

**CROI 2016** Abstract #892

# **Early Adopters and Incident PrEP Prescribers** in a Public Health Detailing Campaign



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### Background

- Pre- and post-exposure prophylaxis (PrEP and PEP) are effective at preventing HIV yet are under-prescribed<sup>1,2</sup>
- New York City (NYC) Health Department and Mental Hygiene (DOHMH) conducted a public health detailing campaign about PrEP and PEP (Figure 1)
- DOHMH representatives visited primary care (PC) and infectious disease (ID) providers, focusing on practices that had recently diagnosed HIV and that were located in high needs neighborhoods
- Initial and follow-up visits consisted of short, individual-level presentations using the *PrEP* and *PEP* Action Kit
- Initial evaluation of public health detailing demonstrated a significant increase in provider report of PrEP prescribing<sup>3</sup>

## **Objectives**

Among providers who had been visited by the PrEP and PEP public health detailing campaign, we examined characteristics associated with

- PrEP prescribing at initial visit: early adopters
- PrEP prescribing at follow-up visit: incident prescribers

### Methods

**Study population** Potential prescribers [MDs, nurse practitioners (NPs), and physician assistants (PAs)] who received both initial and follow-up visits during the campaign

**Data collection** Brief questionnaire at beginning of initial and follow-up visit, before Action Kit materials were presented, administered by DOHMH representatives

#### **Outcomes**

- **Early adopters** Providers who reported ever prescribing PrEP at initial visit.
- **Incident prescribers** Providers who reported ever prescribing at follow-up visit, after report of never prescribing PrEP at initial visit

#### **Characteristics examined**

- **Practice-level** Type (community health clinic, hospital-affiliated, private practice), location (Manhattan, other), neighborhood HIV diagnosis and poverty rates
- **Provider-level** Specialty/training (MD-ID, MD-PC, NP/PA), ever prescribing PEP at initial visit, incident PEP prescribing at follow-up (incident analysis only)
- **Program-level** Detailing Round (I: Oct 2014-Jan 2015; II: Feb-Apr 2015), length of initial visit (minutes; incident analysis only)

**Data analysis** Bivariate and multivariate models were constructed using generalized estimating equations

Figure 1. PrEP/PEP Public Health Detailing Campaign (L to R): Action Kit, Action Kit Contents, Representatives and Providers Visited









### Overall early adoption and incident prescribing (Figure 2)

- 18% (155/881) were early adopters of PrEP 13% (89/709) were incident prescribers of PrEP

#### Associations with early adoption (Table 1)

In the multivariate model, early adoption was associated with:

- Community health clinic practice type vs. private practice
- Manhattan location vs. other
- MD-ID specialty vs. MD-PC
- Report of PEP prescribing at initial visit

#### **Associations with incident prescribing (Table 2)**

In the multivariate model, incident prescribing was associated with:

- MD-ID specialty vs. MD-PC
- Ever prescribed PEP (initial visit) and incident PEP prescribing (follow-up visit)
- Initial visit length ≥10 mins, with no additional increase seen ≥20 mins

#### **Table 1**. Associations with Early Adoption of PrEP Prescribing among Providers Reached by a Public Health Detailing Campaign, New York City, 2014-15

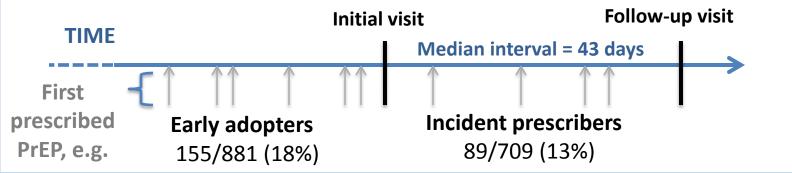
Characteristic	N (column %)	Early adopters, n/N (row %)	Bivariate OR (95% CI)	Adjusted* OR (95% CI)
Practice-level characteristics	(column 70)	11/14 (1044 70)	(55% CI)	(55% Ci)
Practice Type				
Community health clinic	136 (15%)	46/136 (34%)	2.3 (1.3 - 4.2)€	1.5 (0.7 - 3.5)
·		69/440 (16%)	2.2 (0.97 - 4.9)	·
Hospital affiliated	440 (50%)		,	1.8 (0.7 - 5.2)
Private practice	305 (36%)	40/305 (13%)	Ref	Ref
Location (borough)	407 (220/)	74/407/200/	4.0.40.4 7.7\£	40/05 70)£
Manhattan	197 (22%)	74/197 (38%)	4.9 (3.1 - 7.7)€	4.2 (2.5 - 7.2)€
Other Neighborhood HIV diagnosis rate	684 (78%)	81/684 (12%)	Ref	Ref
Top 3 quartiles	824 (94%)	154/824 (19%)	12.1 (1.7 - 89.0)€	6.8 (0.9 - 50.9)
Lowest quartile	56 (6%)	1/56 (2%)	Ref	0.8 (0.9 - 30.9) Ref
Neighborhood poverty rate	30 (0/0)	1/30 (2/0)	Nei	Nei
≥10% residents below FPL¤	782 (89%)	125/782 (16%)	0.4 (0.2 - 0.7)	0.9 (0.5 - 1.7)
<10% residents below FPL¤	98 (11%)	30/98 (31%)	Ref	Ref
Provider-level characteristics	, ,	, , ,		
Provider specialty				
MD-ID¤	237 (27%)	62/237 (26%)	1.9 (1.3 - 2.9) €	2.3 (1.4 - 3.9)€
NP/PA¤	135 (15%)	27/135 (20%)	1.4 (0.9 - 2.1)	1.2 (0.8 - 2.0)
MD-PC¤	509 (58%)	66/509 (13%)	Ref	Ref
Ever prescribed PEP (initial visit)				
Yes	269 (31%)	137/269 (51%)	36.4 (20.4 - 64.8)€	34.7 (18.6 - 64.6)€
No	603 (69%)	15/603 (2%)	Ref	Ref
Program-level characteristics				
Detailing round				
I: Oct 2014-Jan 2015	641 (73%)	117/641 (18%)	0.8 (0.5 - 1.3)	1.9 (0.98 - 3.7)
II: Feb 2015-Apr 2015	240 (27%)	38/240 (16%)	Ref	Ref

variables except the other PEP-related variable.

€ p<0.05 FPL= federal poverty level, ID=infectious disease, PC=primary care, NP/PA=nurse practitioners or physician assistants

### Results

Figure 2. PrEP/PEP Public Health Detailing Campaign Schematic and Description of Early Adopters and Incident Prescribers , New York City, 2014-15



**Table 2**. Associations with Incident PrEP Prescribing among Providers Reached by a Public Health Detailing Campaign, New York City, 2014-15 ¥

Characteristic	N (column %)	Incident prescribers, n/N (row %)	Bivariate OR (95% CI)	Adjusted* OR (95% CI)
Practice-level characteristics				
Practice Type				
Community health clinic	87 (12%)	12/87 (14%)	2.2 (0.97 - 4.9)	1.8 (0.7 - 5.2)
Hospital affiliated	367 (52%)	56/367 (15%)	2.3 (1.3 - 4.2)€	1.5 (0.7 - 3.5)
Private	255 (36%)	21/255 (8%)	Ref	Ref
Location (borough)				
Manhattan	121 (17%)	26/121 (21%)	2.8 (1.5 - 5.0)€	1.7 (0.8 - 3.4)
Other	588 (83%)	63/588 (11%)	Ref	Ref
Neighborhood HIV diagnosis rate				
Top 3 quartiles	655 (93%)	86/655 (13%)	2.9 (0.9 - 9.5)	1.6 (0.4 - 5.8)
Lowest quartile	53 (7%)	3/53 (6%)	Ref	Ref
Neighborhood poverty rate				
≥10% residents below FPL¤	641 (91%)	73/641 (11%)	0.4 (0.2 - 0.8)€	0.5 (0.2 - 1.1)
<10% residents below FPL¤	67 (9%)	16/67 (24%)	Ref	Ref
Provider-level characteristics				
Provider specialty				
MD-ID¤	171 (24%)	37/171 (22%)	2.4 (1.4 - 3.9)€	2.3 (1.3 - 4.3)€
NP/PA¤	104 (15%)	7/104 (7%)	0.6 (0.3 - 1.4)	0.5 (0.2 - 1.1)
MD-PC¤	434 (61%)	45/434 (10%)	Ref	Ref
Ever prescribed PEP (initial visit)				
Yes	128 (18%)	38/128 (30%)	3.7 (2.3 - 5.9)€	3.5 (2.2 - 5.6)€
No	575 (82%)	51/575 (9%)	Ref	Ref
Incident PEP prescribing (follow-	up visit)			
Yes	80 (11%)	42/80 (53%)	10.4 (5.9 - 18.2)€	10.3 (5.4 - 19.6) €
No	619 (89%)	47/619 (8%)	Ref	Ref
Program-level characteristics Detailing round				
I: Oct 2014-Jan 2015	515 (73%)	73/515 (14%)	0.4 (0.2 - 0.8)€	0.67 (0.3 - 1.7)
II: Feb 2015-Apr 2015	194 (27%)	16/194 (8%)	Ref	Ref
Length of initial visit				
≥20 minutes	352 (50%)	53/352 (15%)	3.4 (1.3 - 8.6)€	3.3 (1.3 - 8.3)€
≥10-<20	235 (33%)	30/235 (13%)	2.8 (1.1 - 6.9)€	3.2 (1.2 - 8.1)€
<10 minutes	122 (17%)	6/122 (5%)	Ref	Ref

<sup>¥</sup> Incident prescriber analysis excludes early adopters

\*Adjusted for all other variables in table except PEP-related variables. PEP-related associations are adjusted by all other variables except the other PEP-related variable. € p<0.05;

FPL= federal poverty level, ID=infectious disease, PC=primary care, NP/PA=nurse practitioners or physician assistants

### Limitations

- Prescribing data (PrEP and PEP) rely on provider self-report and therefore could be subject to recall error and social desirability bias
- Data were not collected on patient-level characteristics, including information that could help determine whether providers saw potential PrEP/PEP candidates
- Data were collected in the context of a specific detailing campaign and during a citywide increase in support for PrEP implementation; in this context, generalizability and interpretation of causality are limited

### Discussion

- We observed early adoption and incident PrEP prescribing at NYC practices presumed to be serving at-risk and potentially low-income populations
- Nearly 1 in 5 potentially prescribing providers was an early adopter
- Nearly **1** in **8** potentially prescribing providers was an incident prescriber
- Early adoption and incident PrEP prescribing were both more likely among MD-ID
- Suggests a higher level of willingness to prescribe PrEP among MD-ID
- However, both outcomes were also observed among MD-PC and NP/PAs
- Early adoption was associated with concurrent report of ever prescribing PEP; incident PrEP prescribing was associated with PEP prescribing at initial visit and with incident PEP prescribing
  - Supports the promotion of PrEP and PEP in tandem
  - PEP prescribing may be a gateway to PrEP prescribing
- Findings suggest that detailing may have influenced PrEP prescribing, particularly if the initial presentation to providers was ≥10 minutes
- Results will inform future rounds of detailing in NYC and elsewhere

### References

- 1. Centers for Disease Control and Prevention. Pre-exposure Prophylaxis for the Prevention of HIV Infection in the United States – 2014. A Clinical Practice Guideline. Available
- at: http://www.cdc.gov/hiv/pdf/guidelines/PrEPguidelines2014.pdf
- 2. Jain S, Mayer KH. Practical guidance for nonoccupational postexposure prophylaxis to prevent HIV infection: an editorial review. AIDS. 2014;28(11):1545-1554.
- 3. Edelstein Z; Reid A; Salcuni P; Restar A; Daskalakis D; Myers J. Public Health Detailing on Preand Post-Exposure Prophylaxis (PrEP and PEP) New York City, 2014-2015. Presented at the National HIV Prevention Conference, Dec 6-9, 2015; Atlanta GA. Abstract # 1344

## Acknowledgements

We would like to thank our detailers (Maryellen Lively, Alex Cherisme, Gregory Gattereau, Jacqueline Kirkland, Stanford Smith, Jeffrey Watson), DOHMH colleagues (Mary Bassett, Jay Varma, Sue Blank, Adriana Andaluz, Michelle Dresser, Elizabeth Thomas, Mohini Persaud, Amanda Reid), and providers who received a detailing visit