STIs and the Sustainable Development Goals



Prof Helen Rees Gollow Lecture World STI & HIV 2015 Congress, Brisbane 2015



Executive Director, Wits Reproductive Health & HIV Institute Personal Professor, Obstetrics and Gynaecology, University of Witwatersrand Honorary Professor, London School of Hygiene and Tropical Medicine Honorary Fellow, Murray Edwards College, Cambridge

Dr. Morris M. Gollow (1925 - 2011)

- This lecture marks the legacy of Morris Gollow – it is the 24th Gollow lecture
- Emigrated to WA in 1956 from the UK
- Inaugural President of the Australasian College of Venereologists (1988-1991)
- Awarded the Member of the Order of Australia for services to Medicine, particularly in Venereology



Morris Gollow AM, DipVen(Lond)

Presentation

- 1. What are the Sustainable Development Goals (SDGs)?
- 2. What are the Millenium Development Goals (MDGs) and how do they differ from the SDGs ?
- 3. Other Global Commitments relevant to STIs
- 4. How can STIs fit into the SDG framework?
- 5. Progress during the MDGs
- 6. Opportunities during the SDGs



Millennium Development Goals 2000-2015

- 1. Eradicate poverty and hunger
- Universal primary education
 Gender equality and
- Genuer equality and empower women
 Reduce child mortality
- Reduce child mortality
 Improve maternal health
- Combat HIV/AIDS, malaria and IDs
- 7. Ensure environmental sustainability
- Global partnership for development

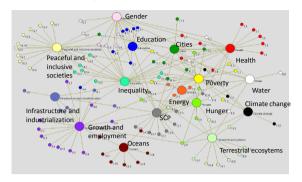


UN Sustainable Development Goals 2015-2030

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- Poverty
 Hunger
- Healthy life
 Education
- 5. Equality of women and girls
- Water and sanitation
 Sustainable energy
- Sustainable energy
 Economic growth & employment
- 9. Sustainable industrialization
- 10. Reduce inequality among countries
- 11. Sustainable cities & settlements
- 12. Sustainable consumption
- 13. Climate change
- Oceans
 Sustainable terrestrial ecosystem
- 16. Peace and justice
- 17. Global partnership for sustainable development

SDGs are a 'Network of 169 Targets' with integration between sectors



Given the significant disease burden, how do we justify investment in STIs under the SDGs and is it important to do this?

Yes because the SDGs will determine the targeting and level of resources committed for global health programmes and research for the next 15 years



No	Goal 3 Ensure healthy lives and promote well-being for all at all ages: Targets	STI linkages
3.1	By 2030 end preventable deaths of newborns and under-five children	EMTCT of syphilis and HIV
	By 2030 end the epidemics of AIDS, tuberculosis, malaria, and neglected tropical diseases and combat hepatitis, water-borne diseases, and other communicable diseases	-EMTCT of syphilis, HBV vaccine, combat other STIs. This goal expands ++ on MDG 6, which only targeted AIDS, TB and malaria.
	Strengthen prevention and treatment of substance abuse, including narcotic drug abuse and harmful use of alcohol	Combat effects of narcotic drugs and alcohol on sexual behaviour and thus STIs
	By 2030 ensure universal access to SRH services, including for family planning, information and education, and the integration of reproductive health into national strategies and programmes	-Universal access to STI services - Integration of STIs within national strategies, including for HIV, adolescents and maternal health
3.8	Achieve UHC, 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	-UHC to STI services, and safe, effective, quality, and affordable medicines -Access to STI vaccines -Health financing: reduce private sector

No	Goal 3 Ensure healthy lives and	STI linkages
	promote well-being for all at all ages:	
	Targets	
	By 2030 end preventable deaths of newborns and	EMTCT of syphilis and HIV
3.3	By 2030 end the epidemics of AIDS,	EMTCT of syphilis, HBV vaccine,
	tuberculosis, malaria, and neglected tropical	Hepatitis C, combat other STIs.
	diseases and combat hepatitis, water-borne	
	diseases, and other communicable diseases	
	Strengthen prevention and treatment of substance abuse, including narcotic drug abuse and harmful use of alcohol	Combat effects of narcotic drugs and alcohol on sexual behaviour and thus STIs
	By 2030 ensure universal access to SRH services, including for family planning, information and education, and the integration of reproductive health into national strategies and programmes	 -Universal access to STI services - Integration of STIs within national strategies, including for HIV, adolescents and maternal health
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3.7	By 2030 ensure universal access to SRH	Universal access to STI services
	services, including for family planning, information and education, and the integration of reproductive health into national strategies and	Integration of STIs within national strategies, including for HIV, adolescents and maternal health
2 0	programmes	LUIC to CTU and income and only affective
	Achieve UHC, 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	UHC to STI services, and safe, effective, quality, and affordable medicines Access to STI vaccines Health financing: reduce private sector services; cash transfers to raise service demand

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	By 2030 end preventable deaths of newborns and under-five children	EMTCT of syphilis
	By 2030 end the epidemics of AIDS, tuberculosis, malaria, and neglected tropical diseases and combat hepatitis, water-borne diseases, and other communicable diseases	HIV, HBV vaccine, hepatitis C treatment, combat other STIs.
	By 2030 ensure universal access to SRH services, including for family planning, information and education, and the integration of reproductive health into national strategies and programmes	Universal access to STI services Integration of STIs within national strategies, including for HIV, adolescents and maternal health
3.8	Achieve UHC, 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	Health financing: reduce private sector services; cash transfers to raise service demand UHC for STI services, with safe, effective, quality, and affordable medicines Access to STI vaccines

No	Goal 3 Ensure healthy lives and promote well-being for all at all ages: Targets	STI linkages
3.c	Increase substantially health financing and the recruitment, development and training and retention of the health workforce in developing countries	Raise capacity of health workers in STI services
3,d	Strengthen the capacity of all countries, particularly developing countries, for early warning, risk reduction, and management of national and global health risks	National and global responses to STI epidemics or increases in prevalence of STIs e.g. NG resistance

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SDG Goals other than 3	Relevant Targets within other SDGs	STI linkages	
Goal 5. Achieve gender equality	5.2 Eliminate all forms of violence against all women and girlsincluding trafficking and sexual and other types of exploitation	Reduce STI risks from sexual violence, link STI and SGBV services etc.	
and empower all women and girls		STI services situated within rights-based approach, Women's Empowerment, ICPD Programme of Action	
Goal 10. Reduce inequality within and among countries	10.3 Ensure equal opportunity and reduce inequalities of outcome, including through eliminating discriminatory laws, policies and practices and promoting appropriate legislation, policies and actions in this regard	STI services reduce inequalities by targeting higher risk groups , e.g. FSWs, young women and adolescents, MSM.	

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Goal 10. Reduce inequality within and among countries	10.3 Ensure equal opportunity and reduce inequalities of outcome, including through eliminating discriminatory laws, policies and practices and promoting appropriate legislation, policies and actions in this regard	STI services and interventions reduce inequalities and stigma by targeting higher risk groups , e.g. FSWs, young women and adolescents, MSM.

DG Goals other than	Relevant Targets within other SDGs	STI linkages	SDG Goals other than Goal 3	Relevant Targets within other SDGs	STI linkages
Soal 17. Strengthen the means of mplementation and evitalize the global partnership for sustainable development	17.6 Enhance North-South, South-South and triangular regional and international cooperation on and access to science, technology and innovation, and enhance knowledge sharing on mutually agreed terms, including through improved coordination among existing mechanisms, particularly at UN level, and through a global technology facilitation mechanism when agreed	facilitating advances in science, technology and innovation for STIs	Goal 17. Strengthen the means of implementation and revitalize the global	17.6 Enhance North-South, South-South and triangular regional and international cooperation on and access to science, technology and innovation, and enhance knowledge sharing on mutually agreed terms, including through improved coordination among existing mechanisms, particularly at UN level, and through a global technology facilitation mechanism when agreed	technology and innovation for STIs
ueveropment	17.16 enhance the global partnership for sustainable development complemented by multi-stakeholder partnerships that mobilize and share knowledge, expertise, technologies and financial resources	multi-stakeholder global partnerships		17.16 Enhance the global partnership for sustainable development complemented by multi-stakeholder partnerships that mobilize and share knowledge, expertise, technologies and financial resources	multi-stakeholder global partnerships

SDG 3 Sub-Goals and STIs

OVERARCHING	Ensure healthy lives and promote well-being for all at all ages (SDG 3)
HEALTH GOAL	
HEALTH	
SUB-GOALS	 Reduce maternal mortality Reduce child and neonatal mortality End epidemics of AIDS, TB, malaria and NTDs and combat hepatitis and other communicable diseases Reduce NCDs and improve mental health Address alcohol and other substance use
	6. Road traffic accidents 7. Sexual and reproductive health 8. Universal Health Coverage including financial risk protection 9. Hazardous chemicals, pollution & contamination 10. Tobacco control 11. Affordable essential medicines 12. Health financing and workforce 13. Capacity for early warning and management of health risks

Other global commitments and initiatives in support of STIs



THE LANCET

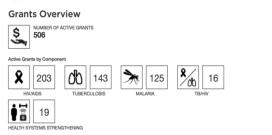
Online First	Current Issue	All Issues Spe	ecial Issues	Multimedia ~	Information for Authors
		All Content		\$ Searc	h Advanced Search
Global I	health 20	35: a world	d conve	rging wit	hin a generation
Published: D Executive S	ecember 3, 201 Summary	13			
Prompted by revisited the dramatic he for action by	y the 20th anniv case for invest alth gains by 20	ment in health a	93 World De nd develope as four key n	d a new invest nessages, each	ort, a <i>Lancet</i> Commission ment framework to achieve accompanied by opportunitie countries and by the

Lancet Commission: Only mention HPV vaccines: one of 'Best buy clinical interventions'.



GAVI supports Hepatitis B vaccine as part of childhood immunisation, and HPV vaccine as pilot introduction in GAVI eligible countries

S The Global Fund

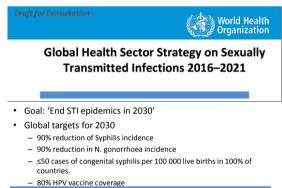


Some funding of STI services as an important part of HIV prevention (hard to determine what proportion of funding is for STIs)



Global Validation of Elimination of Mother-to Child Transmission (MTCT) of HIV and Syphilis

- Initially only syphilis in 2007, but from 2009-2014 Syphilis and HIV joined in EMTCT
- Defined as a case rate of congenital syphilis of <=50 cases per 100 000 live births.



WHO Product Development for Vaccines Advisory Committee: HSV vaccine in top 10 priority vaccines.

World Health Organisation: Linking three separate strategies

HIV: End the AIDS epidemic in 2030 Build on momentum; Accelerate the response Aligned to UNAIDS strategy

STIs: End STI epidemics in 2030 Neglected area multiple diseases/pathogens drug resistance

Building on previous strategies

Hepatitis: Eliminate Hepatitis B and C in 2030 Emerging global interest; increasing patient demand; new prevention and treatment opportunities

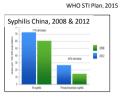


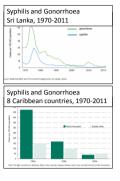
Moving towards the SDGs: Progress during the MDG period

The good news and the bad news

Progress during the MDG period

Appreciable decline in incidence of Haemophilus ducreyi (chancroid), syphilis and gonococcal rates, in sequelae such as neonatal conjunctivitis, an increase in pregnant women screened for syphilis and increased access to HPV vaccination in HIC.

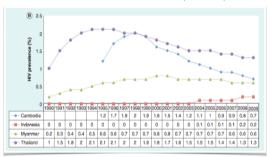




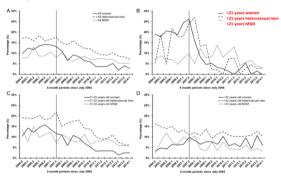
EMTCT HIV and Syphilis in Cuba, 2015



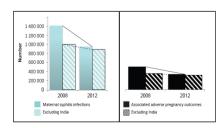
HIV prevalence stabilised or declining in countries where targeted interventions have slowed transmission in SW (SE Asia)



Impact of HPV Vaccine in Australia



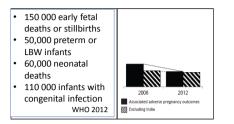
Maternal syphilis infections and associated adverse pregnancy outcomes, 2008 & 2012



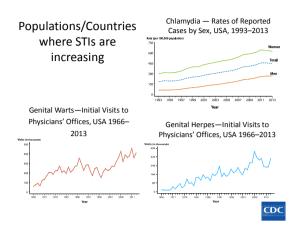
An estimated 96% of maternal syphilis infection and 98% of adverse outcomes occurred in low- and middle-income countries.

Unfinished business of the MDGs: Challenges during the MDG period

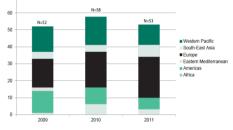
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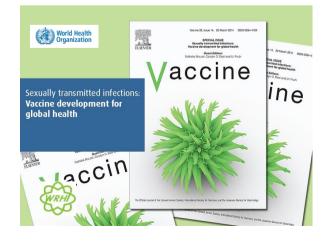


Limited surveillance: Countries contributing data on Gonococcal Antimicrobial Resistance 2009-2011



WHO Gonococcal Antimicrobial Surveillance Programme (GASP), to cephalosporin, azithromycin or quinolones, 2014

Strengthening STIs under the SDGs: Seeking novel opportunities to renew focus on STIs



Unfinished business of the MDGs: Successes and challenges of STI intervention research

Multipurpose Prevention Technologies

Unintended pregnancy
STIS

HIV transmission & acquisition

Product Name	Delivery System	Developer Sponsor	Stage of Development as MPT	Indications
		HTV & Pregnancy		
Sofing ¹⁶ M	Intronginal Neg (141)	Selling-LLC	Early Predicioal	HIL Preparty
Deplytime + Lewonorgenited NR	Intranginal Ring (MR)	PM	Advanced Precisical	HE, Preparcy
		HIV & Other STIS		
1.0% Tendovir Gel	Vigitual Gel	CAPIESA, CONBAD, TACTS, FMI NO. Gland Sciences, MTN	Phase III Circlusi Trial	HILL HEV
Griffithsin in Carrageerun gel (OC gel)	Vegnul Gel	Population Council	Advanced Predictual	HIL HY, HY
O FRANCIS	Veginal Gel	University of Louisville	Early Predicial	HILL HIV, HOV
G493-Jul 18	Intranginal Ring (SR)	Population Council	Early Predicted	HIL HY, HIL
Griffithsin nanofiber delivery system	Nancifiber - Vaginal	Population Council	EarlyPrecipical	HIL, HPV, HSV
mapp65 (mAb) Film	Vaginal 70m	Mapp Stopharmaceutical, Inc.	Phase I Clinical Trial	HILL HSV
MV-150+ Zinc Acetate in Carragement gel (M2C gel)	Vigital Gel	Population Council	Phase I Clinical Trial	HIL HY, HI
Sh2P Gel	Veginal Gel	SN International	Early Precinical	HEIC HOV
Terofovir + Acyclovir MI	Intronginal King (147)	Author Thermeceuticals	Phone I Clinical Trial	HTIC HSV
Tenofoxit + 10P-0528	Intranginal Ring (1/R)	InQuest Biolidences	Advanced Predictual	HIL SV
Terrofroir Disprod Fumante (TDF) NR	Intranginal Ring (NR)	Albert Einstein College of Medicine	Place Cirical Tital	HIL KSV
Tenofovir NR	Intronginal King (1/1)	CONNAD	Phase I Circlesi Trial	HIK HSV
Tenofovir Virginal Tablet	Vegical Tablet	CONSED	Place Circle Trial	HIL HV
TFN/FTC Virginal Tablet	Veginal Tablet	CONSIND	Place Cirical Trial	HILL HEV
ViveGel*	Veginal Gel	SterPlarma Ltd.	Advanced Preditical	BK, HIV, HSV
Zinc Aostalia + Carnageenan NR (2C NR)	Intronginal King (1/K)	Population Council	Advanced Precisical	HIL HP, HY
Zinc Apetatie in Carragement and (2C and)	Veginal Gel	Population Council	Advanced Precisical	HER, HEV, HER
		Pregnancy, HIV & Other STb		
Origani Fenale Condon	Female Condom	Strate Verlous Product Design	Plase II Cinical Trial	Olamydia, Gonomhea, HEL, HSV, Pregnanky
PPCM SAMMA Gui	Veginal Gel	Yao Batechnologies	Early Predictual	Olempila, Generihea, MX, MPV, MSX, Prepar
Tenofovit + Levoncegestrel NR	Intronginal King (147)	CONTRO	Phase I Clinical Titul	HIL HSV, Pregnancy
		Pregnancy & Non-Hill STIS		
Amphora Gel	Vaghal Gel	Evolen Inc.	Advanced Precipical	BI, Gonorthea, Pregna

Point-of-care diagnostics for STIs

ASSURED



- Affordable
- Sensitive
- Specific
- User-friendly
- Rapid and robust
- Equipment-free
- Deliverable to end-users.

Using the SDG space to promote STIs

- STIs remain an important priority in HICs and LMICs
- Piggy back onto HIV and SRH
- Piggy back new STI vaccine development onto HPV vaccine success
- Select only a few 'compelling flagship projects', with achievable goals e.g. EMTCT syphilis and HIV
- Prioritise interventions to prevent a catastrophic outcome e.g. Gonococcal resistance
- · Prioritise cost-effective interventions (use modelling)

Using the SDG space to promote STIs

- Focus on key populations including stigmatized groups e.g.:
 - SWs
 - MSM
 - Minorities
 - Young women
- Link with non-health sector e.g. human rights
- Integrate STIs into Global Health Initiatives other than SDGs e.g. WHO's elimination targets

Getting smart in the era of SDGs

"Reducing the burden of STIs contributes to":

- SDG Goal 3 for health
- SDG Goal 5 for gender equality, and empowerment of women and young girls
- SDG Goal 10 to reduce inequality and stigma within and between countries
- SDG Goal 17 to create global partnerships for research and sustainable development

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