral registries, expert hotlines

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53. Updated recommendations for the treatment of *Neisseria gonorrhoeae*, *Chlamydia trachomatis* and *Treponema pallidum* (syphilis) and new recommendations on syphilis testing and partner services. Geneva: World Health Organization; 2024 (https://iris.who.int/handle/10665/378213). Licence: CC BY-NC-SA 3.0 IGO.

54. WHO guideline for screening and treatment of cervical pre-cancer lesions for cervical cancer prevention. 2nd ed. Geneva: World Health Organization; 2021 (https://iris.who.int/handle/10665/342365). Licence: CC BY-NC-SA 3.0 IGO.

55. Human papillomavirus (HPV) nucleic acid amplification tests (NAATs) to screen for cervical pre-cancer lesions and prevent cervical cancer: policy brief. Geneva: World Health Organization; 2022 (https://iris.who.int/handle/10665/352495). Licence: CC BY-NC-SA 3.0 IGO.

56. WHO list of prequalified in vitro diagnostic products [website]. Geneva: World Health Organization; 2025 (https://extranet.who.int/prequal/vitro-diagnostics/prequalified/in-vitro-diagnostics).

57. Point-of-care tests for sexually transmitted infections: target product profiles. Geneva: World Health Organization; 2023 (https://iris.who.int/handle/10665/371294). Licence: CC BY-NC-SA 3.0 IGO.

58. The diagnostics landscape for sexually transmitted infections. Geneva: World Health Organization; 2023 (https://iris.who.int/handle/10665/371498). Licence: CC BY-NC-SA 3.0 IGO.

59. WHO recommendations on self-care interventions: self-collection of samples for sexually transmitted infections (STIs), 2022 update. Geneva: World Health Organization; 2022 (https://iris.who.int/handle/10665/376246). Licence: CC BY-NC-SA 3.0 IGO.

60. WHO recommendations on self-care interventions: human papillomavirus (HPV) self-sampling as part of cervical cancer screening and treatment, 2022 update. Geneva: World Health Organization; 2023 (https://iris.who.int/handle/10665/366868). Licence: CC BY-NC-SA 3.0 IGO.

61. Recommendations for the treatment of *Trichomonas vaginalis*, *Mycoplasma genitalium*, *Candida albicans*, bacterial vaginosis and human papillomavirus (anogenital warts). Geneva: World Health Organization; 2024 (https://iris.who.int/handle/10665/378215). Licence: CC BY-NC-SA 3.0 IGO.

62. Enhanced Gonococcal Antimicrobial Surveillance Programme (EGASP): general protocol. Geneva: World Health Organization; 2021 (https://iris.who.int/handle/10665/341333). Licence: CC BY-NC-SA 3.0 IGO.

63. Enhanced Gonococcal Antimicrobial Surveillance Programme (EGASP): supplementary protocols. Geneva: World Health Organization; 2023 (https://iris.who.int/handle/10665/375797). Licence: CC BY-NC-SA 3.0 IGO.

64. WHO guidelines for the treatment of genital herpes simplex virus. Geneva: World Health Organization; 2016 (https://iris.who.int/handle/10665/250693). Licence: CC BY-NC-SA 3.0 IGO.

65. WHO guidelines for the treatment of *Treponema pallidum* (syphilis). Geneva: World Health Organization; 2016 (https://iris.who.int/handle/10665/249572). Licence: CC BY-NC-SA 3.0 IGO.

66. Network-based testing services for HIV, viral hepatitis, and STIs [website]. Geneva: World Health Organization; 2025 (https://www.who.int/tools/network-based-testing-services-toolkit-for-hiv-hepatitis-and-stis).

67. WHO guideline on contact tracing. Geneva: World Health Organization; 2024 (https://iris.who.int/handle/10665/380060). Licence: CC BY-NC-SA 3.0 IGO.

68. A tool for strengthening STI surveillance at the country level. Geneva: World Health Organization; 2015 (https://iris.who.int/handle/10665/161074).

69. International Classification of Diseases, 11th revision (ICD-11) [website]. Geneva: World Health Organization; 2025 (https://icd.who.int/en).

70. Global guidance on criteria and processes for validation: elimination of mother-to-child transmission of HIV, syphilis and hepatitis B virus. Geneva: World Health Organization; 2021 (https://iris.who.int/handle/10665/349550). Licence: CC BY-NC-SA 3.0 IGO.

71. WHO congenital syphilis estimation tool [website]. Geneva: World Health Organization; 2020 (https://www.who.int/teams/global-hiv-hepatitis-and-stis-programmes/stis/strategic-information/congenital-syphilis-estimation-tool).

72. WHO guideline: recommendations on digital interventions for health system strengthening. Geneva: World Health Organization; 2019 (https://iris.who.int/handle/10665/311941). Licence: CC BY-NC-SA 3.0 IGO.

73. Global curriculum guide for community health workers. Geneva: World Health Organization; 2025 (https://iris.who.int/handle/10665/384658). License: CC BY-NC-SA 3.0 IGO.

Annexes

Annex 1. List of key WHO resources on STIs

WHO guidelines

- Recommendations on the delivery of health services for the prevention and care of sexually transmitted infections. Geneva: World Health Organization; 2025 (https://iris.who.int/handle/10665/381907). Licence: CC BY-NC-SA 3.0 IGO.
- Guidelines for the management of asymptomatic sexually transmitted infections. Geneva: World Health Organization; 2025 (https://iris.who.int/handle/10665/381533). Licence: CC BY-NC-SA 3.0 IGO.
- Recommendations for the treatment of *Trichomonas vaginalis*, *Mycoplasma genitalium*, *Candida albicans*, bacterial vaginosis and human papillomavirus (anogenital warts). Geneva: World Health Organization; 2024 (https://iris.who.int/handle/10665/378215). Licence: CC BY-NC-SA 3.0 IGO.
- Updated recommendations for the treatment of *Neisseria gonorrhoeae*, *Chlamydia trachomatis* and *Treponema pallidum* (syphilis), and new recommendations on syphilis testing and partner services. Geneva: World Health Organization; 2024 (https://iris.who.int/handle/10665/378213). Licence: CC BY-NC-SA 3.0 IGO.
- Framework for monitoring sexually transmitted infections and strengthening surveillance. Geneva: World Health Organization; 2024 (https://iris.who.int/handle/10665/378238). Licence: CC BY-NC-SA 3.0 IGO.
- Laboratory and point-of-care diagnostic testing for sexually transmitted infections, including HIV. Geneva: World Health Organization; 2023 (https://iris.who.int/handle/10665/374252). Licence: CC BY-NC-SA 3.0 IGO.
- Consolidated guidelines on HIV, viral hepatitis and STI prevention, diagnosis, treatment and care for key populations. Geneva: World Health Organization; 2022 (https://iris.who.int/handle/10665/360601). Licence: CC BY-NC-SA 3.0 IGO.
- WHO guideline on self-care interventions for health and well-being, 2022 revision. Geneva: World Health Organization; 2022 (https://iris.who.int/handle/10665/357179). Licence: CC BY-NC-SA 3.0 IGO.
- Guidelines for the management of symptomatic sexually transmitted infections. Geneva: World Health Organization; 2021 (https://iris.who.int/handle/10665/342523). Licence: CC BY-NC-SA 3.0 IGO.
- WHO guideline for screening and treatment of cervical pre-cancer lesions for cervical cancer prevention: use of mRNA tests for human papillomavirus (HPV). 2nd ed. Geneva: World Health Organization; 2021 (https://iris.who.int/handle/10665/350652). Licence: CC BY-NC-SA 3.0 IGO.
- WHO guideline on syphilis screening and treatment for pregnant women. Geneva: World Health Organization; 2017 (https://iris.who.int/handle/10665/259003). Licence: CC BY-NC-SA 3.0 IGO.
- WHO guidelines for the treatment of *Chlamydia trachomatis.* Geneva: World Health Organization; 2016 (https://iris.who.int/handle/10665/246165).
- WHO guidelines for the treatment of genital herpes simplex virus. Geneva: World Health Organization; 2016 (https://iris.who.int/handle/10665/250693).

- WHO guidelines for the treatment of *Neisseria gonorrhoeae.* Geneva: World Health Organization; 2016 (https://iris.who.int/handle/10665/246114).
- WHO guidelines for the treatment of *Treponema pallidum* (syphilis). Geneva: World Health Organization; 2016 (https://iris.who.int/handle/10665/249572).
- Brief sexuality-related communication: recommendations for a public health approach. Geneva: World Health Organization; 2015 (https://iris.who.int/handle/10665/170251).

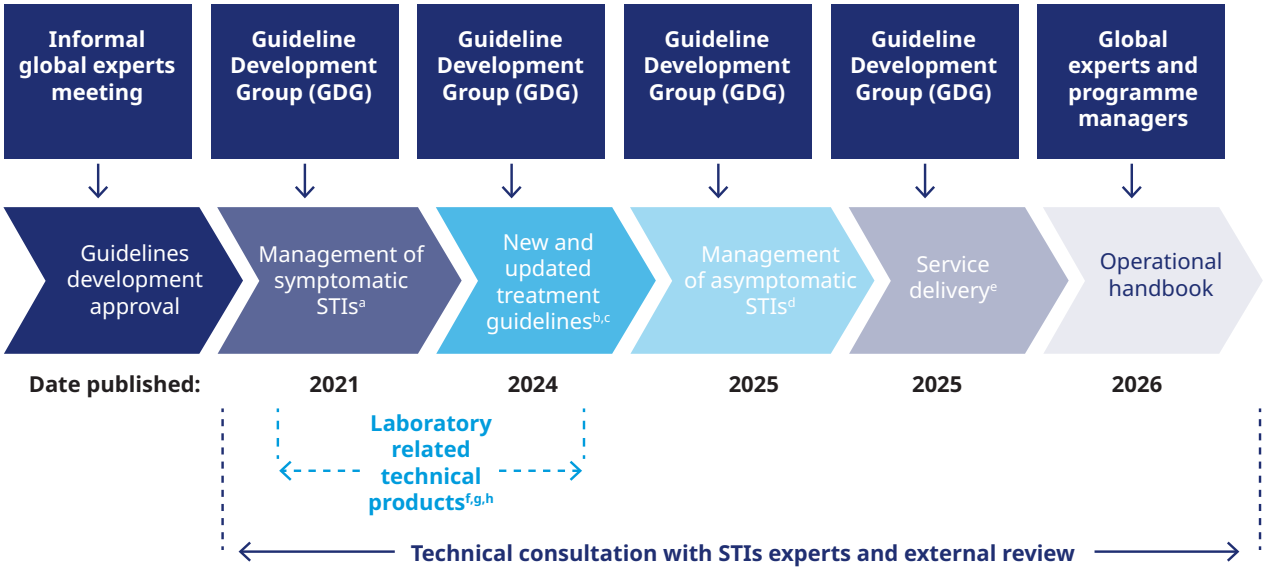
Relevant WHO guidance

- WHO, UNICEF. Country guidance for planning triple elimination of mother-to-child transmission of HIV, syphilis and hepatitis B virus programmes. Geneva: World Health Organization; 2025 (https://iris.who.int/handle/10665/381914). Licence: CC BY-NC-SA 3.0 IGO.
- Enhanced Gonococcal Antimicrobial Surveillance Programme (EGASP): supplementary protocols. Geneva: World Health Organization; 2023 (https://iris.who.int/handle/10665/375797). Licence: CC BY-NC-SA 3.0 IGO.
- Guidance for national strategic planning (NSP): health sector response to HIV, viral hepatitis and sexually transmitted infections. Geneva: World Health Organization; 2023 (https://iris.who.int/handle/10665/373523). Licence: CC BY-NC-SA 3.0 IGO.
- Guide to conducting programme reviews for HIV, viral hepatitis and sexually transmitted infections. Geneva: World Health Organization; 2023 (https://iris.who.int/handle/10665/373333). Licence: CC BY-NC-SA 3.0 IGO.
- Introducing a framework for implementing triple elimination of mother-to-child transmission of HIV, syphilis and hepatitis B virus: policy brief. Geneva: World Health Organization; 2023 (https://iris.who.int/handle/10665/375893). Licence: CC BY-NC-SA 3.0 IGO.
- Point-of-care tests for sexually transmitted infections: target product profiles. Geneva: World Health Organization; 2023 (https://iris.who.int/handle/10665/371294). Licence: CC BY-NC-SA 3.0 IGO.
- The diagnostics landscape for sexually transmitted infections. Geneva: World Health Organization; 2023 (https://iris.who.int/handle/10665/371498). Licence: CC BY-NC-SA 3.0 IGO.
- Global health sector strategies on, respectively, HIV, viral hepatitis and sexually transmitted infections for the period 2022–2030. Geneva: World Health Organization; 2022 (https://iris.who.int/handle/10665/360348). Licence: CC BY-NC-SA 3.0 IGO.
- WHO implementation tool for pre-exposure prophylaxis (PrEP) of HIV infection: module 13: integrating STI services. Geneva: World Health Organization; 2022 (https://iris.who.int/handle/10665/362227). Licence: CC BY-NC-SA 3.0 IGO.
- Enhanced Gonococcal Antimicrobial Surveillance Programme (EGASP): general protocol. Geneva: World Health Organization; 2021 (https://iris.who.int/handle/10665/341333). Licence: CC BY-NC-SA 3.0 IGO.
- Global guidance on criteria and processes for validation: elimination of mother-to-child transmission of HIV, syphilis and hepatitis B virus. Geneva: World Health Organization; 2021 (https://iris.who.int/handle/10665/349550). Licence: CC BY-NC-SA 3.0 IGO.
- A tool for strengthening STI surveillance at the country level. Geneva: World Health Organization; 2015 (https://iris.who.int/handle/10665/161074).
- Training modules for the syndromic management of sexually transmitted infections. 2nd ed. Geneva: World Health Organization; 2007 (https://iris.who.int/handle/10665/43275).

Annex 2. Methodology for development of the consolidated operational handbook

The development of the consolidated operational handbook on STIs followed a structured, consultative and iterative process, drawing on WHO standards for evidence-informed products and approaches used for derivative implementation guidance. This handbook was produced as a derivative output of the WHO comprehensive guidelines on the prevention, diagnosis, treatment and care of STIs, under planning clearance approved by the WHO Guideline Review Committee (see Fig. A2.1). The process followed several structured steps, informed by guidance from the WHO Science Division *(1)*, as outlined below.

Fig. A2.1. STI guidelines and consolidated operational handbook development process.



[a] *Guidelines for the management of symptomatic sexually transmitted infections* (4)

[b] *Updated recommendations for the treatment of Neisseria gonorrhoeae, Chlamydia trachomatis and Treponema pallidum (syphilis), and new recommendations on syphilis testing and partner services* (5)

[c] *Recommendations for the treatment of Trichomonas vaginalis, Mycoplasma genitalium, Candida albicans, bacterial vaginosis and human papillomavirus (anogenital warts)* (6)

[d] *Guidelines for the management of asymptomatic sexually transmitted infections* (7)

[e] *Recommendations on the delivery of health services for the prevention and care of sexually transmitted infections* (3)

[f] *Laboratory and point-of-care diagnostic testing for sexually transmitted infections, including HIV* (8)

[g] *Point-of-care tests for sexually transmitted infections: target product profiles* (9)

[h] *The diagnostics landscape for sexually transmitted infections* (10)

Step 1: Review of WHO normative guidance, global frameworks and related evidence

The process began with a structured review of all WHO normative guidelines relevant to the prevention, diagnosis, treatment and care of STIs. The review included all guidelines developed through structured, consultative processes in accordance with the *WHO handbook for guideline development (2)*, including use of the GRADE approach (see Annex 1).

The review identified all relevant recommendations, good practice statements, implementation considerations and explanatory remarks forming the technical foundation of this consolidated operational handbook. It also mapped related WHO strategic frameworks, including those on primary health care, universal health coverage, antimicrobial resistance and elimination of mother-to-child transmission of HIV, syphilis and hepatitis B.

Although WHO's normative guidance is comprehensive, the review highlighted the absence of a consolidated operational resource to support countries in translating these recommendations into practical STI service delivery models across the STI prevention and care cascade. Existing literature similarly contained limited programmatic or operational tools specific to STIs. These gaps were also reflected in systematic reviews on service delivery published in *Recommendations on the delivery of health services for the prevention and care of sexually transmitted infections (3)*.

Findings from this review confirmed the need for a derivative operational product that brings together relevant WHO normative and technical guidance and provides practical support to countries in planning, integrating and optimizing STI services. These findings guided the scope, structure and priority content areas for subsequent drafting.

Step 2: Development of the initial draft (version 0)

The WHO Secretariat prepared the initial draft (version 0), drawing on the findings of the review, examples from operational handbooks in other health areas and engagement with WHO regional and country office colleagues. The framework of the handbook was organized around the STI prevention and care cascade. Version 0 outlined the proposed structure, core content areas and operational framing and served as the foundation for subsequent revisions and consultations.

Step 3: Review and development of version 0.1

Version 0 was shared with selected WHO staff members across headquarters, regional and country offices for targeted technical input. Written feedback was consolidated and used to refine the structure and content, resulting in version 0.1.

Step 4: Expert review and development of versions 0.2 and 0.3

Version 0.1 underwent further expert review by former WHO staff and technical specialists familiar with WHO STI guidelines and service implementation. Revisions based on written exchanges resulted in version 0.2.

A virtual meeting was then held to discuss version 0.2 in detail, focusing on areas requiring group discussion. Further revisions based on this meeting resulted in version 0.3. This step ensured that the draft reflected operational realities across diverse settings and remained aligned with WHO normative guidance.

Step 5: Establishment of an external review group

An external review group was convened by the WHO Secretariat. The group included leading experts with extensive experience in STI service implementation across diverse settings. Members were selected to ensure geographical and gender balance and to reflect a broad range of perspectives, including academia, national programmes, technical agencies, policy and research institutions, programme managers, in-country end users and community organizations (listed in the Acknowledgements). Experts representing different components of the STI prevention

and care cascade (such as diagnostics, prevention, treatment and surveillance) were included. Standard WHO procedures for declaration and management of conflicts of interest were applied to all members of the external review group.

Step 6: External review and refinement

Version 0.3 was shared with members of the external review group. Reviewers were asked to assess technical accuracy, operational feasibility, clarity and alignment with WHO recommendations. Written comments were consolidated and discussed, informing revisions and the development of version 1.0.

Step 7: Finalization and approval

Following incorporation of all feedback, version 1.0 was finalized by the WHO Secretariat and prepared for publication. The handbook underwent WHO editorial and administrative review and was cleared through departmental and divisional processes in accordance with WHO requirements for derivative and implementation-focused products.

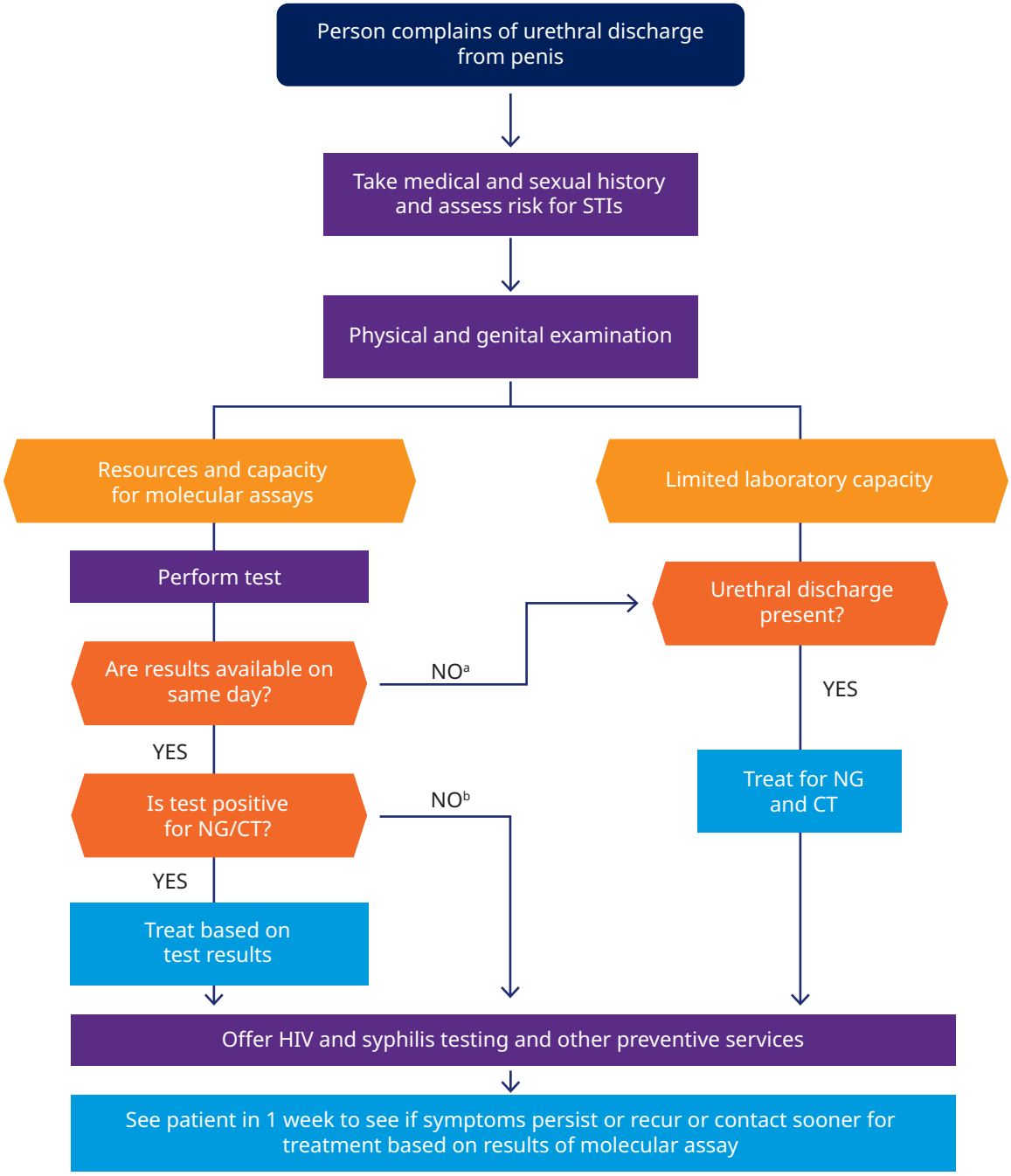
References[3]

1. Evidence generation for development of health products: a practical guide for WHO staff. Geneva: World Health Organization; 2023 (https://iris.who.int/handle/10665/375093). Licence: CC BY-NC-SA 3.0 IGO.
2. WHO handbook for guideline development. 2nd ed. Geneva: World Health Organization; 2014 (https://iris.who.int/handle/10665/145714).
3. Recommendations on the delivery of health services for the prevention and care of sexually transmitted infections. Geneva: World Health Organization; 2025 (https://iris.who.int/handle/10665/381907). Licence: CC BY-NC-SA 3.0 IGO.
4. Guidelines for the management of symptomatic sexually transmitted infections. Geneva: World Health Organization; 2021 (https://iris.who.int/handle/10665/342523). Licence: CC BY-NC-SA 3.0 IGO.
5. Updated recommendations for the treatment of *Neisseria gonorrhoeae*, *Chlamydia trachomatis* and *Treponema pallidum* (syphilis), and new recommendations on syphilis testing and partner services. Geneva: World Health Organization; 2024 (https://iris.who.int/handle/10665/378213). Licence: CC BY-NC-SA 3.0 IGO.
6. Recommendations for the treatment of *Trichomonas vaginalis*, *Mycoplasma genitalium*, *Candida albicans*, bacterial vaginosis and human papillomavirus (anogenital warts). Geneva: World Health Organization; 2024 (https://iris.who.int/handle/10665/378215). Licence: CC BY-NC-SA 3.0 IGO.
7. Guidelines for the management of asymptomatic sexually transmitted infections. Geneva: World Health Organization; 2025 (https://iris.who.int/handle/10665/381533). Licence: CC BY-NC-SA 3.0 IGO.
8. Laboratory and point-of-care diagnostic testing for sexually transmitted infections, including HIV. Geneva: World Health Organization; 2023 (https://iris.who.int/handle/10665/374252). Licence: CC BY-NC-SA 3.0 IGO.
9. Point-of-care tests for sexually transmitted infections: target product profiles. Geneva: World Health Organization; 2023 (https://iris.who.int/handle/10665/371294). Licence: CC BY-NC-SA 3.0 IGO.
10. The diagnostics landscape for sexually transmitted infections. Geneva: World Health Organization; 2023 (https://iris.who.int/handle/10665/371498). Licence: CC BY-NC-SA 3.0 IGO.

[3] All references accessed on 13 November 2025.

Annex 3. Syndromic management flowcharts and treatment options

Fig. A3.1. Flowchart for managing urethral discharge from the penis.



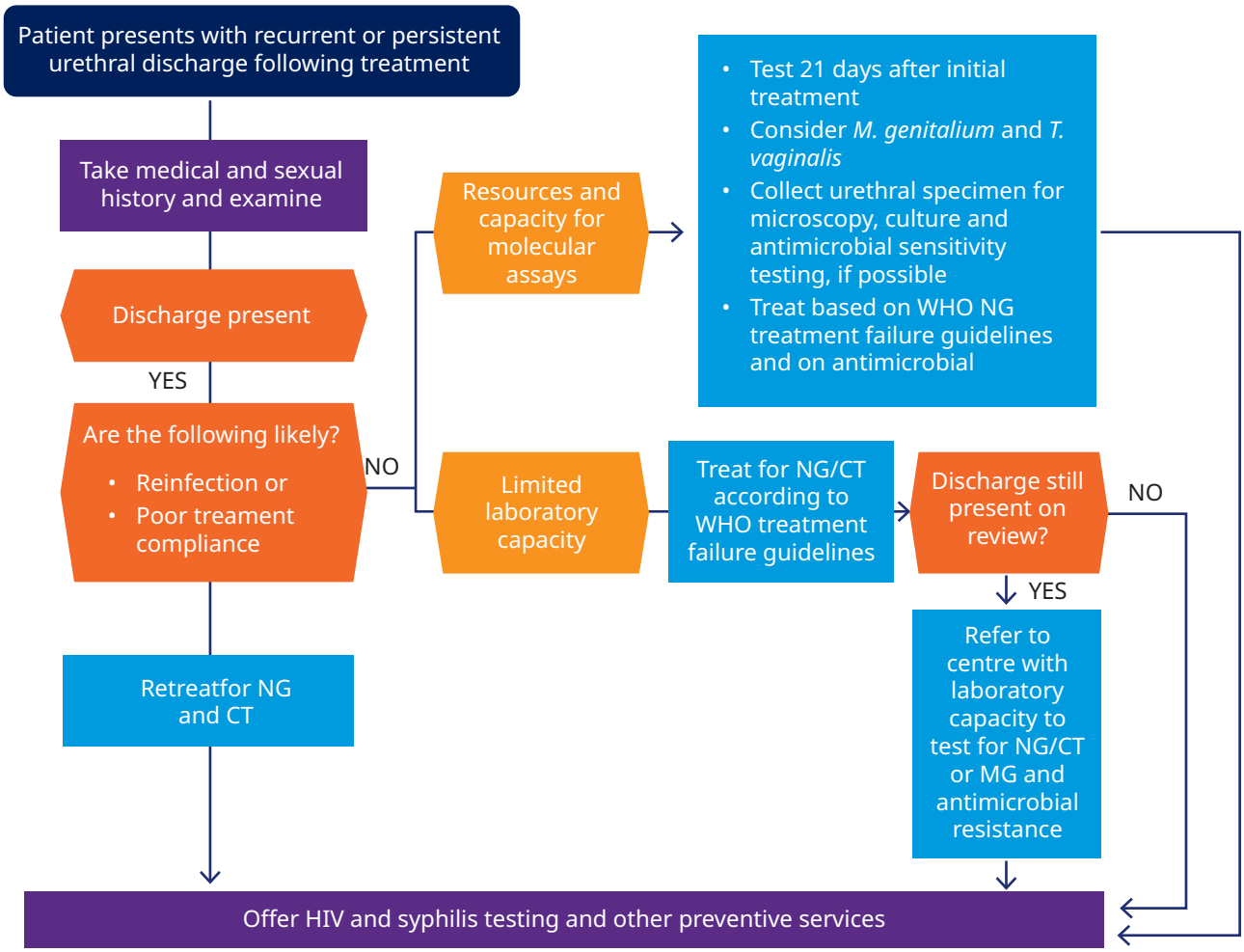
NG, *N. gonorrhoeae;* CT, *C. trachomatis.*

[a] If molecular assay was performed and results were not available on same day, revise the syndromic treatment initially provided according to the test results when available.

[b] If test is negative but urethral discharge is present, treat for non-gonococcal/non-chlamydial urethritis (such as *M. genitalium*, *T. vaginalis*)

Source: *Guidelines for the management of symptomatic sexually transmitted infections* (1).

Fig. A3.2. Flowchart for managing persistent or recurrent urethral discharge[a].



NG, *N. gonorrhoeae*; CT, *C. trachomatis*; MG, *M. genitalium*.

[a] This flowchart assumes that the patient has received and taken effective therapy for gonorrhoea and chlamydia before this consultation.

Source: *Guidelines for the management of symptomatic sexually transmitted infections* (1).

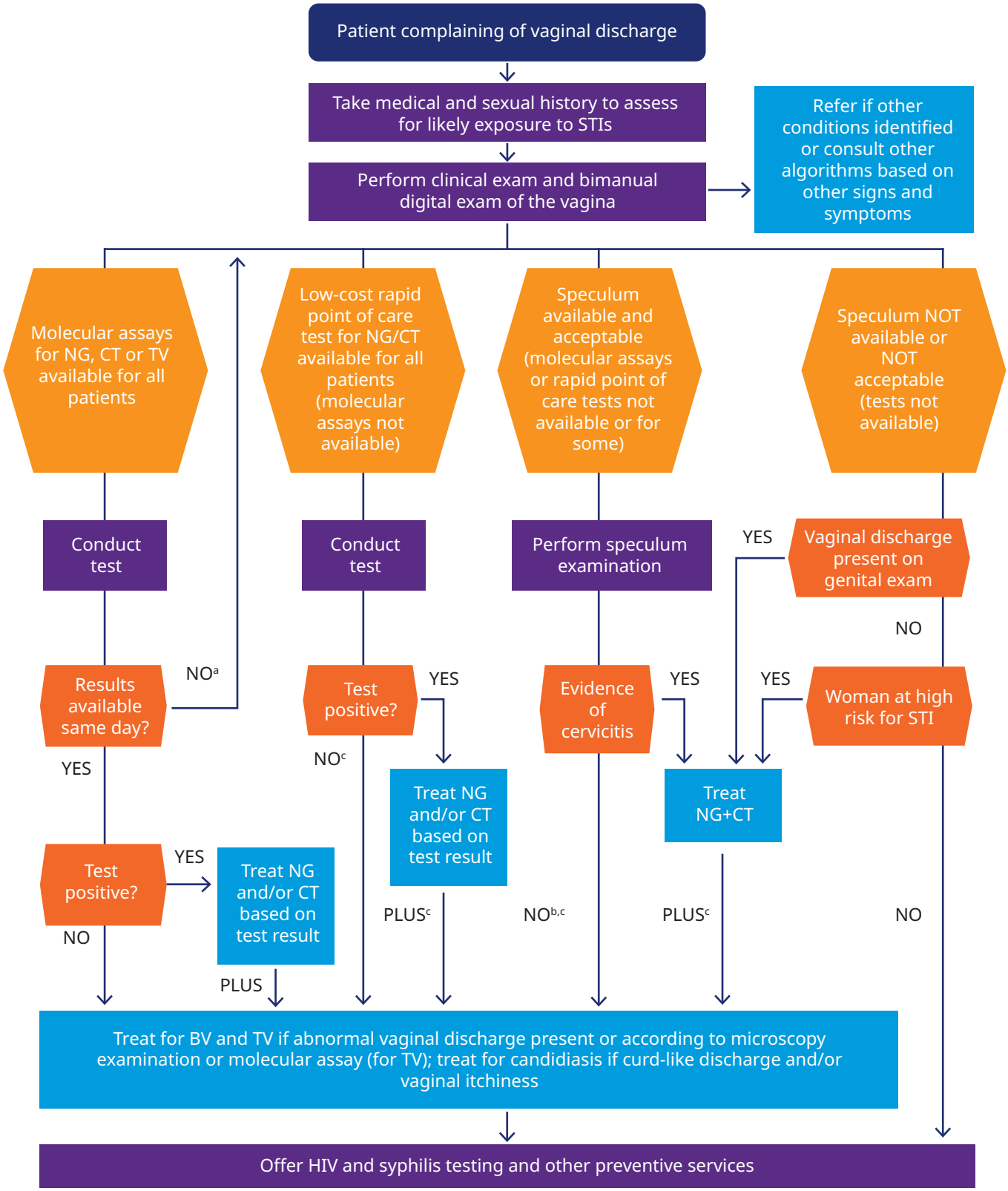
Table A3.1. Treatment options for urethral discharge.

Therapy for uncomplicated gonorrhoea + Therapy for chlamydia		
Infections covered	**First-line options**	**Guidelines and notes**
Gonorrhoea	Ceftriaxone, 1 g, intramuscularly, single dose	*(2)* Discuss pain and option of using lidocaine as diluent with injection
Chlamydia	Doxycycline. 100 mg, orally, twice daily for seven days	*(2)* Extended-release doxycycline may be an alternative

Additional therapeutic options for persistent or recurrent infections		
Infections covered	**First-line options**	**Guidelines and notes**
Trichomoniasis	Metronidazole, 400 or 500 mg, orally, twice daily for seven days	*(3)*
***M. genitalium* infection**	In settings with high or suspected high resistance to macrolides (such as where azithromycin is frequently used) or when testing shows that *M. genitalium* is resistant to macrolides: Doxycycline, 100 mg, orally, twice daily for seven days followed by Moxifloxacin, 400 mg, orally, once daily for seven days In settings with low or suspected low resistance to macrolides or when testing shows that *M. genitalium* is susceptible to macrolides: Doxycycline, 100 mg, orally, twice daily for seven days followed by Azithromycin, 1 g, orally on day 1, 500 mg once daily for three days	*(3)* If treatment for suspected chlamydial infection (doxycycline, 100 mg orally, twice daily for seven days) was provided, retreatment with doxycycline to reduce bacterial load before using moxifloxacin or azithromycin is not required.
Additional therapeutic options for suspected treatment failure[a]		
Gonorrhoea[b]	Ceftriaxone, 1 g, intramuscularly, single dose[c] or Spectinomycin, 2 g, intramuscularly, single dose or Gentamicin, 240 mg, intramuscularly, single dose + Azithromycin, 2 g, orally, single dose	*(2)* [a]If treatment failure occurred after a non-WHO-recommended treatment, retreat with a WHO-recommended therapy [b]If treatment failure occurred after a WHO-recommended therapy and reinfection is assessed to be unlikely, re-treat with a regimen not used previously from one of the options plus azithromycin and perform a test of cure [c]Only if ceftriaxone was not used previously

Source: adapted from *Guidelines for the management of symptomatic sexually transmitted infections* (1), *Updated recommendations for the treatment of Neisseria gonorrhoeae, Chlamydia trachomatis and Treponema pallidum (syphilis) and new recommendations on syphilis testing* and *partner services* (2) and *Recommendations for the treatment of Trichomonas vaginalis, Mycoplasma genitalium, Candida albicans, bacterial vaginosis and human papillomavirus (anogenital warts)* (3).

Fig. A3.3. Flowchart for the management of vaginal discharge.



NG, *N. gonorrhoeae*; CT, *C. trachomatis*; TV, *T. vaginalis*; BV, bacterial vaginosis.

[a] If molecular assay was performed and results were not available on same day, revise the syndromic treatment initially provided according to the test results when available.

[b] perform rapid point of care test or molecular assay if available to confirm NG/CT and treat if positive; if negative do not treat and ask woman to return if symptoms recur.

[c] if woman complains of recurrent or persistent discharge refer to a centre with laboratory capacity.

Source: *Guidelines for the management of symptomatic sexually transmitted infections* (1).

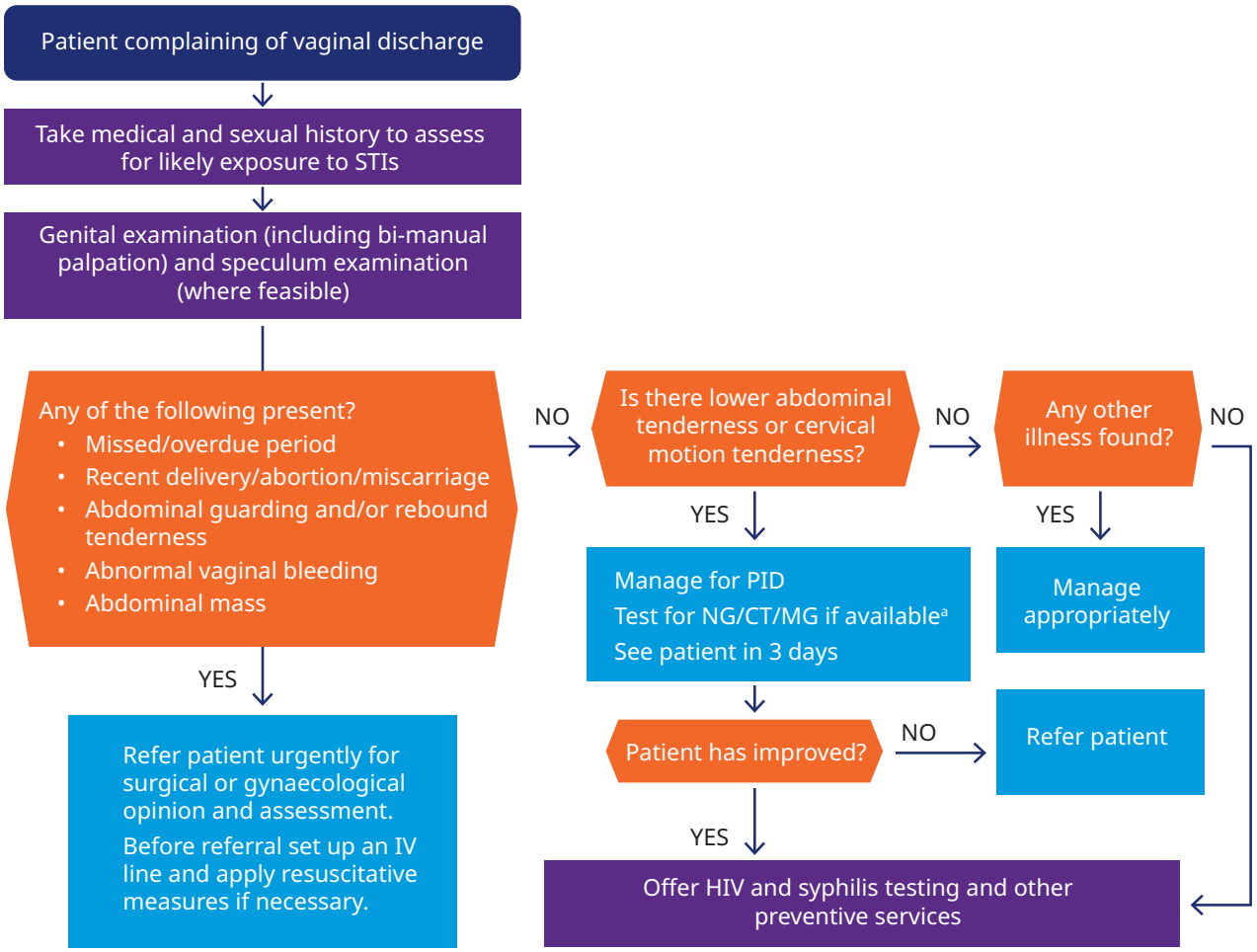
Table A3.2. Recommended treatment options for vaginal discharge.

Therapy for uncomplicated gonorrhoea + Therapy for chlamydia		
Infections covered	**First-line options**	**Guidelines and notes**
Gonorrhoea	Ceftriaxone, 1 g, intramuscularly, single dose	*(2)* Discuss pain and option of using lidocaine as diluent with injection
Chlamydia	Doxycycline, 100 mg, orally, twice daily for seven days	*(2)* Extended-release doxycycline may be an alternative Contraindicated during pregnancy and breastfeeding, use following first-line option: Azithromycin, 1 g, orally, single dose
Therapy for bacterial vaginosis and trichomoniasis if abnormal vaginal discharge present + Therapy for candidiasis if curd-like white discharge, vulvovaginal redness and itching are present		
Infections covered	**First-line options**	**Guidelines and notes**
Bacterial vaginosis and trichomoniasis	Metronidazole, 400 mg or 500 mg, orally, twice daily for seven days	*(3)*
Candidiasis	Fluconazole, 150–200 mg, orally, single dose or Clotrimazole, 500 mg, intravaginally, single dose, or 200 mg, intravaginally, once daily for three days, or 10% cream, intravaginally, single dose or Miconazole, 1200 mg, intravaginally, single dose, or 400 mg, intravaginally, once daily for seven days or Econazole, 150 mg, intravaginally as a single dose or Nystatin, 100 000 units, intravaginally, twice daily for 15 days	*(3)* Choice of treatment may depend on preferences for intravaginal administration (which may also reduce vulval itching and soreness) or oral administration, and the cost in different settings During pregnancy, use the following first-line options: Clotrimazole, 100 mg, intravaginally once daily for seven days or 1% cream intravaginally once daily for seven days or Nystatin, 100 000 units, intravaginally, twice daily for 15 days

Additional therapeutic options for persistent or recurrent infections		
***M. genitalium* infection**	In settings with high or suspected high resistance to macrolides (such as where azithromycin is frequently used) or when testing shows that *M. genitalium* is resistant to macrolides: Doxycycline, 100 mg, orally, twice daily for seven days followed by Moxifloxacin, 400 mg, orally, once daily for seven days In settings with low or suspected low resistance to macrolides or when testing shows that *M. genitalium* is susceptible to macrolides: Doxycycline, 100 mg, orally, twice daily for seven days followed by Azithromycin, 1 g, orally on day 1, then 500 mg once daily for three days	*(3)* If treatment for suspected chlamydial infection (doxycycline 100 mg orally twice daily for seven days) is provided, treatment with doxycycline to reduce bacterial load before using moxifloxacin or azithromycin is not required. Contraindicated during pregnancy and breastfeeding, use following first-line option: Pristinamycin,1 g, orally four times daily for 10 days

Source: adapted from *Guidelines for the management of symptomatic sexually transmitted infections* (1) and *Recommendations for the treatment of Trichomonas vaginalis, Mycoplasma genitalium, Candida albicans, bacterial vaginosis and human papillomavirus (anogenital warts)* (3).

Fig. A3.4. Flowchart for managing lower abdominal pain.



NG, *N. gonorrhoeae;* CT, *C. trachomatis;* MG, *M. genitalium.*

[a] To support partner notification.

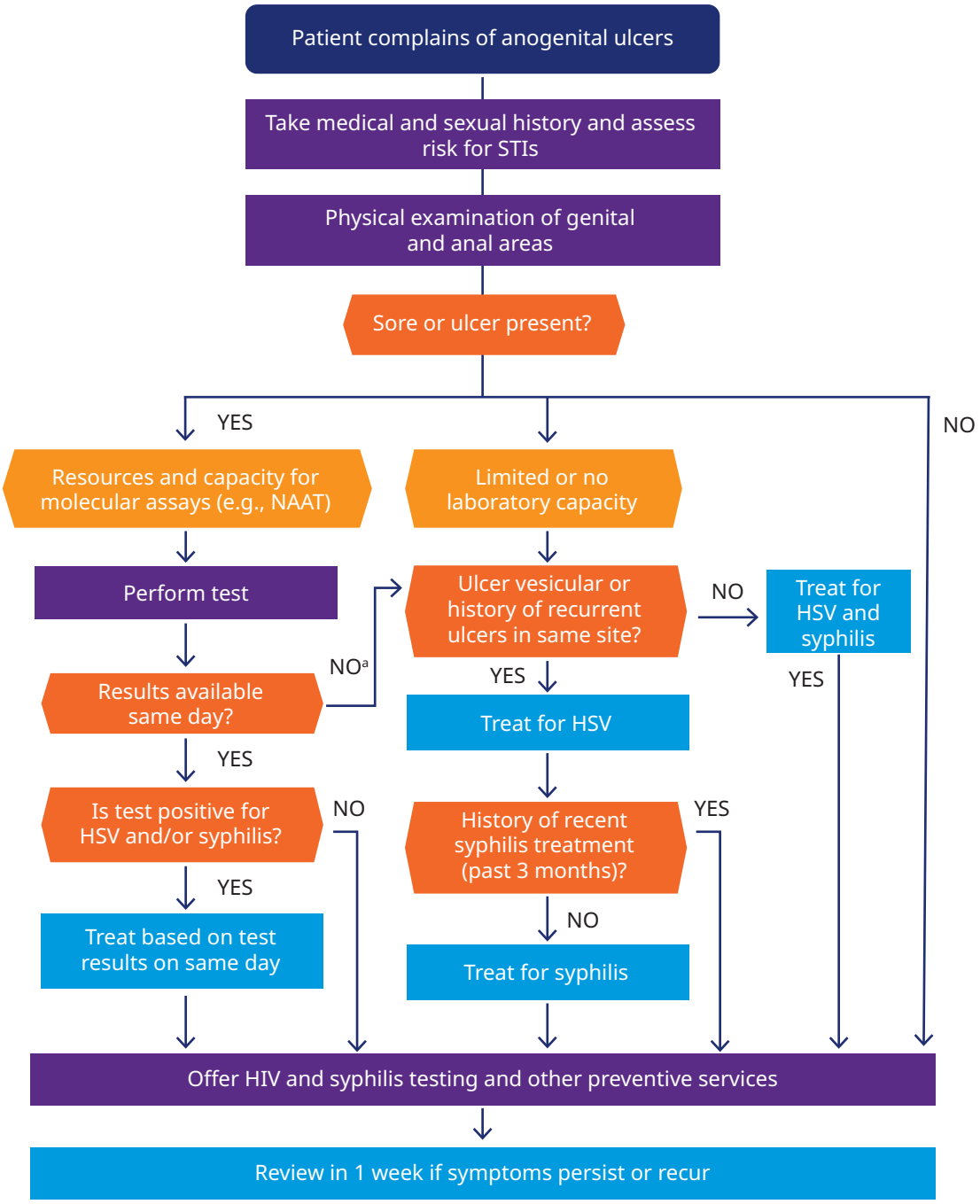
Source: *Guidelines for the management of symptomatic sexually transmitted infections* (1).

Table A3.3. Treatment options for pelvic inflammatory disease.

Therapy for uncomplicated gonorrhoea + Therapy for chlamydia Plus + Therapy for anaerobic infections		
Infections covered	**First-line options**	**Guidelines and notes**
Gonorrhoea	Ceftriaxone, 1 g, intramuscularly, single dose	*(2)* Discuss pain and option of using lidocaine as diluent with injection
Chlamydia	Doxycycline, 100 mg, orally, twice daily for seven days	*(2)* Extended-release doxycycline may be an alternative
Anaerobes	Metronidazole, 400 mg or 500 mg, orally, twice daily for 14 days	*(1)*

Source: adapted from *Guidelines for the management of symptomatic sexually transmitted infections* (1) and *Updated recommendations for the treatment of Neisseria gonorrhoeae, Chlamydia trachomatis and Treponema pallidum (syphilis) and new recommendations on syphilis testing and partner services* (2).

Fig. A3.5. Flowchart for the management of genital ulcer disease, including anorectal ulcers.



HSV, herpes simplex virus.

[a] If molecular assay was performed and results were not available on same day, revise the syndromic treatment initially provided according to the test results when available.

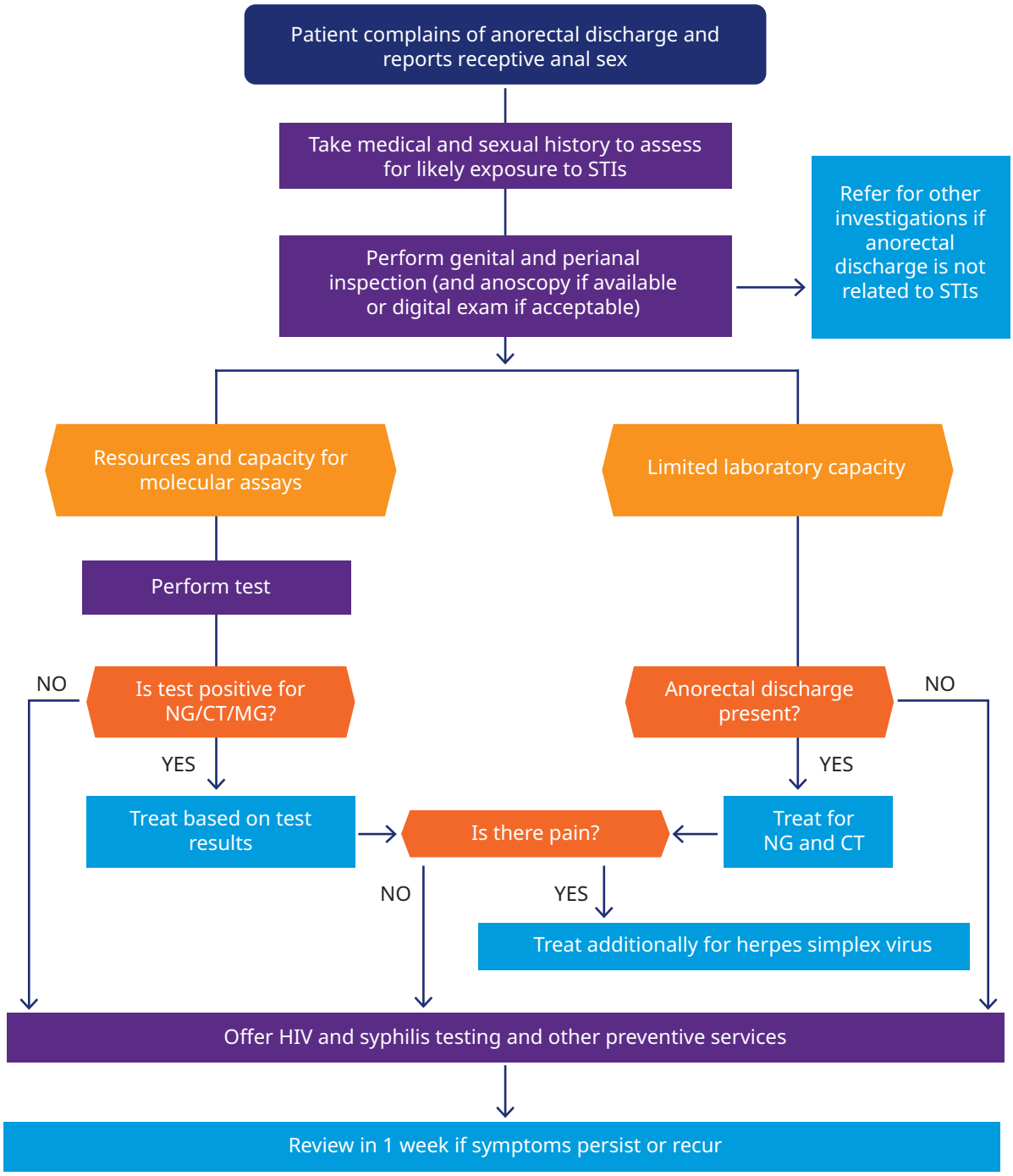
Source: *Guidelines for the management of symptomatic sexually transmitted infections* (1).

Table A3.4. Treatment options for genital ulcer disease, including anorectal ulcers.

Therapy for herpes + Therapy for syphilis		
Infections covered	**First-line options**	**Guidelines and notes**
Anogenital herpes	First clinical episode: Acyclovir, 400 mg, orally, three times daily for 10 days or Acyclovir, 200 mg, orally, five times daily for 10 days	*(4)*
	Recurrent clinical episode (episodic therapy): Acyclovir, 400 mg, orally, three times daily for five days or Acyclovir, 800 mg, orally, three times daily for two days or Acyclovir, 800 mg, orally, twice daily for five days	*(4)*
	Recurrent clinical episode (suppressive therapy): Acyclovir, 400 mg, orally, twice daily	*(4)* For individuals who have frequent recurrences (such as 4–6 times a year or more), severe symptoms or that cause distress and reassess after one year
Syphilis	Treatment for primary, secondary and early latent of not more than two years' duration (early syphilis): Benzathine penicillin, 2.4 million units, intramuscularly, single dose	*(2, 5)* Lidocaine solution can be added to solvent to reduce pain
	Treatment for late latent and tertiary syphilis of more than two years' duration (late syphilis) or unknown duration: Benzathine penicillin, 2.4 million units, intramuscularly, once weekly for three consecutive weeks	*(2, 5)* Lidocaine solution can be added to solvent to reduce pain

Source: adapted from *Guidelines for the management of symptomatic sexually transmitted infections* (1), *Updated recommendations for the treatment of Neisseria gonorrhoeae, Chlamydia trachomatis and Treponema pallidum (syphilis) and new recommendations on syphilis testing and partner services* (2), *WHO guidelines for the treatment of genital herpes simplex virus* (4) and *WHO guidelines for the treatment of Treponema pallidum (syphilis)* (5).

Fig. A3.6. Flowchart for management of anorectal discharge.



NG, *N. gonorrhoeae*; CT, *C. trachomatis*; MG, *M. genitalium*.

Source: *Guidelines for the management of symptomatic sexually transmitted infections* (1).

Table A3.5. Treatment options for anorectal discharge.

Therapy for uncomplicated gonorrhoea + Therapy for chlamydia + Therapy for herpes if there is anorectal pain		
Infections covered	**First-line options**	**Guidelines and notes**
Gonorrhoea	Ceftriaxone, 1 g, intramuscularly, single dose	*(2)* Discuss pain and option of using lidocaine as diluent with injection
Chlamydia	Doxycycline, 100 mg, orally, twice daily for seven days or Doxycycline 100 mg, orally, twice daily for 21 days (to cover rectal lymphogranuloma venereum if suspected or confirmed by NAAT)	*(2, 6)* Extended-release doxycycline may be an alternative Contraindicated during pregnancy and breastfeeding, use following first-line option: Azithromycin, 1 g, orally, single dose or Azithromycin, 1 g, orally, once weekly for three weeks (to cover rectal lymphogranuloma venereum if suspected or confirmed by NAAT)
Anogenital herpes	First clinical episode: Acyclovir, 400 mg, orally, three times daily for 10 days or Acyclovir, 200 mg, orally, five times daily for 10 days	*(4)*
	Recurrent clinical episode (episodic therapy): Acyclovir, 400 mg, orally, three times daily for five days or Acyclovir, 800 mg, orally, three times daily for two days or Acyclovir, 800 mg, orally, twice daily for five days	*(4)*
	Recurrent clinical episode (suppressive therapy): Acyclovir, 400 mg, orally, twice daily	*(4)* For individuals who have frequent recurrences (such as 4–6 times a year or more), severe symptoms or that cause distress and reassess after one year

Source: adapted from: *Guidelines for the management of symptomatic sexually transmitted infections* (1), *Updated recommendations for the treatment of Neisseria gonorrhoeae, Chlamydia trachomatis and Treponema pallidum (syphilis) and new recommendations on syphilis testing and partner services* (2), *WHO guidelines for the treatment of genital herpes simplex virus* (4) and *WHO guidelines for the treatment of Chlamydia trachomatis* (6).

Note: These flowcharts were originally published in the *Guidelines for the management of symptomatic sexually transmitted infections* (2021), following review by the Guideline Development Group and approval by the Guideline Review Committee *(1)*. The 2021 publication noted that the treatment regimens from the 2016 guidelines would be updated. These regimens were subsequently updated in 2023 and 2024 *(2, 3)*. The flowcharts in this operational handbook therefore reflect the approved 2021 syndromic algorithms and the updated treatment recommendations.

References[4]

1. Guidelines for the management of symptomatic sexually transmitted infections. Geneva: World Health Organization; 2021 (https://iris.who.int/handle/10665/342523). Licence: CC BY-NC-SA 3.0 IGO.
2. Updated recommendations for the treatment of *Neisseria gonorrhoeae*, *Chlamydia trachomatis* and *Treponema pallidum* (syphilis) and new recommendations on syphilis testing and partner services. Geneva: World Health Organization; 2024 (https://iris.who.int/handle/10665/378213). Licence: CC BY-NC-SA 3.0 IGO.
3. Recommendations for the treatment of *Trichomonas vaginalis*, *Mycoplasma genitalium*, *Candida albicans*, bacterial vaginosis and human papillomavirus (anogenital warts). Geneva: World Health Organization; 2024 (https://iris.who.int/handle/10665/378215). Licence: CC BY-NC-SA 3.0 IGO.
4. WHO guidelines for the treatment of genital herpes simplex virus. Geneva: World Health Organization; 2016 (https://iris.who.int/handle/10665/250693). Licence: CC BY-NC-SA 3.0 IGO.
5. WHO guidelines for the treatment of *Treponema pallidum* (syphilis). Geneva: World Health Organization; 2016 (https://iris.who.int/handle/10665/249572). Licence: CC BY-NC-SA 3.0 IGO.
6. WHO guidelines for the treatment of *Chlamydia trachomatis*. Geneva: World Health Organization; 2016 (https://iris.who.int/handle/10665/246165). Licence: CC BY-NC-SA 3.0 IGO.

[4] All references accessed on 13 November 2025.

Annex 4. Summary of diagnostic approaches for common STIs

Table A4.1. Diagnostic approaches for common STIs.

Infection	Preferred diagnostic test(s)	Alternative or point-of-care options	Notes and considerations
Gonorrhoea	NAAT on first-void urine (men) and vaginal or cervical swabs (women); extragenital swabs (anorectal or oropharyngeal) as indicated	Culture (for antimicrobial susceptibility testing); Gram stain of urethral smear in symptomatic men; near-patient or point-of-care or NAAT platforms (if available)	Culture is essential for antimicrobial resistance surveillance and should be done before antibiotics where feasible. Self-collected swabs perform comparably to those collected by health-care providers.
Chlamydia	NAAT on first-void urine (men) and vaginal or cervical swabs (women); extragenital swab as indicated	Near-patient or point-of-care or NAAT platforms (if available)	Self-collected swabs perform comparably to those collected by health-care providers. High proportion asymptomatic; targeted screening essential in accordance with programme guidance.
Syphilis	Serology using an algorithm that combines a non-treponemal test (rapid plasma reagin and Venereal Disease Research Laboratory) with a treponemal test (such as *T. pallidum* haemagglutination, *T. pallidum* particle agglutination and enzyme immunoassay)	Rapid diagnostic tests, including dual HIV/syphilis tests	Use a standard confirmation algorithm (traditional or reverse sequence). Point-of-care testing facilitates same-day testing and treatment in antenatal care and outreach.
Trichomoniasis	NAAT on vaginal swab or urine	Wet mount microscopy; culture; antigen rapid diagnostic tests	Wet mount has low sensitivity; NAATs are most sensitive but less available in resource-limited settings.
M. genitalium infection	NAAT (add macrolide resistance detection where available)	Limited rapid assays in development	Diagnosis is molecular only. Resistance-guided therapy recommended if testing exists.

Infection	Preferred diagnostic test(s)	Alternative or point-of-care options	Notes and considerations
Herpes	NAAT (polymerase chain reaction) of lesion swab	Viral culture; type-specific serology (limited clinical utility)	Polymerase chain reaction preferred; serology may aid specific scenarios (such as counselling discordant couples) but not for acute lesion diagnosis.
Human papillomavirus	HPV DNA tests (NAAT) for cervical samples; anal testing may be considered	Cytology (Pap); visual inspection with acetic acid if resources limit molecular testing	HPV DNA tests are more sensitive than cytology; self-sampling is effective for cervical HPV testing.
Trichomoniasis, bacterial vaginosis or candidiasis (causes of vaginal discharge)	NAAT (if available) targeting *T. vaginalis*, bacterial vaginosis or *C. albicans*	Microscopy (saline/KOH wet mount; Gram stain with Nugent score), Amsel criteria, vaginal pH paper, whiff test	Point-of-care or near-patient NAAT increasingly available; microscopy less sensitive in asymptomatic infections; Amsel and Nugent remain programmatically useful.
Chancroid or donovanosis	Specialized culture for chancroid; NAAT (if available)	Clinical diagnosis in endemic areas with syndromic management	Now rare in most settings; laboratory confirmation may be unavailable; follow syndromic flowcharts.

Source: adapted from *WHO implementation tool for pre-exposure prophylaxis (PrEP) of HIV infection: module 13: integrating STI services* (1) and *Laboratory and point-of-care diagnostic testing for sexually transmitted infections, including HIV* (2).

References[5]

1. WHO implementation tool for pre-exposure prophylaxis (PrEP) of HIV infection: module 13: integrating STI services. Geneva: World Health Organization; 2022 (https://iris.who.int/handle/10665/362227). Licence: CC BY-NC-SA 3.0 IGO.

2. Laboratory and point-of-care diagnostic testing for sexually transmitted infections, including HIV. Geneva: World Health Organization; 2023 (https://iris.who.int/handle/10665/374252). Licence: CC BY-NC-SA 3.0 IGO.

[5] All references accessed on 13 November 2025.

Annex 5. Summary of WHO STI treatment recommendations

Table A5.1. WHO treatment recommendations for syphilis.

ICD-11	First choice	Effective substitutes	Guidelines and notes
1A61 **Early syphilis** Treatment for primary, secondary and early latent of not more than two years' duration	Benzathine penicillin, 2.4 million units, intramuscularly, single dose[a]	Procaine penicillin G, 1.2 million units, intramuscularly, once daily for 10–14 days If benzathine or procaine penicillin are not available or cannot be used: Doxycycline, 100 mg, orally, twice daily for 14 days[b] or Ceftriaxone, 1 g, intramuscularly, once daily for 14 days or Azithromycin, 2 g, orally, single dose[c]	*(1)* [a]Lidocaine solution can be added to solvent to reduce pain [b]Contraindicated during pregnancy and breastfeeding (see recommendation below) [c]Only in special circumstances when local susceptibility to azithromycin is likely
For pregnant and breastfeeding women[c]	Benzathine penicillin, 2.4 million units, intramuscularly, single dose	Procaine penicillin G, 1.2 million units, intramuscularly, once daily for 14 days In rare situations:[d] Ceftriaxone, 1 g, intramuscularly, once daily for 14 days or Erythromycin, 500 mg, orally, four times daily for 14 days[e]	*(2, 3)* [c]If the stage of syphilis is unknown, see recommendation for pregnant women with late syphilis [d]Only in rare situations when benzathine or procaine penicillin cannot be used (such as due to confirmed penicillin allergy, which occurs in less than 3% of the population, and where penicillin desensitization is not possible) or are not available (such as due to stock-outs) [e]Necessary to treat newborn soon after delivery since it does not cross the placental barrier completely

ICD-11	First choice	Effective substitutes	Guidelines and notes
1A62 **Late syphilis** Treatment for late latent and tertiary syphilis of more than two years' duration	Benzathine penicillin, 2.4 million units, intramuscularly, once weekly for three consecutive weeks[f]	Procaine penicillin, 1.2 million units by intramuscularly, once daily for 20 consecutive days If benzathine or procaine penicillin are not available or cannot be used: Doxycycline 100 mg, orally, twice daily for 30 days[g]	*(1)* [f]Lidocaine solution can be added to solvent to reduce pain [g]Contraindicated during pregnancy and breastfeeding (see recommendation below)
For pregnant and breastfeeding women[h]	Benzathine penicillin, 2.4 million units, intramuscularly, once weekly for three consecutive weeks	Procaine penicillin, 1.2 million units by intramuscularly, once daily for 20 consecutive days In rare situations:[i] Erythromycin, 500 mg, orally, four times daily for 30 days[j]	*(2, 3)* [h]If the stage of syphilis is unknown, follow this recommendation for pregnant women with late syphilis [i]Only in rare situations when benzathine or procaine penicillin cannot be used (such as due to confirmed penicillin allergy, which occurs in less than 3% of the population, and where penicillin desensitization is not possible) or are not available (such as due to stock-outs) [j]Necessary to treat newborn soon after delivery since it does not cross the placental barrier completely
1A60 **Congenital syphilis** For infants with confirmed congenital syphilis or mother untreated, inadequately treated (within 30 days of delivery) or treated with non-penicillin regimen	Aqueous benzyl penicillin, 100 000–150 000 U/kg, intravenously, once daily for 10–15 days	Procaine penicillin, 50 000 U/kg, intramuscularly, once daily for 10-15 days	*(1, 3)*

ICD-11	First choice	Effective substitutes	Guidelines and notes
For infants who are clinically normal and mother with syphilis was treated adequately with no signs of reinfection	Close monitoring of the infant	Benzathine penicillin, 50 000 U/kg, intramuscularly, single dose[k]	*(1, 3)* [k]The risk of transmission of syphilis to the fetus depends on a number of factors; if treatment is provided, this is an option

Table A5.2. WHO treatment recommendations for gonorrhoea.

ICD-11	First choice	Effective substitutes	Guidelines and notes
1A70 **Gonococcal infection** Includes genital, anorectal and oropharyngeal gonococcal infections	Ceftriaxone, 1 g, intramuscularly, single dose[a]	If ceftriaxone is not available or refused: Cefixime, 800 mg, orally, single dose + Test of cure[b] If test of cure is not possible or when oropharyngeal infection is diagnosed or is a potential concern: Cefixime, 800 mg, orally, single dose + Azithromycin, 2 g, orally, single dose[c] When resistance, allergy or availability of cephalosporins is a concern: Spectinomycin 2 g, intramuscularly, single dose + Azithromycin, 2 g, orally, single dose[c] or Gentamicin, 240 mg, intramuscularly, single dose + Azithromycin, 2 g, orally, single dose[c]	*(2)* National or local antimicrobial resistance data should determine the choice of therapy when available Pregnant women should be closely monitored for adverse reactions [a]Discuss pain and option of using lidocaine as diluent with injection [b]Recommend test of cure if use single therapy of cefixime [c]Azithromycin, 2 g may cause gastrointestinal side-effects, especially on an empty stomach; consider azithromycin, 1 g taken at 6- to 12-hour intervals to reduce side-effects

ICD-11	First choice	Effective substitutes	Guidelines and notes
Retreatment after treatment failure[d]	Ceftriaxone, 1 g, intramuscularly, single dose[e] + Azithromycin, 2 g, orally, single dose or Spectinomycin, 2 g, intramuscularly, single dose + Azithromycin, 2 g, orally, single dose or Gentamicin, 240 mg, intramuscularly, single dose + Azithromycin, 2 g, orally, single dose	—	*(2)* [d]If treatment failure occurred after a WHO-recommended therapy and reinfection is assessed to be unlikely, re-treat with a regimen not used previously from one of the options and perform a test of cure [e]Only if ceftriaxone was not used previously If an individual does not respond to these treatment failure recommendations, refer the individual to a specialist for further assessment and management
KA65.0 **Neonatal conjunctivitis due to *N. gonorrhoeae***	Ceftriaxone, 50 mg/kg, intramuscularly, single dose (maximum 150 mg) or Kanamycin, 25 mg/kg, intramuscularly, single dose (maximum 75 mg) or Spectinomycin, 25 mg/kg, intramuscularly, single dose (maximum 75 mg)	—	*(4)* Side-effects should be monitored

ICD-11	First choice	Effective substitutes	Guidelines and notes
Ocular prophylaxis[f]	Tetracycline hydrochloride 1%, eye ointment, topically or Erythromycin, 0.5%, eye ointment, topically or Providone iodine, 2.5% solution (water-based), topically[g] or Silver nitrate, 1% solution, topically or Chloramphenicol, 0.5%, eye ointment, topically	—	*(4)* [f]For the prevention of gonococcal and chlamydial ophthalmia neonatorum, suggest topical application to both eyes immediately after birth [g]Do not use alcohol-based povidone iodine solution

Table A5.3. WHO treatment recommendations for chlamydia and lymphogranuloma venereum.

ICD-11	First choice	Effective substitutes	Guidelines and notes
1A81 **Non-ulcerative chlamydial infection** Includes uncomplicated genitourinary (1A81.0) or oropharyngeal infection (1A81.Y) or anorectal chlamydial infection (1A81.Y)	Doxycycline, 100 mg, orally, twice daily for seven days[a,b]	Azithromycin, 1 g, orally, single dose[c] or Erythromycin, 500 mg, orally, four times daily for seven days[d] or Ofloxacin, 200–400 mg, orally, twice daily for seven days[b,d] or Tetracycline 500 mg, orally, four times daily for seven days[b,d]	*(2)* [a]Extended-release doxycycline may be an alternative [b]Contraindicated during pregnancy and breastfeeding (see recommendation below) [c]For use when doxycycline is not available or adherence to multiple doses is a serious concern [d]For use only when doxycycline or azithromycin are not available

ICD-11	First choice	Effective substitutes	Guidelines and notes
For pregnant and breastfeeding women	Azithromycin, 1 g, orally, single dose	Amoxicillin, 500 mg, orally, three times daily for seven days or Erythromycin 500 mg, orally, four times daily for seven days	*(2)* Side-effects should be monitored
KA65.0 **Neonatal conjunctivitis due to *C. trachomatis***	Azithromycin, 20 mg/kg, orally, once daily for three days (maximum 150 mg)	Erythromycin, 50 mg/kg, orally, in four divided doses daily for 14–21 days[e]	*(5)* Risk of pyloric stenosis with erythromycin use in neonates
Ocular prophylaxis[e]	Tetracycline hydrochloride 1%, eye ointment, topically or Erythromycin, 0.5%, eye ointment, topically or Providone iodine, 2.5% solution (water-based), topically[f] or Silver nitrate, 1% solution, topically or Chloramphenicol, 0.5%, eye ointment, topically	—	*(5)* [e]For the prevention of gonococcal and chlamydial ophthalmia neonatorum, suggest topical application to both eyes immediately after birth [f]Do not use alcohol-based povidone iodine solution
1A80 **Chlamydial lymphogranuloma** Includes lymphogranuloma venereum – caused by specific serovars of *C. trachomatis* (L1, L2, L3)	Doxycycline, 100 mg, orally, twice daily for 21 days[g]	Azithromycin, 1 g, orally, once weekly for three weeks[h] or Erythromycin, 500 mg, orally, four times daily for 21 days[i]	*(5)* [g]Pregnant women should not use doxycycline [h]For use only when doxycycline is contraindicated [i]For use only when doxycycline or azithromycin are not available

Table A5.4. WHO treatment recommendations for trichomoniasis.

ICD-11	First choice	Effective substitutes	Guidelines and notes
1A92 Trichomoniasis	Metronidazole, 400 or 500 mg, orally, twice daily for seven days	When adherence to multiple doses is a serious concern: Metronidazole, 2 g, orally, single dose or Tinidazole, 2 g, orally, single dose[a]	*(6)* [a]Contraindicated during pregnancy If metronidazole or tinidazole are not available, secnidazole, 2 g, orally, single dose (except during pregnancy) or ornidazole 1.5 g, single dose (except during pregnancy) could be used

Table A5.5. WHO treatment recommendations for *M. genitalium* infection.

ICD-11	First choice	Effective substitutes	Guidelines and notes
1A9Y *Mycoplasma genitalium* (XN9UG)	In settings with high or suspected high resistance to macrolides (such as where azithromycin is frequently used) or when testing shows that *M. genitalium* is resistant to macrolides: Doxycycline, 100 mg, orally, twice daily for seven days followed by Moxifloxacin, 400 mg, orally, once daily for seven days[a,b] In settings with low or suspected low resistance to macrolides or when testing shows that *M. genitalium* is susceptible to macrolides: Doxycycline, 100 mg, orally, twice daily for seven days followed by Azithromycin, 1 g, orally on day 1, then 500 mg once daily for three days[a,b]	If azithromycin or moxifloxacin are not available, or there is confirmed or suspected high resistance to both: Minocycline, 100 mg, orally, twice daily for 14 days[b] or Sitafloxacin 200 mg, orally, once daily for seven days[b] or Pristinamycin 1 g, orally four times daily for 10 days	*(6)* [a]If treatment for suspected chlamydial infection (doxycycline 100 mg orally twice daily for seven days) was provided, retreatment with doxycycline to reduce bacterial load before using moxifloxacin or azithromycin is not required [b]Contraindicated during pregnancy and breastfeeding (only use pristinamycin)

Table A5.6. WHO treatment recommendations for anogenital warts (caused by HPV).

ICD-11	First choice	Effective substitutes	Guidelines and notes
1A95 **Anogenital warts**	Podophyllotoxin 0.5% solution or 0.5–1.5% cream, self-applied topically, twice daily for three days, followed by four days of no treatment (can be repeated up to four times)[a] or Imiquimod 3.75% or 5% cream, self-applied topically overnight, three times weekly (wash off after 6–10 hours) for up to 16 weeks[a]	Surgical removal by electrosurgery or electrocautery or CO_2 laser therapy or Trichloroacetic acid 80%, applied topically[a] or Cryotherapy, with liquid nitrogen[b]	*(6)* Choice of treatment should be guided by factors such as the thickness and size of the anogenital warts, as well as anatomical location [a]Contraindicated during pregnancy [b]Cryotherapy is the safest option during pregnancy

Table A5.7. WHO treatment recommendations for anogenital herpes (caused by HSV).

ICD-11	First choice	Effective substitutes	Guidelines and notes
1A94 **Anogenital herpes simplex infection** First clinical episode	Acyclovir, 400 mg, orally, three times daily for 10 days or Acyclovir, 200 mg, orally, five times daily for 10 days	Valaciclovir, 500 mg, orally, twice daily for 10 days or Famciclovir, 250 mg, orally, three times daily for 10 days	*(7)*
Recurrent clinical episodes (episodic therapy)	Acyclovir, 400 mg, orally, three times daily for five days or Acyclovir, 800 mg, orally, three times daily for two days or Acyclovir, 800 mg, orally, twice daily for five days	Valaciclovir, 500 mg, orally, twice daily for three days[a] or Famciclovir, 250 mg, orally, twice daily for five days[b]	*(7)* [a]Increase to five days if living with HIV or immunocompromised [b]Increase to 500 mg if living with HIV or immunocompromised

ICD-11	First choice	Effective substitutes	Guidelines and notes
Recurrent clinical episodes (suppressive therapy)[c]	Acyclovir, 400 mg, orally, twice daily	Valaciclovir, 500 mg, orally, once daily or Famciclovir, 250 mg, orally, twice daily[d]	*(7)* [c]For individuals who have frequent recurrences (such as 4–6 times a year or more), severe symptoms or that cause distress and reassess after one year [d]Increase to 500 mg if living with HIV or immunocompromised

Table A5.8. WHO treatment recommendations for other infections.

ICD-11	First choice	Effective substitutes	Guidelines and notes
1F23.10 **Candidiasis** Vulvovaginal infection	Fluconazole, 150–200 mg, orally, single dose or Clotrimazole, 500 mg, intravaginally, single dose, or 200 mg, intravaginally, once daily for three days, or 10% cream, intravaginally, single dose or Miconazole, 1200 mg, intravaginally, single dose, or 400 mg, intravaginally, once daily for seven days or Econazole, 150 mg, intravaginally, single dose or Nystatin, 100 000 units, intravaginally, twice daily for 15 days	—	*(6)* Choice of treatment may depend on preferences for intravaginal administration (which may also reduce vulval itching and soreness) or oral administration and the cost in different settings If an individual does not respond to treatment, refer to a specialist for further assessment and management

ICD-11	First choice	Effective substitutes	Guidelines and notes
Treatment in pregnant women	Clotrimazole, 100 mg, intravaginally once daily for seven days, or 1% cream intravaginally once daily for seven days or Nystatin, 100 000 units, intravaginally, twice daily for 15 days	—	*(6)* Choice of treatment may depend on preferences for intravaginal administration (which may also reduce vulval itching and soreness) or oral administration and the cost in different settings If an individual does not respond to treatment, refer to a specialist for further assessment and management
MF3A **Bacterial vaginosis** Vaginal infection	Metronidazole, 400 mg or 500 mg, orally, twice daily for seven days	If oral metronidazole is not available, adherence to multiple doses is a serious concern, or if vaginal creams are preferred: Metronidazole, 0.75% gel, intravaginally, once daily for seven days or Tinidazole, 2 g, orally, single dose[a] or Clindamycin, 300 mg, orally, twice daily for seven days or Clindamycin, 2% gel (5 g), intravaginally, once daily for seven days or Secnidazole, 2 g, orally, single dose	*(6)* [a]Contraindicated during pregnancy

Note: Treatment recommendations for other STIs were included in *Guidelines for the management of sexually transmitted infections* (8) but were not included in the most recent review and update of treatment recommendations.

References[6]

1. WHO guidelines for the treatment of *Treponema pallidum* (syphilis). Geneva: World Health Organization; 2016 (https://iris.who.int/handle/10665/249572). Licence: CC BY-NC-SA 3.0 IGO.
2. Updated recommendations for the treatment of *Neisseria gonorrhoeae*, *Chlamydia trachomatis* and *Treponema pallidum* (syphilis) and new recommendations on syphilis testing and partner services. Geneva: World Health Organization; 2024 (https://iris.who.int/handle/10665/378213). Licence: CC BY-NC-SA 3.0 IGO.
3. WHO guideline on syphilis screening and treatment for pregnant women. Geneva: World Health Organization; 2017 (https://iris.who.int/handle/10665/259003). Licence: CC BY-NC-SA 3.0 IGO.
4. WHO guidelines for the treatment of *Neisseria gonorrhoeae*. Geneva: World Health Organization; 2016 (https://iris.who.int/handle/10665/246114). Licence: CC BY-NC-SA 3.0 IGO.
5. WHO guidelines for the treatment of *Chlamydia trachomatis*. Geneva: World Health Organization; 2016 (https://iris.who.int/handle/10665/246165). Licence: CC BY-NC-SA 3.0 IGO.
6. Recommendations for the treatment of *Trichomonas vaginalis*, *Mycoplasma genitalium*, *Candida albicans*, bacterial vaginosis and human papillomavirus (anogenital warts). Geneva: World Health Organization; 2024 (https://iris.who.int/handle/10665/378215). Licence: CC BY-NC-SA 3.0 IGO.
7. WHO guidelines for the treatment of genital herpes simplex virus. Geneva: World Health Organization; 2016 (https://iris.who.int/handle/10665/250693). Licence: CC BY-NC-SA 3.0 IGO.
8. Guidelines for the management of sexually transmitted infections. Geneva: World Health Organization; 2003 (https://iris.who.int/handle/10665/42782).

[6] All references accessed on 13 November 2025.

Annex 6. Summary of STI partner services

Table A6.1. Types of STI partner services.

Type of partner service	Description
Patient referral (also known as simple, passive or partner referral)	The individual diagnosed with an STI takes primary responsibility for notifying their partner(s) of possible exposure and encouraging them to seek testing and treatment. Health-care providers offer counselling, support for disclosure guidance and information on where partners can access services.
Enhanced patient referral (also known as enhanced partner referral)	The health-care provider supports the person diagnosed with an STI by offering additional tools to facilitate partner notification, such as referral slips, printed or digital information, anonymous online notification platforms or self-collection kits for partners.
Delayed provider referral (also known as contract or delayed assisted referral)	The individual agrees to notify their partner(s) within a defined time frame. If the partner(s) do not present for testing and treatment within that period, the provider contacts them directly with the individual's consent.
Provider-assisted referral (also known as assisted partner notification)	With the individual's consent, the health-care provider directly notifies partner(s) of potential exposure and offers STI testing and treatment services.
Provider–patient referral	The provider supports or accompanies the individual diagnosed with an STI in notifying their partner(s) and facilitates testing and treatment during the same visit or encounter.
Expedited partner therapy	The individual diagnosed with an STI is provided with medication or a prescription to deliver to their partner(s) without prior medical evaluation, enabling prompt treatment when this approach is permitted by national policy.
Social network approaches (also known as social network testing services)	Individuals at increased risk of STIs, including those without a recent diagnosis, are encouraged to invite members of their sexual or social networks to access testing and related prevention services.

Source: adapted from: *Updated recommendations for the treatment of Neisseria gonorrhoeae, Chlamydia trachomatis and Treponema pallidum (syphilis), and new recommendations on syphilis testing and partner services* (1).

References[7]

1. Updated recommendations for the treatment of *Neisseria gonorrhoeae*, *Chlamydia trachomatis* and *Treponema pallidum* (syphilis) and new recommendations on syphilis testing and partner services. Geneva: World Health Organization; 2024 (https://iris.who.int/handle/10665/378213). Licence: CC BY-NC-SA 3.0 IGO.

[7] All references accessed on 13 November 2025.

Annex 7. Summary of global STI indicators

Table A7.1. Core STI indicators mapped to the prevention and care cascade.

Cascade component	Indicator name[a]	Definition	Global reporting platform	Global health sector strategies target
1. Primary prevention of STIs	6. Condom distribution	Number of condoms distributed in the last 12-month period	Global AIDS Monitoring	–
	7. Eliminating vertical transmission of syphilis	Percentage of pregnant women attending antenatal care in the last 12-month period who (a) were tested at least once for syphilis and (b) tested positive for syphilis and received at least one dose of benzathine penicillin G (2.4 million units)more than 30 days before delivery	Global AIDS Monitoring	Yes
2. Managing symptomatic STIs	8. Reported STI cases by infection or syndrome	Number of reported cases of STIs in the last 12-month period by (a) infection[b] confirmed using a quality-assured diagnostic test and (b) STI-related syndrome[c]	Global AIDS Monitoring: urethral discharge for men; gonorrhoea for men	–
3. Identifying asymptomatic STIs	9. STI testing coverage in key or priority populations or specific services	Percentage of people using a specific service[d] who were tested at least once using a quality-assured test for a specific STI[b] in the last 12-month period	Global AIDS Monitoring	Yes
	10. STI test positivity in services offering STI testing	Percentage of people attending a specific serviced who were tested for a particular STI[b] and tested positive in the last 12-month period	Global AIDS Monitoring: syphilis in pregnant women attending antenatal care, men who have sex with men and sex workers	Yes

Cascade component	Indicator name[a]	Definition	Global reporting platform	Global health sector strategies target
4. Diagnosis of STIs	3. Routine surveillance for STIs	Number and percentage of health-care facilities routinely reporting data on STIs (syndromic or aetiological) in the last 12-month period	WHO GASP	Yes
5. Treatment for STIs	5. National STI drug and diagnostic supplies	Number of days of reported stock-outs of key STI commodities[e] in the last 12-month period	–	–
6. Managing partners	(no direct global core indicator)	–	–	–
7. Monitoring, evaluation and surveillance	1. Up-to-date STI policies and guidelines	Dates of latest: (1) STI national plan, (2) STI case management guidelines and (3) STI treatment guidelines (by infection)	Global AIDS Monitoring	Yes
	2. Annual budget for STIs	Annual national budget for STI activities by funding source	–	–
	4. Surveillance for gonococcal antimicrobial resistance	Surveillance for antimicrobial resistance in *Neisseria gonorrhoeae* with data reported to WHO GASP in the last 12-month period	Global AIDS Monitoring	Yes
	11. Congenital syphilis case rate	Number of cases of congenital syphilis per 100 000 live births in the last 12-month period	Global AIDS Monitoring	Yes
8. 8. Enabling service delivery for STIs	(no direct global core indicator)	–	–	-

[a] According to the WHO framework for monitoring sexually transmitted infections and strengthening surveillance (2024).

[b] Priority infections: syphilis, gonorrhoea and chlamydia.

[c] Priority syndromes: urethral discharge (men) and genital ulcer disease (men and women).

[d] Services include antenatal care clinics, STI clinics, PrEP services, HIV treatment services, youth clinics and family planning clinics.

[e] Priority commodities: benzathine penicillin G and rapid diagnostic tests for syphilis.

Source: adapted from *Framework for monitoring sexually transmitted infections and strengthening surveillance* (1).

References[8]

1. Framework for monitoring sexually transmitted infections and strengthening surveillance. Geneva: World Health Organization; 2024 (https://iris.who.int/handle/10665/378238). Licence: CC BY-NC-SA 3.0 IGO.

[8] All references accessed on 13 November 2025.

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