SAN FRANCISCO PROGRAM
FOR RAPID
ART INITIATION AND LINKAGE TO
CARE

STANDARD OPERATING PROCEDURES

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I. INTRODUCTION
“RAPID” (The Rapid ART Program Initiative for HIV Diagnoses) is a clinical program being implemented throughout San Francisco as part of the Getting to Zero (G2Z) initiative, the goals of which are a 90% reduction in HIV diagnoses, a 90% reduction in HIV-related deaths, and zero HIV-related stigma by the year 2020. RAPID extends the concept of universal ART to include immediate linkage to HIV care and initiation of ART at the time of HIV diagnosis. The potential benefits of RAPID are: 1) Improving individual patient health by decreasing the time to virologic suppression and 2) Improving rates of early engagement and possibly long-term in retention in care. Citywide Rapid builds on the SFGH RAPID program, established at the HIV/AIDS Division at SFGH (“Ward 86”) in 2013.

II. PURPOSE OF THIS DOCUMENT
1. To provide the medical and public health rationale for RAPID
2. To serve as a practical guide for the medical, counseling, and care planning components of the citywide RAPID program
3. To propose evaluation metrics for RAPID

III. RATIONALE FOR RAPID
City and national guidelines currently recommend universal ART (ART initiation for all HIV-infected patients regardless of CD4 count) 1. The main rationale for the RAPID program is the compelling benefit to HIV-infected individuals conferred by immediate ART. RAPID also may confer a community level public health benefit by reducing HIV transmission. We highlight here benefits of immediate and universal ART.

A. Individual patient benefit:
There are increasing data showing that there may be direct benefits to the individual patient if ART is initiated as soon as possible, particularly during acute/early HIV infection. This means not waiting
weeks to months between HIV diagnosis and starting antiretroviral therapy. These benefits are summarized below.

III.A.1. Viral load suppression alone is not sufficient to restore immunologic health.

- Initiating ART later in chronic HIV infection is associated with dampened CD4+ T cell recovery. In one study, 25% of patients who start ART at CD4+ T cell counts <200 cells/mm³ were unable to achieve CD4+ T cell counts >500 cells/mm³ even after >7 years of suppressive ART².
- The inability to restore a normal CD4+ T cell count in the setting of ART is associated with an increased risk of AIDS- and non-AIDS related complications, and this risk persists even with restoration of CD4+ T cell counts above 500 cells/mm³³-⁵.

III.A.2. Initiating ART during acute/early infection may improve CD4+ T cell recovery and decrease the overall size of the HIV reservoir.

- When ART is initiated during chronic HIV infection, there is ongoing low-level viral replication detected by sensitive assays despite long-term, suppressive ART⁶-⁸.
- Earlier initiation of ART during acute HIV infection may lead to improved CD4+ T cell count recovery, decreased on-treatment immune activation, and decreased HIV reservoir size⁹.
- In some individuals, early initiation of ART during acute HIV infection may lead to prolonged control of HIV after the subsequent cessation of ART¹⁰.
- Immediate initiation of ART during extremely early HIV infection (Fiebig Stages I-III¹¹) may protect long-lived
central memory CD4+ T cells from becoming infected\textsuperscript{12} and decrease the size of the long-term reservoir.

III.A.3. Randomized clinical trial data\textsuperscript{13} show decreased HIV-related and non-related morbidity and mortality when ART is started at a CD4+ T cell count > 500 cells/mm vs. < 350 cells/mm.

III.A.4. In a pilot study of RAPID at the SFGH/UCSF HIV clinic (“Ward 86”) immediate (same-day) ART was highly acceptable to patients and providers, significantly reduced time from diagnosis to undetectable viral load, and was associated with very high rates of linkage to and retention in care.

- The HIV clinic at SFGH initiated a RAPID protocol in 2013. As of September 2015 over 90 patients had started ART as part of the RAPID program.
- Analysis of the first 39 RAPID patients vs. 47 patients treated using standard of care (universal ART) shows the following\textsuperscript{14}:
  - Shorter time to virologic suppression using the RAPID protocol (56 days) vs. universal ART (132 days) (p value<0.001)
  - High retention in care among RAPID participants 90% at 6 months (RAPID) vs. 85% (Universal ART)
  - 100% patient acceptance of immediate ART vs. 85% (Universal ART)
  - High provider acceptance of RAPID
Most patients, when provided with the opportunity to start ART, want it. Community awareness of Universal ART means that many newly diagnosed HIV+ patients come in expecting and wanting to start medications. Many patients report that deciding to start ART and rapidly achieving viral suppression provides them with the first experience of feeling empowered to successfully live with HIV.

B. Public health benefit:
Earlier ART initiation and earlier viral load suppression will likely decrease the risk of subsequent HIV transmission events\(^{15}\). While this is particularly true for patients who are in the acute stages of HIV infection and hyperinfectious because of peak viremia, it also applies to the larger pool of patients diagnosed >6 months from infection.

IV. ELIGIBILITY FOR RAPID
- Newly diagnosed HIV patients (inclusive of acute and chronic infection), defined as:
  - Acute Infection: antibody(-)/RNA(+) or antibody(-)/p24 antigen(+)
  - Recent Infection: antibody(+) with last documented antibody(-) within prior 6 months
  - Chronic Infection: antibody positive with no prior HIV test result or last documented antibody(-) > 6 months ago
- Patients with known HIV infection who are re-engaging in care with CD4 count<200 cells/mm\(^3\) and no contraindications to starting ART may also benefit from immediate ART. Contraindications include a complicated or unknown ART history with possibility of acquired resistance; or a medical contraindication such as a suspected intracranial OI.
V. OPERATIONS

Overview: The goal of the RAPID program is for a newly diagnosed or newly re-engaged patient (if safe to do so: see IV. Eligibility for RAPID, above) to see an HIV health team, be offered ART, receive counseling, and agree on a sustainable care plan on the day of their diagnosis or re-engagement, or as soon as possible (within 2-5 days) if same-day initiation is not possible.

Generally, a new HIV diagnosis is made through a San Francisco Community HIV testing site (e.g., Alliance Healthcare Program, STRUT/San Francisco AIDS Foundation) or in a medical setting such as a private practice office, a DPH clinic, such as San Francisco City Clinic or Castro Mission Health Center, a hospital-associated clinic (such as UCSF, CPMC, St. Mary’s, Kaiser San Francisco), a hospital emergency department or urgent care, in specialty clinics (methadone, TB, Prenatal, Renal), or during inpatient hospitalization.

Schematically, RAPID consists of several basic steps, once HIV diagnosis is confirmed (see RAPID Patient Flow Chart, below):

- Post-test counseling including potential benefits of immediate ART and assessment of patient’s interest in immediate ART
- Assessment of where the client should be linked for RAPID initiation of ART (this involves finding out patient’s current insurance status and whether s/he has a primary care provider)
- Communication of a new diagnosis to the clinic where the patient will be evaluated for immediate ART (a single point of contact—such as a dedicated pager or cellphone -- for the RAPID team at a treatment site is highly recommended).
- The initial RAPID visit with ART initiation.
• Expedited linkage to ongoing HIV primary care (which may continue at RAPID site if available, or at another HIV primary care site appropriate for and acceptable to the patient).

Some details of the RAPID process will differ, depending on where a patient is diagnosed with HIV infection and where they can receive immediate ART.
RAPID Patient Flow Chart

Patient tests HIV+ at SFGH: Call PHAST

Patient tests HIV+ at SF City Clinic: Call LINCS

Patient tests HIV+ at community testing site (e.g. SFAF, STRUT, AHP): call LINCS

Patient tests HIV+ at non-SFGH SFHN* clinic: Call LINCS

Insured patient tests HIV+ at non-SFHN Primary Care clinic (includes private offices, SFCCC** clinics, healthcare organizations such as UCSF, Kaiser, CPMC)

LINCS (SFCC, other clinics) or PHAST (SFGH only)
1. Delivers post-test counseling and education
2. Determines patient insurance status
3. Arranges expedited RAPID ART visit (same day if possible) at ART clinic that can see patient, based on patient’s preferences and insurance/eligibility
4. In some cases (e.g., SFAF/STRUT), on-site navigators will perform steps 1-3, but LINCS still needs to be informed about patient’s linkage status
5. If patient tests HIV+ at a clinic that does not provide HIV care, this testing clinic may be able to refer directly to a RAPID HIV primary care provider for expedited (1-5 days) intake. If not, LINCS should be called for navigation.
6. LINCS provides partner services

Can patient stay at test site for expedited ART?

NO

YES

INITIAL RAPID VISIT: Same day as HIV(+) test and navigation if possible
1. Expedited warm handoff to clinic
2. Post-test counseling (if not already done)
3. Enrollment in presumptive Medi-Cal/emergency ADAP/medication assistance programs (if needed)
4. Brief, targeted medical history and exam
5. Send blood for baseline laboratory testing
6. Offer RAPID ART, if no contraindications

If a medical contraindication to ART exists, address issues and start ART as soon as safe to do so

If patient accepts, prescribe same day ART

If patient declines same-day ART, discuss reasons why, schedule follow-up appointment (see below)

1. Schedule follow-up appointment within 5-7 days to discuss laboratory results and assess treatment plan
2. Arrange transfer to clinic for ongoing HIV primary care, if needed

*Non-SFGH SFHN Clinics include: Castro Mission Health Center; Southeast; Tom Waddell Urban Health Center; Maxine Hall; Chinatown Public Health Center; Ocean Park Health Center; Potrero Hill Health Center; Silver Avenue Family Health Center; Larkin Street Medical Clinic; Cole Street Clinic; Dimensions Clinic; 3rd Street Youth Center and Clinic

**SFCCC Clinics include: Tenderloin Health Center; HealthRIGHT360; Lyon-Martin Health Services; Curry Senior Center; Native American Health Center; North East Medical Services; Saint Anthony Medical Clinic; San Francisco Free Clinic; South of Market Health Center; Women’s Community Clinic
STEP ONE
Referral of NEW HIV+ patient to linkage/navigation for expedited care

- **Patients who test at SFGH**: Patients with a confirmed new HIV+ diagnosis are referred by the SFGH lab to the PHAST team for linkage to care, insurance navigation

- **Patients who test at SF City Clinic, Community Testing Sites, SFHN clinics not on the SFGH campus, and all primary care clinics (Private or SF Community Consortium) that cannot themselves provide ART**: Patients with a confirmed new HIV+ diagnosis are referred to LINCS/Partner Services for linkage to care, insurance navigation. Some testing sites (e.g., SFAF, STRUT) may have in-house linkage navigators who can navigate patients to care; in this case LINCS should also be notified to reduce duplication and enhance co—ordination of care

- **Patients who test at a clinic that provides HIV Primary Care**: Patients with a confirmed new HIV+ diagnosis can stay at that clinic for RAPID initiation of ART without being referred for navigation. If the patient tests HIV+ at a multidisciplinary healthcare organization (HCO) (e.g., Kaiser, UCSF, St. Mary’s Hospital, CPMC/Sutter) that has internal HIV capacity, (s)he can be referred to that HCO’s HIV clinic for RAPID ART initiation. LINCS, which is notified of all new HIV+ cases in San Francisco, can help with rapid linkage to HIV care, if needed.

STEP TWO:
Linkage of a newly diagnosed HIV+ patient to RAPID ART initiation

A. **Patients Who Test HIV+ on the SFGH Campus or are referred to Ward 86 at SFGH after testing HIV+ at an outside site or clinic**
The SFGH Testing and Linkage to care team (PHAST) is paged [415-443-3892] either by the community testing sites or by the San Francisco General Hospital Clinical Laboratory, via pager Monday-Friday 8-5pm, for any HIV+ antibody/antigen test result or a detectable HIV RNA (sent for the purposes of diagnosis) in the absence of an HIV+ antibody test result. Determination is then made whether the diagnosis is a new diagnosis and whether it is likely to be an acute infection. After receiving test result disclosure and post-test counseling at the testing site, patients are invited to San Francisco General Hospital Ward 86 RAPID program. All efforts should be made to transfer the patient to Ward 86 for RAPID the same day. Upon arrival, the patient is welcomed and meets with a health counselor for additional post-test counseling and education as well as psychosocial assessment and initiation of insurance paperwork. Then the patient meets with the RAPID clinician for further counseling and ART initiation. The majority of RAPID visits will occur on weekday afternoons, and are expected to last approximately 2 hours (See STEP THREE, below, for a description of the RAPID visit).

**B. Patients who test HIV+ at San Francisco City Clinic (SFCC) or are referred to SFCC after testing HIV+ an outside testing site or clinic**

A clinician trained in HIV medicine sees all new HIV diagnoses made at SFCC to assist with post-test counseling and to answer clinical questions related to an HIV diagnosis. In addition, the LINCS/Partner Services (LINCS/PS) team provides post-testing counseling, linkage to care and Partner Services. What happens next depends on insurance status. Patients without insurance, or with pending Medi-Cal or pending commercial insurance and no HIV primary care provider may remain at SFCC to initiate ART through the Early Care Clinic. In this case, the patient meets with the RAPID clinician for ART initiation, with the expectation that patients will be referred for ongoing care once their insurance is in place and they have an appointment with a qualified HIV primary care provider. Medi-Cal eligible patients without insurance or with presumptive Medi-Cal may be referred that day to Ward 86 at
SFGH for RAPID initiation (through notifying the PHAST team). Patients with Medi-Cal can be referred to Ward 86 or another DPH clinic that provides ART for expedited intake. Patients with commercial insurance and a qualified HIV provider in their network should be referred for expedited intake (same day if possible, but within 5 days at most) to a provider in their network who accepts commercial insurance (including Kaiser if (s)he is a Kaiser member). The majority of RAPID visits are expected to last approximately 2 hours. (See STEP THREE, below, for a description of the RAPID visit).

C. Patients who test HIV+ at sites other than SFGH or SFCC, and are not referred to Ward 86 at SFGH or to SFCC for RAPID

This describes approximately 30% of new HIV cases in San Francisco annually. Typically, these are patients with commercial insurance who test HIV+ while receiving primary care or urgent care at a private practice, Kaiser San Francisco, UCSF, St. Mary’s Hospital, or CPMC-affiliated sites. Alternatively, they may be patients with Medi-Cal, Healthy San Francisco, or San Francisco Health Plan who test HIV+ while getting their primary care at a DPH clinic (e.g., Castro Mission Neighborhood Health Center) and are not referred to Ward 86 at SFGH or to SFCC. If these patients (commercially or publically insured) test HIV+ at a clinic that provides ART, they can stay there to initiate ART. If they test HIV+ at a clinic that does not provide ART, or at a community testing site and are not eligible to be seen at Ward 86 or San Francisco City Clinic, they need expedited referral to a clinic that provides ART and will accept their insurance. For patients at large healthcare organizations (HCOs), such as Kaiser, this may mean an internal referral to that HCO’s HIV clinic.

In all cases, the site that makes the diagnosis of HIV should inform LINCS/PS of the new diagnosis, as LINCS/PS is ultimately responsible to SFDPH for making sure that HIV+ patients are linked to care.
The key to making RAPID work in this setting is for the receiving clinic to have a system in place to accept rapid referrals. One successful approach is to designate a “RAPID Officer of the Day:” A team member who will be the single point of contact for receiving the referral and will organize the RAPID response to the newly diagnosed patient. The RAPID Officer of the Day can be a case manager, MD/NP/PA, RN, or social worker, who will marshal the personnel needed to treat the patient that day (front desk/registration, counseling, phlebotomy, eligibility and benefits counseling and navigation, medical evaluation with ART prescription, notification of Partner Services), with the goal of same-day evaluation and ART initiation. In some clinics, it might make sense to have an on-call schedule (in which one person is designated RAPID Officer of the Day). In other clinics, it might make sense for the patient’s primary care provider to organize the RAPID response. The patient undergoes counseling, psychosocial assessment, and a RAPID clinician visit for further education and ART initiation and establishment of a care plan (see STEP THREE, below).

STEP THREE
The Initial “RAPID” visit:
One of the lessons learned during the RAPID pilot at Ward 86 was that patients should be subjected to the fewest handoffs possible, and that “all handoffs should be warm handoffs:” Never let the patient wait in the waiting room, but escort him or her from team member to team member. One of the worries that patients have during their RAPID visit is whether they will be able to afford their care. It is helpful to address this up front, but without letting the discussion of insurance dominate their clinical care (it’s also important to make sure that patients will not be stuck with an unexpected and large bill for their initial visit). Here is a sample script that an eligibility/registration worker can use to help address the insurance issue when the patient arrives at the clinic:
“My goal is to help you receive excellent HIV care. In order to do this, I need to ask you a few questions about your health insurance situation. I know health insurance can be confusing and tricky. – I’m here to help you navigate it and get you into care as quickly as we can.”

A. Counseling: A key component of the RAPID program is to insure that the patient has individualized post-test counseling and education. This includes but is not limited to include discussion of the patient’s new HIV diagnosis, psychosocial assessment/intervention, discussion of risks/benefits of treatment, education on HIV and safer sex practices. Once that is accomplished, assessment is started to identify potential barriers to successful linkage to care (medical insurance including drug benefits, mental health, substance use, unstable housing, immigration status, legal challenges). The initial session also addresses partners at risk. In the RAPID program, the counseling starts after diagnosis, and continues after a patient is started on treatment. With this approach, all the standard individualized counseling components are covered, but they a) do not delay ART and b) offer the opportunity to continue counseling while patient is starting therapy.
B. Establishing a sustainable long-term care plan: Successful outcomes in HIV depend on not only the rapid initiation of therapy but also upon the rapid establishment of a sustainable HIV care plan. Based on the initial assessment of potential barriers to successful linkage to care, a plan is put in place with a social worker, case manager or clinician to address both immediate and long-term barriers. This may include emergency housing, emergency access to insurance and drug benefits, expedited access to mental health services or residential drug treatment programs, counseling and referrals to deal with immigration or other legal issues. All patients require an assessment of the impact of HIV stigma and how they will cope with this as well as whether they will need additional resources (support groups, ability to meet with an HIV+ peer advocate, counseling, etc.). In addition, someone from the RAPID team should notify the LINCS/Partner Services Coordinator (415-487-5506) about the new patient, so LINCS/PS can discuss current and recent sexual partners and other persons at risk for infection such as children or persons sharing IV drugs and drug paraphernalia, and who might need HIV testing, including those who might who have been exposed within the past 72 hours and might benefit from post-exposure prophylaxis (PEP). Patients are counseled that the Department of Public Health Partner Services branch will contact them to assist with partner services.

Based on the identification of barriers to linkage and retention in care, a contingency plan is identified for potential problems such as missed appointments, missed dosages of ART, inability to fill medications at the pharmacy, etc. Patients are given clear guidance on how to get help and support and remain connected to the clinic.

C. Medical Evaluation:
HIV history: An HIV risk/prevention history will be taken and recorded, including:
1. Date of last negative HIV test and prior HIV tests
2. PrEP use
3. PEP use 
4. Sexual practices and serostatus of partners, if known

**Medical history:** A quick medical history will be taken, particularly since patients will be started on ART before most laboratory test results have returned:
1. Co-morbidities (especially renal/liver problems)
2. Medications
3. Drug allergies
4. Review of systems (to alert for the presence of OIs or seroconversion syndrome)

**Laboratory studies:** As part of standard intake labs, all newly diagnosed patients will have the following laboratory tests performed on the day of the initial RAPID visit: HIV antibody (if confirmed HIV Antibody test not already on record), HIV viral load, HIV genotype, Integrase genotype if available, CD4+ T cell count, HLAB5701 polymorphism testing, comprehensive metabolic panel (including creatinine and liver function tests), RPR, gonorrhea and Chlamydia screening (NAAT) in urine, throat, and rectum, HAV IgG antibody, HBsAg, HBcAb, HBsAb, and HCV antibody. Quantiferon or PPD for tuberculosis, Toxoplasma IgG antibody and G6PD testing may also be considered.

**D. ART counseling on the risks and benefits of immediate ART:** A full discussion occurs with the patient regarding the risks and benefits of immediate ART. The role of viral load monitoring and the importance of adherence will also be included in this discussion to introduce the concepts and therapy goals. Patients are told about the possibility of developing an immune reconstitution syndrome. They are also reminded about the importance of being in close contact with the health system during early months of treatment should any complications arise related to medication or HIV disease. **Emphasis is placed upon listening to patient concerns, and conveying to the patient that they will likely have**
additional questions through this process and that the team is happy to address these questions.

E. Initiation of immediate ART:

- The provider reviews the patient’s plan for long-term ART and follow-up care.
- Unless there is a clear contraindication or the patient declines, the provider offers, selects (in consultation with the patient) and prescribes immediate ART.
- **Selection of Antiretroviral Therapy:** The selection of a particular ART regimen for an individual patient will depend upon the patient’s preferences, co-morbidities, potential drug interactions, and drug allergy history.

Because most patients will be initiated on ART before the results of laboratory tests are available (in particular the HIV viral load, genotype, creatinine, liver function tests, and HLA B5701 for predisposition to abacavir hypersensitivity), we have selected the following ART regimens as preferred RAPID regimens:
PREFERRED ART REGIMENS FOR RAPID

- dolutegravir 50mg once daily + tenofovir-DF 300mg/emtricitabine 200mg 1 tab once daily\(^a\)

- darunavir 800mg once daily + ritonavir 100mg once daily + tenofovir-DF 300mg/emtricitabine 200mg 1 tab once daily\(^a,b,c\)

- raltegravir 400mg twice daily + tenofovir-DF 300mg/emtricitabine 200mg 1 tab once daily\(^a\)

- tenofovir-DF 300mg/emtricitabine 200mg/elvitegravir 150mg/cobicistat 150mg (Striibl\(^\text{®}\)) 1 tab once daily

- tenofovir alafenamide (TAF) 10mg/emtricitabine 200mg/elvitegravir 150mg/cobicistat 150mg (Genvoya\(^\text{®}\)) 1 tab once daily

\(^a\) As of the 7-14-2016 DHHS Guidelines\(^1\), emtricitabine 200mg/tenofovir alafenamide 25mg can be substituted for emtricitabine 200mg/tenofovir-DF 300mg, in combination with a third drug consisting of raltegravir, dolutegravir, or ritonavir-boosted darunavir, as a recommended regimen for ART-naïve patients

\(^b\) The dose of TAF (10 mg) studied with emtricitabine and boosted darunavir or atazanavir is not currently available in the United States. The current coformulation available in the United States (as Descovy\(^\text{®}\)) contains 200mg of emtricitabine plus 25mg of TAF.

\(^c\) The use of cobicistat-boosted darunavir (coformulated as Prezcobix\(^\text{®}\)) may be considered. Providers should be aware that the C\(_{\text{min}}\) of darunavir toward the end of the dosing interval is lower with this combination than with ritonavir-boosted darunavir.
Individual ART regimens may need to be tailored for patients who have had recent PrEP/PEP exposure. They will also be tailored for a patient with known renal disease that precludes the use of tenofovir alafenamide (CrCl<30 ml/min).

F. Prescribing and/or Dispensing Initial ART

Option A: Medication Available on-site

- Once an ART regimen has been selected, the health team dispenses (having recorded the order in the medical record) a 5-day supply of medications. The goal is to provide sufficient ART until the patient’s ADAP/insurance is able to supply a standard monthly supply. In situations where this period is anticipated to be longer than 5 days, additional pills may be dispensed.
- The patient is encouraged to take the first dose of ART, witnessed, during the initial RAPID visit.
- In the patient’s medical record, create an order for a standard 30-day supply of the same ART regimen and FAX to the appropriate pharmacy.
- The clinician CALLS the pharmacy to alert them to the incoming ART prescription, and that it is to be filled as soon as possible.

Option B: Medication NOT Available on site

- Once an ART regimen has been selected and emergency ADAP or presumptive Medi-Cal are initiated, or if the patient already has insurance, the clinician writes a 30-day prescription and faxes it to the appropriate pharmacy. If there are any delays to the ADAP or Medi-Cal activation, the use of pharmaceutical company medication assistance

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coupons to ensure same-day initiation is highly recommended (see Appendix I: RAPID Treatment Site Checklist).

- The clinician CALLS the pharmacy to alert them to the incoming ART prescription, and that it is to be filled as soon as possible (this will also alert the clinician to any stock-outs or other problems at the pharmacy).

**STEP FOUR:**
Follow-up Care

**Day ART Initiation + 1:** The health counselor calls the patient on the day after ART initiation to provide psychosocial support, assess for any clinical symptoms, or medication side effects, and provide any support for the patient to fill his/her long-term ART prescription. This may involve contacting the patient’s pharmacy to work out any potential problem with access to medications. Any medical symptoms or questions are conveyed to the provider for the appropriate follow-up.

**Day 5-10:** The patient has a follow-up appointment with the long-term provider who provides follow-up on clinical care and laboratory tests that are ordered. At that visit, CD4, HIV RNA and HLAB5701 results are reviewed with the patient. Assessment is made for HIV or medication side effects. Treatment may be adjusted as appropriate. Care resumes with the provider as per routine primary HIV care.

**Ongoing:** Access to social workers is provided during this time period and over the next 3 months to continue working on the stabilization plan, provide ongoing support and education for coping with stigma, partners/family/friends disclosure and other barriers (mental health, substance use, housing, and immigration, insurance). Patients are offered a session with a Clinical Pharmacist to support adherence and provide additional education on ART.
Appointment reminders are made and immediate follow-up for any missed appointment is done, including outreach and home visits.

For patients deemed at continued risk for poor retention in care, referrals are made to case managers and overlapping support is provided until patient has established a relationship with the case manager.

VI. OPERATIONAL DEFINITION OF TERMS RELATED TO ENGAGEMENT IN HIV CARE

All patients start as “active patients.” After 6 months, they may progress to “engaged” patients where viral suppression is achieved and care plan established, and psychosocial needs have stabilized. Patients who transfer to another system are classified as “transferred patients.” Patients for whom no information or contact can be gained are classified as “Lost to follow-up.”

Glossary of Terms:

ACTIVE PATIENTS: These patients have maintained linkage to the clinic either through primary care or urgent care and continue to need support (appointment reminders, follow-up on missed appointments, nursing care coordination, education regarding medication refills, scheduling, psychosocial stabilization, appropriate utilization of urgent care or emergency services); this includes all patients newly enrolled (within past 6 months).

ENGAGED PATIENTS (“HIV CARE ENGAGEMENT”): Engaged in HIV care for at least 6 months; health insurance established; plasma HIV-1 RNA below the level of detection (e.g., < 40 copies/mL) for at least 3 months on ART; demonstrated ability to maintain engagement in
primary care independently including scheduling and rescheduling appointments, refilling medications, and utilizing urgent care and emergency services appropriately; attended at least 3 primary care appointments; filled and refilled long-term ART prescriptions; have a self-identified medical home.

TRANSFERRED PATIENTS: Includes patients admitted to Laguna Honda Hospital or any other skilled nursing facility, or any community hospice programs; patients who become incarcerated; patients who chose to transfer their care to a clinic out of county; patients with insurance change that mandates care transfer.

LOST TO FOLLOW UP PATIENTS: Have made no contact with long-term HIV provider during the past 6 months, and no contact information exists after verification of lost contact with San Francisco DPH Surveillance.

LINKAGE TO CARE: One initial medical encounter post HIV diagnosis, with baseline HIV laboratory testing and assignment of ongoing primary care (medical home + primary care provider).

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VII. REFERENCES


APPENDIX I:

RAPID Clinical Site Checklist

Rapid ART Program Initiative for HIV Diagnoses (RAPID): The goal of RAPID is to provide immediate antiretroviral therapy (ART) to all HIV-infected patients at the time of diagnosis (same day if possible). Everyone in your clinic plays a key role in making this program work.

Is your clinic ready to offer RAPID?

A. Front-desk staff are familiar with RAPID, are aware that it is provided, understand the time sensitivity of the visit, and are able to triage patient calls and visits accordingly.

B. Clinical staff have received training on prescribing immediate ART.

1. Prescribers and nursing staff are familiar with the RAPID Standard Operating Procedures in order to properly prescribe RAPID and counsel patients about RAPID treatment.

   a. During a RAPID visit, providers should do the following:
      - HIV history
      - Medical history
      - Laboratory tests
      - ART counseling on the risks and benefits of immediate ART
      - Initiation of immediate ART

2. Social workers and counselors (or other members of the team) can provide psychological counseling and assist patients in navigating insurance coverage and access to other benefits, if necessary.

   a. During a RAPID visit, the following issues also need to be considered:
      - Insurance navigation if needed (if navigation cannot be done by on-site staff, patient may need immediate referral to an outside navigator, including the LINCS team or SF AIDS Foundation)
      - Socioeconomic issues (i.e. employment, housing, etc.)
      - Health issues (i.e. mental health, substance abuse, etc.)
      - Legal Issues (i.e. immigration)
      - Other persons at risk for infection (notify LINCS-partner services)

3. Laboratory staff are prepared to test for HIV antibody, HIV viral load, HIV genotype, CD4+ T cell count, HLAB5701 polymorphism testing, comprehensive metabolic panel (including creatinine and liver function tests), RPR, HAV IgG antibody, HBsAg, HBcAb, HBsAb, and HCV antibody on the day of the initial RAPID visit. QFT/ Toxoplasma IgG antibody and G6PD testing may also be considered.
4. **Participating pharmacies** are prepared to expedite 30 day prescriptions of ART (dispense on the day prescribed) and know how to process patient-assistance coupons for antiretrovirals, when needed.

5. The following **resources** are available for patients:
   a. Educational materials
   b. A mechanism for providing same-day ART (e.g., starter packs, same-day enrollment in emergency ADAP and/or presumptive Medi-Cal, or pharmaceutical coupons for initial RAPID treatment prescription
   c. A list of pharmacies that are aware of RAPID ART and can provide same-day dispensing
# APPENDIX II.

## Recommended RAPID Treatment Regimens (as of 9.1.2016)

<table>
<thead>
<tr>
<th>Regimen</th>
<th>Pill Burden</th>
<th>Pros</th>
<th>Cons</th>
</tr>
</thead>
<tbody>
<tr>
<td>• dolutegravir 50 mg once daily</td>
<td>2 pills once daily</td>
<td>• Rapid drop in VL with INSTI class&lt;br&gt;• DTG well tolerated&lt;br&gt;• DTG appears to have high genetic barrier to resistance&lt;br&gt;• once daily dosing</td>
<td>• Limited experience</td>
</tr>
<tr>
<td>• tenofovir 300mg/emtricitabine 200mg once daily&lt;sup&gt;a,b,c&lt;/sup&gt;</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• darunavir 800 mg once daily&lt;br&gt;• Ritonavir 100 mg once daily&lt;br&gt;• tenofovir 300mg/emtricitabine 200mg once daily&lt;sup&gt;a&lt;/sup&gt;</td>
<td>3 pills once daily</td>
<td>• PI class has high genetic barrier to resistance&lt;br&gt;• clinical experience suggests efficacy even if M184V present&lt;br&gt;• once daily dosing</td>
<td>• Drug interactions (ritonavir is a CYP3A4 inhibitor)</td>
</tr>
<tr>
<td>• raltegravir 400 mg twice daily&lt;br&gt;• tenofovir 300mg/emtricitabine 200mg once daily&lt;sup&gt;a&lt;/sup&gt;</td>
<td>1 pill BID&lt;br&gt;1 pill daily</td>
<td>• Rapid drop in VL with INSTI class&lt;br&gt;• RAL well tolerated</td>
<td>• BID dosing for RAL</td>
</tr>
<tr>
<td>• Once daily coformulated tenofovir 300mg/emtricitabine 200mg/elvitegravir 150mg/cobicistat 150mg (Stribild®)</td>
<td>1 pill once daily</td>
<td>• Rapid drop in VL with INSTI class&lt;br&gt;• Lowest pill burden&lt;br&gt;• once daily dosing</td>
<td>• Drug interactions (cobicistat is a CYP3A4 inhibitor)&lt;br&gt;• possibility of INSTI, NRTI resistance with failure seen in licensing trials&lt;br&gt;• Stribild ® not for use if CrCl&lt;70 mL/min&lt;br&gt;• Genvoya® not for use if CrCl&lt;30 mL/min</td>
</tr>
<tr>
<td>• Once daily coformulated TAF 10mg/emtricitabine 200mg/elvitegravir 150mg/cobicistat 150mg (Genvoya®) can be substituted for this regimen</td>
<td>1 pill daily</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<sup>a</sup> as of the 7-14-2016 DHHS Guidelines¹, emtricitabine 200mg/tenofovir alafenamide 25mg can be substituted for emtricitabine 200mg/tenofovir-DF 300mg, in combination with a third drug consisting of raltegravir, dolutegravir, or ritonavir-boosted darunavir, as a recommended regimen for ART-naïve patients

<sup>b</sup>The dose of TAF (10 mg) studied with emtricitabine and boosted darunavir or atazanavir is not currently available in the United States. The current coformulation available in the United States (as Descovy®) contains 200mg of emtricitabine plus 25mg of TAF.

<sup>c</sup>The use of cobicistat-boosted darunavir (coformulated as Prezcobix®) may be considered. Providers should be aware that he C<sub>min</sub> of darunavir toward the end of the dosing interval is lower with this combination than with ritonavir-boosted darunavir.

**ARVs to AVOID until results of genotype, HLAB5701 are known**

- 1st, 2nd generation NNRTIs (efavirenz, nevirapine, etravirine, rilpivirine): NNRTI class most associated with transmitted drug resistance; efavirenz neuropsychiatric side effects; nevirapine associated with hepatotoxicity; rilpivirine less potent iv baseline VL>100,000 c/mL
- Abacavir-containing regimens (including abacavir co-formulations such as Epzicom® and Triumeq®): high risk of fatal abacavir hypersensitivity reaction if HLAB5701(+)
APPENDIX III:

RAPID Provider FAQ

What is RAPID?

RAPID, (Rapid ART Program Initiative for HIV Diagnoses), is a program that provides immediate treatment to all patients newly diagnosed with HIV. The RAPID program extends the concept of universal ART to include immediate linkage to HIV care and initiation of ART.

Who is eligible for immediate ART?

Anyone with a new, confirmed HIV diagnosis unless there is a clear contraindication to starting immediate ART.

Who is not eligible for immediate ART?

Patients for whom immediate ART might be medically dangerous, including those with:

- Untreated cryptococcal meningitis (defer ART for 5 weeks after the diagnosis of cryptococcal meningitis¹)
- Other intracranial opportunistic infections (defer ART at the discretion of the attending physician)
- Pulmonary or gastrointestinal kaposi sarcoma before chemotherapy (usually Doxil) has been started
- Patients with prior ARV history concerning for potential acquired resistance (case-by-case determination of eligibility)

Who can prescribe immediate ART?

A clinician (MD, DO, NP, PA) with experience treating HIV-infected patients with ART.

What is the evidence base for immediate ART?

“The START (“Strategic Timing of Antiretroviral Treatment”) study is a randomized, controlled clinical trial of “immediate” (CD4>500) vs. “deferred” (CD4 ≤ 350) ART, designed to more clearly define the optimal time for HIV-infected individuals to begin antiretroviral therapy.” The study found that the risk of developing serious illness or death was 53% lower in the early treatment group than in the deferred treatment group. Additionally, rates of serious AIDS related events and serious non-AIDS related events were also both lower in the early treatment group than the deferred treatment group.

In addition:
- Immediate ART may reduce reservoir size and chronic inflammation
- ART started later in infection is associated with less robust immune reconstitution
- Providers who have used RAPID report decreased anxiety and increased sense of control among their patients who start ART at the time of HIV diagnosis

What regimens are recommended for immediate ART?

The following regimens are recommended options for immediate ART:

- Dolutegravir 50 mg/day + Tenofovir/Emtricitabine 1 tab/day
- Darunavir 800 mg/day + Ritonavir 100 mg/day + Tenofovir/Emtricitabine 1 tab/day
- Raltegravir 400 mg twice daily + Tenofovir/Emtricitabine 1 tab/day
- Tenofovir/emtricitabine/elvitegravir/cobicistat 1 tab/day
- As new coformulations using tenofovir alafenamide (TAF) become available, these may replace coformulations using tenofovir disoproxil fumarate (TDF)—see Appendix II, Recommended RAPID Treatment Regimens, above.
- As new coformulations of cobicistat with darunavir become available, these may be substituted for the combination of darunavir 800mg plus ritonavir 100mg—see Appendix II, Recommended RAPID Treatment Regimens, above.

These regimens are recommended because they are safe, well-tolerated, and likely to achieve viral suppression even in the setting of limited drug resistance. It is important to remember that in RAPID, ART is started before the results of the screening genotype and HLAB-5701 are known.

What regimens are NOT recommended for immediate ART?

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3 O’Dowd, A. Experts plan to recommend immediate antiretroviral therapy for people with HIV.
Abacavir-containing regimens are not recommended for immediate ART, since ART is begun while HLAB-5701 testing is pending. Tenofovir plus emtricitabine is the preferred nucleoside backbone. Tenofovir is unlikely to cause renal impairment in the several days before HLAB5701 results are available. Tenofovir + emtricitabine can be replaced with abacavir + lamivudine once the patient is confirmed HLAB-5701-negative.

Unless there is a reason to suspect drug-resistance (patient became HIV-infected while taking PrEP, or has a known source with drug-resistant HIV), immediate ART with >3 fully active agents is not recommended.

**Is immediate ART safe?**

Yes. Immediate ART involves prescribing the same drugs that are currently used to treat HIV-infected patients. The only factor that differs is the shortened time between HIV diagnosis and ART initiation which occurs before the results of baseline lab testing are known.

**What baseline history and physical exam is recommended before starting immediate ART?**

- HIV Risk/Prevention History
  - Last negative HIV test
  - PrEP use
  - PEP use
  - Sexual practices and serostatus of partners, if known
- Medical History
  - Co-morbidities (especially renal/liver problems)
  - Medications
  - Drug allergies
  - Review of systems (to alert for the presence of OIs or seroconversion syndrome)

**What baseline lab assessment is recommended for individuals beginning immediate ART?**

All newly diagnosed HIV-infected patients will have the following laboratory tests performed on the day of the initial RAPID visit:

- HIV antibody
- HIV viral load
- HIV genotype
- CD4+ T cell count
- HLAB5701 polymorphism testing
- RPR
- HAV IgG antibody
- HBsAg
- HBcAb
- HBsAb
● comprehensive metabolic panel
  (including creatinine and liver function tests)

● HCV antibody

QFT/Toxoplasma IgG antibody and G6PD testing may also be considered.

What additional support and ongoing assessment are required for patients on immediate ART?

In the experience of RAPID at SFGH/Ward 86, some patients benefitted from close follow-up (e.g. return visits, phone calls, texts) in the period immediately following ART initiation. Additionally, RAPID patients need much of the same support that patients treated under standard (non-RAPID) protocols need, including support from pharmacists, mental health professionals, substance abuse counselors, and social workers.

Will immediate ART be covered by my patients’ health insurance?

- Emergency ADAP, Medi-Cal, and Healthy San Francisco should all cover immediate ART.
- In most cases, patients will have already been enrolled in these programs before being linked to you.
- Patients with commercial insurance, Covered California plans, or managed Medi-Cal should be able to access immediate ART. They may need pharmacy coupons, enrollment in pharma-sponsored patient assistance programs, or enrollment in OA-HIPP to help with copays or share of cost, especially before their deductible is exhausted.

Should a patient wait to start ART until a long-term relationship with an HIV provider has been established?

In almost all cases, patients should NOT wait to start ART until a relationship with an HIV provider has been established. Data from San Francisco show that this process can take weeks to months, delaying treatment. RAPID allows for the simultaneous initiation of ART and establishment of a patient-provider relationship.

What if the patient does NOT have an established HIV provider?

For patients who do not have an established HIV provider, the initial RAPID visit will be their entry visit into primary HIV care. Most of the time, this initial RAPID visit will be facilitated by the PHAST team at SFGH/Ward 86, or at San Francisco City Clinic with the LINCS team, or by CBO-based linkage navigators (such as at SFAF), and will take place at SFGH/Ward 86, San Francisco City Clinic, or at another testing/navigation site, such as SFAF on Market Street, or STRUT in the Castro.

What if a patient is referred directly to me, without going through a RAPID linkage site (SFGH/Ward 86 or San Francisco City Clinic?)
If you provide RAPID ART, patients may be referred directly to you from the HIV testing site where they are diagnosed (usually by a navigator), or by their primary care (non-HIV) provider, or from within your own site (e.g., a patient who tests HIV-positive while receiving his or her primary care at your site, or at a non-HIV primary care clinic within your healthcare organization or network). The patient’s entry into RAPID ART will be his/her first appointment at your site (if referred directly from a testing site, navigator or primary care provider) or their first follow-up appointment with you after an HIV diagnosis (if the patient already gets primary care at your clinic).

Should providers wait for genotype results before ART initiation?

In most cases no. The goal of rapid is to remove barriers to ART initiation. The regimens recommended for RAPID (see above) should provide a high barrier to resistance while the results of the screening genotype are pending. Therefore, in most cases, providers should not wait for genotype results before starting ART, but should instead modify the regimen based on genotype results.

Should providers wait for psycho-social stabilization before ART initiation?

While patients with untreated mental health, active substance use, immigration issues and/or marginal housing face considerable barriers to successful adherence and linkage, they deserve the highest standard of HIV care, which includes immediate ART initiation. Often, a RAPID visit is the first time that a patient has come into contact with an integrated model of care that addresses his/her medical and psycho-social needs. With appropriate counseling and contingency management combined with careful selection of ART regimen with less potential for resistance, all patients can have a shot at achieving viral suppression while working on stabilization to insure long-term retention.