

ORAL ABSTRACT: OL-08
Tuesday, March 10, 2020

INITIATING PrEP DURING ACUTE HIV INFECTION: WHAT IS THE RISK FOR ARV DRUG RESISTANCE?

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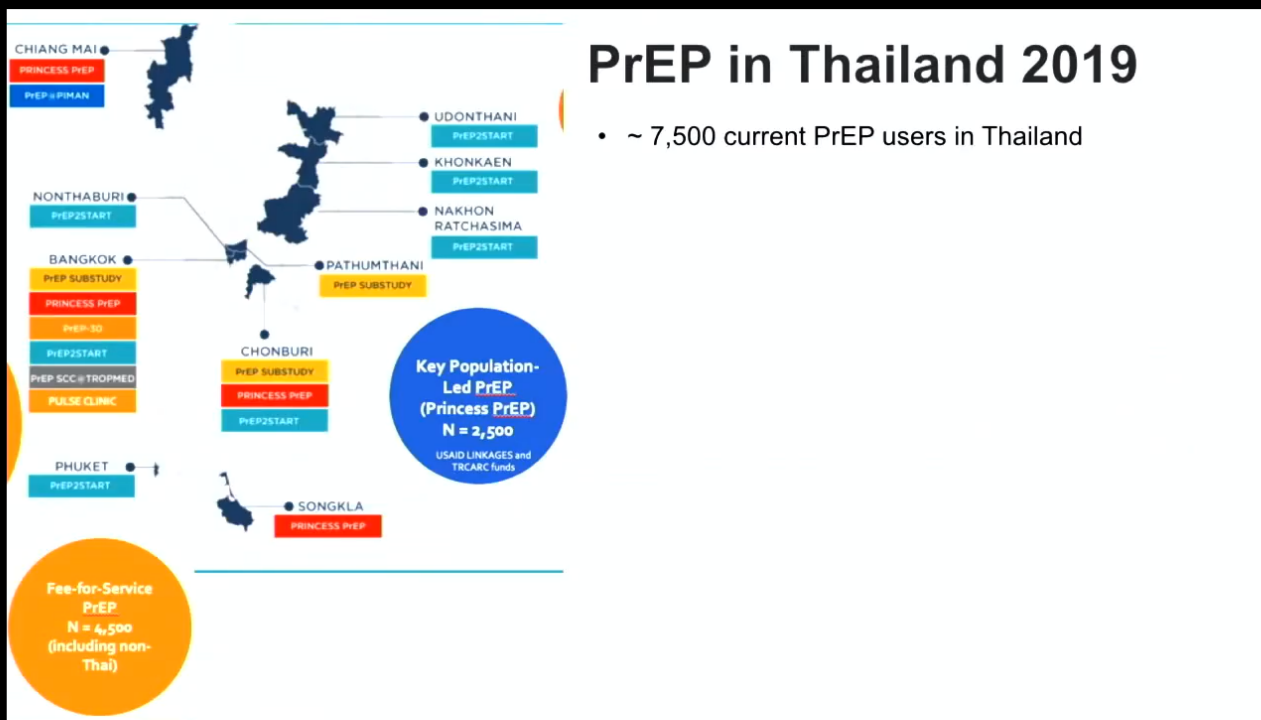
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PrEP in Thailand 2019

- ~ 7,500 current PrEP users in Thailand
- Estimated need 50,000 – 100,000 high-risk MSM and TGW
- PrEP available through:
 - free implementation projects
 - PrEP-15 at the Thai Red Cross Anonymous Clinic at ~\$15/month unsubsidized price
- National Health Service Organization has announced that PrEP will be available through public insurance in 2020

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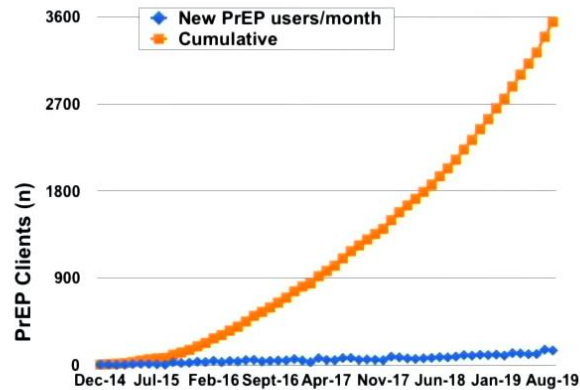
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PrEP and AHI screening at the TRC Anonymous Clinic

TRC PrEP-15 clients: cumulative number



RV254/SEARCH010

Acute infection cohort with early ART

Real-time screening of 371,994 samples in Thailand

Pooled Qual. HIV RNA (Aptima) on all HIV Ab NR samples

Acute HIV infection (n=632 enrolled/809 detected)

Immediate ART (n=632)

Through 31-December-2019

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AHI at PrEP initiation in PrEP-15 at TRC

2,442 started PrEP through October 2018



7 (~1/350) had AHI at PrEP initiation

5/7 identified by (+) Qualitative HIV RNA test (Aptima)

2/7 identified by (+) serology at 1 month visit (Quant HIV RNA (+) pre-PrEP)

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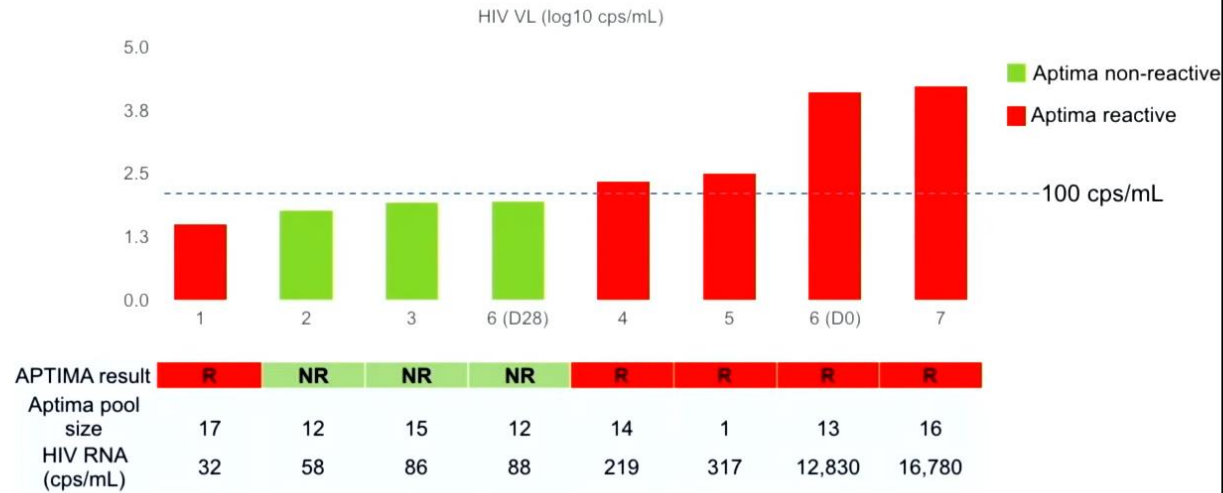
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Sensitivity of Qualitative HIV RNA screen is related to VL



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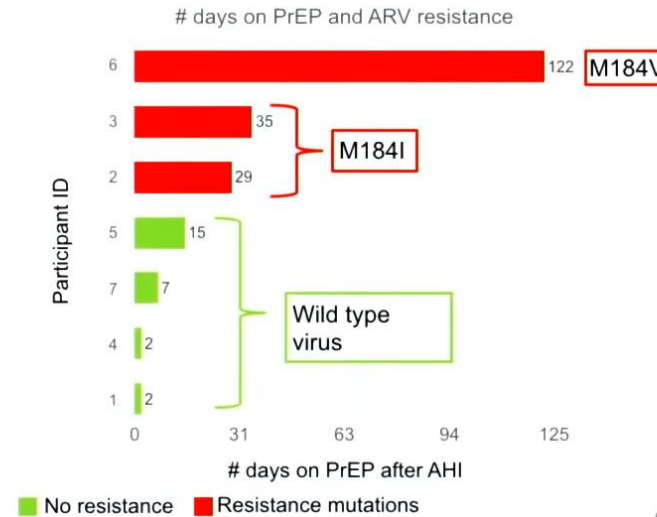
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HIV resistance

- All 7 participants had genotype resistance test results on post-PrEP samples
- **3/7 had FTC resistance (M184I, M184V)**
 - PrEP use 29-122 days
- **4/7 cases had no FTC resistance**
 - PrEP use 2-15 days
- **0/7 cases had TDF resistance**
- 1/7 had NNRTI mutation (E138A)
- 0/7 had PI mutations
- **Comparison to AHI cohort in Bangkok*:**
 - 0/229 (0%) FTC resistance
 - 1/229 (0.4%) TDF resistance

*Colby et al, JIAS, 2016



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Starting PrEP during AHI and risk for HIV resistance at the TRCAC

- ~ 1/350 PrEP users have AHI at PrEP initiation
- Screening for AHI with pooled qualitative HIV RNA tests can detect most, but not all AHI prior to starting PrEP
- The risk for development of new drug resistance mutations increases with time on PrEP
 - <= 15 days has a low risk for DRM
 - >4 weeks has a high risk for DRM
- The most common DRM the develop (M184I/V) confer resistance to FTC and 3TC
- There is a low risk for resistance to TDF when PrEP is taken for < 5 weeks

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How can we prevent HIV DRM in high-risk patients starting PrEP

- Since early 2019, PrEP clients with any high-risk behavior within the previous 30 days are started on 3-drug PEP (TDF/FTC/RLP) for 4 weeks.
 - If HIV Ab screening is negative at 1 month, then PrEP is prescribed
 - Over 1,200 people have started PrEP in the past year
 - No new cases of AHI in PREP initiators have been detected since

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Mark de Souza
Tippawan Pankam
Prapaipan Plodkratok
Many more

Chulalongkorn

Supraee Buranapraditkun
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Acknowledgement **PREVENTION**



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