

### A. GENERAL QUESTIONS ABOUT THE HIV CARE CONTINUUM AND THE CCD

#### 1. **What is the HIV Care Continuum?**

The HIV Care Continuum is a coordinated delivery system, encompassing a comprehensive range of health and social services that meet the needs of people living with HIV at all stages of illness.<sup>1,2</sup>

#### 2. **Why are linkage to care, viral load suppression, and viral load below transmission threshold areas of focus for the CCDs?**

Linkage to care, viral load suppression, and viral load transmission threshold are critical components of the HIV Care Continuum. Linkage to care is a key point in the care continuum, and facilitates timely viral suppression. Viral load suppression – when sustained – results in less morbidity and mortality, prevents sexual transmission to HIV-negative partners,<sup>3</sup> and reduces transmission to needle-sharing partners. Viral load below transmission threshold reduces the likelihood of HIV transmission to partners and is informative about local progress towards viral suppression. These key indicators can be estimated using comprehensive HIV-related laboratory data reported to the Centers for Disease Control and Prevention (CDC)’s National HIV Surveillance System<sup>4</sup>, and are key metrics within the National HIV/AIDS Strategy: Updated to 2020 (NHAS).<sup>2</sup> Locally, the New York City Department of Health and Mental Hygiene (NYC DOHMH) uses HIV surveillance data to monitor its own progress towards the goals set forth in the NHAS, New York State’s plan to end the HIV epidemic (NYS EtE),<sup>5</sup> and the HIV National Strategic Plan for the United States: A Roadmap to End the Epidemic 2021–2025 (HNSP)<sup>6</sup>.

#### 3. **What are the requirements for health care providers with regard to offering HIV testing and linking patients to care?**

In New York State, anyone 13 years and older must be offered an HIV test when receiving primary care services, and in inpatient, outpatient, and emergency department hospital settings.<sup>7</sup> HIV testing must be offered by physicians, physician assistants, nurse practitioners, and midwives who provide primary care, regardless of setting. At a minimum, providers must verbally advise patients that an HIV test will be performed. Written consent is not required. HIV test providers must arrange, with the consent of the patient, an appointment for medical care for those who test positive.

#### 4. **What HIV-related information is reported to NYC DOHMH?**

All previously unreported diagnoses of HIV and AIDS are reportable to NYC DOHMH, per New York State law. Clinical laboratories must report all positive confirmatory test results, viral load test results (detectable and undetectable), CD4 test results, and viral nucleotide sequence results. All HIV surveillance information reported to NYC DOHMH is stored in the New York City HIV Surveillance Registry (Registry). The Registry does not currently include treatment status information (e.g., whether a patient is taking antiretroviral therapy or not) or HIV care visit information. HIV-related laboratory tests reported to NYC DOHMH are used as proxies for HIV care visits (see section B6, below).

**5. Why does NYC DOHMH share the CCDs?**

It is important for facilities providing medical care to HIV-positive New York City residents to know their performance relative to national and local goals for providing care and treatment to people living with HIV. This information may be useful to facilities seeking to understand their contribution to achieving the NHAS and NYS EtE goals, and/or as quality indicators to track program efficacy in caring for people living with HIV.

**6. When did NYC DOHMH first release CCDs?**

The first release occurred in December 2012.

**7. How often does NYC DOHMH release CCDs?**

NYC DOHMH sends individual CCD reports to facilities biannually, once in June and once in December. NYC DOHMH first publicly released viral suppression data from the CCDs in December 2015, and continues to do so annually on its CCD webpage.<sup>8</sup>

**8. Which facilities receive CCDs?**

In the initial 2012 release of the CCDs, NYC DOHMH selected 21 facilities that were among the highest-volume HIV care facilities in New York City or part of New York City Health + Hospitals (NYC H + H). These 21 facilities collectively cared for a large proportion of persons receiving care for HIV in the city. For the June 2014 release, NYC DOHMH expanded criteria to include HIV testing and care providers in New York City that either: a) reported  $\geq 10$  newly diagnosed patients, and/or b) had  $\geq 150$  patients “in care” based on Registry data in a designated 12-month time period. Once a site qualifies for receiving a CCD based on these criteria, it will thereafter receive biannual CCDs.

**9. Who at selected facilities receives CCDs?**

NYC DOHMH sends CCDs biannually to persons responsible for leading HIV care and treatment efforts at each facility, such as the Medical Director of an HIV clinic or the HIV administrator, as well as other facility leaders, such as the Chief Medical Officer or Chief Executive Officer. If there are any additional key individuals who should receive your facility’s CCD or there are changes in leadership, please email us at [HIVCCD@health.nyc.gov](mailto:HIVCCD@health.nyc.gov).

**10. How does NYC DOHMH use CCDs? What happens if a facility does not meet local and national goals for HIV care and treatment?**

The CCD is meant to help and encourage facilities to meet national and local goals for HIV care and treatment. It is up to facilities to decide how they wish to use these data.

There are many facility-, individual-, and structural-level drivers of linkage to care and viral load suppression which contribute to variability in linkage and suppression rates across and within sites (e.g., facility type and resource level, substance use, housing status, mental health). Data on these drivers are typically unavailable to surveillance and therefore are not reflected in the CCDs. While the linkage and viral suppression goals are citywide and apply to all CCD sites, it is understood that achievement of this goal will take some sites longer than others.

**11. Does NYC DOHMH use these CCD reports as a basis for direct funding decisions?**

No.

**B. SPECIFIC QUESTIONS ABOUT THE CCD (see mock CCD at end of document)**

**1. How does NYC DOHMH calculate the indicators that are included in the CCDs?**

NYC DOHMH uses the following definitions for the HIV indicators:

- **Timely linkage to care among newly diagnosed patients:** All persons diagnosed with HIV infection at the facility in the given 12-month time period according to the Registry are included in the denominator. Persons who timely linked to care at “your facility” (including affiliated sites), as well as persons who timely linked at any “other facility” in New York City are included in the numerator. A newly diagnosed person is considered to have timely linked to care if they have any HIV viral load, CD4, or HIV genotype test reported to the NYC DOHMH within one month (30 days) of HIV diagnosis. Data on timely linkage to care are included only in CCDs for sites that reported  $\geq 10$  newly diagnosed patients to the Registry in the specified 12-month time period. The goal for timely linkage to care is 85%.
- **Timely viral load suppression among newly diagnosed patients:** All persons diagnosed with HIV infection at the facility in the given 12-month time period according to the Registry are included in the denominator. The numerator includes newly diagnosed persons who have an HIV viral load  $< 200$  cc/mL reported to NYC DOHMH within three months (91 days) of HIV diagnosis. The CCD also includes data on the proportion of newly diagnosed patients with timely viral suppression by linkage to care status (i.e., linked within 1 month of diagnosis, and not linked within 1 month of diagnosis, regardless of linkage site (your facility or other facility)). Data on timely viral load suppression are included only in CCDs for sites that reported  $\geq 10$  newly diagnosed patients to the Registry in the specified 12-month time period. The goal for timely viral load suppression is 75%.
- **Viral load suppression among patients in care:** All HIV-diagnosed persons meeting the U.S. Department of Health and Human Services (HHS) Human Resources and Services Administration (HRSA)’s definition of continuous care are included in the denominator.<sup>9</sup> This definition requires at least two HIV lab reports (CD4 or viral load) drawn at least 90 days apart and reported to the Registry within the given 12-month time period. Persons are considered to be in continuous care at a specific facility if the two or more labs that defined this status were ordered by providers at that facility. Viral suppression is the proportion of persons whose most recent quantitative HIV RNA level was  $< 200$  copies/mL among all persons in continuous care at that facility during the given 12-month time period. Similarly, viral load below transmission threshold is the proportion of persons whose most recent quantitative HIV RNA level was  $< 1,500$  copies/mL among all persons in continuous care at that facility during the given 12-month time period. Sites with  $\geq 150$  patients

“in care” per Registry data in the initial 12-month time period were selected to receive a viral suppression CCD. Once a site qualifies for receiving a viral suppression CCD based on this criterion, it will thereafter receive the viral suppression CCD biannually.

NYC DOHMH uses the following definitions for the Hepatitis C virus (HCV) indicators:

- **Current HCV infection among patients in HIV care:** Hepatitis C virus infection among people in HIV care is defined as having at least one positive RNA test result from January 1, 2020- December 31, 2020.
- **HCV treatment initiation among patients in HIV care co-infected with HCV:** Treatment initiation is defined as at least one negative RNA test result reported from January 1, 2020- December 31, 2020, among people in HIV care who had a positive RNA test result during that time period. A negative RNA test suggests that a person has started and is responding to HCV medications.

Viral load (RNA) monitoring is used to determine if patients are responding to HCV medications with the goal of a sustained virologic response. Using reportable RNA test results, NYC DOHMH validated using an RNA negative test result after a high RNA positive test result as suggestive of treatment initiation.<sup>10</sup>

## 2. What data time period is shown in the graphs?

The graphs show a 12-month rolling time period, either for a full calendar year period or a period that spans from mid-year to mid-year of the previous year.

## 3. What is the basis for the goals in the CCDs?

The goal of 85% for 30-day timely linkage to care aligns with the linkage goal in the NHAS.<sup>2</sup> The goal of 75% for timely viral suppression is based on the NYS EtE plan.<sup>5</sup> The goal of 90% viral suppression among patients in care is based on published literature and local HIV surveillance data.

## 4. Why do the numbers of persons diagnosed and in continuous care used for the indicator proportions in the CCDs differ from our facility estimates?

CCD indicators are calculated using Registry data, which come from multiple sources, including provider reports, laboratory reporting, and matches to local and national death registries. It is not unusual for facility estimates and estimates based on surveillance data to differ because of these multiple sources of case information.

- **Timely linkage to care and viral suppression among newly diagnosed patients:** The denominator is based only on those persons whose HIV diagnosis was newly reported to the Registry in the given 12-month time period. Hence, this graph does not represent all persons with positive test results at your facility during this period.
- **Viral suppression and viral load below transmission threshold among patients in care:** The denominator for your facility includes all persons with at least two CD4 or

viral load tests from your facility (including care affiliates) that were at least three months apart in the given 12-month time period and were reported to the Registry. It is not unusual for there to be a difference in the size of the patient census when comparing facility information to Registry data, because care status assessments using Registry data rely upon reportable laboratory events only. Note that the denominator for the citywide indicator includes patients who have two HIV-related laboratory tests 90 days apart within the given 12-month time period, without regard to changes in the ordering facility that may occur during the year.

5. **Why does the *Timely Linkage to Care* figure show the patients who linked to care at “your facility” and “other facility” for the facility-specific indicator but not for the New York City indicator?**

This indicator provides a population-level view of timely linkage to HIV care in New York City. This indicator presents timely linkage to care among all persons newly diagnosed with HIV in New York City in the given time 12-month period, regardless of the facility where they were diagnosed or linked to care. For individual facilities, NYC DOHMH provides the percentage of newly diagnosed patients who were diagnosed at your facility and linked to care within one or three months of diagnosis at “your facility” (including care affiliates) as well as at any “other facility” in New York City. In those circumstances in which there are no patients who were diagnosed at a specific CCD facility and linked at an “other facility” in New York City, this label will not be displayed on that facility’s CCD.

6. **Has the use of CD4/viral load/HIV genotype reports as a proxy measure for HIV care been validated?**

CD4, viral load, and HIV genotype reports received by public health surveillance registries are widely used by local and national health agencies as proxy measures for the receipt of HIV-related medical care, and estimates of care engagement based on these data are the subject of numerous peer-reviewed publications. They are used by the CDC to measure care status and track national progress towards the NHAS goals.<sup>2</sup>

7. **Why do the CCDs use viral load <200 copies/mL as the marker of viral suppression?**

CDC defines viral suppression as <200 copies/mL.<sup>11,12</sup> For more information, see [U = U Guidance for Implementation in Clinical Settings](#).

8. **Why do the CCDs use viral load <1,500 copies/mL as the marker of transmission threshold?**

Several studies show that an HIV viral load below 1,500 copies/mL lowers the risk of transmitting HIV to sex and needle-sharing partners.<sup>13,14, 15, 16</sup>

## RESOURCES

1. **CCDs:**

- For general questions or concerns regarding the CCDs, email us at [HIVCCD@health.nyc.gov](mailto:HIVCCD@health.nyc.gov).

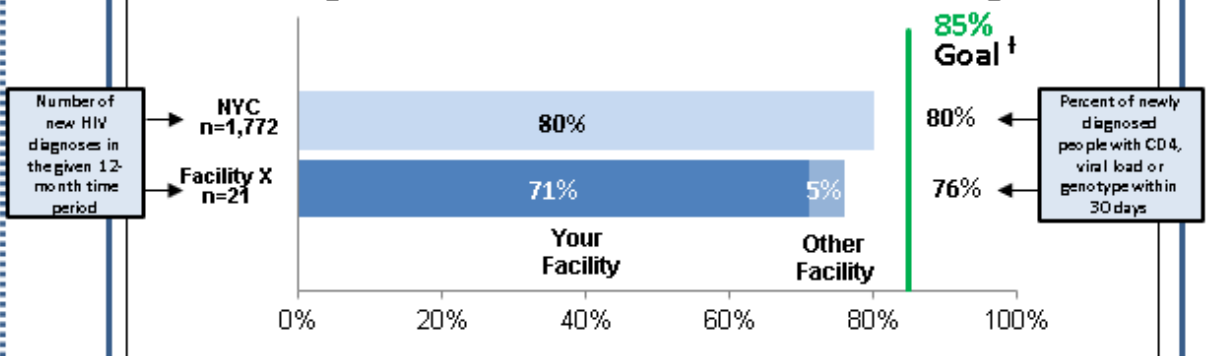
**2. For more information on HIV and HCV surveillance data and programs and services in New York City:**

- For assistance with HIV reporting at your facility, call the HIV Surveillance Unit at 212-442-3388.
- NYC DOHMH’s HIV Care Status Reports, which include patient-specific data regarding patients who are out of care, are available to New York City HIV care providers [here](#).
- Citywide data on care and clinical status of people living with HIV in New York City based on HIV surveillance data is available [here](#).
- Information on programs and services in New York City, including HIV testing, partner services, free condoms and other safer sex products, syringe services, and other resources, is available [here](#).
- AASLD/IDSA guidelines on the treatment of HCV infection in HIV/HCV co-infected patients are available [here](#).
- AIDS Institute clinical guidelines for HCV care are available [here](#).
- Information about the Empire Liver Foundation’s Hepatitis C Clinical Provider Training is available [here](#).
- To learn more about the HIV/HCV Treatment Access Committee of the NYC Hep C Task Force, contact [Hep@health.nyc.gov](mailto:Hep@health.nyc.gov).
- Hepatitis education materials are available [here](#).
- Additional hepatitis C resources are available [here](#).

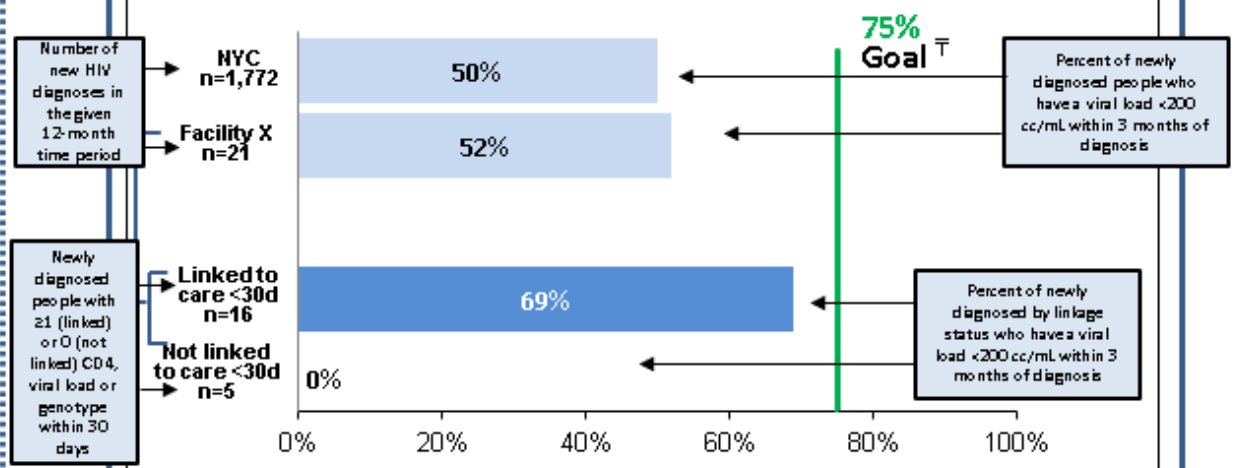
**Additional websites:**

- Information about the NYS EtE plan is available [here](#).
- The EtE Dashboard, which provides information on New York State and New York City’s progress toward these EtE goals, is available [here](#).
- NYS DOH’s “HIV Testing, Reporting and Confidentiality in New York State 2017-18 Update: Fact Sheet and Frequently Asked Questions” is available [here](#).
- NYS DOH’s HIV Clinical Guidelines are available [here](#).
- HHS’s HIV clinical guidelines, including “Guidelines for the Use of Antiretroviral Agents in Adults and Adolescents Living with HIV,” are available [here](#).

#### Linkage To Care Within 1 Month After HIV Diagnosis



#### Viral Load Suppression\* Within 3 Months After HIV Diagnosis



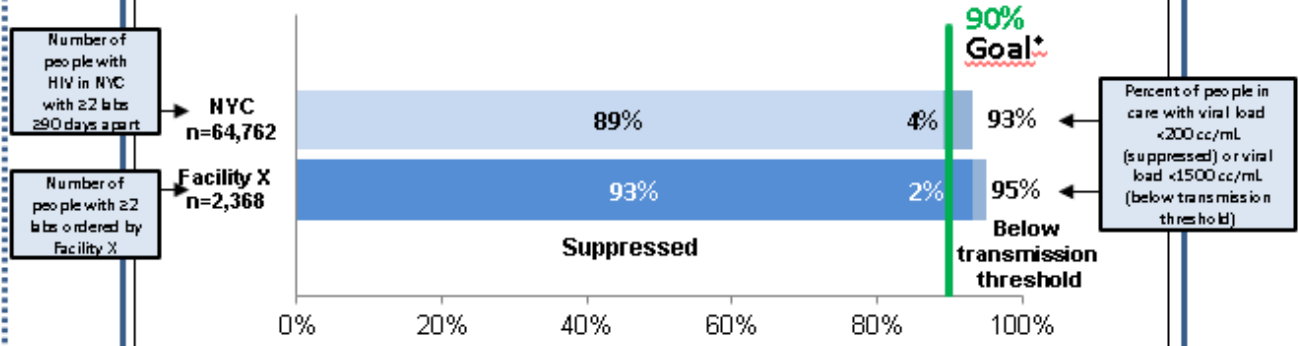
† National HIV/AIDS Strategy 2020

◆ Local New York City goal

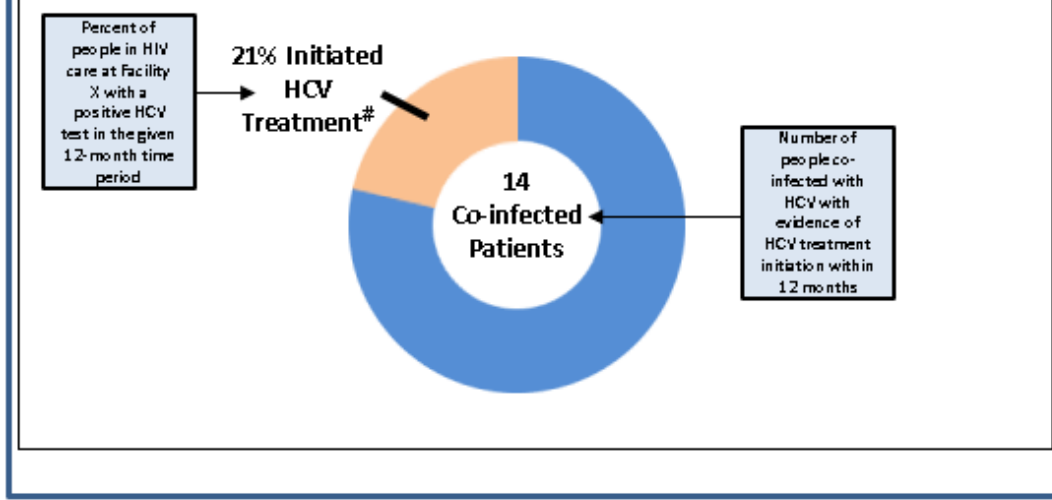
‡ New York State Ending the Epidemic Goal

\* Viral load within 3 months of diagnosis <200 copies/mL

**Viral Load Suppression Among Patients In Care<sup>‡</sup>**



**Current HCV Infection Among Patients In HIV Care<sup>Δ</sup>**



<sup>‡</sup> "In care" based on the Health Resources and Services Administration definition of retention: 2 labs (CD4 or viral load) at least 90 days apart within 12 months

<sup>♦</sup> Local New York City goal

<sup>Δ</sup> At least one positive RNA test result within 12 months

<sup>#</sup> At least one negative RNA test result among people in HIV care who had a positive RNA test result within 12 months



- <sup>1</sup> HIV.gov. HIV Care Continuum. <https://www.hiv.gov/federal-response/policies-issues/hiv-aids-care-continuum>. Accessed November 18, 2021.
- <sup>2</sup> The White House. National HIV/AIDS Strategy for the United States: Updated to 2020. <https://files.hiv.gov/s3fs-public/nhas-update.pdf>. Published July 2015. Accessed November 18, 2021.
- <sup>3</sup> Blackstock O, Myers J, Kobrak P, et al. U = U Guidance for Implementation in Clinical Settings. <https://www.hivguidelines.org/antiretroviral-therapy/u-equals-u/>. Published June 2019. Accessed November 18, 2021.
- <sup>4</sup> Centers for Disease Control and Prevention. HIV, Statistics Center. <https://www.cdc.gov/hiv/statistics/index.html>. Accessed November 18, 2021.
- <sup>5</sup> New York State Department of Health. 2015 Blueprint for Ending the Epidemic. [https://www.health.ny.gov/diseases/aids/ending\\_the\\_epidemic/docs/blueprint.pdf](https://www.health.ny.gov/diseases/aids/ending_the_epidemic/docs/blueprint.pdf). Published March 2015. Accessed November 18, 2021.
- <sup>6</sup> U.S. Department of Health and Human Services. 2021. *HIV National Strategic Plan for the United States: A Roadmap to End the Epidemic 2021–2025*. Washington, DC.
- <sup>7</sup> New York State Department of Health AIDS Institute. HIV Testing, Reporting and Confidentiality in New York State 2017-18 Update: Fact Sheet and Frequently Asked Questions. [https://www.health.ny.gov/diseases/aids/providers/testing/docs/testing\\_fact\\_sheet.pdf](https://www.health.ny.gov/diseases/aids/providers/testing/docs/testing_fact_sheet.pdf). Published June 2018. Accessed November 18, 2021.
- <sup>8</sup> New York City Department of Health and Mental Hygiene. HIV Care Continuum Dashboard 2018. <https://www1.nyc.gov/site/doh/health/health-topics/care-continuum-dashboard.page>. Accessed November 18, 2021.
- <sup>9</sup> United States Department of Health and Human Services, Health Resources and Services Administration. HIV/AIDS Bureau Performance Measures, Performance Measure: HIV Viral Load Suppression. <https://hab.hrsa.gov/sites/default/files/hab/clinical-quality-management/coremeasures.pdf>. Published March 2017. Accessed November 18, 2021.
- <sup>10</sup> Moore MS, Bocour A, Jordan L, et al. Development and Validation of Surveillance-Based Algorithms to Estimate Hepatitis C Treatment and Cure in New York City. *J Public Health Manag Pract*. 2018;24(6):526–532. doi:10.1097/PHH.0000000000000688.
- <sup>11</sup> Centers for Disease Control and Prevention. Vital Signs: HIV Prevention Through Care and Treatment – United States. *Morbidity and Mortality Weekly Report*. 2011;60(47):1618-1623. <https://www.cdc.gov/mmwr/preview/mmwrhtml/mm6047a4.htm>. Accessed November 18, 2021.
- <sup>12</sup> Centers for Disease Control and Prevention. Using Viral Load Data to Monitor HIV Burden and Treatment Outcomes in the United States. <https://www.cdc.gov/hiv/pdf/library/factsheets/using-viral-load-data-monitor-hiv-burden-treatment-outcomes.pdf>. Published February 2012. Accessed November 18, 2021.
- <sup>13</sup> Quinn TC, Wawer MJ, Sewankambo N, et al. Viral load and heterosexual transmission of human immunodeficiency virus type 1. *N Engl J Med*. 2000;342:921-929.
- <sup>14</sup> Mark G, Gardner LI, Rose CE, et al. Time above 1500 copies: a viral load measure for assessing transmission risk of HIV-positive patients in care. *AIDS*. 2015;29(8):947-54.
- <sup>15</sup> Attia S, Egger M, Muller M, et al. Sexual transmission of HIV according to viral load and antiretroviral therapy: systematic review and meta-analysis. *AIDS*. 2009;23(11):1397-1404.
- <sup>16</sup> Tovanabutra S, Robison V, Wongtrakul J, et al. Male viral load and heterosexual transmission of HIV-1 subtype E in northern Thailand. *J Acquir Immune Defic Syndr*. 2002;29(3):275-283.