Global and Regional Epidemiology of Syphilis

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Disclosure

I have no actual or potential conflict of interest in relation to this presentation
Outline

- Global and regional burden of sexually transmitted infections
- Syphilis on the rise
- Elimination of congenital syphilis
- Addressing syphilis epidemic

Over one million new STIs are acquired each day

- 376.4 million new infections in adults in 2016
  - Chlamydia 127 million
  - Gonorrhoea 87 million
  - Trichomoniasis 156 million
  - Syphilis 6.3 million

New cases of chlamydia, gonorrhoea, trichomoniasis, and syphilis among adults 15 to 49 years of age (WHO global estimates for 2016)

High incidence of curable STIs in women and men in Asia Pacific

Estimated incidence of STI, by region and sex, 2012

- 90% reduction of *T. pallidum* incidence (2018 global baseline)
- 90% reduction in *N. gonorrhoeae* incidence (2018 global baseline)
- ≤50 cases of congenital syphilis per 100,000 live births in 80% of countries
- 80% human papillomavirus (HPV) vaccine coverage in adolescent 9-14 years of age in 80% of countries


WHO, Global Health Sector Strategy on Sexually Transmitted Infections, 2016-2021
Reported syphilis cases on the rise in multiple countries

Syphilis notification rate per 100,000, 2007-2016: Australia  Reported cases of syphilis 2010-2016: Japan

Reported cases of syphilis 2013-2017: South Korea

Reported case of syphilis 2012-2017, New Zealand

Syphilis on the rise including congenital syphilis

Syphilis incidence rate 1981-2016: Malaysia

Syphilis prevalence among pregnant women: Mongolia

Syphilis per 100,000 Population 2000-2014: Thailand

Congenital syphilis cases 2008-2017: United States
Congenital syphilis
Can we allow this to happen in 2018?


HIV/syphilis dual rapid test kits
- SD Bioline (WHO Pre-qual)
- Chembio (CE marked)
- Premier Medical Group (WHO review for Pre-qual)

Over 40 countries have experienced benzathine penicillin shortages in 2014-2018

Global Elimination of Congenital Syphilis (CS)

In 2007, WHO and partners launched global elimination of congenital syphilis as a public health problem using justifications of:

- SEVERE & COMMON CONDITION
- COST EFFECTIVE INTERVENTION
- PROGRAMATICALLY FEASIBLE
- FIT GLOBAL CONTEXT
- REGIONAL EXAMPLE
Global criteria and processes for validation of elimination of mother-to-child transmission (EMTCT) of HIV and syphilis (updated in 2017)

Elimination criteria
Congenital syphilis case rate ≤ 50 per 100,000 live birth

with 2+ years of
- ≥ 95% antenatal care (ANC) attendance
- ≥ 95% maternal syphilis screening in ANC
- ≥ 95% of positive cases “adequately” treated


The Ultimate Prize: Validation of EMTCT of Syphilis and HIV
11 Countries validated

2015
- Cuba

2016
- Thailand
- Belarus
- Moldova

2017
- Anguilla
- Antigua & Barbuda
- Bermuda
- Cayman Islands
- Montserrat
- St. Christopher & Nevis

2018
- Malaysia
Malaysia: First country in the Western Pacific region to eliminate mother-to-child transmission of syphilis and HIV

Regional Framework for Triple Elimination of Mother-to-Child Transmission (EMTCT) of HIV, Hepatitis B and Syphilis in Asia and the Pacific 2018-2030

**Vision**
Every infant free of HIV, hepatitis B and syphilis

**Goal**
Achieve and sustain EMTCT of HIV, hepatitis B and syphilis and achieve better health for women, children and their families through a coordinated approach and efforts by 2030

**Pillar 1: Policy**
Coordinated national policy and strategy

**Pillar 2: Service delivery**
Seamless quality care for women, newborns, children and their families

**Pillar 3: Monitoring & Evaluation**
Coordinated monitoring and evaluation of elimination
Percentage of antenatal care attendees positive for syphilis
2016 Interim analysis

- 988,000 pregnant women with syphilis
- 355,000 adverse birth outcomes

Draft 2016 Congenital Syphilis Case Estimates
Maternal syphilis prevalence 0.69%
473 cases/100,000 live births

**Programme Data:** Antenatal syphilis testing coverage in priority countries, 2008 and 2016

**Congenital Syphilis Elimination Key Indicator:** Coverage of syphilis testing in ANC ≥ 95%

- Data not reported in 2008 or 2016, thus closest data point used
- CAR: Central African Republic, ONG: Papua New Guinea

**Programme Data:** Treatment coverage among syphilis-seropositive pregnant women in priority countries, 2010 and 2016

**Congenital Syphilis Elimination Key Indicator:** Treatment coverage in positive mothers > 95%

(IM benzathine penicillin)

- Data not reported in 2010 and/or 2016, thus closest data point used
- CAR: Central African Republic, ONG: Papua New Guinea
Let’s face syphilis (STIs) epidemic

- Increase in primary and secondary syphilis cases in a number of countries over last 5-8 years
- Significant increase among men who have sex with men (in Asia, large proportions are married or have female partners)
- Increasing heterosexual transmission affecting women, followed by congenital syphilis
- Young populations (e.g. 20-29 years old) and cultural/racial minority groups including indigenous communities being affected
- Co-infections are not rare (e.g. other STIs including HIV)

It’s a reflection of our society and health systems

- Continued lack of commitment and neglect of STIs
- Widening disparity in accessing health services among vulnerable populations – health system failure
- Increased use of social networking technologies - 2.46 billion in 2017 (over two-fold increase since 2010) – changing behaviours
- Young populations including adolescents – their specific needs, sexual health, drug use, decreased condom use
- Population movement – migrants, tourism, overseas workers - their health needs

**What’s needed?**

**Joint call and action to make a strong rope**

- Simple and low-cost diagnostics and treatment are available
- **Quality data** needed, in particular from low and middle-income countries – technical support needs
- **Modelling for investment case** – establish political commitment
- **Clear and bold messages and communications for target populations** through platforms and channels used by communities
- Collaborations and joint work with affected populations, in particular with **MSM communities**

**What’s needed?**

**Condom and regular screening/treatment**

- Disclaimer needed for **Undetectable = Untransmittable**, mind STIs!
- Marry PrEP – **no PrEP without STI services**, excellent entry point to regular STI screening and treatment
- **Universal antenatal syphilis (and other STIs) screening with partners**, pre-marital/pre-pregnancy testing
- **Sexual health as a part of routine health check-up** (e.g. annual health assessment, maintenance of personal health)
- **Condom, condom, and condom** (any condom which attracts users?)
Conclusion

What are we waiting for? Act now!

• Global prevalence and incidence of STIs remain high, with over one million new infections each day

• Reported syphilis cases on the rise in multiple countries among MSM, but also among heterosexuals and congenital syphilis

• Successful cases of EMTCT of syphilis in a number of countries

• Joint call and action needed to address syphilis (and STI) epidemic

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STI  http://www.who.int/reproductivehealth/topics/rtis/en/

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