Frameworks for PrEP Scale-Up

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PrEP use continues to grow globally

Half of PrEP users are in the U.S.

Cumulative number starting PrEP

Estimated active users Feb 2018

-50000 0 50000 100000 150000 200000 250000 300000 350000
PrEP persistence has improved over time, but ~1/2 still on PrEP after 1 year

Average number of Truvada for PrEP refills/year = 7.5
PrEP must be embedded in sexual health care
Bacterial STI infection in men, by HIV status and PrEP Use,
(Fenway Health, 2005-2015)
PrEP can be a gateway to 1º care

Adjusted prevalence ratios (95% CI) comparing receipt of primary care between PrEP users and individuals not prescribed PrEP – Fenway, 2012-2016 (N=5,857)

<table>
<thead>
<tr>
<th>Service</th>
<th>Ratio (95% CI)</th>
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<tbody>
<tr>
<td>Flu vaccination</td>
<td>1.57 (1.47-1.67)</td>
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<tr>
<td>Tobacco screening</td>
<td>1.13 (1.09-1.16)</td>
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<tr>
<td>Depression screening</td>
<td>1.18 (1.15-1.22)</td>
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<tr>
<td>Hemoglobin A1c or glucose testing</td>
<td>1.83 (1.75-1.92)</td>
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<tr>
<td>Hemoglobin A1c testing</td>
<td>0.89 (0.79-1.01)</td>
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<tr>
<td>Glucose testing</td>
<td>2.03 (1.93-2.14)</td>
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</tbody>
</table>

Prevalence ratios obtained from Poisson models with generalized estimating equations. Adjusted models included age, gender, race/ethnicity, insurance type, and year, with diabetes, hypertension, and overweight/obesity additionally included in models for hemoglobin A1c and glucose testing.

Marcus et al., CROI, 2018; AJPH, in press
HIV Pre-Exposure Prophylaxis Implementation

**Implementation and Sustainability Infrastructure**
- PrEP navigators
- Insurance navigation
- Case managers
- Referral networks
- Partner notification services
- Hotlines
- Inter-agency linkages

**Recipients**

**Organizational Characteristics**
- STD clinic
- Public health program
- Community-based organization
- Pharmacy
- Community health center
- Primary care
- Academic medical center

**Patient Characteristics**
- Men who have sex with men
- Serodiscordant couples
- Injection drug users
- High risk heterosexuals
- Poor/under-insured

**External Environment**
- Healthcare reform
- State insurance policies
- Local medication and care costs
- Structural racism
- Homophobia
- Transphobia

**Adoption**

**Implementation**

**Maintenance**

**Reach and Effectiveness**

Mayer et al, JAIDS, 2017
Purview paradox: PrEP Needs local Champions

HIV providers:
10 care providers should prescribe PrEP

Primary care providers:
PrEP is for specialists

Krakower, AIDS and Behavior, 2014
Improving the “PrEP Cascade”

- “Academic detailing”: bring the trainers to the clinics (NYDOH)
- Simplifying PrEP for providers, using electronic health record prompts (Krakower)
- Engaging non-MDs, e.g. pharmacists (Patel), nurses, “differentiated PrEP care”
- PrEP navigators (several groups)
- Home monitoring: “PrEP in a box” (Siegler)
New technologies and PrEP engagement

- ↑ treatment adherence with text messaging (Lester, Lancet, 2010)
- SMS texting was used to supplement a nurse-delivered PrEP intervention (Safren/Mayer)
- Counseling augmented by electronic diary was associated with ↑ adherence (Amico/Hosek)
- Feedback on drug levels been studied as adjunct to counseling (Landovitz)
- SexPro and MyChoices Apps being developed for youth (Buchbinder/Scott/Liu; Mayer/Biello)
- But, augmented lower tech approaches, e.g. home visits, may also be effective (Haberer)
Moving beyond PrEP 1.0

New oral PrEP drugs and dosing strategies

Vaginal & Rectal Microbicides

Intravaginal rings (Dapivirine, Tenofovir) +/- Contraception

Injectables: ARVs and mAbs (Cabotegravir, VRC01)
Coming soon: Implantables

Novel adherence strategies

Alternative delivery systems and formulations
Need to Address more than PrEP (and TasP)

Interventions to Increase HIV and STI Testing

Test

HIV negative

Risk assessment PrEP, adherence counseling

HIV positive

Positive prevention

Linkage to care

Enroll in care

ART initiation

Retain

Adherence to ART

Maintain viral suppression

Address concomitant concerns: depression, substance use, relationship dynamics, structural/social issues, STI

Decrease in HIV and STI transmission
Thank You

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