



CLINICAL GUIDELINES PROGRAM

NEW YORK STATE DEPARTMENT OF HEALTH AIDS INSTITUTE | HIV · HCV · SUBSTANCE USE · LGBT HEALTH

Rapid Initiation of Antiretroviral Therapy

Lead author Asa Radix, MD, MPH, with the Medical Care Criteria Committee, August 2019

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Rapid Initiation of Antiretroviral Therapy

Purpose of This Guideline

Lead author Asa Radix, MD, MPH, with the *Medical Care Criteria Committee*, August 2019

This guideline was developed by the New York State Department of Health (NYSDOH) AIDS Institute (AI) for primary care providers and other practitioners who are initiating antiretroviral therapy (ART) immediately at the time of HIV diagnosis in ART-naïve adults, also known as rapid initiation of ART. The NYSDOH AI *January 2018 call to action* emphasized the importance of starting ART at the time of HIV diagnosis and promotes scale-up of this approach to treating people newly diagnosed with HIV. Toward that end, this guideline aims to achieve the following goals:

- Provide guidance for choosing safe and efficacious ART regimens based on known patient characteristics, when results of recommended resistance testing or baseline laboratory testing are not available.
- Identify antiretroviral regimens to avoid for rapid ART initiation.
- Provide guidance for recognizing when rapid initiation is not appropriate.
- Encourage clinicians to seek the assistance of an [experienced HIV care provider](#) when managing patients with extensive comorbidities.
- Integrate current evidence-based clinical recommendations into the healthcare-related implementation strategies of the *NYS Ending the Epidemic initiative*, which seeks to end the AIDS epidemic in NYS by the end of 2020.
- Provide guidance on funding sources for sustainable access to ART.

Guideline development: This guideline was developed by the NYSDOH AI Clinical Guidelines Program, which is a collaborative effort between the NYSDOH AI Office of the Medical Director and the Johns Hopkins University School of Medicine, Division of Infectious Diseases.

Established in 1986, the goal of the Clinical Guidelines Program is to develop and disseminate evidence-based, state-of-the-art clinical practice guidelines to improve the quality of care provided to people who have HIV, hepatitis C virus, or sexually transmitted infections; people with substance use issues; and members of the LGBTQ community. NYSDOH AI guidelines are developed by committees of clinical experts through a consensus-driven process.

The NYSDOH AI charged the [Medical Care Criteria Committee](#) (adult HIV and related guidelines) with developing evidence-based clinical recommendations for rapid ART initiation. The resulting recommendations are based on an extensive review of the medical literature and reflect consensus among this panel of experts. Each recommendation is rated for strength and quality of the evidence (see below). If recommendations are based on expert opinion, the rationale for the opinion is included.

NYSDOH AI Clinical Guidelines Program Ratings Scheme, Updated June 26, 2019 [a]

Strength of Recommendation Ratings

- A Strong recommendation
- B Moderate recommendation
- C Optional

Quality of Supporting Evidence Ratings

- 1 Indicates that the evidence supporting a recommendation is derived from published results of at least one randomized trial with clinical outcomes or validated laboratory endpoints.
-

NYSDOH AI Clinical Guidelines Program Ratings Scheme, Updated June 26, 2019 [a]

- * Indicates that the evidence supporting a recommendation is strong because it is based on a self-evident conclusion(s) or conclusive, published in vitro data, or because the recommendation articulates well-established, accepted practice that cannot be tested because ethics would preclude a clinical trial.

- 2 Indicates that the evidence supporting a recommendation is derived from published results of at least 1 well-designed, nonrandomized clinical trial or observational cohort study with long-term clinical outcomes.

- 2† Indicates that the evidence supporting a recommendation has been extrapolated from published results of well-designed studies (including nonrandomized clinical trials) conducted in populations other than those specifically addressed by a recommendation. One example would be results of studies conducted predominantly in a subpopulation (e.g., one gender) that the committee determines to be generalizable to the population under consideration in the guideline. When this rating is assigned to a recommendation, the source(s) of the extrapolated evidence and the rationale for the extrapolation are provided in the guideline text.

- 3 Indicates that a recommendation is based on the expert opinion of the committee members. The rationale for the recommendation is provided in the guideline text.

- a. With the June 2019 update, the ratings for quality of supporting evidence were expanded to add the * rating and the 2† rating.

Rationale for Rapid ART Initiation

Lead author Asa Radix, MD, MPH, with the *Medical Care Criteria Committee*, August 2019

The New York State Department of Health (NYSDOH) HIV Clinical Guidelines Program and the U.S. Department of Health and Human Services (DHHS) recommend initiation of antiretroviral therapy (ART) for all patients with a confirmed HIV diagnosis regardless of their CD4 cell count or viral load, for the benefit of the individual with HIV (reduced morbidity and mortality) [Zolopa, et al. 2009; Lundgren, et al. 2015] and to reduce the risk of transmission to others [Cohen, et al. 2016]. Initiating ART during early HIV infection may improve immunologic recovery (CD4 T cell counts) and reduce the size of the HIV reservoir [Jain, et al. 2013]; there is also evidence that initiating ART at the time of diagnosis reduced treatment delays and improved retention in care and viral suppression at 12 months [Ford, et al. 2018].

→ KEY POINT

- Rapid ART initiation, the standard of care in New York State, is efficacious, safe, and highly acceptable, with few patients declining the offer of immediate ART.

Reduced Treatment Delays and Loss to Follow-Up

Standard practice protocols for ART initiation have produced preventable delays, and the required wait for confirmatory HIV diagnostic and baseline laboratory test results (including resistance testing) along with required medical visits can unnecessarily delay the start of treatment by as long as 4 weeks. Problems in accessing insurance or waiting for activation of public benefits may also cause delays. It is estimated that in 2016, only 75.9% of individuals diagnosed with HIV in the U.S. HIV care continuum were linked to care within 1 month [CDC 2018]. Individuals with HIV who are not linked to care are at risk for having sustained viral loads and ongoing HIV transmission.

Rapid initiation of ART may reduce delays and improve viral suppression rates in people with HIV. Rapid or same-day ART initiation, which is preferable, or initiation within 3 days of a newly positive HIV test is the strategy endorsed by the World Health Organization [WHO 2017] and is an essential component of the *New York State Ending the Epidemic initiative*. Mathematical modeling demonstrates that a test-and-treat strategy with immediate initiation of ART and prevention approaches could lead to elimination of new HIV infections [Grulich, et al. 2009].

Benefits of Rapid ART Initiation

Several observational and clinical trials have demonstrated the individual-level benefits of rapid ART initiation [Ford, et al. 2018]. An early pilot of this approach in San Francisco, California, demonstrated that patients initiating ART within 1 or 2

days had a shorter time (median, 1.8 months) to viral suppression (HIV RNA \leq 200 copies/mL) than those offered the standard of care (4.3 months) or historical controls (7.2 months) [Pilcher, et al. 2017]. A longer-term follow-up of 225 patients at the same center found that, of patients who had access to rapid initiation, 95.8% had achieved viral suppression at least once and 92.1% had achieved it at the last recorded visit [Coffey, et al. 2019]. These individual-level benefits have been replicated in other U.S. and international studies that demonstrated improved viral suppression with shortened time to ART initiation [Rosen, et al. 2016a; Koenig, et al. 2017; Colasanti, et al. 2018]. After implementing rapid ART initiation at a hospital clinic in Atlanta, Georgia, time to viral suppression fell from 77 days, before the intervention, to 57 days [Lundgren, et al. 2015], and average time to ART initiation decreased from 21 to 7 days, both of which were statistically significant [Colasanti, et al. 2018].

Another demonstrated benefit is an improved rate of retention in care [Amanyire, et al. 2016; Rosen, et al. 2016a; Koenig, et al. 2017]. In the RapIT trial in South Africa, patients newly diagnosed with HIV were randomized to rapid ART initiation or standard of care [Rosen, et al. 2016b]. The participants in the rapid initiation arm had higher rates of ART initiation at 90 days (97% vs. 72%) and higher rates of retention in care and viral suppression (HIV RNA \leq 400 copies/mL) at 10 months (relative risk, 1.26 [1.05–1.50]). The average cost per patient to achieve viral suppression was lower in the intervention arm, demonstrating that this strategy of care may also be cost-effective [Long, et al. 2017]. Studies conducted in China and South Africa support the cost-effectiveness of rapid ART initiation [Zulliger, et al. 2014; Wu, et al. 2015; Ford, et al. 2018]. Rapid ART initiation is efficacious, safe, and highly acceptable, with few patients declining the offer of immediate ART [Pilcher, et al. 2017; Coffey, et al. 2019].

Modeling evidence suggests the potential for rapid ART initiation to significantly reduce HIV transmission in the community, although this has been directly modeled only in the context of South Africa [Granich, et al. 2009]. In the United States, linkage to and retention in HIV care are significant gaps in the HIV care continuum, with an estimated 64% of individuals with HIV receiving any HIV care and 49% being retained in care during 2016 [CDC 2019]. Models have translated these gaps in care to their effect on HIV transmission in the United States, demonstrating that between 43% and 49% of new HIV transmissions are attributable to individuals who have been diagnosed with HIV but are not receiving ART and have not been retained in care [Skarbinski, et al. 2015; Li, et al. 2019]. Because it is designed to help close this care gap, rapid ART initiation greatly reduces new HIV infections, hastening the achievement of [HIV incidence reduction goals in New York State](#).

Safety of Rapid ART Initiation

In the San Francisco study discussed above [Pilcher, et al. 2017], 89.7% of patients used integrase strand transfer inhibitor (INSTI)-containing regimens and 12.8% used protease inhibitor–containing regimens. The predominant INSTI-based regimen was dolutegravir plus emtricitabine/tenofovir disoproxil fumarate. The clinic did not have any cases of major resistance mutations to the prescribed ART regimen, and no regimen switches were made because of resistance. Two patients had their regimens changed because of rash, and in 10 cases, the regimen was simplified to a single-tablet regimen.

Of 149 patients initiating ART through a program in New York City, only 1 required a regimen change because of subsequently detected resistance [Blank, et al. 2018].

Rapid ART initiation is safe. Most designated regimens for rapid ART initiation are the same regimens that are recommended as initial treatment in the existing [NYSDOH](#), [International Antiviral Society–USA](#), and [DHHS](#) guidelines. These regimens are well tolerated and effective, and the likelihood of drug resistance is low based on the current prevalence of drug resistance [NYCDHMH 2018].

References

- Amanyire G, Semitala FC, Namusobya J, et al. Effects of a multicomponent intervention to streamline initiation of antiretroviral therapy in Africa: a stepped-wedge cluster-randomised trial. *Lancet HIV* 2016;3(11):e539-e548. [PMID: 27658873] <https://www.ncbi.nlm.nih.gov/pubmed/27658873>
- Blank S, Borges CM, Castro MA, et al. Getting a jump on HIV: expedited ARV treatment at NYC sexual health clinics, 2017. CROI; 2018 Mar 4-7; Boston, MA. <http://www.croiconference.org/sessions/getting-jump-hiv-expedited-arv-treatment-nyc-sexual-health-clinics-2017>
- CDC. Understanding the HIV care continuum. 2018 <https://www.cdc.gov/hiv/pdf/library/factsheets/cdc-hiv-care-continuum.pdf> [accessed 2019 Jun 19]
- CDC. Monitoring selected national HIV prevention and care objectives by using HIV surveillance data—United States and 6 dependent areas, 2017. *HIV Surveillance Supplemental Report* 2019;24(3).

- Coffey S, Bacchetti P, Sachdev D, et al. RAPID antiretroviral therapy: high virologic suppression rates with immediate antiretroviral therapy initiation in a vulnerable urban clinic population. *AIDS* 2019;33(5):825-832. [PMID: 30882490] <https://www.ncbi.nlm.nih.gov/pubmed/30882490>
- Cohen MS, Chen YQ, McCauley M, et al. Antiretroviral Therapy for the Prevention of HIV-1 Transmission. *N Engl J Med* 2016;375(9):830-839. [PMID: 27424812] <https://www.ncbi.nlm.nih.gov/pubmed/27424812>
- Colasanti J, Sumitani J, Mehta CC, et al. Implementation of a rapid entry program decreases time to viral suppression among vulnerable persons living with HIV in the Southern United States. *Open Forum Infect Dis* 2018;5(6):ofy104. [PMID: 29992172] <https://www.ncbi.nlm.nih.gov/pubmed/29992172>
- Ford N, Migone C, Calmy A, et al. Benefits and risks of rapid initiation of antiretroviral therapy. *AIDS* 2018;32(1):17-23. [PMID: 29112073] <https://www.ncbi.nlm.nih.gov/pubmed/29112073>
- Granich RM, Gilks CF, Dye C, et al. Universal voluntary HIV testing with immediate antiretroviral therapy as a strategy for elimination of HIV transmission: a mathematical model. *Lancet* 2009;373(9657):48-57. [PMID: 19038438] <https://www.ncbi.nlm.nih.gov/pubmed/19038438>
- Jain V, Hartogensis W, Bacchetti P, et al. Antiretroviral therapy initiated within 6 months of HIV infection is associated with lower T-cell activation and smaller HIV reservoir size. *J Infect Dis* 2013;208(8):1202-1211. [PMID: 23852127] <https://www.ncbi.nlm.nih.gov/pubmed/23852127>
- Koenig SP, Dorvil N, Devieux JG, et al. Same-day HIV testing with initiation of antiretroviral therapy versus standard care for persons living with HIV: A randomized unblinded trial. *PLoS Med* 2017;14(7):e1002357. [PMID: 28742880] <https://www.ncbi.nlm.nih.gov/pubmed/28742880>
- Labhardt ND, Ringera I, Lejone TI, et al. Same day ART initiation versus clinic-based pre-ART assessment and counselling for individuals newly tested HIV-positive during community-based HIV testing in rural Lesotho - a randomized controlled trial (CASCADE trial). *BMC Public Health* 2016;16:329. [PMID: 27080120] <https://www.ncbi.nlm.nih.gov/pubmed/27080120>
- Li Z, Purcell DW, Sansom SL, et al. Vital signs: HIV transmission along the continuum of care - United States, 2016. *MMWR Morb Mortal Wkly Rep* 2019;68(11):267-272. [PMID: 30897075] <https://www.ncbi.nlm.nih.gov/pubmed/30897075>
- Long LC, Maskew M, Brennan AT, et al. Initiating antiretroviral therapy for HIV at a patient's first clinic visit: a cost-effectiveness analysis of the rapid initiation of treatment randomized controlled trial. *AIDS* 2017;31(11):1611-1619. [PMID: 28463879] <https://www.ncbi.nlm.nih.gov/pubmed/28463879>
- Lundgren JD, Babiker AG, Gordin F, et al. Initiation of antiretroviral therapy in early asymptomatic HIV infection. *N Engl J Med* 2015;373(9):795-807. [PMID: 26192873] <https://www.ncbi.nlm.nih.gov/pubmed/26192873>
- NYCDHMH. HIV surveillance annual report, 2017. 2018 <https://www1.nyc.gov/assets/doh/downloads/pdf/dires/hiv-surveillance-annualreport-2017.pdf> [accessed 2019 Jul 22]
- Pilcher CD, Ospina-Norvell C, Dasgupta A, et al. The effect of same-day observed initiation of antiretroviral therapy on HIV viral load and treatment outcomes in a US public health setting. *J Acquir Immune Defic Syndr* 2017;74(1):44-51. [PMID: 27434707] <https://www.ncbi.nlm.nih.gov/pubmed/27434707>
- Rosen S, Maskew M, Fox MP, et al. Correction: Initiating antiretroviral therapy for HIV at a patient's first clinic visit: The RapIT randomized controlled trial. *PLoS Med* 2016a;13(6):e1002050. [PMID: 27258028] <https://www.ncbi.nlm.nih.gov/pubmed/27258028>
- Rosen S, Maskew M, Fox MP, et al. Initiating antiretroviral therapy for HIV at a patient's first clinic visit: The RapIT randomized controlled trial. *PLoS Med* 2016b;13(5):e1002015. [PMID: 27163694] <https://www.ncbi.nlm.nih.gov/pubmed/27163694>
- Skarbinski J, Rosenberg E, Paz-Bailey G, et al. Human immunodeficiency virus transmission at each step of the care continuum in the United States. *JAMA Intern Med* 2015;175(4):588-596. [PMID: 25706928] <https://www.ncbi.nlm.nih.gov/pubmed/25706928>
- WHO. Guidelines for managing advanced HIV disease and rapid initiation of antiretroviral therapy. 2017 <https://apps.who.int/iris/bitstream/handle/10665/255884/9789241550062-eng.pdf;jsessionid=7B7901DF1D162BB7D16B83C444A2D417?sequence=1> [accessed 2019 Jun 18]
- Wu Z, Zhao Y, Ge X, et al. Simplified HIV testing and treatment in China: analysis of mortality rates before and after a structural intervention. *PLoS Med* 2015;12(9):e1001874. [PMID: 26348214] <https://www.ncbi.nlm.nih.gov/pubmed/26348214>
- Zolopa A, Andersen J, Powderly W, et al. Early antiretroviral therapy reduces AIDS progression/death in individuals with acute opportunistic infections: a multicenter randomized strategy trial. *PLoS One* 2009;4(5):e5575. [PMID: 19440326] <https://www.ncbi.nlm.nih.gov/pubmed/19440326>
- Zulliger R, Black S, Holtgrave DR, et al. Cost-effectiveness of a package of interventions for expedited antiretroviral therapy initiation during pregnancy in Cape Town, South Africa. *AIDS Behav* 2014;18(4):697-705. [PMID: 24122044] <https://www.ncbi.nlm.nih.gov/pubmed/24122044>

Protocol for Rapid ART Initiation

Lead author Asa Radix, MD, MPH, with the *Medical Care Criteria Committee*, August 2019

☑ RECOMMENDATIONS: PROTOCOL FOR RAPID ART INITIATION

- Clinicians should offer rapid initiation of antiretroviral therapy (ART)—preferably on the same day (A1) or within 96 hours—to all individuals who are candidates for rapid ART initiation (see text) and who have:
 - A confirmed HIV diagnosis (A1), *or*
 - A reactive HIV screening result pending results of a confirmatory HIV test (A2), *or*
 - Suspected acute HIV infection, i.e., HIV antibody negative and HIV RNA positive (A2).
 - See the NYSDOH AI guideline *Diagnosis and Management of Acute HIV > Presentation and Diagnosis*.
- To determine whether a patient is a candidate for rapid ART initiation, the clinician should confirm that the individual has any of the following (A1):
 - A new reactive point-of-care HIV test result, or new confirmed HIV diagnosis, or acute HIV infection, or known HIV infection, *and*
 - No prior ART (i.e., treatment naïve) or limited prior use of antiretroviral medications, *and*
 - No medical conditions or opportunistic infections that require deferral of rapid ART initiation, including suspected cryptococcal or tuberculous meningitis.
- Clinicians should perform baseline laboratory testing listed in *Box 2* for all patients who are initiating ART immediately; ART can be started while awaiting laboratory test results. (A3)

→ SELECTED GOOD PRACTICE REMINDERS

- For patients with a reactive HIV antibody screening test that is pending confirmation, make sure the patient understands the benefits of rapid ART initiation and that:
 1. Screening test results are not diagnostic, because a false-positive result is possible;
 2. A confirmatory (diagnostic) HIV test will be performed;
 3. ART will be discontinued if the confirmatory test result is negative and continued if it is positive;
 4. The benefit of starting ART early, if it is needed, outweighs the negligible risk of taking ART for a few days and then stopping it if confirmed HIV negative.
- Provide the result of the confirmatory HIV test as soon as it is available; discontinue ART if the result is negative and reinforce adherence and next steps if it is positive.
- If a patient declines rapid ART initiation, discuss options for deferred initiation of ART and linkage with HIV primary care and outline next steps.

Figure 1: Protocol for Rapid ART Initiation

Identify Rapid ART Candidates	Counseling and Education	Assess and Refer	Baseline Lab Testing	Initiate ART	Payment Assistance?	Follow-Up	Adjust ART
<p>Candidates have:</p> <ul style="list-style-type: none"> A new reactive POC HIV test result, new HIV diagnosis, acute HIV, or known HIV, <i>and</i> No or limited prior ARV use, <i>and</i> No medical conditions or OIs that require deferral of ART initiation 	<ul style="list-style-type: none"> HIV diagnosis Disclosure Adherence Side effects and management of Management of lifelong medications 	<ul style="list-style-type: none"> Health literacy Identify and address medical and psychosocial barriers to treatment and adherence As indicated, refer for substance use treatment, behavioral health services, housing assistance 	<ul style="list-style-type: none"> Confirm HIV diagnosis Viral load Resistance testing CD4 count HAV, HBV, HCV testing Metabolic panel STIs Urinalysis Pregnancy test for individuals of childbearing potential 	<ul style="list-style-type: none"> Choose a preferred regimen based on patient characteristics and preference Initiate ART immediately—preferably on the same day—or within 96 hours Administer the first dose on site if possible 	<ul style="list-style-type: none"> Assess need for payment assistance Refer patients with no insurance to NYS UCP Provide resources for payment assistance 	<ul style="list-style-type: none"> Contact the patient within 24 to 48 hours by phone (or other preferred method) Assess medication tolerance and adherence If feasible, schedule in-person visit with medical care provider within 7 days Reinforce adherence 	<ul style="list-style-type: none"> Change or adjust the initial ART regimen based on results of initial lab and resistance testing

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Reactive HIV Screening Test Result

When the result of a patient’s initial HIV point-of-care screening test is reactive, established practice is to obtain a blood specimen for diagnostic HIV testing because of the possibility of false-positive screening results. This is particularly important for individuals who are not at high risk of acquiring HIV. However, supplemental testing results may not be available for several days, introducing the risk that a patient will not return. The goal of the rapid ART initiation protocol is to assess whether a person with a reactive HIV screening test result (or a confirmed HIV diagnosis) is also a candidate for same-day initiation of ART. If so, then the rapid ART initiation protocol is to provide counseling on HIV transmission and the benefits of ART, initiate ART that day or within 4 days, and link the person expeditiously to HIV primary care. Thus, the protocol recommends immediate initiation of ART while awaiting confirmatory HIV test results.

Patients who are candidates for rapid ART initiation:

- Have a new reactive point-of-care HIV test result or a new HIV diagnosis (confirmed through the *Centers for Disease Control and Prevention HIV testing algorithm*) or acute HIV infection (HIV antibody negative and HIV RNA positive) or known HIV, *and*
- Are treatment naive, *or*
- Have a history of limited ART use (e.g., a person who stopped first-line therapy for reasons other than regimen failure), as long as concern for acquired drug resistance is low (requires a case-by- case determination).

Patients with a new reactive HIV test result can be retested using a second point-of-care test, preferably from a different manufacturer than that of the first test, to minimize the possibility of a false-positive result. It is not necessary to retest with a second point-of-care test before providing ART, but given the possibility of a false-positive screening result, a confirmatory HIV test should always be performed to establish a diagnosis of HIV. If the confirmatory HIV test result is negative, ART can be discontinued.

→ KEY POINT

- Patients with a new reactive HIV test result can be retested using a second point-of-care test, preferably from a different manufacturer than that of the first test, to minimize the possibility of a false-positive result.
 - See the NYSDOH AI guideline *HIV Testing > Characteristics of FDA-Approved Rapid HIV Tests* for a list of available point-of-care HIV tests.

Counseling

A reactive HIV screening result should prompt a care provider to counsel the patient about the benefits and risks of ART and about HIV transmission risk, including the consensus that *Undetectable Equals Untransmittable (U=U)*. When patients are initiated on ART on the same day as their reactive HIV test result, the priorities for patient education and counseling include:

- Confirming the diagnosis of HIV.
- Managing disclosure, if indicated.
- Adhering to the ART regimen.
- Recognizing and responding to side effects.
- Following through with clinic visits.
- Assessing health literacy.
- Managing lifelong ART: Navigating acquisition of and paying for medications required for lifelong therapy, including pharmacy selection, insurance requirements and restrictions, co-pays, and prescription refills.
- Identifying and addressing psychosocial issues that may pose barriers to treatment.
- Referring for substance use and behavioral health counseling if indicated.
- Referring for housing assistance if indicated.
- Ensuring the patient knows how to reach the care team if needed, to address adverse effects of medications or other concerns.

→ KEY POINT: HEALTH LITERACY

- According to the *National Network of Libraries of Medicine*, health literacy requires:
 - The ability to understand instructions on prescription drug bottles, appointment slips, medical education brochures, and doctor’s directions and consent forms.
 - The ability to negotiate complex healthcare systems.
 - Reading, listening, analytical, and decision-making skills, and the ability to apply these skills to health situations.
- **Resources:**
 - *AHRQ Short Assessment of Health Literacy–Spanish and English*
 - *AHRQ Rapid Estimate of Adult Literacy in Medicine–Short Form*
 - *AHRQ Short Assessment of Health Literacy for Spanish Adults*
 - *Health Literacy Tool Shed (funded by the U.S. National Libraries of Medicine)*

Medical and Psychosocial Assessment

Medical assessment of a patient with a new reactive HIV test result should include history or signs or symptoms of opportunistic infection(s). ART should be delayed and appropriate medical management initiated if tuberculous (TB) meningitis or cryptococcal meningitis are suspected (see below) [WHO 2017], if cytomegalovirus retinitis is suspected, or if the patient has any evidence of advanced HIV disease on clinical exam.

To identify the potential for pre-existing drug-resistant virus, the initial assessment should also include the patient’s history of pre-exposure prophylaxis (PrEP) and post-exposure prophylaxis (PEP) use and previous ART use for people who are re-engaging in care [Ford, et al. 2018]. See *Box 1: Medical History Checklist*, below.

Box 1: Medical History Checklist

When taking a medical history before rapid ART initiation, ask about:

- Date and result of last HIV test.
- Serostatus of sex partners and their ART regimens if known.
- Previous use of antiretroviral medications, with dates of use, and including PrEP or repeated episodes of PEP.
- Comorbidities, including a history of renal or liver disease, particularly hepatitis B infection.

Box 1: Medical History Checklist

- Prescribed and over-the-counter medications.
- Drug allergies.
- Substance use.
- Symptoms, to assess for active cryptococcal and TB meningitis.
- Psychiatric history, particularly depressive or psychotic symptoms or any history of suicidality.
- Possible pregnancy and childbearing plans in individuals of childbearing potential.

Deferral of ART initiation: If the patient understands the benefits of rapid initiation but declines ART, then initiation should be revisited as soon as possible. In some circumstances, such as in the rare case of suspected cryptococcal or TB meningitis, rapid ART is not recommended (see the NYSDOH AI guideline *When to Initiate ART > Initiating ART Following Acute Opportunistic Infections*). Patients who present with signs and symptoms suggestive of pulmonary or intracranial and ophthalmologic infections should receive further assessment before initiating ART on the same day as a reactive HIV screening test result.

ART initiation should be delayed in any person presenting with signs or symptoms suggestive of meningitis, including headache, nausea or vomiting, light sensitivity, and changes in mental status. Treatment of TB meningitis was investigated in a trial in Vietnam in which immediate initiation of ART was compared with ART initiated 2 months after TB treatment [Torok, et al. 2011]. There were significantly more grade 4 adverse effects in individuals who initiated ART immediately than in those who delayed. Among patients with cryptococcal meningitis, early initiation of ART has been associated with adverse outcomes, including death [Boulware, et al. 2014]; therefore, it is recommended that ART be deferred until after the induction phase of treatment for cryptococcal meningitis has been completed (see *DHHS: Guidelines for the Prevention and Treatment of Opportunistic Infections in Adults and Adolescents with HIV*).

It is clear that co-treatment of HIV and pulmonary TB improves survival. In the SAPIT trial in South Africa, there was a 56% relative reduction in mortality when ART was initiated within 4 weeks of TB treatment initiation, compared with when it was started after TB treatment was completed (hazard ratio, 0.44; 95% confidence interval, 0.25–0.79; $P=.003$), although symptoms of immune reconstitution inflammatory syndrome (IRIS) were greater in patients who started ART earlier [Abdool Karim, et al. 2010]. However, it is not clear that ART initiation prior to initiation of pulmonary TB treatment is the best course of action. Care providers should weigh the benefits of rapid ART initiation against the potential drawbacks of pill burden, drug interactions, and the risk of IRIS.

Baseline Laboratory and Resistance Testing

All patients with a reactive HIV test result should undergo the baseline laboratory testing listed in Box 2, below. For discussion of baseline testing, see the NYSDOH AI guideline *Selecting an Initial ART Regimen > ART-Initiation Laboratory Testing*. It is not necessary to wait for these test results before initiating ART.

Box 2: Baseline Laboratory Testing Checklist

- HIV-1/2 antigen/antibody assay.
- HIV quantitative viral load.
- Baseline HIV genotypic resistance profile.
- Baseline CD4 cell count.
- Testing for hepatitis A, B, and C viruses.
- Comprehensive metabolic panel (creatinine clearance, hepatic profile).
- Sexually transmitted infection (STI) screening; see the NYSDOH AI *STI Care Guidelines*.
- Urinalysis.
- Pregnancy test for individuals of childbearing potential.

References

Abdool Karim SS, Naidoo K, Grobler A, et al. Timing of initiation of antiretroviral drugs during tuberculosis therapy. *N Engl J Med* 2010;362(8):697-706. [PMID: 20181971] <https://www.ncbi.nlm.nih.gov/pubmed/20181971>

- Boulware DR, Meya DB, Muzoora C, et al. Timing of antiretroviral therapy after diagnosis of cryptococcal meningitis. *N Engl J Med* 2014;370(26):2487-2498. [PMID: 24963568] <https://www.ncbi.nlm.nih.gov/pubmed/24963568>
- Ford N, Migone C, Calmy A, et al. Benefits and risks of rapid initiation of antiretroviral therapy. *AIDS* 2018;32(1):17-23. [PMID: 29112073] <https://www.ncbi.nlm.nih.gov/pubmed/29112073>
- Torok ME, Yen NT, Chau TT, et al. Timing of initiation of antiretroviral therapy in human immunodeficiency virus (HIV)--associated tuberculous meningitis. *Clin Infect Dis* 2011;52(11):1374-1383. [PMID: 21596680] <https://www.ncbi.nlm.nih.gov/pubmed/21596680>
- WHO. Guidelines for managing advanced HIV disease and rapid initiation of antiretroviral therapy. 2017 <https://apps.who.int/iris/bitstream/handle/10665/255884/9789241550062-eng.pdf;jsessionid=7B7901DF1D162BB7D16B83C444A2D417?sequence=1> [accessed 2019 Jun 18]

General Principles in Choosing a Regimen for Rapid ART Initiation

Lead author Asa Radix, MD, MPH, with the *Medical Care Criteria Committee*, August 2019

RECOMMENDATIONS: GENERAL PRINCIPLES IN CHOOSING A REGIMEN FOR RAPID ART INITIATION

- Clinicians should involve their patients when deciding which antiretroviral therapy (ART) regimen is most likely to result in adherence. (A3)
- Before initiating ART, clinicians should:
 - Assess the patient's prior use of antiretroviral medications, including pre-exposure prophylaxis (PrEP), which may increase the risk for baseline resistance. (A2)
 - Assess for any comorbidities and chronic coadministered medications that may affect the choice of regimen for initial ART. (A2)
 - At the time of HIV diagnosis, obtain genotypic resistance testing for the protease (A2), reverse transcriptase (A2), and integrase (B2) genes.
 - Ask individuals of childbearing potential about the possibility of pregnancy, their reproductive plans, and the use of contraception. (A3)
- For ART-naïve patients, clinicians should select an initial ART regimen that is preferred; see *Table 1: Preferred and Alternative Regimens for Rapid ART Initiation in Nonpregnant Adults*. (A1)
- Clinicians should reinforce medication adherence regularly. (A3)
- Clinicians should obtain a viral load test 4 weeks after ART initiation to assess the response to therapy. (A3)
 - See the NYSDOH AI guideline *Virologic and Immunologic Monitoring* for more information.

→ SELECTED GOOD PRACTICE REMINDERS

- Follow up within 24 to 48 hours, by telephone or another preferred method, with a patient who has initiated ART to assess medication tolerance and adherence.
- If feasible, schedule an in-person visit for 7 days after ART initiation.

Choosing a Regimen for Rapid ART Initiation

The preferred medications for rapid ART initiation are based on the established regimens for persons who are ART naïve and are restricted to those that can be safely initiated in the absence of readily available baseline laboratory testing results, such as viral load, CD4 count, and HLA-B*5701. The preferred regimens have a high barrier to resistance, are well tolerated, and limit the potential for *drug-drug interactions*. Initial regimens should be selected on the basis of patient preferences and clinical characteristics, and a preferred regimen should be used whenever possible (see *Table 1*, below).

One regimen (tenofovir alafenamide/emtricitabine/cobicistat/darunavir [TAF/FTC/COBI/DRV]) has been studied formally in the setting of rapid ART initiation, in a phase 3, open-label, single-arm, prospective, multicenter study without the benefit of resistance testing and produced high rates (96%) of viral suppression (HIV RNA <50 copies/mL) at 48 weeks [Huhn, et al. 2019].

When following a rapid ART initiation protocol, care providers should avoid regimens containing abacavir, because results of HLA-B*5701 testing are not likely to be available. Similarly, rilpivirine should be avoided in patients whose viral load is >100,000 copies/mL and whose CD4 count <200 cells/mm³.

Efavirenz is associated with a higher risk of central nervous system side effects and of transmitted drug resistance mutations [Kagan, et al. 2019]; therefore, it is not recommended for rapid ART initiation.

Clinics that have implemented rapid ART initiation frequently design pre-approved regimens that consider local patterns of transmitted drug resistance and drug toxicity [Pilcher, et al. 2017].

There is a greater possibility that HIV drug resistance mutations may emerge and reduce the efficacy of an initial ART regimen in patients with a new reactive HIV screening test or a new HIV diagnosis who have taken tenofovir disoproxil fumarate/emtricitabine (TDF/FTC) as PrEP since their last negative HIV test. Results of a recent study in New York City demonstrated that individuals who had taken PrEP in the 3 months prior to a new HIV diagnosis were significantly more likely than those who never used PrEP (26% vs. 2%; $P<.0001$) to have resistance mutations (M184I/V/IV/MV) to lamivudine/emtricitabine (3TC/FTC) [Misra, et al. 2019]. For such patients, the initial regimen should consist of an integrase strand transfer inhibitor plus a boosted protease inhibitor and 2 nucleoside reverse transcriptase inhibitors. An option for treatment in this scenario is provided in *Table 1*, below. The initial regimen may be simplified once results of baseline genotypic testing have been reviewed.

- See the NYSDOH AI guideline *Selecting an Initial ART Regimen* for more information.

Preferred and Alternative Regimens for Rapid ART Initiation

Table 1, below, includes initial preferred and alternative regimens for rapid ART initiation in nonpregnant adults. The regimens are listed alphabetically. For specific details on choosing a regimen, see the discussions in other sections of this guideline and the *package inserts* for the drugs listed below.

Providing ART: Some clinics provide patients with the first dose of ART and a 30-day prescription when a rapid ART initiation protocol is being followed [Pilcher, et al. 2017]. Others may provide a 7-day ART starter pack or a 30-day prescription.

Table 1: Preferred and Alternative Regimens for Rapid ART Initiation in Nonpregnant Adults		
Regimen	Comments	Rating
<i>Preferred Regimens</i>		
Tenofovir alafenamide/emtricitabine/bictegravir (TAF 25 mg/FTC/BIC; Biktarvy)	<ul style="list-style-type: none"> • Available as a single-tablet formulation, taken once daily. • TAF/FTC should not be used in patients with a creatinine clearance (CrCl) <30 mL/min; re-evaluate after baseline laboratory testing results are available. • Contains 25 mg of TAF, unboosted. • Take magnesium- or aluminum-containing antacids 2 hours before or 6 hours after BIC; calcium-containing antacids or iron supplements may be taken simultaneously if taken with food. 	A1
Tenofovir alafenamide/emtricitabine and dolutegravir (TAF 25 mg/FTC and DTG; Descovy and Tivicay)	<ul style="list-style-type: none"> • TAF/FTC should not be used in patients with CrCl <30 mL/min; re-evaluate after baseline laboratory testing results are available. • Contains 25 mg of TAF, unboosted. • Two tablets once daily. • Take magnesium- or aluminum-containing antacids 2 hours before or 6 hours after DTG; calcium-containing antacids or iron supplements may be taken simultaneously if taken with food. • See DTG safety statement, below. 	A1
Tenofovir alafenamide/ emtricitabine/ darunavir/cobicistat (TAF 10 mg/FTC/DRV/COBI; Symtuza)	<ul style="list-style-type: none"> • Available as a single-tablet formulation, taken once daily. • Contains 10 mg TAF, boosted. 	A2

Table 1: Preferred and Alternative Regimens for Rapid ART Initiation in Nonpregnant Adults		
Regimen	Comments	Rating
	<ul style="list-style-type: none"> TAF/FTC should not be used in patients with CrCl <30 mL/min; re-evaluate after baseline laboratory testing results are available. Pay attention to drug-drug interactions. 	
<i>Alternative Regimen</i>		
Tenofovir alafenamide/emtricitabine and raltegravir (TAF 25 mg/FTC and RAL HD; Descovy and Isentress HD)	<ul style="list-style-type: none"> TAF/FTC should not be used in patients with CrCl <30 mL/min; re-evaluate after baseline laboratory testing results are available. To date, no clinical trials have been conducted with TAF and RAL; data are based on bioequivalence pharmacokinetic studies. Contains 25 mg of TAF, unboosted. Administer as TAF/FTC once daily and RAL HD 1200 mg once daily, dosed as two 600 mg HD tablets. Magnesium- or aluminum-containing antacids are contraindicated; coadministration of calcium-containing antacids is not recommended with RAL HD. 	B1
<i>Regimen for Patients With Exposure to TDF/FTC as PrEP Since Their Last Negative HIV Test</i> Note: The initial ART regimen may be simplified based on results of genotypic resistance testing.		
Dolutegravir and darunavir/cobicistat/tenofovir alafenamide/emtricitabine (DTG/DRV/COBI/TAF/FTC 10 mg/FTC; Tivicay and Symtuza)	<ul style="list-style-type: none"> TAF/FTC should not be used in patients with CrCl <30 mL/min; re-evaluate after baseline laboratory testing results are available. Documented DTG resistance after initiation in treatment-naïve patients is rare. Take magnesium- or aluminum-containing antacids 2 hours before or 6 hours after DTG; calcium-containing antacids or iron supplements may be taken simultaneously if taken with food. Tenofovir disoproxil fumarate (TDF) may be substituted for TAF; TDF/FTC is available as a single tablet (brand name, Truvada). Lamivudine (3TC) may be substituted for FTC. 3TC/TDF is also available as a single tablet. See DTG safety statement, below. 	A3
<i>Medications to Avoid</i>		
<ul style="list-style-type: none"> Abacavir (ABC) Rilpivirine (RPV) Efavirenz (EFV) 	<ul style="list-style-type: none"> ABC should be avoided unless a patient is confirmed to be HLA-B*5701 negative. RPV should be administered only in patients confirmed to have a CD4 cell count ≥200 cells/mm³ and a viral load <100,000 copies/mL. EFV is not as well tolerated as other antiretroviral medications, and nonnucleoside reverse transcriptase inhibitors have higher rates of resistance. 	A3

Reducing the risk of perinatal transmission of HIV requires timely identification of HIV infection in a pregnant individual and 3-drug ART initiated as soon as possible after diagnosis. Pregnancy is not a contraindication to rapid ART initiation. Adherence to an ART regimen during pregnancy should be encouraged, as should coordination among HIV and obstetric care providers (see the NYSDOH AI guideline [Prevention of Mother-to-Child HIV Transmission](#)).

Table 2, below, includes initial preferred regimens for rapid ART initiation in pregnant adults.

Table 2: Preferred Regimens for Rapid ART Initiation in Pregnant Adults

See also: *DHHS: Recommendations for the Use of Antiretroviral Drugs in Pregnant Women with HIV Infections and Interventions to Reduce Perinatal HIV Transmission in the United States.*

Regimen	Comments	Rating
Tenofovir disoproxil fumarate/emtricitabine and dolutegravir* (TDF/FTC and DTG; Truvada and Tivicay)	<ul style="list-style-type: none"> Should not be initiated during the first trimester (<14 weeks), gestational age measured by last menstrual period. TDF/FTC should not be used in patients with creatinine clearance (CrCl) <50 mL/min; re-evaluate after baseline laboratory testing results are available. Take magnesium- or aluminum-containing antacids 2 hours before or 6 hours after DTG; calcium-containing antacids or iron supplements may be taken simultaneously if taken with food. 	A1
Tenofovir disoproxil fumarate/emtricitabine and atazanavir and ritonavir (TDF/FTC and ATV and RTV; Truvada and Reyataz and Norvir)	<ul style="list-style-type: none"> TDF/FTC should not be used in patients with CrCl <50 mL/min; re-evaluate after baseline laboratory testing results are available. Carefully consider drug-drug interactions with RTV. Scleral icterus from benign hyperbilirubinemia due to ATV may be a patient concern. The recommended dose of ATV is 300 mg once daily in the first trimester; the dose increases to 400 mg once daily in the second and third trimesters when used with either TDF or a histamine-2 receptor antagonist. This regimen can be initiated in the first trimester. 	A2
Tenofovir disoproxil fumarate/emtricitabine and darunavir and ritonavir (TDF/FTC and DRV/RTV; Truvada and Prezista and Norvir)	<ul style="list-style-type: none"> Twice-daily DRV/RTV dosing (DRV 600 mg plus RTV 100 mg with food) is recommended in pregnancy. TDF/FTC should not be used in patients with CrCl <50 mL/min; re-evaluate after baseline laboratory testing results are available. Twice-daily DRV/RTV dosing (DRV 600 mg plus RTV 100 mg with food) is recommended in pregnancy. Regimen can be initiated in the first trimester. 	A2
Tenofovir disoproxil fumarate/emtricitabine and raltegravir (TDF/FTC and RAL; Truvada and Isentress)	<ul style="list-style-type: none"> RAL 400 mg twice daily is recommended in pregnancy, NOT once daily RAL HD. TDF/FTC should not be used in patients with CrCl <50 mL/min; re-evaluate after baseline laboratory testing results are available. Administer as TDF/FTC once daily and RAL 400 mg twice daily. The recommended dose of RAL is 400 mg twice daily without regard to food. This regimen can be initiated in the first trimester. 	A2

***Dolutegravir (DTG) Safety Statement, March 20, 2019**

On December 7, 2018, the DHHS Guidelines Panel issued an update to its prior statement in response to preliminary results from a study that reported increased risk of neural tube defects (NTDs) in babies born to mothers taking DTG-based ART at the time of conception.

Updated data are pending and expected to be released in 2019. Until that time, the Panel's conservative, interim recommendations remain that DTG-containing regimens should be avoided in the first trimester of pregnancy or in any HIV-exposed individual who may become pregnant. If there are no alternatives to use of DTG for individuals of childbearing potential, then clinicians should strongly advise the use of effective contraception and should obtain a pregnancy test before initiating treatment.

For pregnant women already taking DTG who present to care in the first trimester of pregnancy, patient-centered counseling should address the risks and benefits of continuing DTG or switching regimens and include the following information:

Table 2: Preferred Regimens for Rapid ART Initiation in Pregnant Adults

See also: *DHHS: Recommendations for the Use of Antiretroviral Drugs in Pregnant Women with HIV Infections and Interventions to Reduce Perinatal HIV Transmission in the United States.*

Regimen	Comments	Rating
	<ul style="list-style-type: none"> The importance of accurate gestational dating as neural tube development is complete by 28 days post-conception or 6 weeks after the first day of the last menstrual period. NTDs may have already occurred, and the added risk in the remaining weeks of the first trimester may be slight. A background risk of NTDs ranging from 0.05% to 0.1% exists for all pregnancy regardless of HIV status or antiretroviral treatment. DTG remains a preferred agent for use in women after the first trimester of pregnancy. Individuals who continue use of DTG after delivery should be counseled regarding possible risk in future pregnancies and should be offered effective, ongoing contraception options. 	
<p>For more information, see: <i>DHHS Recommendations for the Use of Antiretroviral Drugs in Pregnant Women with HIV Infection and Interventions to Reduce Perinatal HIV Transmission in the United States.</i></p>		

Rapid ART Initiation Follow-Up

Standard good practice is to follow up by telephone or in person within 48 hours after a person initiates ART, to assess for adverse effects, answer questions, and encourage adherence. If feasible, based on clinic protocol and individual patient needs, an in-person follow-up visit with a medical care provider is encouraged within 7 days of ART initiation. If an in-person visit is not feasible, then follow-up by telephone is encouraged.

Once laboratory test results are available, ART should be discontinued if an HIV diagnosis is not confirmed. In this case, the patient may be assessed or referred for PrEP if there is ongoing risk of HIV exposure (see the NYSDOH AI guideline *PrEP to Prevent HIV Acquisition > Candidates for PrEP*). If the HIV diagnosis is confirmed, the ART regimen may be adjusted if necessary (e.g., if there is significant renal disease). Further adjustments may be required if major resistance mutations are found that will compromise the effectiveness of the initial regimen. Arrangements should be made for a viral load test 4 weeks after ART initiation to assess adherence and troubleshoot any problems with maintaining treatment. See the NYSDOH AI guideline *Virologic and Immunologic Monitoring* for more information.

References

- Huhn G, Crofoot G, Ramgopal M, et al. Darunavir/cobicistat/emtricitabine/tenofovir alafenamide (D/C/F/TAF) rapid initiation for HIV-1 infection: primary analysis of the DIAMOND study. *ACTHIV*; 2019 April 11-13; Miami, FL. <http://www.acthiv.org/program/>
- Kagan RM, Dunn KJ, Snell GP, et al. Trends in HIV-1 drug resistance mutations from a U.S. reference laboratory from 2006 to 2017. *AIDS Res Hum Retroviruses* 2019. [PMID: 31169022] <https://www.ncbi.nlm.nih.gov/pubmed/31169022>
- Misra K, Huang J, Daskalakis DC, et al. Impact of PrEP on drug resistance and acute HIV infection, New York City, 2015-2017. *CROI*; 2019 Mar 4-7; Seattle, WA. <http://www.croiconference.org/sessions/impact-prep-drug-resistance-and-acute-hiv-infection-new-york-city-2015-2017>
- Pilcher CD, Ospina-Norvell C, Dasgupta A, et al. The effect of same-day observed initiation of antiretroviral therapy on HIV viral load and treatment outcomes in a US public health setting. *J Acquir Immune Defic Syndr* 2017;74(1):44-51. [PMID: 27434707] <https://www.ncbi.nlm.nih.gov/pubmed/27434707>

Paying for Rapid ART Initiation

Lead author Asa Radix, MD, MPH, with the *Medical Care Criteria Committee*, August 2019

Lack of insurance coverage for antiretroviral therapy (ART), a high co-pay, or large out-of-pocket costs may pose a significant barrier to rapid ART initiation for some patients. Addressing financial requirements for ART initiation and helping patients identify sources of payment assistance is an essential component of the rapid ART initiation protocol. Options for patients in New York State (NYS) are described below.

For patients without insurance: The *NYS Department of Health Uninsured Care Programs (UCP)* provide access to free medications, outpatient primary care, home care, and insurance premium payments for NYS residents who are uninsured

or underinsured. Acknowledging the critical need for rapid access to ART, UCP has revised the enrollment process to facilitate same-day enrollment. Please contact the New Enrollment Unit at the information below.

RESOURCE: NYSDOH UNINSURED CARE PROGRAMS

- Hours of Operation: Monday – Friday, 8:00 AM – 5:00 PM
- Telephone:
 - In state, toll free: 1-800-542-2437 or 1-844-682-4058
 - Out of state: 1-518-459-1641
 - TDD: 1-518-459-0121
- Address: Empire Station, P.O. Box 2052, Albany, NY 12220-0052

A care provider must be enrolled as an ADAP Plus provider on the day that services are provided in order to receive reimbursement. New York State Medicaid Program providers are eligible to enroll in the UCP. To become an enrolled provider, contact the UCP Provider Relations Department at 1-518-459-1641 or email damarys.feliciano@health.ny.gov. Eligible providers will be activated the date the application is received.

For patients with existing health insurance: People who have insurance coverage may be eligible for medication and co-pay assistance to cover the cost of out-of-pocket expenses.

- For dolutegravir: <https://www.myviivcard.com/>.
- For emtricitabine, tenofovir disoproxil fumarate, and bictegravir: <https://www.gileadadvancingaccess.com/get-started-advancing-access>.
- For darunavir/cobicistat/emtricitabine/tenofovir alafenamide: <https://www.janssencarepath.com/sites/www.janssencarepath.com/files/id-savings-program-overview.pdf>.

NYS residents who do not have health insurance but need help with out-of-pocket costs (co-pays, deductibles, etc.) and meet eligibility criteria may be eligible for help from the UCP.

All Recommendations

Lead author Asa Radix, MD, MPH, with the *Medical Care Criteria Committee*, August 2019

☑ All Recommendations: Rapid Initiation of Antiretroviral Therapy

Protocol for Rapid ART Initiation

- Clinicians should offer rapid initiation of antiretroviral therapy (ART)—preferably on the same day (A1) or within 96 hours—to all individuals who are candidates for rapid ART initiation (see text) and who have:
 - A confirmed HIV diagnosis (A1), *or*
 - A reactive HIV screening result pending results of a confirmatory HIV test (A2), *or*
 - Suspected acute HIV infection, i.e., HIV antibody negative and HIV RNA positive (A2).
 - See the NYSDOH AI guideline *Diagnosis and Management of Acute HIV > Presentation and Diagnosis*.
- To determine whether a patient is a candidate for rapid ART initiation, the clinician should confirm that the individual has any of the following (A1):
 - A new reactive point-of-care HIV test result, or new confirmed HIV diagnosis, or acute HIV infection, or known HIV infection, *and*
 - No prior ART (i.e., treatment naïve) or limited prior use of antiretroviral medications, *and*
 - No medical conditions or opportunistic infections that require deferral of rapid ART initiation, including suspected cryptococcal or tuberculous meningitis.
- Clinicians should perform baseline laboratory testing listed in *Box 3* for all patients who are initiating ART immediately; ART can be started while awaiting laboratory test results. (A3)

General Principles in Choosing a Regimen for Rapid ART Initiation

- Clinicians should involve their patients when deciding which antiretroviral therapy (ART) regimen is most likely to result in adherence. (A3)
- Before initiating ART, clinicians should:
 - Assess the patient’s prior use of antiretroviral medications, including pre-exposure prophylaxis (PrEP), which may increase the risk for baseline resistance. (A2)
 - Assess for any comorbidities and chronic coadministered medications that may affect the choice of regimen for initial ART. (A2)
 - At the time of HIV diagnosis, obtain genotypic resistance testing for the protease (A2), reverse transcriptase (A2), and integrase (B2) genes.
 - Ask individuals of childbearing potential about the possibility of pregnancy, their reproductive plans, and the use of contraception. (A3)
- For ART-naïve patients, clinicians should select an initial ART regimen that is preferred; see *Table 1: Preferred and Alternative Regimens for Rapid ART Initiation in Nonpregnant Adults*. (A1)
- Clinicians should reinforce medication adherence regularly. (A3)
- Clinicians should obtain a viral load test 4 weeks after ART initiation to assess the response to therapy. (A3)
 - See the NYSDOH AI guideline *Virologic and Immunologic Monitoring* for more information.

All Good Practice Reminders

→ SELECTED GOOD PRACTICE REMINDERS: RAPID INITIATION OF ANTIRETROVIRAL THERAPY

- For patients with a reactive HIV antibody screening test that is pending confirmation, make sure the patient understands the benefits of rapid ART initiation and that:
 5. Screening test results are not diagnostic, because a false-positive result is possible;
 6. A confirmatory (diagnostic) HIV test will be performed;
 7. ART will be discontinued if the confirmatory test result is negative and continued if it is positive;
 8. The benefit of starting ART early, if it is needed, outweighs the negligible risk of taking ART for a few days and then stopping it if confirmed HIV negative.
- Provide the result of the confirmatory HIV test as soon as it is available; discontinue ART if the result is negative and reinforce adherence and next steps if it is positive.
- If a patient declines rapid ART initiation, discuss options for deferred initiation of ART and linkage with HIV primary care and outline next steps.
- Follow up within 24 to 48 hours, by telephone or another preferred method, with a patient who has initiated ART to assess medication tolerance and adherence.
- If feasible, schedule an in-person visit for 7 days after ART initiation.

Appendices

Rapid ART Initiation Checklists

Box A1: Rapid Initiation of ART Checklists: Counseling, Medical History, and Laboratory Testing		
Counseling	Medical History	Baseline Laboratory Testing
<p>Priorities for counseling and education before rapid ART initiation:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Confirming HIV diagnosis. <input checked="" type="checkbox"/> Managing disclosure. <input checked="" type="checkbox"/> Adhering to the ART regimen. <input checked="" type="checkbox"/> Recognizing and responding to side effects as they occur. <input checked="" type="checkbox"/> Following through with clinic visits. <input checked="" type="checkbox"/> Assessing health literacy. <input checked="" type="checkbox"/> Navigating acquisition of and payment for medications: Pharmacy selection, insurance requirements and restrictions, co-pays, and refills. <input checked="" type="checkbox"/> Identifying and addressing psychosocial barriers to treatment. <input checked="" type="checkbox"/> Establishing the best methods of contact. <input checked="" type="checkbox"/> Ensuring the patient knows how to reach the care team. <input checked="" type="checkbox"/> Referrals, if indicated: Substance use treatment, behavioral health counseling, housing assistance, etc. 	<p>When taking a medical history before rapid ART initiation, ask about:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Date and result of last HIV test. <input checked="" type="checkbox"/> Serostatus of sex partners and their ART regimens if known. <input checked="" type="checkbox"/> Previous use and dates of antiretroviral medications, including PrEP or repeated episodes of taking PEP. <input checked="" type="checkbox"/> Comorbidities, including a history of renal or liver disease, particularly hepatitis B infection. <input checked="" type="checkbox"/> Prescribed and over-the-counter medications. <input checked="" type="checkbox"/> Drug allergies. <input checked="" type="checkbox"/> Substance use. <input checked="" type="checkbox"/> Symptoms, to assess for active cryptococcal and TB meningitis. <input checked="" type="checkbox"/> Psychiatric history, particularly depressive or psychotic symptoms or any history of suicidality. <input checked="" type="checkbox"/> Possible pregnancy and childbearing plans in individuals of childbearing potential. 	<p>ART can be initiated while awaiting test results.</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> HIV-1/2 antigen/antibody assay. <input checked="" type="checkbox"/> HIV quantitative viral load. <input checked="" type="checkbox"/> Baseline HIV genotypic resistance profile. <input checked="" type="checkbox"/> Baseline CD4 cell count. <input checked="" type="checkbox"/> Testing for hepatitis A, B, and C viruses. <input checked="" type="checkbox"/> Comprehensive metabolic panel (creatinine clearance, hepatic profile). <input checked="" type="checkbox"/> STI screening; see the NYSDOH AI <i>STI Care Guidelines</i>. <input checked="" type="checkbox"/> Urinalysis. <input checked="" type="checkbox"/> Pregnancy test for individuals of childbearing potential.
<p>Abbreviations: PEP, post-exposure prophylaxis; PrEP, pre-exposure prophylaxis; STI, sexually transmitted infection; TB, tuberculosis.</p>		

How This Guideline Was Developed

This guideline was developed by the New York State (NYS) Department of Health (DOH) AIDS Institute (AI) Clinical Guidelines Program, which is a collaborative effort between the NYSDOH AI Office of the Medical Director and the Johns Hopkins University School of Medicine, Division of Infectious Diseases.

Established in 1986, the goal of the Clinical Guidelines Program is to develop and disseminate evidence-based, state-of-the-art clinical practice guidelines to improve the quality of care provided to people who have HIV, hepatitis C virus, or sexually transmitted infections; people with substance use issues; and members of the LGBTQ community. NYSDOH AI guidelines are developed by committees of clinical experts through a consensus-driven process.

Medical Care Criteria Committee (MCCC) for Adult HIV Care Guidelines

The NYSDOH AI charged the Medical Care Criteria Committee (adult HIV and related guidelines) with developing evidence-based recommendations for clinicians in NYS who provide care to individuals with HIV. The purpose of the *Rapid Initiation of Antiretroviral Therapy* clinical practice guideline is to establish and promulgate a protocol for practitioners in NYS to follow in initiating antiretroviral therapy (ART) immediately in ART-naïve adults who have either a confirmed diagnosis or a reactive HIV screening test result and are candidates for RIA.

Committee Makeup: Members of the MCCC (see Box A2: *MCCC Leaders and Members* below) were appointed by the NYSDOH AI to ensure representation of clinical practice in all major regions of the state, relevant medical disciplines and sub-specialties, key NYS agencies, community stakeholders, and patient advocates. Individuals confirmed as Committee members are required to disclose any potential conflicts of interest; disclosures are reviewed and approved by the NYSDOH AI Office of the Medical Director (see *Funding and Disclosure of Potential Conflicts of Interest*, below).

Committee Role: Committee members actively participate in guideline development, including evidence review, drafting of recommendations and text, manuscript review, consensus approval of all recommendations, and rating of recommendations.

Committee Leadership: Working with the lead author, the MCCC Planning Group of Committee leaders reviewed and refined the manuscript, facilitated consensus approval of all recommendations, and addressed feedback from the committee at large.

Johns Hopkins University (JHU) Editorial Role: The JHU editorial team coordinated, guided, and documented all Committee activities and edited the guideline material for clarity, flow, and style.

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Box A2: MCCC Leaders and Members (when this guideline was developed)**Leadership**

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Funding and Disclosure of Potential Conflicts of Interest (COIs)

Funding: NYS funds supported development of the *Rapid Initiation of ART (RIA)* guideline through a grant awarded to the JHU School of Medicine, Division of Infectious Diseases, from the NYSDOH AI.

Conflicts of interest: All active MCCC members, invited consultants and coauthors, peer reviewers, and program staff are required to disclose financial relationships with commercial entities, including gifts that may be actual conflicts of interest or may be perceived as conflicts. These individuals must disclose financial relationships annually, for themselves, their partners/spouses, and their organization/institution. On their annual disclosures, MCCC members are asked to report for the previous 12 months and the upcoming 12 months. Box A2, above, lists reported conflicts.

Management of COIs: All reported financial relationships with commercial entities are reviewed by the NYSDOH AI guidelines program to assess the potential for undue influence on guideline recommendations made by the Committee.

All guideline recommendations received consensus approval of the full MCCC, and the final review and approval of the recommendations was performed by the Committee Chair and the NYSDOH AI Medical Director and Deputy Medical Director, none of whom reported conflicts of interest.

Evidence Collection and Review

The NYSDOH AI guideline development process is based on a strategic search and analysis of the published evidence. Box A3 illustrates the evidence review and selection process.

Box A3: Evidence Collection and Review Processes

- NYSDOH AI and MCCC defined the goal of the guideline: To provide evidence-based clinical recommendations to guide practitioners in initiating antiretroviral therapy (ART) immediately at the in ART-naive adults who have a confirmed HIV diagnosis or a reactive HIV screening test and are candidates for RIA.
- MCCC appointed a lead author who conducted a systematic literature search in PubMed using MeSH terms; all searches were limited to studies that 1) were published within the previous 5 years; 2) involved only human subjects; and 3) were published in English.
- Lead author reviewed studies identified through searches and excluded based on the following criteria:
 - Publication type, study design, participants, and clinical relevance to the guideline.
- Author and editorial staff conducted additional searches using PubMed and online databases to identify:
 - Studies published prior to the 5-year search limit.
 - Studies published during the guideline development process.
 - Recent conference abstracts.
 - Older studies known to provide strong evidence in support of specific recommendations or to undergird expert opinion.
- Lead author developed and all MCCC members reviewed and approved evidence-based guideline recommendations:
 - Planning group reviewed, deliberated, refined, and approved draft recommendations.
 - MCCC members reviewed, provided written comment on, deliberated, and reached consensus on recommendations.
 - Planning group reviewed the cited evidence and assigned a 2-part rating to each recommendation to indicate the strength of the recommendation and the quality of the supporting evidence; consensus reached on ratings.
 - Additional evidence identified and cited during the rating process (see below).
- Ongoing update process:
 - JHU editorial staff will surveil published literature on an ongoing basis to identify new evidence that may prompt changes to existing recommendations or development of new recommendations.
 - JHU editorial staff will ensure that the MCCC reviews new studies at least four times per year, and more often if newly published studies, new drug approval, or drug-related warning indicate the need for an immediate change to the published guideline.
 - JHU editorial staff will track, summarize, and publish ongoing changes to the guideline.
 - MCCC will review and approve substantive changes to, additions to, or deletions of recommendations.
 - MCCC will initiate a full review of the guideline 4 years after the original publication date.
- NYSDOH AI will publish a comprehensive update 5 years after the original publication date.

Recommendation Development and Rating Process

The clinical recommendations presented in this guideline were developed by consensus based on a synthesis of the current evidence collected through the systematic search described above. If no data were available, the recommendations are based on expert opinion, and this status is indicated in the rating and in the text.

The Planning Group met via teleconferences over approximately 2 months to finalize the guideline and reach consensus on recommendations and rationale. Once consensus among the Planning Group members was reached, the guideline was reviewed by the full MCCC, and consensus was reached on all recommendations. These deliberations were conducted by teleconference and through MCCC comments submitted in writing. Committee review discussions were recorded, and recordings were reviewed carefully to ensure that all decisions and changes were captured and integrated into the manuscript.

Members of the Planning Group then individually reviewed the evidence for each recommendation and assigned a 2-part rating (see below). The individual ratings were compiled into a report distributed to all raters, and conference call

discussions were held to deliberate ratings for which consensus was needed. Once all raters agreed on the interpretation of evidence and ratings for all recommendations, the guideline was sent to the NYSDOH AI for review and approval.

NYSDOH AI Clinical Guidelines Program Ratings Scheme, Updated June 26, 2019 [a]

Strength of Recommendation Ratings

- A Strong recommendation
- B Moderate recommendation
- C Optional

Quality of Supporting Evidence Ratings

- 1 Indicates that the evidence supporting a recommendation is derived from published results of at least one randomized trial with clinical outcomes or validated laboratory endpoints.
 - * Indicates that the evidence supporting a recommendation is strong because it is based on a self-evident conclusion(s) or conclusive, published in vitro data, or because the recommendation articulates well-established, accepted practice that cannot be tested because ethics would preclude a clinical trial.
 - 2 Indicates that the evidence supporting a recommendation is derived from published results of at least 1 well-designed, nonrandomized clinical trial or observational cohort study with long-term clinical outcomes.
 - 2† Indicates that the evidence supporting a recommendation has been extrapolated from published results of well-designed studies (including nonrandomized clinical trials) conducted in populations other than those specifically addressed by a recommendation. One example would be results of studies conducted predominantly in a subpopulation (e.g., one gender) that the committee determines to be generalizable to the population under consideration in the guideline. When this rating is assigned to a recommendation, the source(s) of the extrapolated evidence and the rationale for the extrapolation are provided in the guideline text.
 - 3 Indicates that a recommendation is based on the expert opinion of the committee members. The rationale for the recommendation is provided in the guideline text.
- a. With the June 2019 update, the ratings for quality of supporting evidence were expanded to add the * rating and the 2† rating.

Guideline Updates

Members of the MCCC will monitor developments in RIA in an ongoing structured manner to maintain guideline currency. Once the guidelines are published on the program website: www.hivguidelines.org, any updates will be made to the HTML document as needed as new peer reviewed literature on RIA is published.

Notification of newly published studies will be automated, and the Planning Group will review new data at least every 4 months. Newly published data that provide support for existing recommendations will be cited in the text, and the studies will be added to the reference list(s).

If newly published data prompt a revision to recommendations or rationale, the Planning Group will propose appropriate edits and determine whether the changes warrant review and approval by the entire MCCC. If MCCC review is required, a conference call will be convened for that purpose. Deletion of existing recommendations, addition of any new recommendations, and/or substantive changes to existing recommendations will prompt MCCC review and consensus.

If a new medication or formulation is approved, the Planning Group will be convened via conference call to examine the data, consider inclusion in the guideline, and determine the need for MCCC review and approval.

The full guideline will be reviewed and updated on the 4th anniversary of original publication to prepare for publication of an updated guideline on or before the 5th anniversary of original publication.