

Sexually transmitted infections: implementing the Global STI Strategy

Evidence-to-action brief

The Global STI Strategy describes priority country-level actions for a stronger, more effective response to STIs, to help save millions of lives and improve the health of millions more.



STI as a severe threat to public health

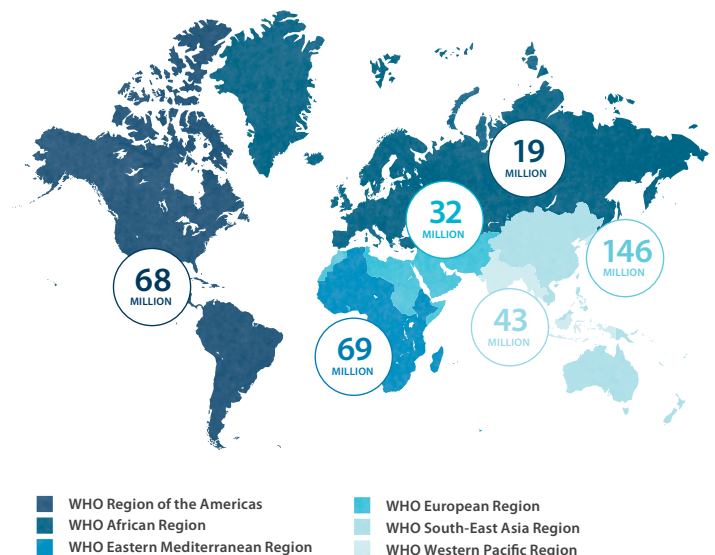
In the 21st century, there is still an unacceptably high global incidence of sexually transmitted infections (STIs). Around the world, more than a million STIs are acquired every day. Some viral STIs, like human papillomavirus (HPV) and HIV, are still incurable and can be deadly, while some bacterial STIs – like chlamydia, gonorrhoea, syphilis and trichomoniasis – are curable if detected and treated. Each year, 357 million new cases of these four curable STIs are acquired by people aged 15–49.¹ In addition, 417 million people in this age group have herpes simplex virus type 2 (HSV-2) infections² (see Figure 1). A major public health issue is highlighted in the recent report from of the WHO Gonococcal Antimicrobial Surveillance Programme (GASP), which includes data from 2009 to 2014 showing continued widespread resistance in gonorrhoea to penicillin, tetracycline and ciprofloxacin; increasing resistance to azithromycin; and emergence of decreased susceptibility and resistance to expanded-spectrum cephalosporins (ESCs)³.

The burden of morbidity and mortality worldwide resulting from sexually, genitally and extra-genitally transmitted pathogens compromises quality of life, as well as sexual and reproductive health, and newborn and child health. Moreover, it is widely recognized that STIs facilitate sexual transmission of HIV and

trigger some cancers that are common across the world. Both oral and anal sexual exposure, involving bacteria, viruses and protozoa, can cause significant morbidity, especially among key populations.

There has been no reduction in the rate of new HIV infections among young people and adults between 2010 and 2015, threatening future progress towards the goal of ending the AIDS epidemic by 2030.⁴ The

Figure 1: WHO estimates: 377 million new cases of chlamydia, gonorrhoea, syphilis, trichomoniasis and herpes simplex virus type 2 (HSV-2) in 2012



Source: Newman et al., 2015;¹ Looker et al., 2015.²

1 Newman LM, Rowley J, Vander Hoorn S, Wijesooriya NS, Unemo M, Low N et al. Global estimates of the prevalence and incidence of four curable sexually transmitted infections in 2012 based on systematic review and global reporting. *PLoS One*. 2015;10(12):e0143304. doi:10.1371/journal.pone.0143304.

2 Looker KJ, Magaret AS, Turner KME, Vickerman P, Gottlieb SL, Newman LM. Global estimates of prevalent and incident herpes simplex virus type 2 infections in 2012. *PLoS One*. 2015;10(1):e114989. doi:10.1371/journal.pone.0114989.

3 Report on global sexually transmitted infection surveillance 2015. Geneva: World Health Organization; 2016 (<http://www.who.int/reproductivehealth/publications/rtis/stis-surveillance-2015/en/>); Wi T, Lahra M, Ndowa F, Bala M, Dillon J, Ramon-Pardo P, Eremin S et al. Antimicrobial resistance in *Neisseria gonorrhoeae*: global surveillance and a call for international collaborative action. *PLoS Med*. 2017 (in press).

4 Political declaration on HIV and AIDS: on the fast-track to accelerate the fight against HIV and to end the AIDS epidemic by 2030. New York (NY): United Nations General Assembly; 2016 (<http://www.unaids.org/en/resources/documents/2016/2016-political-declaration-HIV-AIDS>).



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impact of STI epidemics, including the HIV epidemic, is of particular importance among key populations, such as young people and adolescents, men who have sex with men, and sex workers. Urgent and targeted action is needed to manage infections in the affected persons (including curing those who are curable) and to prevent new infections.

Much can be done to control the spread of STIs, alleviate harmful consequences and vastly improve people's quality of life. To address this global and critical issue and to enable countries to reach targets set for the relevant [Sustainable Development Goals](#) (SDGs)⁵ by 2030, the World Health Organization (WHO) developed the *Global health sector strategy on sexually transmitted infections 2016–2021* ("the [Global STI Strategy](#)" for short)⁶, and it was adopted by the World Health Assembly in May 2016.

This policy brief is designed to help countries implement the Global STI Strategy. By taking action to build sustainable national and institutional capacity for addressing STIs, countries can ensure that key cost-effective interventions reach the greatest number of people in need.

The Global STI Strategy

The Global STI Strategy is one of three key global health sector strategies (GHSSs) – the others are for

the control of [HIV](#) and [viral hepatitis](#)⁷ – that contribute to the 2030 Agenda for Sustainable Development and the Sustainable Development Goals (SDGs), as well as the UN Secretary-General's [Global Strategy for Women's, Children's and Adolescents' Health](#).⁸

Five strategic directions underpin the Global STI Strategy.

1. Information for focused action
2. Interventions for impact
3. Delivering for equity
4. Financing for sustainability
5. Innovation for acceleration.

Three of these contribute to universal health coverage by helping to improve essential health interventions and services (No. 2), covering all populations who need these services (No. 3) and ensuring that the interventions are affordable (No. 4) (see Figure 2).

To implement the Global STI Strategy, countries need to enact the following.

- **Identify an institutional home for the national STI programme.**
- **Improve data and data systems, and create a 2018 incidence baseline.**
- **Build political will to create an enabling environment for STI prevention and control efforts, encompassing all populations.**
- **Create an enabling environment for innovations in technology and service delivery.**
- **Work with other parts of the health system to ensure that interventions to address STIs can be covered for free or at low cost at the point of care.**

The Global STI Strategy describes priority actions that countries can take as part of a stronger and more effective response to STIs, to help save millions of lives and improve the health of millions more. **The range of actions includes strengthening data monitoring, STI prevention, early diagnosis, and patient and partner management, as well as initiating approaches to reach the most vulnerable populations.**

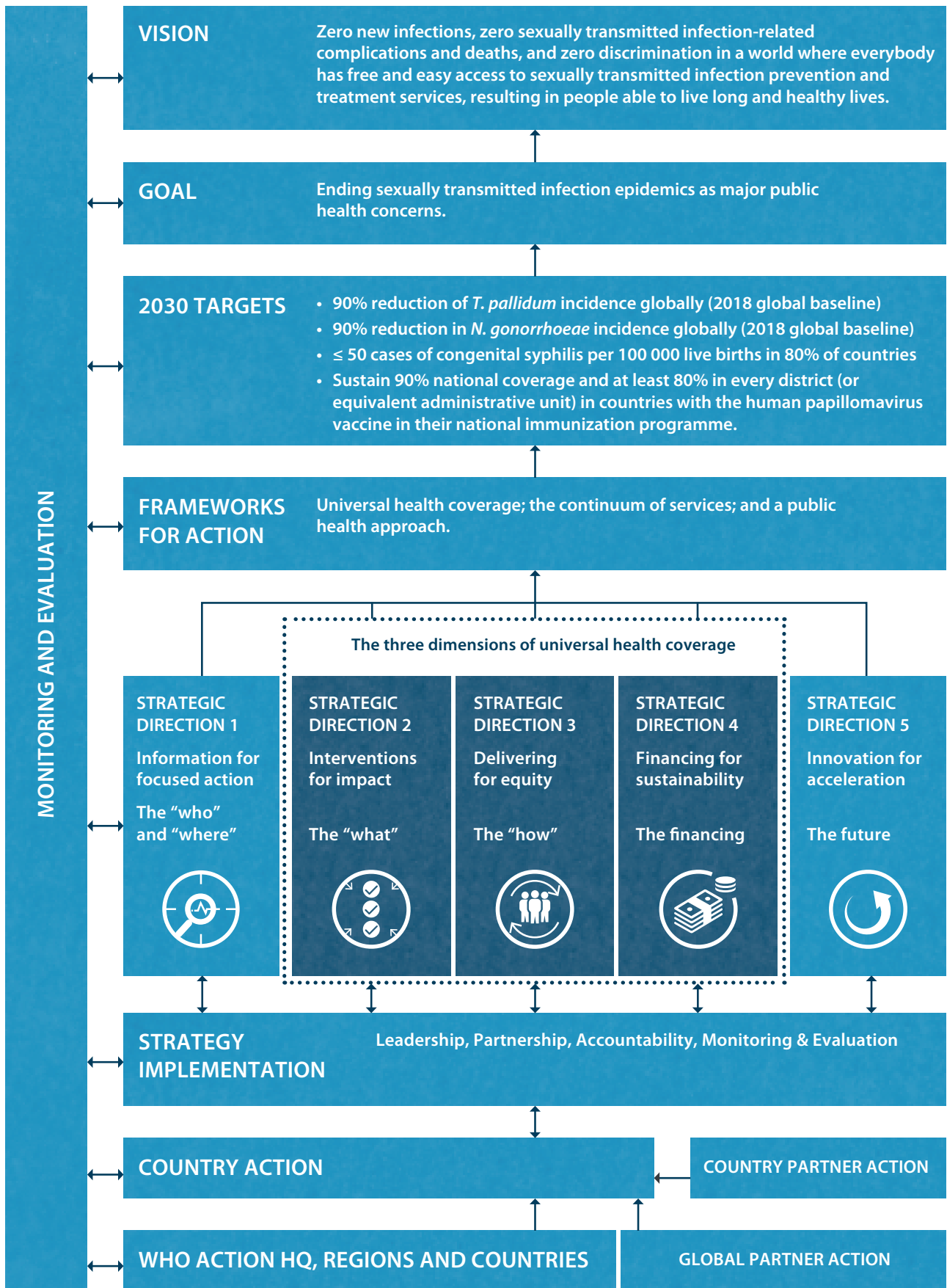
5 Further information available at: <http://www.un.org/sustainabledevelopment/development-agenda/>

6 Global health sector strategy on sexually transmitted infections 2016–2021: towards ending STIs. Geneva: World Health Organization; 2016 (<http://www.who.int/reproductivehealth/publications/rtis/ghss-stis/en/>).

7 GHSS on HIV, available at: <http://www.who.int/hiv/strategy2016-2021/ghss-hiv/en/>; GHSS on viral hepatitis, available at: <http://www.who.int/hepatitis/strategy2016-2021/ghss-hep/en/>

8 Further information available at: <http://globalstrategy.everywomaneverychild.org/>

Figure 2. Outline of the Global STI Strategy 2016–2021



The control of STIs also contributes to the SDGs, by preventing a range of other potential complications and negative health outcomes (see Box 1).

In addition, implementing interventions to control STIs will require cross-sectoral collaboration to create linkages with other relevant health programmes, including in particular those addressing HIV and sexual and reproductive health, as well as programmes

focused on noncommunicable diseases. This broad, collaborative approach can significantly cut costs while amplifying the impact of the STI response.

The Global STI Strategy uses the continuum of quality services – prevention, diagnosis, treatment and cure – to strengthen responses and ensure that all populations in need are reached (see Figure 3).

Box 1. Potential contributions of the Global STI Strategy to other SDG health-related targets

The proposed strategy will contribute to five of the 13 health-related targets by 2030:

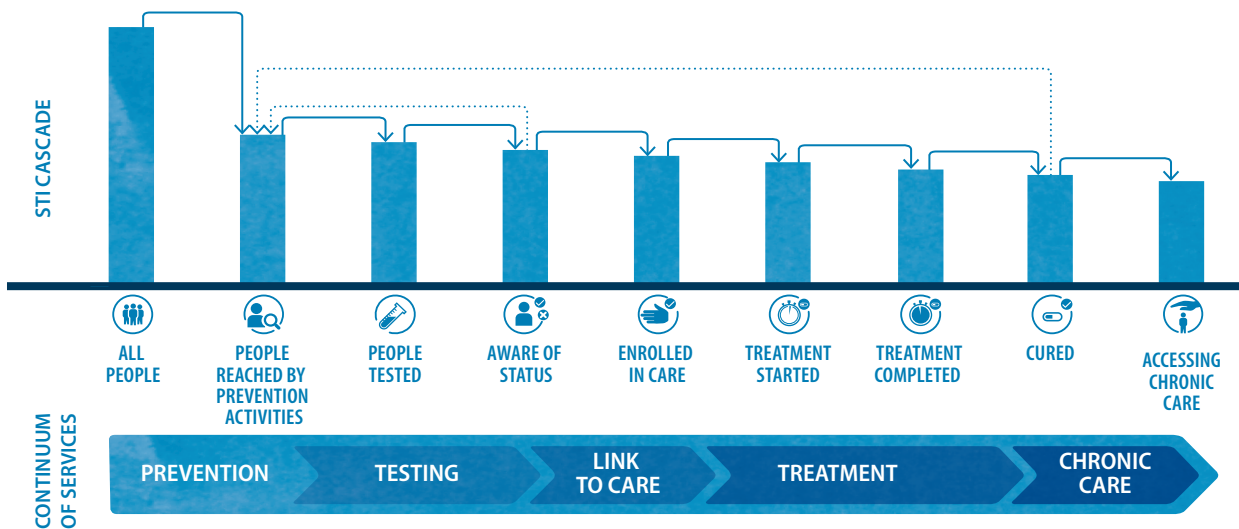
- ending preventable deaths of mothers, newborns and children under 5 years of age;
- ending epidemics of AIDS, and combatting hepatitis and other communicable diseases;
- reducing by one third premature mortality from noncommunicable diseases through prevention and treatment, and promoting mental health and well-being;
- ensuring universal access to services for sexual and reproductive health care, family planning, information and education, and the integration of reproductive health into national strategies and programmes; and
- achieving universal health coverage, including financial risk protection, access to quality essential health care services and access to safe, effective, quality and affordable essential medicines and vaccines for all.

The Global STI Strategy’s public health approach focuses on three STIs that need immediate action and for which cost-effective interventions already exist. These three are listed below along with the reasons why they have been prioritized.

- ***Neisseria gonorrhoeae* (gonorrhoea) – because of increasing resistance to treatment and the high risk of coinfection with other STIs, especially chlamydia (both gonorrhoea and chlamydia are major causes of infertility);**
- ***Treponema pallidum* (syphilis) – due to its impact on pregnant women (there are over 200 000 fetal and neonatal deaths each year due to syphilis in pregnancy)⁹; and**
- **Human papillomavirus (HPV) – because of its link to cervical cancer (approximately 291 million women have an HPV infection; HPV causes 530 000 new infections and 266 000 deaths from cervical cancer each year)¹⁰.**

Besides these burdens, STIs also greatly increase the risk of HIV transmission.

Figure 3. The continuum of STI services and the cascade



9 Wijesooriya NS, Rochat RW, Kamb ML, Turlapati P, Temmerman M, Broutet N et al. Global burden of maternal and congenital syphilis in 2008 and 2012: a health systems modelling study. *Lancet Glob Health*. 2016;4:e525-33.
 10 Global health sector strategy on sexually transmitted infections 2016–2021: towards ending STIs. Geneva: World Health Organization; 2016 (<http://www.who.int/reproductivehealth/publications/rtis/gshs-stis/en/>).

Implementing the Global STI Strategy at the national level

Understanding national epidemics is essential to developing a strategic action plan. The Global STI Strategy urges countries to define a strategic action plan to control STIs based on national and local STI data. This information builds a strong case for national efforts towards STI prevention and care, and can rally political commitment and encourage much-needed government investment in these efforts. With this foundation, countries can prioritize their responses for greatest impact and tailor their interventions in order to reach the Global STI Strategy's 2020 milestones for countries (see Box 2).

National STI programmes

Countries can develop a high-quality, equitable and sustainably financed programme to address STIs by taking the following actions.

- Identify an institutional home or focal point for STIs within the ministry of health.
- Undertake a broader situation analysis to determine how many infections there are and where they are occurring; this will inform programming.
- Strengthen the national STI programme by:
 - revising the national STI guidelines based on local data and the new WHO recommendations;
 - establishing targets for the STI programme.
- Develop or revise the existing national STI programme implementation plan.
- Engage with communities, civil society and other partners from the outset to help ensure essential services are available to the entire population.
- Establish a solid and sustainable funding base by:
 - defining the package of essential STI interventions, services and commodities to be included in the national health benefit package;
 - phasing out user fees and strengthening insurance schemes;
 - pooling funds for different STIs;
 - reducing spending on commodities while improving efficiency through better planning and procurement.

Strengthening national health systems

Beyond STI programmes, more broadly countries can strengthen their health systems to eliminate barriers to equity and thus help to ensure access to STI services. Specifically, actions can include the following.

- Create an enabling environment through enactments of laws and policies that promote human rights and gender equality.
- Ensure the STI programme is properly integrated into national health programmes.
- Use health initiatives promoting behaviour change, circumcision, and control of alcohol and substance use to reach men and boys (in addition to women and girls) with STI interventions.
- Reduce vulnerability and risk by informing individuals about available services.
- Remove barriers that prevent people from accessing services, such as laws on the age of consent, criminalization of certain behaviours, stigma and discrimination in certain health-care settings, and gender-based violence.
- Target interventions towards populations with the greatest need.
- Provide uninterrupted access to quality vaccines, diagnostics, medicines and other commodities.

Box 2: Milestones for 2020

70% of countries:

- have STI surveillance systems in place;
- have at least 95% of pregnant women screened for syphilis and 90% tested for HIV and 95% of HIV positive pregnant women receiving effective treatment;
- provide STI services or links to such services in all primary, HIV, reproductive health, family planning and ante- and post-natal care services;
- deliver HPV vaccines through the national immunization programme; and
- report on antimicrobial resistance in *N. gonorrhoeae*.

70% of key populations:

- have access to a full range of STI & HIV services, including condoms.

Surveillance and data use for monitoring and evaluation

In addition, countries need to assess national progress by monitoring and evaluating where and how new infections occur, how transmission is facilitated and what barriers stand in the way of access to and use of services. Effective monitoring and evaluation systems must be in place, including a system to monitor and evaluate the implementation of the national STI guidelines and achievement of the STI programme targets. To gather the necessary information, countries could take the following actions.

- Create a working group to establish the 2018 incidence baseline data for syphilis and gonorrhoea to allow future monitoring of progress towards the 2030 goals.
- Integrate STI surveillance into the national health information system.
- Increase the level of detail and potential for disaggregation of data, and include data on risk factors and determinants.
- Identify specific populations at greatest risk of STIs and ensure they are included in data collection.

Programmatic support for the continuum of high-quality STI care: prevention, diagnosis and treatment

Prevent STI transmission and acquisition

Efforts should also be made to ensure wide acceptance and availability of prevention interventions. Combination prevention is the most effective way to prevent the transmission of STIs. Countries should therefore consider prioritizing prevention interventions through effective combination strategies that include:

- comprehensive health information, education and promotion programmes for adolescents;
- male and female condom programming for protection against both STIs and unintended pregnancies, especially for adolescents;
- use of maternal and child health and family planning clinics to provide additional care and distribute condoms to women at risk of STIs;
- greater use of social marketing to improve supply of and demand for STI services and condoms;
- promotion of voluntary medical male circumcision where appropriate; and
- ensuring access to HPV and hepatitis B vaccinations.

Diagnose STIs early and ensure linkages to treatment

Early diagnosis of STIs using accurate diagnostic tests and procedures is the best way to ensure effective medical treatment and support, and to prevent further STI transmission. This can be achieved through:

- procurement, introduction and expanded use of WHO prequalified diagnostics;
- quality assurance and improvement to lower the risk of misdiagnosis; and
- reducing delays between specimen collection, laboratory testing, sharing the results and accessing treatment.



Manage symptomatic patients

Primary care outlets – including primary health care clinics, sexual and reproductive health services, and services that provide care and case management for persons living with HIV – should follow updated STI management guidelines for symptomatic patients and their sexual partners (see below). They should also make efforts to ensure that treatment is provided as early as possible and that there is a high level of treatment adherence. These efforts can include:

- updating clinical protocols for symptomatic STI management, based on the latest evidence;
- encouraging the use of single-dose treatment options, delivered if possible at a health-care facility, to strengthen adherence; and
- integrating STI management with routine prevention and care services for HIV, hepatitis B and noncommunicable diseases, for example, in specific populations, to detect and address potential coinfection.

Reach sexual partners and offer them treatment

Partner notification and treatment is an essential component of STI treatment and care. Treating the sexual partner will cure another person, avoiding complications and preventing new infections. Strategies to strengthen sexual partner management should include:

- adopting strategies for partner notification and evaluating their implementation;
- safeguarding patient confidentiality; and
- ensuring counselling and treatment of partners.

Integration and linking of interventions for sustainability and impact

The impact of all the recommended interventions, and of STI programmes as a whole, can be enhanced by combining STI interventions, which should be rights-based and gender-sensitive, with other relevant initiatives and programmes, such as HIV prevention and care, maternal and child health, sexual and reproductive health, cancer screening and care,

immunization and education. Stronger linkages significantly increase coverage of interventions and improve quality of care. The cost of STI programmes can also be significantly reduced when initiatives are combined.

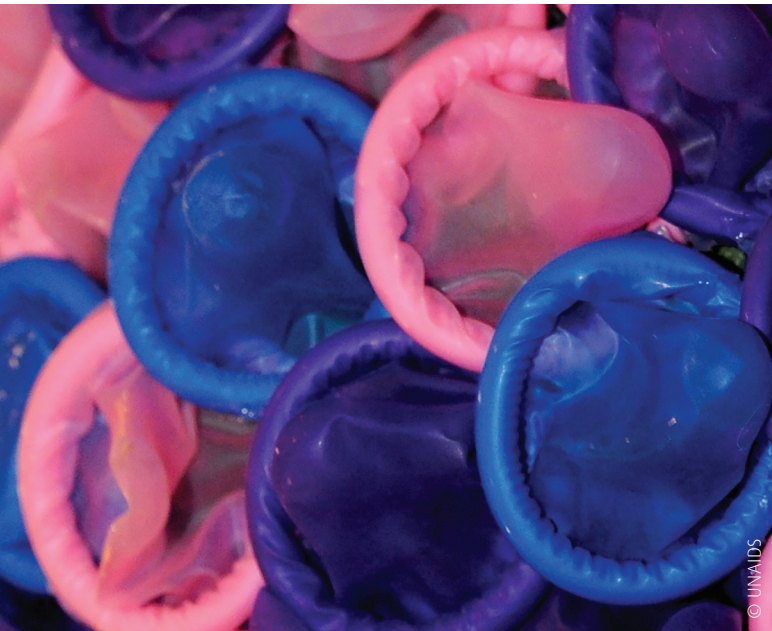
Effective packaging of combined interventions for maximum impact should include the following.

1. **Elimination of mother-to-child transmission (EMTCT) of syphilis, HIV and hepatitis B** through triple elimination campaigns, including:
 - screening all pregnant women for HIV and syphilis;
 - providing vaccination for hepatitis B at delivery;
 - providing appropriate therapy to mothers and infants who are seropositive; and
 - linking EMTCT efforts for HIV, syphilis and hepatitis B.
2. **Ensuring high coverage of HPV and hepatitis B vaccines** to help reduce the incidence of cervical cancer, genital warts and hepatitis B infection through:
 - introducing these vaccines into national immunization programmes;
 - integrating the HPV vaccine into cervical cancer prevention activities to increase coverage among adolescents; and
 - integrating hepatitis B vaccination into prenatal and post-delivery services for EMTCT of hepatitis B.



3. Controlling the spread of gonococcal antimicrobial resistance (AMR) through:¹¹

- strengthening surveillance of gonococcal AMR by building laboratory capacity;
- providing adequate diagnosis and appropriate management of gonorrhoea, including by:
 - adapting national treatment guidelines based on local patterns of resistance and with reference to the new WHO treatment guidelines for gonorrhoea;¹²
 - training health-care providers to provide appropriate treatment; and
- increasing awareness about the negative effects of the misuse and overuse of antibiotics.



Additional factors to be considered by programme managers

Altering the trajectory of the STI response requires innovative approaches in several areas. The following approaches are recommended in four areas.

- **STI, HIV and pregnancy prevention technologies:** National programmes should increase the use of male and female condoms, improve behaviour change and communication, and develop a broader range of vaccines.
- **Scale-up and delivery of services:** National programmes should increase the use of HPV and hepatitis B vaccines, improve primary health care and community-based service delivery, include hard-to-reach populations, and improve linkages and integration of services.
- **STI testing and treatment:** National programmes should initiate point-of-care testing using rapid tests to diagnose one or multiple STIs at a single visit; increase the availability of immediate treatment; and conduct operational research into the use of more effective medicine regimens to reduce dosages and prevent AMR.
- **Flexibility:** National programmes should be dynamic and flexible enough to validate and introduce new tools.

Taken together, all of the above actions will intensify the national STI response and ensure progress towards ending STIs as a public health concern, dramatically reducing the burden of illness and number of deaths associated with them, while improving health and well-being.

11 Global action plan on antimicrobial resistance. Geneva: World Health Organization; 2015 (<http://www.who.int/antimicrobial-resistance/global-action-plan/en/>); Global action plan to control the spread and impact of antimicrobial resistance in *Neisseria gonorrhoeae*. Geneva: World Health Organization; 2012 (<http://www.who.int/reproductivehealth/publications/rtis/9789241503501/en/>).

12 WHO guidelines for the treatment of *Neisseria gonorrhoeae*. Geneva: World Health Organization; 2016 (<http://www.who.int/reproductivehealth/publications/rtis/gonorrhoea-treatment-guidelines/en/>).