

GLOBAL HEALTH NEEDS OF TRANSGENDER PEOPLE

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Acknowledgements

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- The community groups that make great personal and professional sacrifices to serve the unmet health and advocacy needs of those most marginalized in the HIV response
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 - Sari Reisner, Sam Winter, Tonia Poteat, Kevan Whyllie, Claire Holland, Ashley Grosso, Paul Semugoma, Chris Beyrer, and others

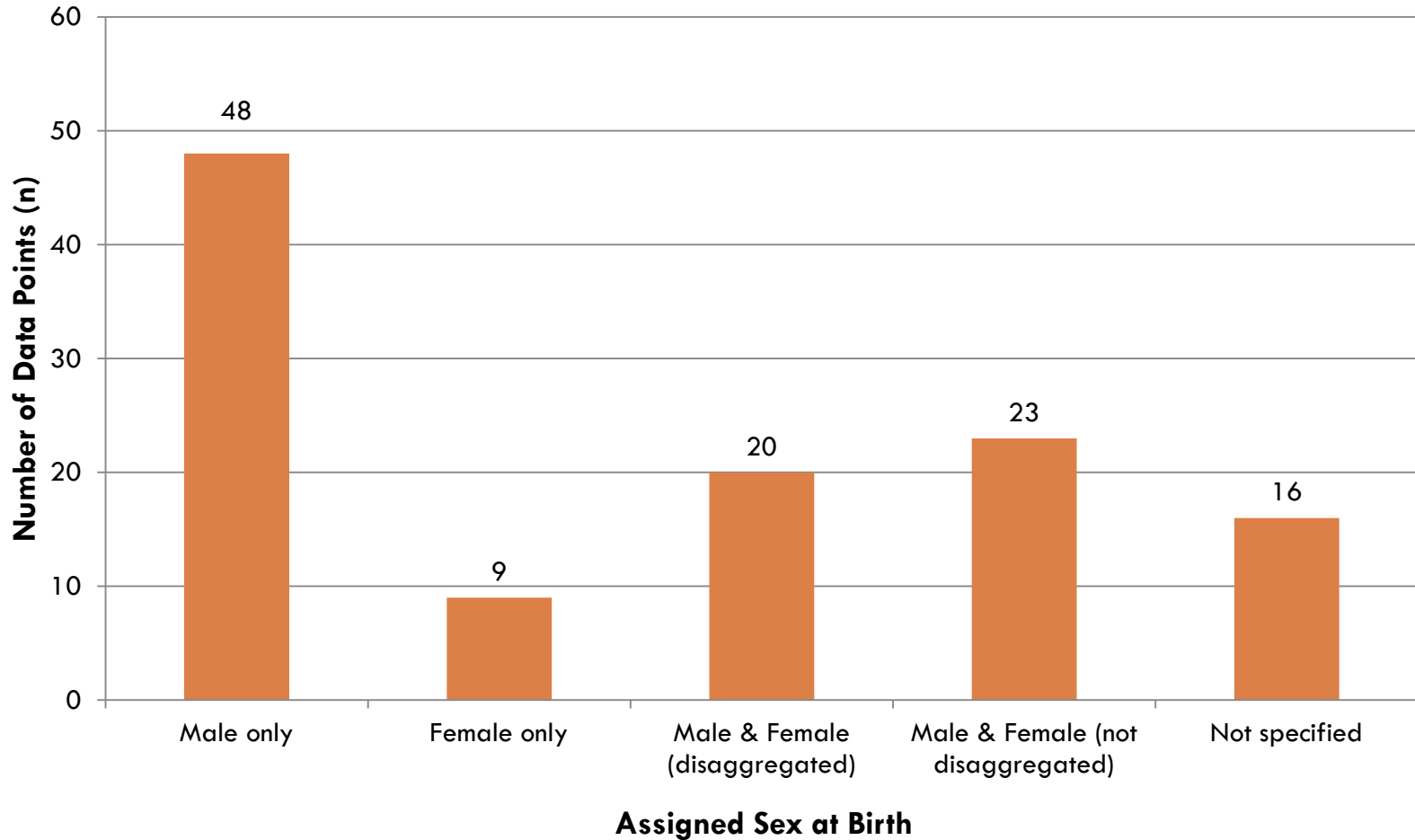
Outline

- Health Issues Affecting Transgender People
- Conceptual Framework of Health Vulnerabilities among Transgender People
 - ▣ Structural Determinants of Health
- Health Care Interventions
 - ▣ Available data
 - ▣ Mathematical Model
- Models of Care Delivery for Transgender People
- Moving Forward
- Key Themes

Transgender Global Disease Burden Systematic Review 2008-2014

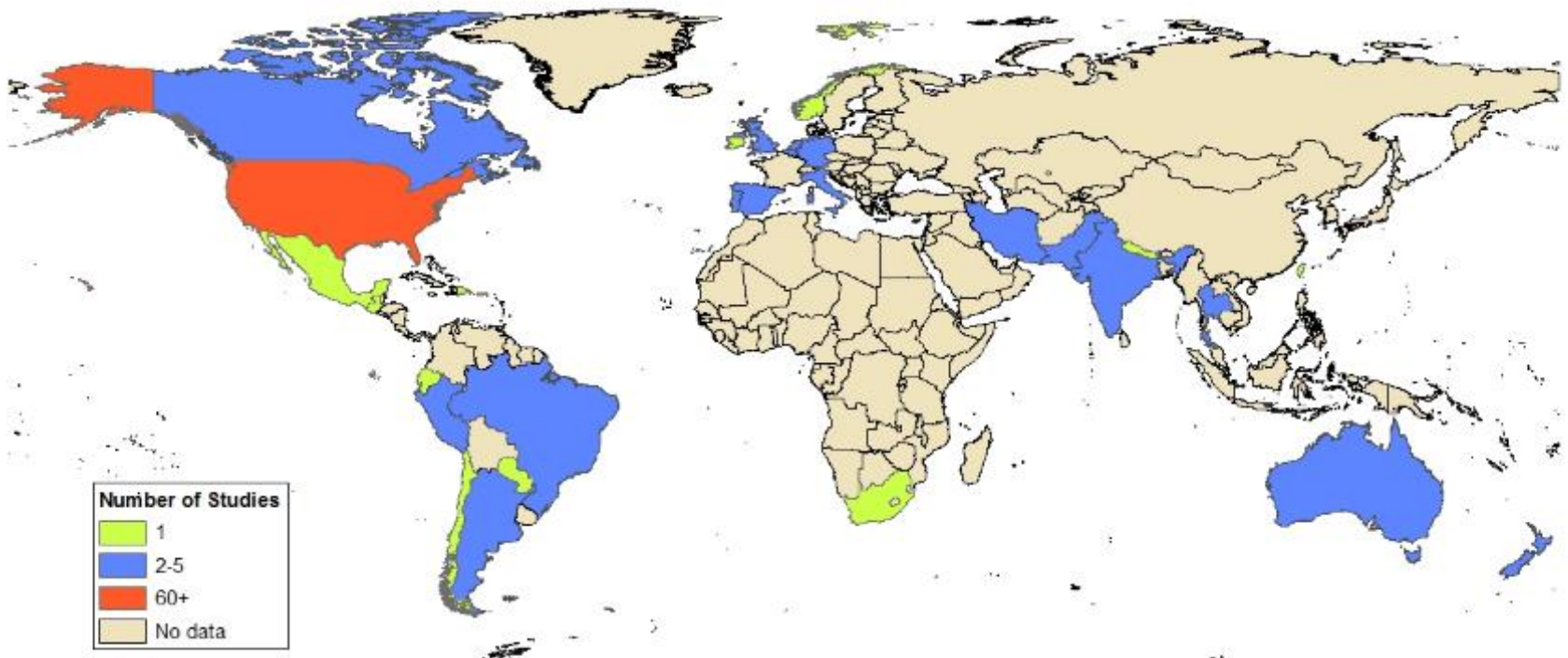
- 116 studies
 - ▣ 30 countries
 - ▣ 95 Definitions of Transgender Persons
 - ▣ 981 health-related outcomes
 - Mental health
 - Sexual and reproductive health
 - Substance use
 - Violence/victimization
 - Stigma and Discrimination
 - General Health

Transgender Health Research by Assigned Sex at Birth



Global Distribution of Transgender Health Research

What do we know and where?

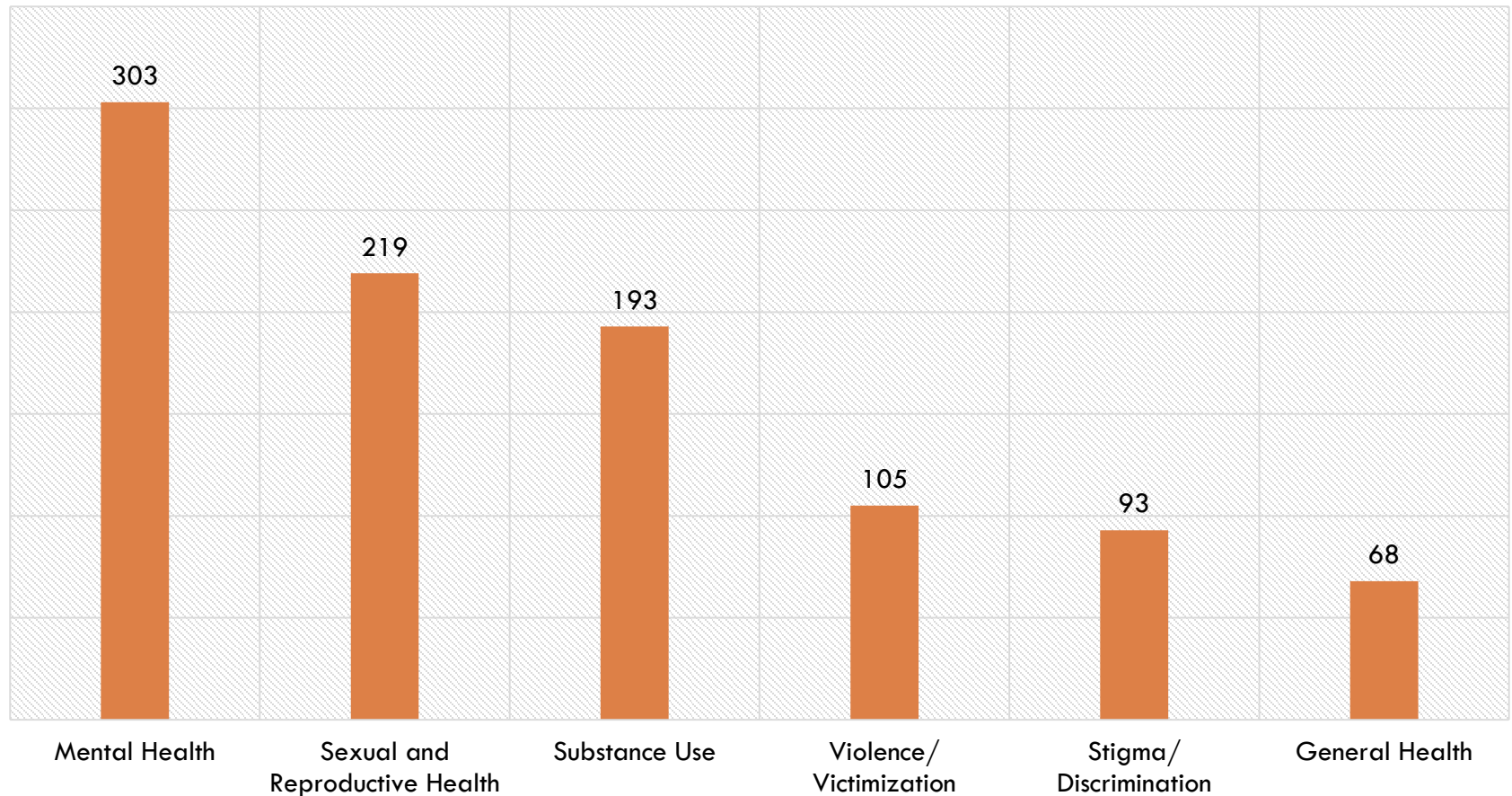


Population Studies Yielding Prevalence Data for Transgender People

Author, Date, country	Sample	Measure	Prevalence Data		
			Birth Assigned Males (%)	Birth Assigned Females	All
Conron, 2012, USA	28662 Adults	Identification as Transgender	0.5	0.4	0.5
Glen and Hurrell, 2012, UK	10039 Adults	Identification as other gender or in another way	0.6	0.4	0.5
Clark, 2014, New Zealand	8166 High School Students	Identification as transgender	1.3	1.2	1.2
Kuyper and Wijsen, 2014, Netherlands	8064 Adults	Identification gender spectrum	1.1	0.8	0.9
Van Caenergen, 2015, Belgium	1832 Adults	Identification gender spectrum	0.7	0.6	0.6

Global Health Burden: Six Health Outcome Categories in Transgender Health (n=981 Data Points), 2008-2014

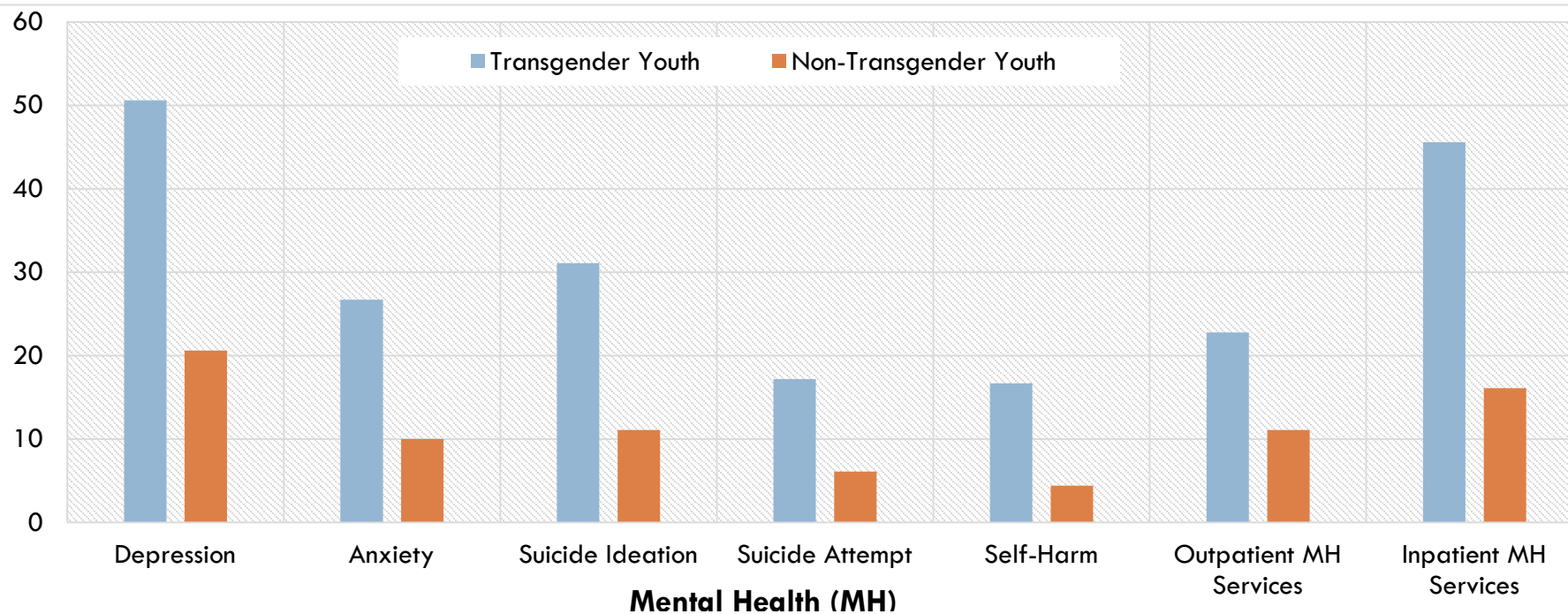
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Burden of Mental Health among Transgender Youth

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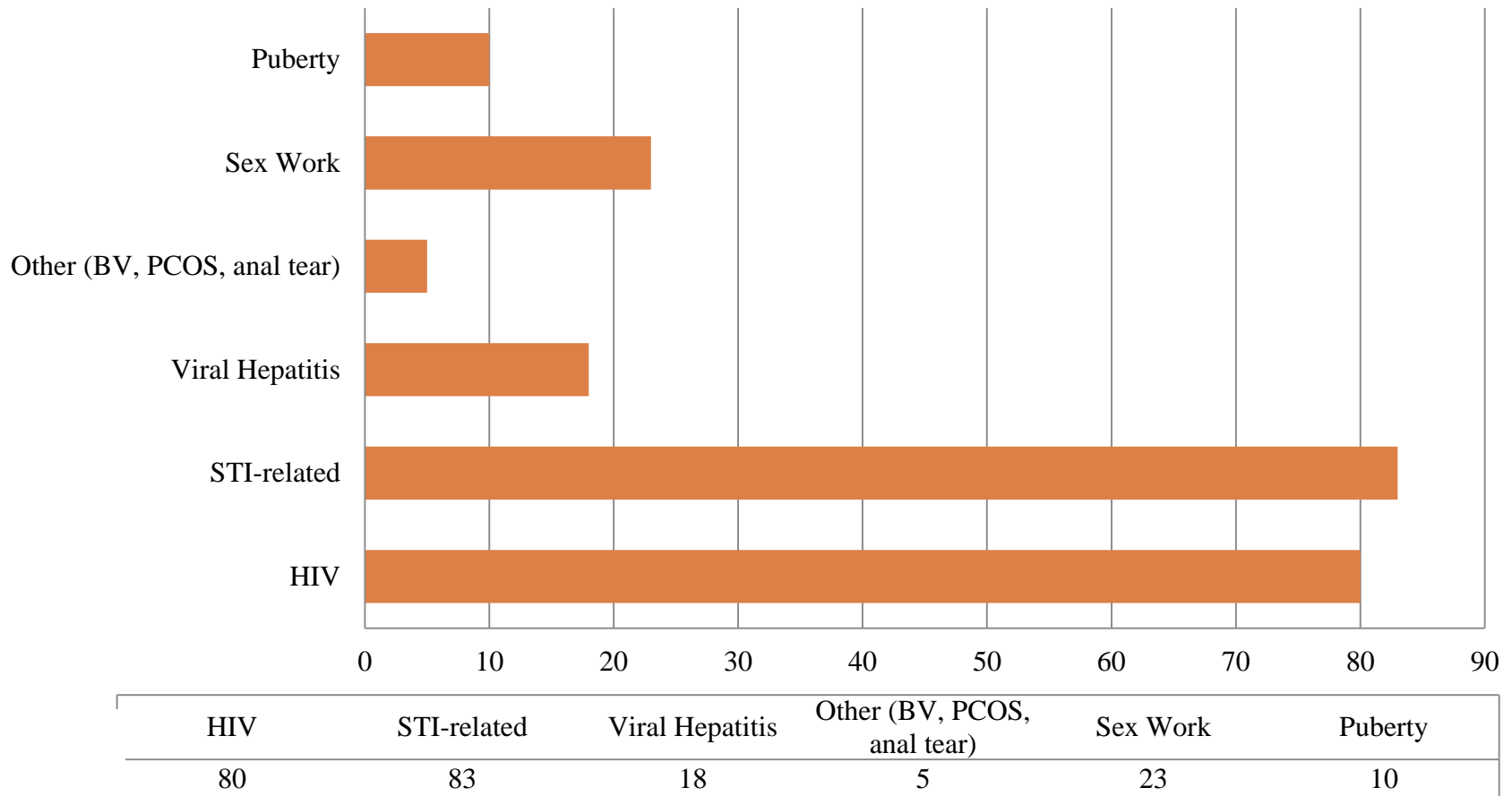
- Retrospective Cohort using EMR
- N=180, age 12-29, 2001-2010
- Matches on multiple characteristics to non-transgender youth



Burden of Mental Health among Transgender Youth

	RR (95% CI)	<i>p</i> value
Depression (DSM-4-TR diagnosis)	3.95 (2.60–5.99)	<.0001
Anxiety (DSM-4-TR diagnosis)	3.27 (1.80–5.95)	.0001
Suicide ideation	3.61 (2.17–6.03)	<.0001
Suicide attempt	3.20 (1.53–6.70)	.002
Self-harm without lethal intent	4.30 (1.95–9.51)	.0003
Inpatient mental health services	2.36 (1.33–4.20)	.004
Outpatient mental health services	4.36 (2.69–7.05)	<.0001

Sexual and Reproductive Health Outcomes



HIV Prevalence among Transgender Women 2001-2011

	n	HIV prevalence in transgender women (95% CI)	Odds ratio (95% CI)	HIV prevalence in reproductive-age adults	HIV prevalence in reproductive-age males	Proportion of total HIV infections in men	Income level
Argentina ¹¹⁻¹⁴	931	33.5% (28.3-38.8)	92.4 (80.6-105.8)	0.54%	0.73%	67.3%	M
Brazil ¹⁵⁻¹⁷	638	33.1% (26.7-39.4)	85.3 (72.3-100.6)	0.58%	0.68%	59.2%	M
El Salvador ¹⁸	67	19.4% (0.0-40.9)	23.2 (12.7-42.5)	1.03%	1.42%	65.6%	M
Peru ¹⁹	450	28.9% (21.1-36.7)	84.7 (69.1-103.9)	0.48%	0.73%	75.3%	M
Uruguay ^{20,21}	260	18.8% (7.9-29.8)	38.3 (28.1-52.3)	0.60%	0.82%	67.7%	M
Australia ²²	133	4.5% (0.0-21.1)	24.9 (11.0-56.5)	0.19%	0.26%	69.0%	H
India ^{23,24}	135	43.7% (31.0-56.4)	208.0 (148.0-292.3)	0.37%	0.44%	61.7%	M
Indonesia ²⁵⁻²⁷	1384	26.1% (21.6-30.6)	180.3 (159.9-203.3)	0.20%	0.32%	70.7%	M
Pakistan ²⁸⁻³¹	2643	2.2% (0.0-6.0)	21.9 (16.9-28.4)	0.10%	0.14%	70.5%	M
Thailand ^{32,33}	614	12.5% (5.1-19.9)	9.9 (7.8-12.6)	1.43%	1.71%	59.6%	M
Vietnam ³⁴	75	6.7% (0.0-28.5)	15.6 (6.3-38.8)	0.45%	0.73%	70.0%	M
Italy ^{35,36}	826	24.5% (18.5-30.4)	65.8 (56.1-77.1)	0.49%	0.65%	65.7%	H
Netherlands ³⁷	69	18.8% (0.0-40.1)	81.8 (44.7-149.5)	0.28%	0.39%	68.6%	H
Spain ^{38,39}	136	18.4% (3.2-33.6)	40.9 (26.5-63.1)	0.55%	0.81%	75.4%	H
USA ⁴⁰⁻⁴⁸	2705	21.7% (18.4-25.1)	34.2 (31.2-37.5)	0.81%	1.18%	74.2%	H
Pooled estimate*	11066	19.1% (17.4-20.7)	48.8 (31.2-76.3)	0.44%	0.58%

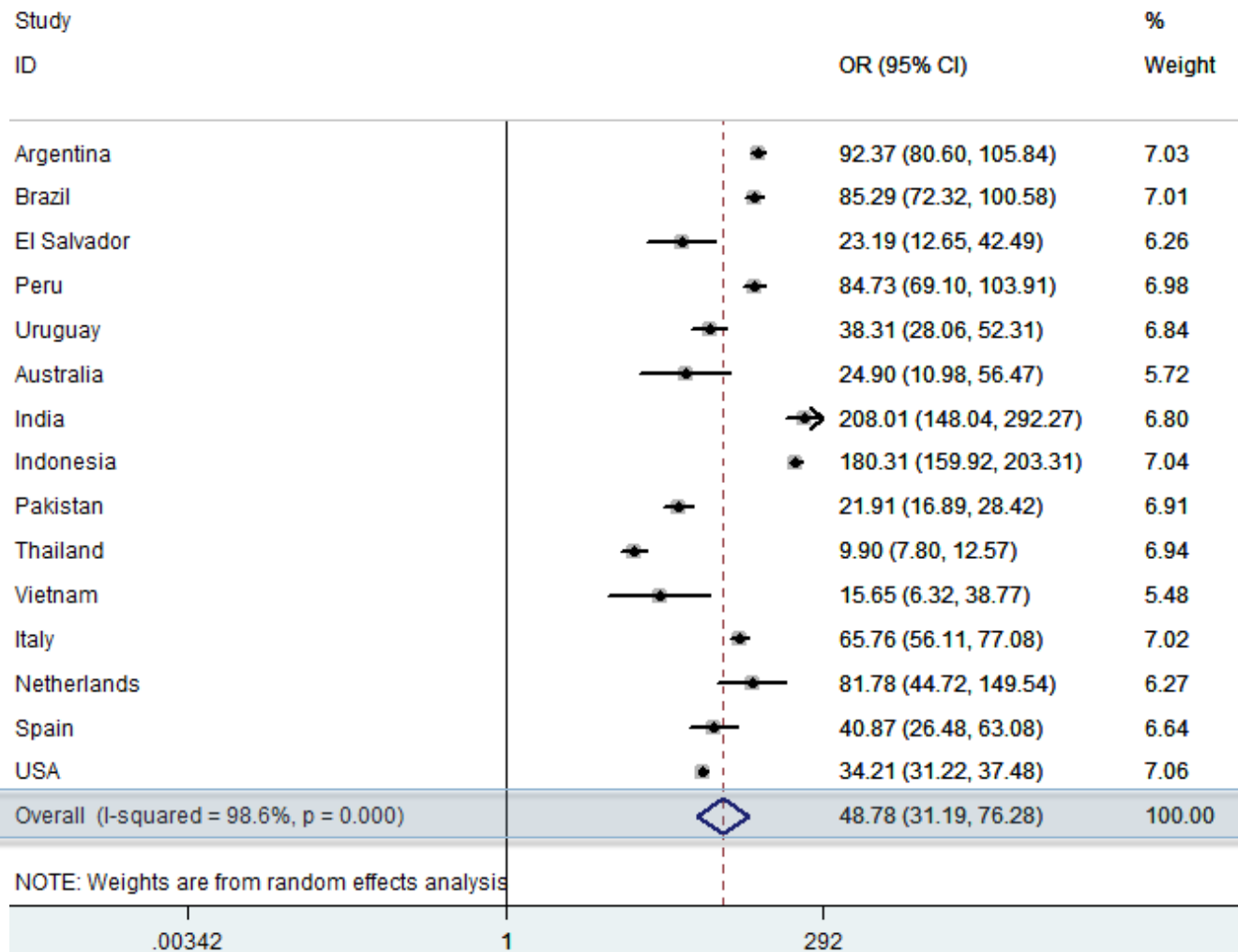
*Degrees of freedom=14, heterogeneity $\chi^2=914.7$, $I^2=98.5\%$, test of odds ratio=1, $z=16.21$, $p=0.0001$. Income level: M=middle-income; H=high-income.

Table 1: Meta-analyses of aggregate country data for HIV prevalence in transgender women versus all reproductive age adults, 2000-11

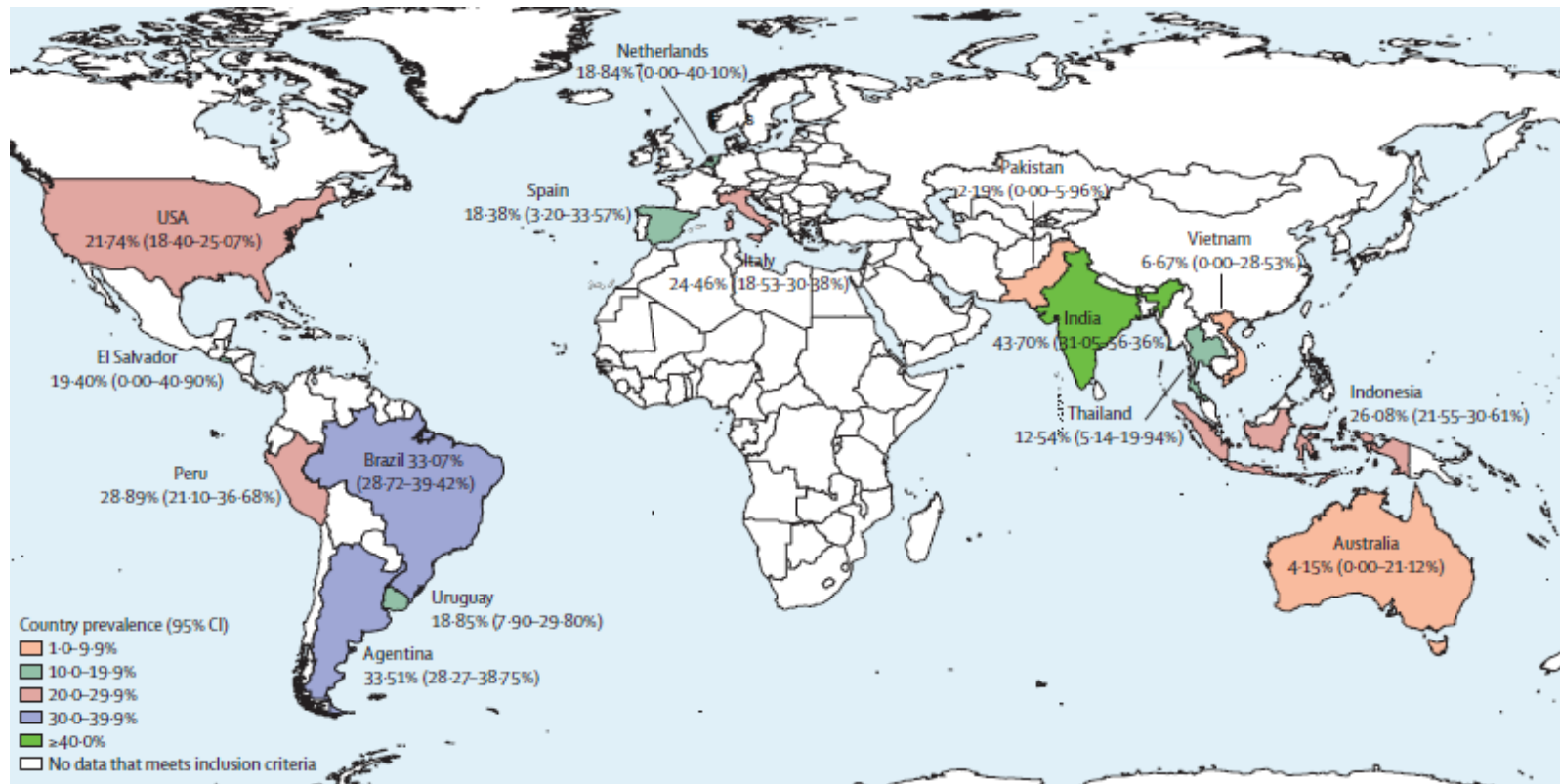
Results

- **The pooled global HIV prevalence was 19.1% (95% CI 17.4-20.7)**
- In 7,197 transgender women from 10 LMIC, HIV prevalence was 17.7%(95%CI 15.6-19.8)
- In 3,869 transgender women from 5 HIC, HIV prevalence was 21.6%(95% CI 18.8-24.3)

HIV Prevalence Data among transgender women compared to all adults

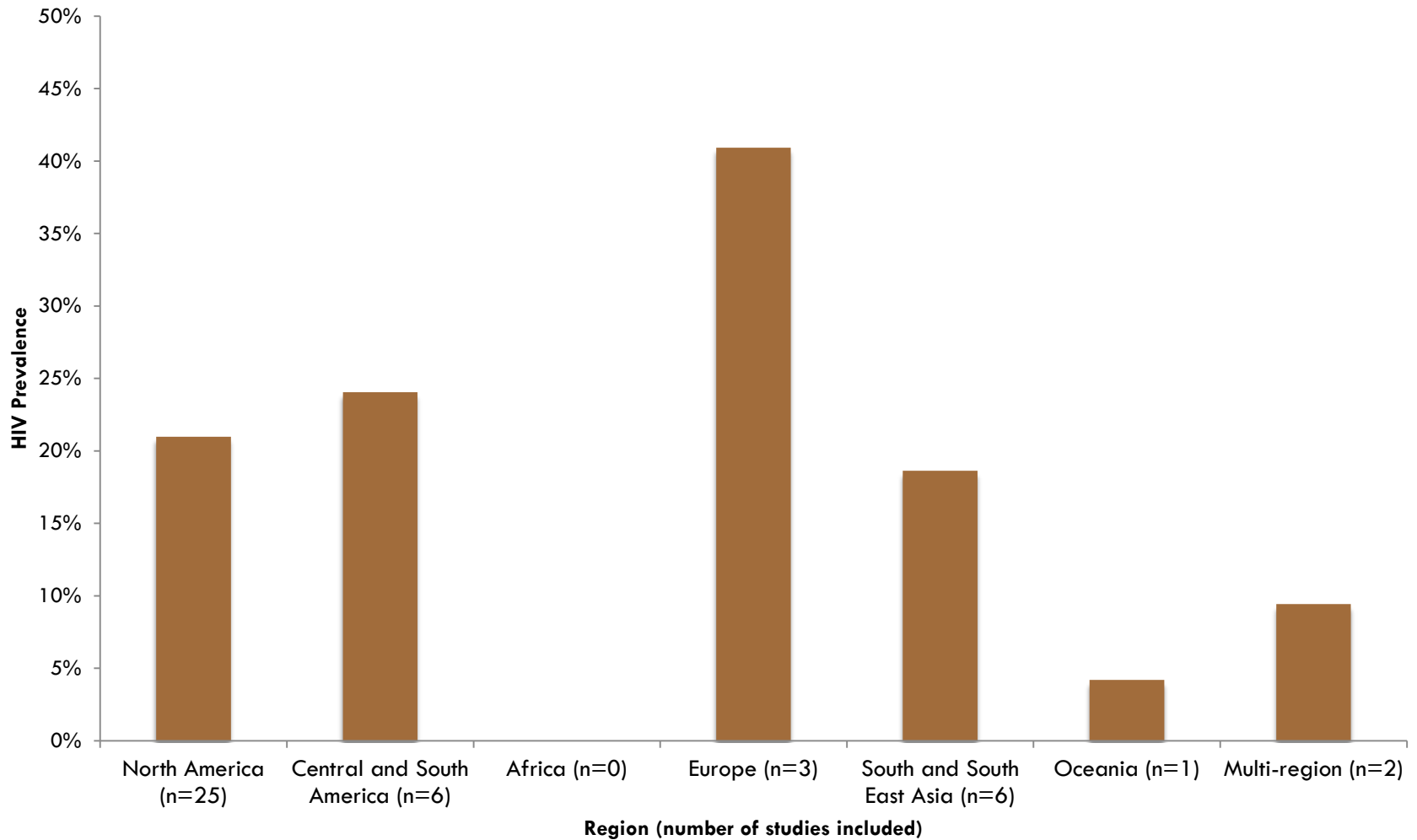


Burden of HIV among Transgender Women



- Pooled OR for HIV infection among transgender women compared to other reproductive people
 - 48.8 (95% CI 31.2-76.3)

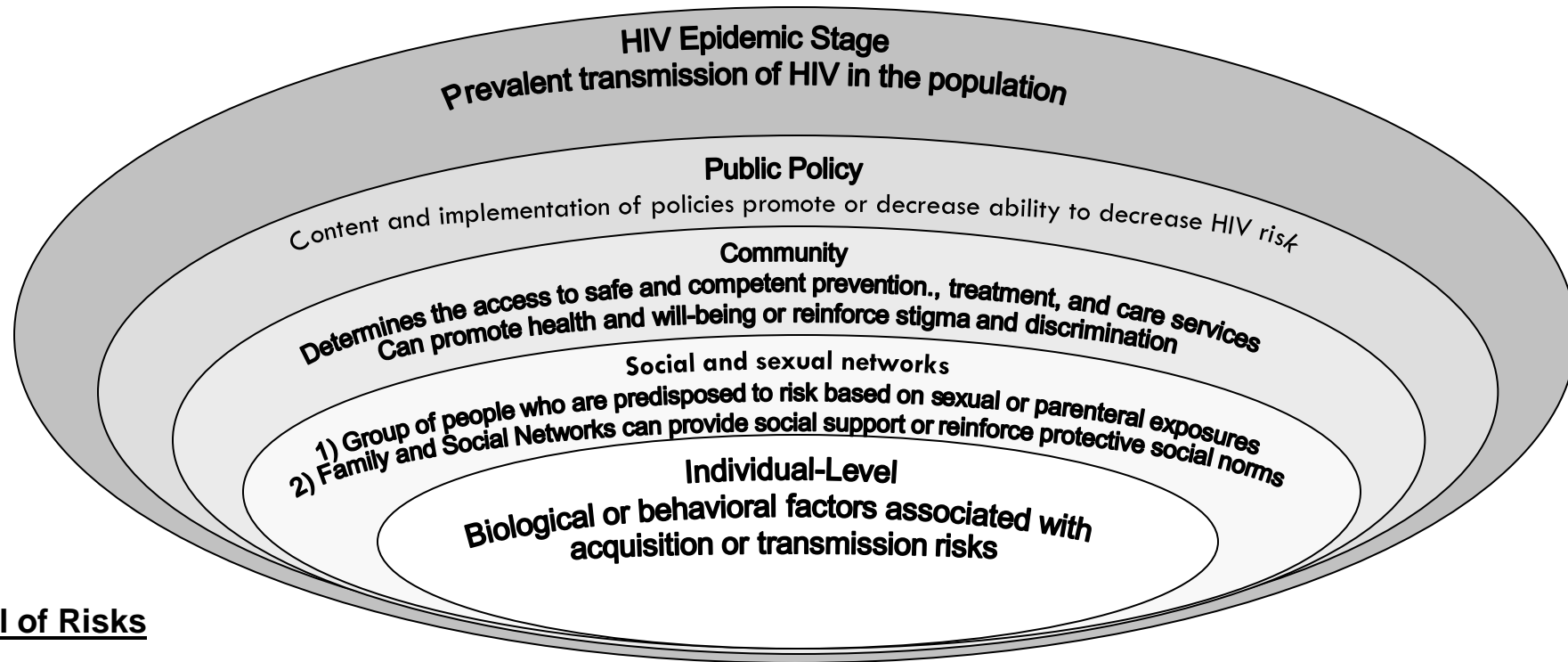
Average HIV Prevalence Among Transgender Women by Region



Transgender Women across Sub-Saharan Africa

- Very rare for people to identify as transgender, but more common to identify as women using two-step gender assessment in studies focused on gay men and other men who have sex with men (MSM)
 - 16% In Burkina Faso
 - 19% In Malawi
 - 25.5% in Swaziland (aOR for HIV 3.96 [1.66-9.43])
 - 8% In Lesotho ($p < 0.05$ for HIV)

Levels of HIV Acquisition and Transmission Risks



Level of Risks

Stage of Epidemic

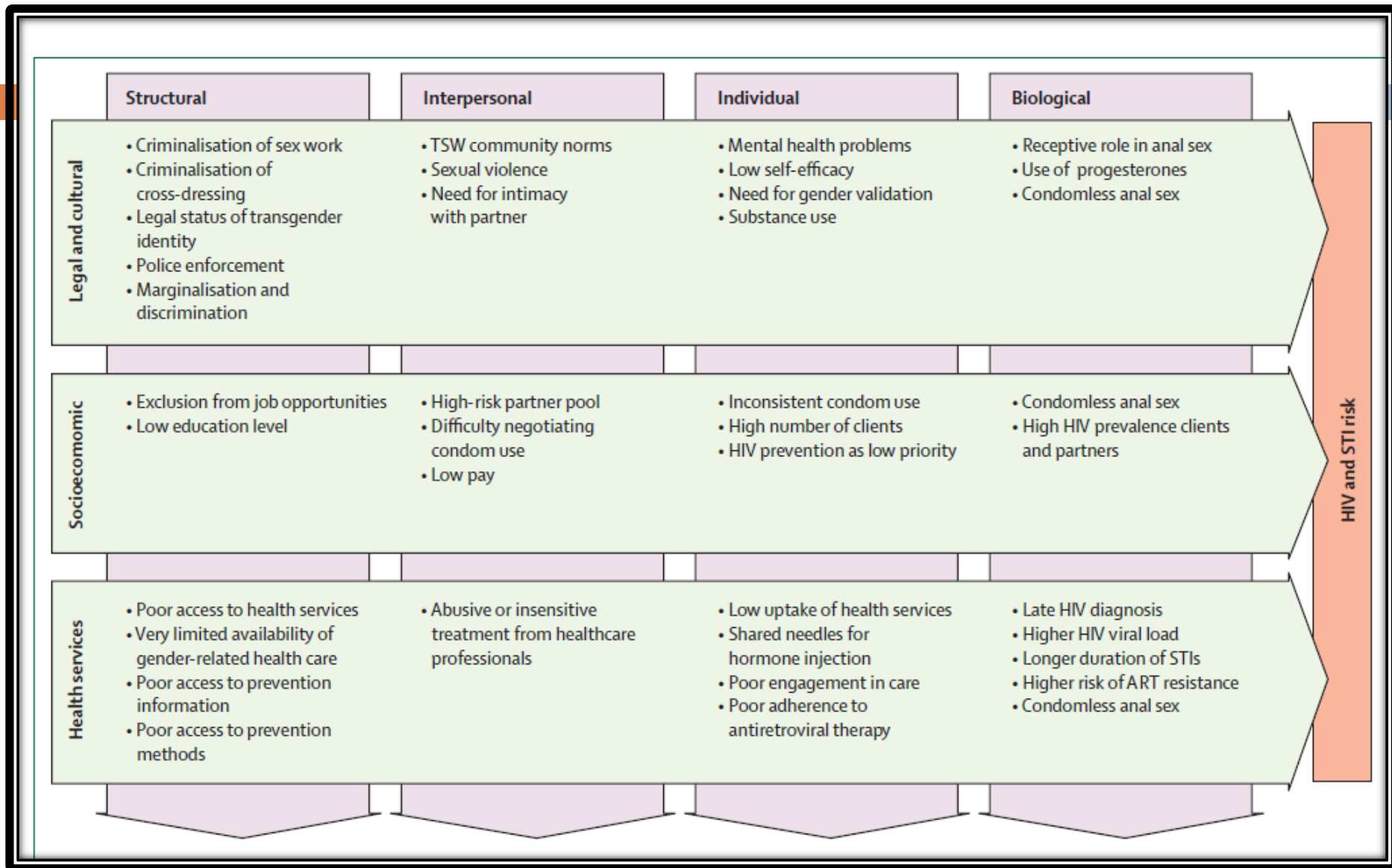
Public Policy

Community

Network

Individual

The interaction of multilevel risks among Transgender People



Specific Results

Transgender Women

- Consistent condom use with a paying partner in India
 - OR 1.9 (95% CI 1.5-2.3) with higher collective efficacy among transgender women

Violence and Fear of Seeking Healthcare among Transgender Women

- 18+ years recruited using RDS in Burkina Faso and Togo
- Chi-square tests used to assess bivariate associations with gender identity
- Generalized structural equation model (GSEM) used to measure associations with violence/abuse and fear of seeking healthcare
 - ▣ Depression as mediator

Violence and Fear of Seeking Healthcare among Transgender Women

- 355 (26.2%) identified as a woman though assigned male sex at birth
- As compared with self-identified male participants, transgender women were more likely to report
 - ▣ Depressed mood (38.9% vs. 30.3%, $p < 0.01$)
 - ▣ Verbal harassment (44.5% vs. 23.5%, $p < 0.01$)
 - ▣ Physical abuse (31.9% vs. 24.7%, $p < 0.01$)
 - ▣ Rape (20.6% vs. 8.0%, $p < 0.01$)
 - ▣ Afraid to seek healthcare (29.3% vs. 18.0%, $p < 0.01$)

Violence and Fear of Seeking Healthcare among Transgender Women

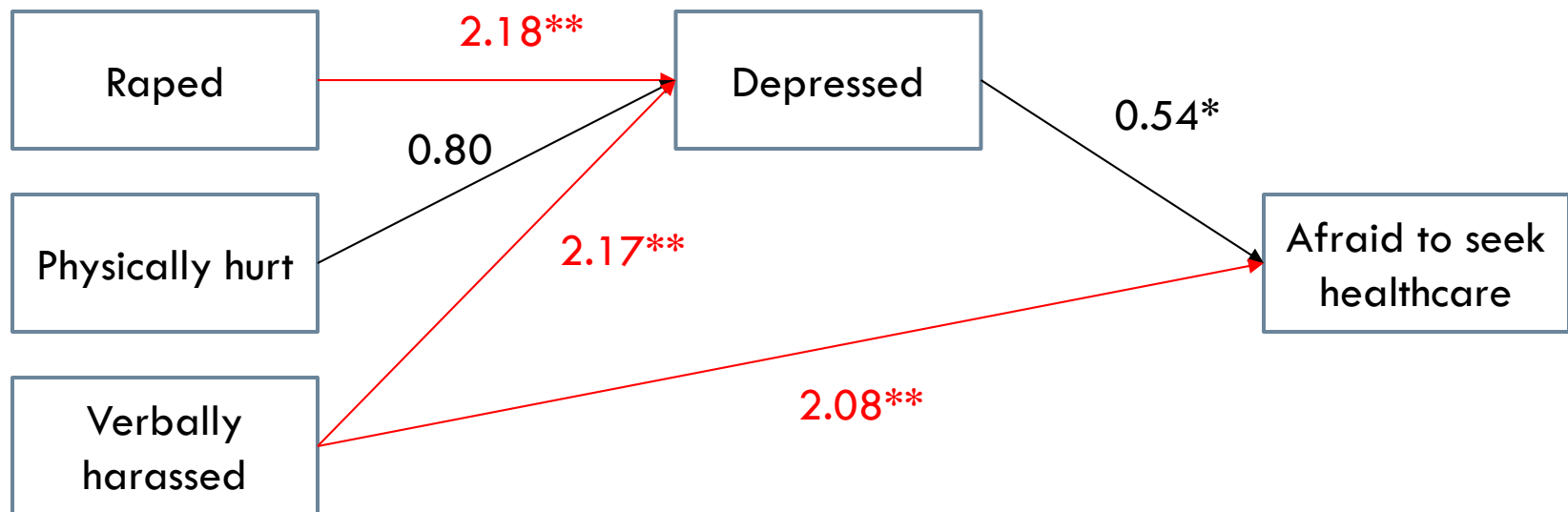


Figure 1. GSEM showing adjusted odds ratios for each pathway

* $p < 0.05$; ** $p < 0.01$; Model adjusts for age, education level, and study site location

Substance Use and Bullying in the US

□ Teen Health and Technology Study

▣ Included 442 transgender 13-18 years old

Transgender Youth

	Without Adjusting for Bullying	With Bullying	Proportion of Effect (%)
	aOR (95% CI)	aOR (95% CI)	Percent (95% CI)
<i>Any Use, Past 12 Months</i>			
Ever Drink Alcohol	1.45 (1.17, 1.80)**	1.22 (0.98, 1.53)	43.2 (27.1, 59.3)***
Ever Smoke Cigarettes	1.42 (1.12, 1.81)**	1.22 (0.95, 1.56)	46.8 (24.3, 69.4)***
Ever Marijuana Use	1.66 (1.30, 2.13)***	1.46 (1.14, 1.89)**	27.7 (15.4, 40.1)***
Ever Non-Marijuana Illicit Drug Use	1.80 (1.36, 2.37)***	1.48 (1.12, 1.97)**	33.9(22.1, 45.6)***
<i>Regular Use, Past 12 Months</i>			
Regular Marijuana Use	1.66 (1.21, 2.28)**	1.48 (1.07, 2.04)*	26.8 (10.6, 43.0)**
Regular Non-Marijuana Illicit Drug Use	1.75 (1.20, 2.56)**	1.48 (1.01, 2.17)*	32.9 (15.8, 50.1)**



Dedicated HIV Prevention Interventions

Published Studies

<u>Country</u>	<u>Intervention(s)</u>
Peru	Mobile HIV testing
India (2)**	Community empowerment/combination prevention (include MSM)
Laos	Condom social marketing
Thailand	Community-led peer education

On-going trials (NIH RePORT)

India**	Anti-stigma program for health workers
Peru	TransPrep: Adherence Intervention

- Disconnect between measured burden of HIV and number of funded studies addressing the needs of transgender people

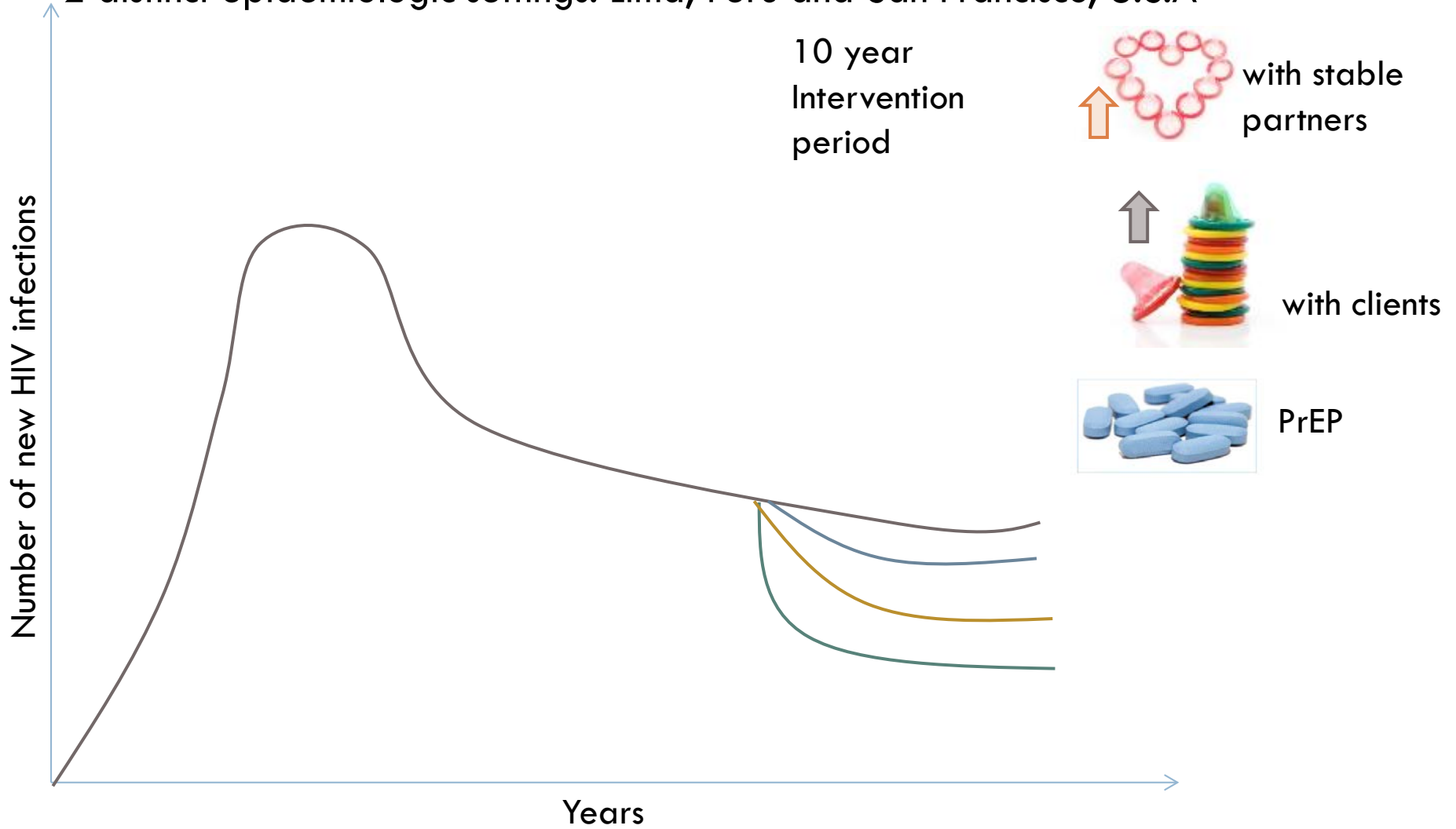
Studies for Transgender Women

□ NIH Funded Studies

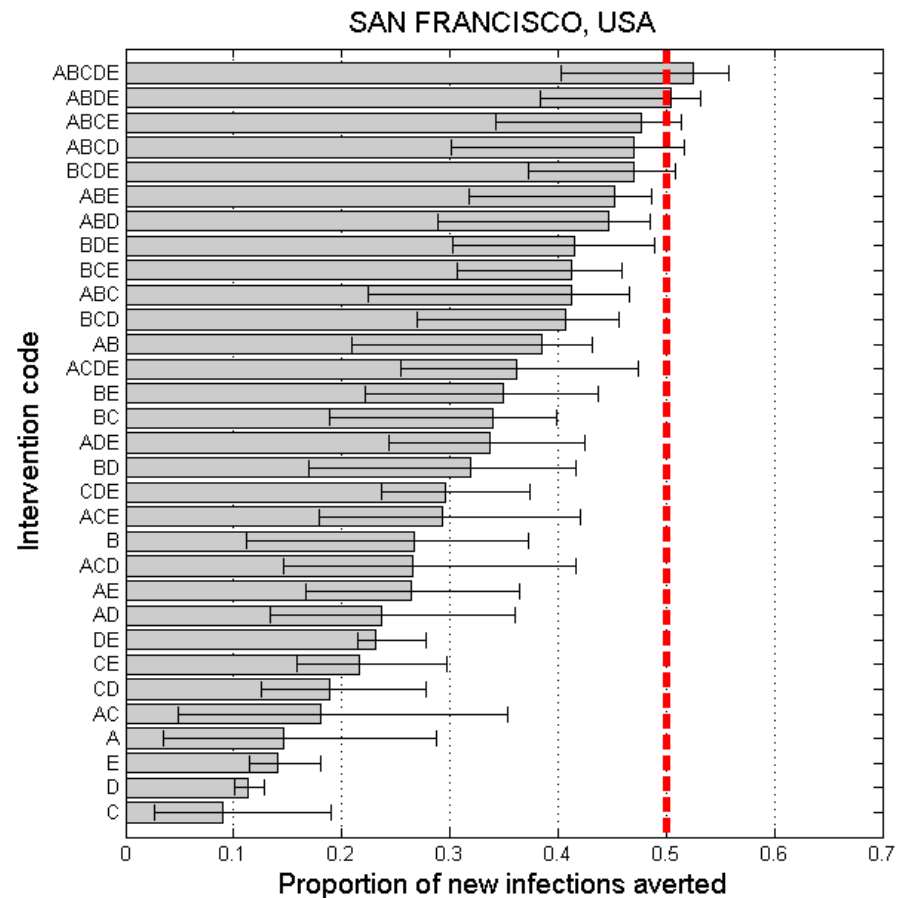
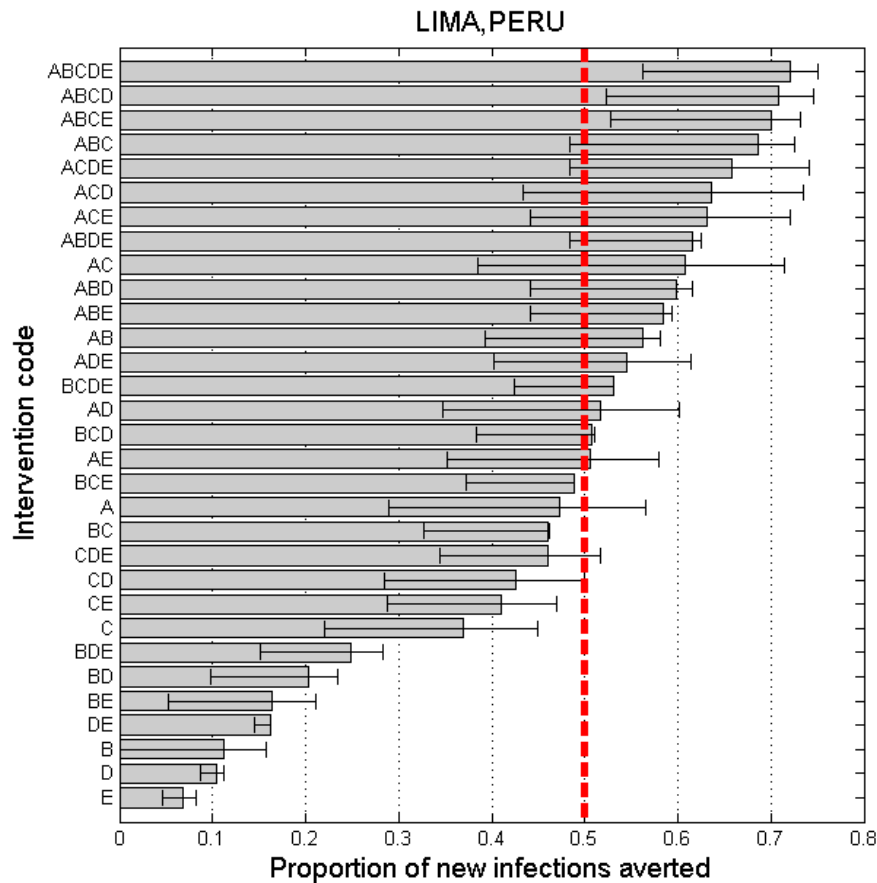
- Feasibility study of an anti-stigma intervention among health care providers in Mumbai, India to improve access to HIV services for hijra
- Feasibility study of a telemedicine approach to improving engagement in care among transgender women of color in Washington, DC
- RCT of the LifeSkills program (a six session, peer-led, group intervention for sexually active transgender women ages 16-24 years) in Boston and Chicago.
- RCT of T-Talk, a peer-led harm reduction and social support intervention for transgender women in New York City
- Pilot RCT of Sheroes, a 5-session group intervention based on gender affirmation in the USA.

Agent-Based Model for Transwomen Sex Workers

2 distinct epidemiologic settings: Lima, Peru and San Francisco, U.S.A



Modelling Results



A=condoms with clients; B= condoms with partners; C=number of commercial transactions; D=PrEP; E = test and treat

Improving Delivery of Care

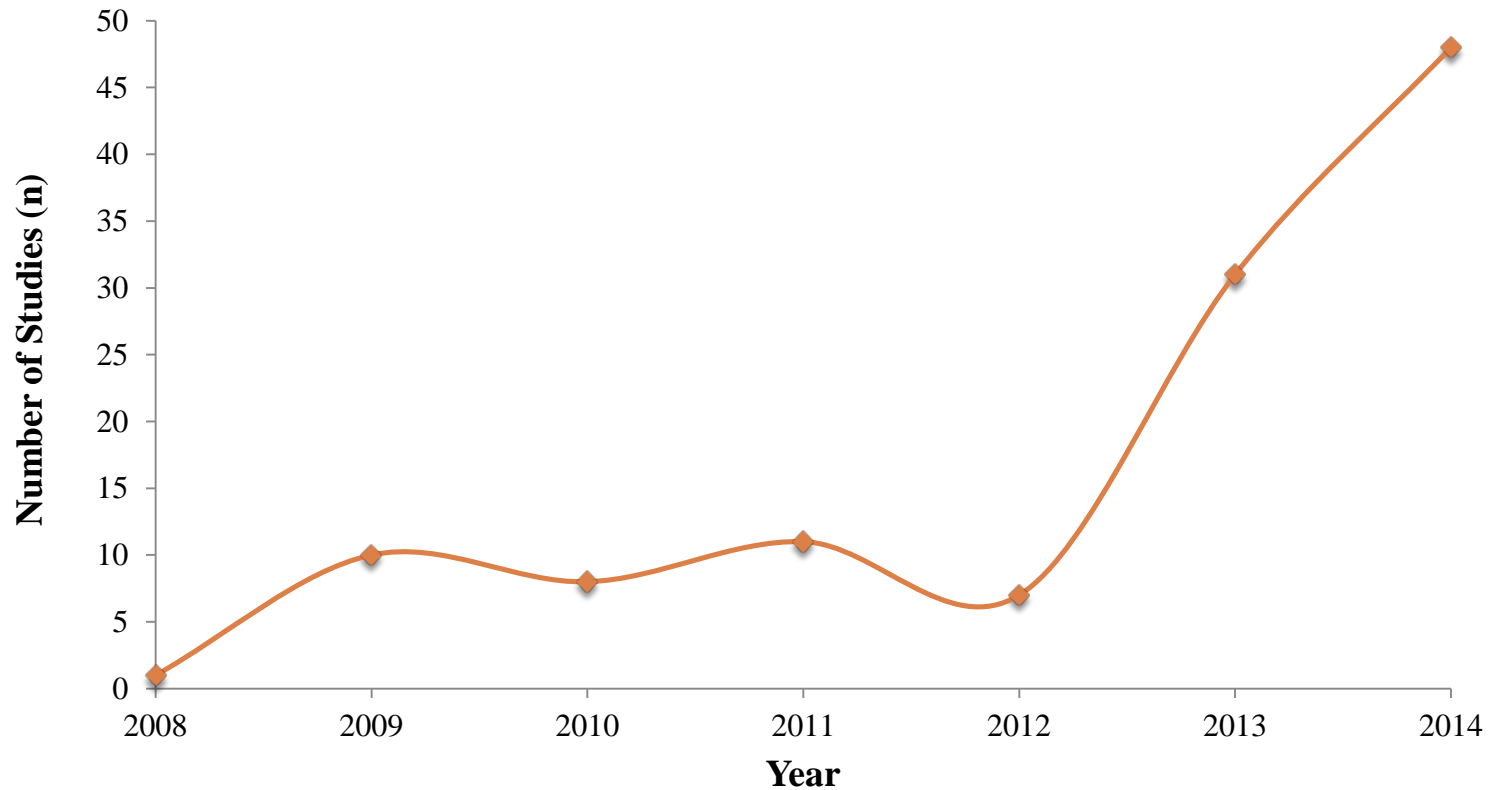
- Early introduction of modules on transgender health in medical education
 - ▣ Even short training modules can help if introduced early
- Three themes of models of care in Literature
 - ▣ Core leadership role of transgender community
 - ▣ Transdisciplinary care to ensure comprehensive services
 - ▣ Importance of partnerships with different agencies
- Tools
 - ▣ Health Care Equality Index (HRC) – 30 best practices for care
 - ▣ Advancing Effective Communication, Cultural Competence Field Guide (TJC)
- Country specific examples: Trans Pulse in Canada, Gender Units in Spain, Borum Model for Transgender Youth in USA

Data Needs to Advance Transgender Health

33

- Dedicated studies with larger sample sizes
 - ▣ Facilitate well-powered statistical analyses
- Longitudinal prospective data
 - ▣ Follow-up over time
 - ▣ Opportunity for nested sub-studies
 - ▣ Intervention studies
- Representation of hard-to-reach subgroups
 - ▣ Diverse transgender participants
- Information on treatment and health outcomes
 - ▣ HIV alongside other health conditions

Transgender Health Studies by Year



Key Themes

- Data Paradox
 - ▣ There is the least amount of data characterizing the needs of transgender people in the most stigmatizing settings
 - Human Rights Imperative to be Counted
 - Encouraging increase in level of focused research on transgender health
- The world is more similar than it is different
 - ▣ Where studied across the world, communities of transgender people are present or emerging
- Disconnect between epidemiologic data and specifically funded intervention research and dedicated programs