Patient-Delivered Partner Therapy (PDPT) Increases the Frequency of Partner Notification Among MSM in Lima, Peru: A Randomized Clinical Trial [Abstract O11.1]

Jesse L. Clark[1], Eddy R. Segura[1], Catherine Oldenburg[2], Jessica Rios[3], Silvia M. Montano[4], Javier Salvatierra[3], Manuel Villaran[3], Jorge Sanchez[3], Thomas J. Coates[1], Javier R. Lama[3]

1. David Geffen School of Medicine, University of California, Los Angeles
2. Harvard University School of Public Health
3. Asociacion Civil Impacta Salud y Educacion
4. U.S. Naval Medical Research Unit-6, Callao, Peru

Background

- Partner management strategies offer an opportunity to focus prevention efforts on high-risk sexual networks by re-tracing patterns of STI transmission
- Partner treatment for curable STIs reduces risk for index patient re-infection and lowers the prevalence of disease in the larger population
- Provision of patient-delivered antibiotic therapy for recent sexual partners (Patient Delivered Partner Therapy, or PDPT) increases likelihood of partner compliance with STI treatment recommendations

EPT/PDPT

- Expedited Partner Therapy (EPT) and Patient-Delivered Partner Therapy (PDPT) have been shown to decrease risk of re-infection among heterosexual men and women with GC/CT, Trichomonas, and other curable STIs (Golden et al, *NEJM* 2005; Kissinger et al, *CID* 2005; Schillinger et al, *STD* 2005) and are recommended for use with heterosexual patients by CDC
- Community-level studies of EPT also show promise for population-level STI control in heterosexual transmission networks (Golden et al., *PLoS Medicine* 2015)

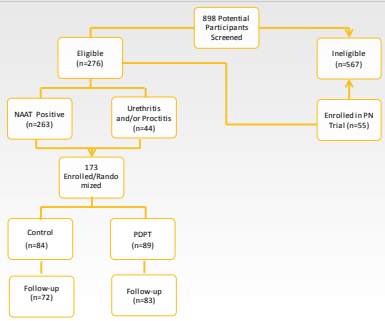
PDPT and MSM/TW Networks

- Use of PDPT among MSM currently limited by concerns surrounding missed opportunities to detect undiagnosed HIV and syphilis infection in MSM networks (Stekler et al, *CID* 2005)
- But if PDPT increases likelihood of notification, would the greater likelihood of partner notification and subsequent HIV/STI testing outweigh the potential risk of loss to follow-up by empirically treated partners?
- Objective: To assess the effect of PDPT on self-reported partner notification among MSM/TW in Lima, Peru with newly diagnosed GC/CT infection
  - Secondary: To assess the effect of PDPT on participant-reported partner testing and treatment outcomes

Study Design

- 898 MSM/TW screened for urethral, rectal, and pharyngeal GC/CT infection (by physical exam and NAAT) between September, 2012 and July, 2014
  - Assessment of proctitis/urethritis conducted by study physician
  - GC/CT testing by Gen-Probe Aptima TMA at NAMRU-6 laboratory
- Enumeration of all recent partners and description of characteristics of 3 most recent partners
- Participants randomized to 2 arms
  - Standard PN Counseling
  - PDPT (Max. 5 partner treatment packets)
- Follow-up in 14-21 days to assess for self-reported PN and in 21 days for repeat GC/CT testing

Participant Flow Chart



Participant Characteristics

		Control (N=72)	PDPT (N=83)
Age (Median±IQR)		26 (22 to 31)	26 (23 to 32)
Education	HS Incomplete	7 (8.3%)	10 (15.3%)
	HS Graduate	23 (27.7%)	15 (20.8%)
	University	53 (63.9%)	46 (63.9%)
Sexual Identity	Heterosexual	3 (4.2%)	6 (7.2%)
	Bisexual	18 (25.0%)	22 (26.5%)
	Gay	49 (68.1%)	48 (57.8%)
	Transgender	0	1 (1.2%)
Number of Sexual Partners (30 Days) (Median±IQR)		3 (2 to 4)	3 (2 to 5)
Site of Infection	Urethral	14 (19.4%)	24 (28.9%)
	Rectal	50 (69.4%)	50 (60.2%)
	Pharyngeal	8 (11.2%)	9 (10.9%)

Results: Overall Partner Notification Outcomes

	Control	PDPT
Any Partners Notified (All Participants)	**Prevalence:** 58.3% (42/72)	**Prevalence:** 83.1% (69/83) **OR: 3.52** (1.68 to 7.39)
Any Partners Notified (Participants with >1 Recent Partner)	**Prevalence:** 61.8% (42/68)	**Prevalence:** 85.2% (69/81) **OR: 3.56** (1.62 to 7.80)

Proportion of Recent Partners Notified		Control	PDPT
All Partners 95% CI p=value*		**36.4%** (27.0 to 45.9%)	**53.5%** (45.0 to 62.0%) p=0.004
Male Partners (N=149)		**34.7%** (27.0 to 47.4%)	**53.5%** (45.0 to 62.0%) p=0.002
	Stable Male Partners (N=55)	**51.6%** (31.4 to 71.8%)	**80.0%** (61.9 to 98.1%) p=0.04
	Casual Male Partners (N=64)	**33.3%** (10.5 to 56.2%)	**54.8%** (32.4 to 77.1%) p=0.049
Female Partners (N=16)		**40.0%** (0 to 100%)	**40.9%** (8.0 to 73.9%) p=0.95

*Rank-sum test

Results: Notification/Treatment Outcomes for Three Most Recent Partners

	Control	PDPT	Odds Ratio*
Partner Notified	33.3% (70/210)	51.7% (125/242)	**OR=2.10 (95% CI: 1.27 to 3.47)**
Partner Notification Confirmed	29.5% (62/210)	46.4% (111/239)	**OR=2.07 (95% CI: 1.26 to 3.39)**
Partner Given and Observed Taking Antibiotics	N/A	21.6% (51/236)	
Partner Tested for STIs	20.5% (43/210)	27.6% (66/239)	**OR=1.51 (95% CI: 0.83 to 2.75)**
Partner Treated for STI (PDPT or Other)	14.3% (30/210)	32.6% (78/239)	**OR=2.81 (95% CI: 1.46 to 5.41)**

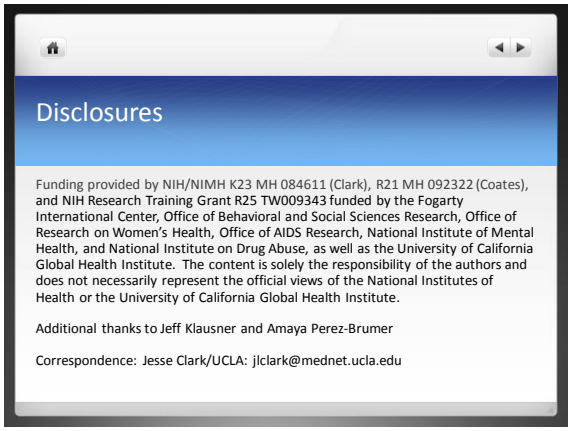
*Generalized Estimation Equation (GEE) modeling

Limitations

- Outcomes limited to self-reported partner notification, no independent confirmation or notification, testing or treatment by partners
- Potential impact of social desirability bias on participant reporting
- Impact of PDPT on participant re-infection unable to be assessed (few cases of persistent or recurrent infection noted at 21-day Follow-up)

Conclusions

- Provision of PDPT increased the frequency of self-reported partner notification and treatment outcomes among Peruvian MSM/TW diagnosed with GC/CT infection
- PDPT also associated with a non-significant increase in partner STI testing as well as greater frequency of health-protective behavior than can be attributed to partner-delivered antibiotic treatment alone
- Future research is needed to assess the effect of PDPT on partner notification, treatment, and testing behavior, and the subsequent impact on HIV/STI transmission in MSM sexual networks


Disclosures
Funding provided by NIH/NIMH K23 MH 084611 (Clark), R21 MH 092322 (Coates), and NIH Research Training Grant R25 TW009343 funded by the Fogarty International Center, Office of Behavioral and Social Sciences Research, Office of Research on Women's Health, Office of AIDS Research, National Institute of Mental Health, and National Institute on Drug Abuse, as well as the University of California Global Health Institute. The content is solely the responsibility of the authors and does not necessarily represent the official views of the National Institutes of Health or the University of California Global Health Institute.
Additional thanks to Jeff Klausner and Amaya Perez-Brumer
Correspondence: Jesse Clark/UCLA: jlclark@mednet.ucla.edu