



GUIDELINES FOR IMPROVING ENTRY INTO AND RETENTION IN CARE AND ANTIRETROVIRAL ADHERENCE FOR PERSONS WITH HIV

Developed by a Panel Convened by the
International Association of Physicians in AIDS Care

RECOMMENDATIONS: ART STRATEGIES

- Among regimens of similar efficacy and tolerability, once-daily (QD) regimens are recommended for treatment-naive patients beginning ART (**II B**).
- Switching treatment-experienced patients receiving complex or poorly tolerated regimens to once-daily (QD) regimens is recommended, given regimens with equivalent efficacy (**III B**).
- Among regimens of equal efficacy and safety, fixed-dose combinations are recommended to decrease pill burden (**III B**).

DHHS Guidelines: Preferred Regimens



NNRTI **Efavirenz¹/emtricitabine²/tenofovir DF³**

PI **Atazanavir⁴ + ritonavir + emtricitabine²/tenofovir DF³**

Darunavir + ritonavir (qd) + emtricitabine²/tenofovir DF³

INSTI **Raltegravir + emtricitabine²/tenofovir DF³**

Pregnant women **Lopinavir/r bid + zidovudine/lamivudine²**

INSTI: Integrase strand transfer inhibitors.

¹Efavirenz should not be used during the first trimester of pregnancy or in women trying to conceive or not using effective and consistent contraception.

²Lamivudine may substitute for emtricitabine or visa versa.

³Tenofovir DF should be used with caution in patients with renal insufficiency.

⁴Atazanavir + RTV should not be used in patients who require >20 mg omeprazole equivalent/day.

DHHS Guidelines: Alternative Regimens



NNRTI **Efavirenz + (abacavir¹ or zidovudine)/lamivudine²**
Rilpivirine³/emtricitabine²/tenofovir DF
Rilpivirine³ + abacavir/lamivudine²

PI **Atazanavir + ritonavir + abacavir/lamivudine²**
Darunavir + ritonavir + abacavir/lamivudine²
Fosamprenavir + ritonavir (qd or bid) +
abacavir/lamivudine² or emtricitabine²/tenofovir DF
Lopinavir/r⁴ (qd or bid) +
abacavir/lamivudine² or emtricitabine²/tenofovir DF

INSTI **Raltegravir + abacavir/lamivudine²**

¹Abacavir should not be used in patients who test positive for HLA-B*5701. Use abacavir with caution in patients with high risk of cardiovascular disease or pretreatment HIV RNA $\geq 100,000$ copies/mL.

²Lamivudine may substitute for emtricitabine or visa versa.

³Use rilpivirine with caution in patients with pretreatment HIV RNA $>100,000$ copies/mL.

⁴Once-daily lopinavir/r is not recommended in pregnant women.

RECOMMENDATIONS FOR FUTURE RESEARCH

- **Data are needed regarding the following outcomes with FDCs compared with individual constituents**
 - Adherence
 - Clinical
 - Biological
 - Cost-effectiveness
- **This is especially important where cost considerations encourage the decoupling of FDCs without regard for possible effects on outcomes**

RECOMMENDATIONS: ADHERENCE TOOLS FOR PATIENTS

- Reminder devices and use of communication technologies with an interactive component are recommended (**I B**).
- Education and counselling using specific adherence-related tools is recommended (**I A**).

RECOMMENDATIONS: ADHERENCE TOOLS FOR PATIENTS

- MEM's caps
 - Typically used to monitor adherence
 - Studied as a tool to improve adherence
 - Review specific adherence issues identified in the MEMs report with the patient
 - Adherence counselors can help the patient identify issues that have specifically resulted in missed or delayed doses
 - Several studies have shown improvements in adherence and clinical outcomes when MEMs caps are used as adherence tools

Rosen et al 2007, Koenig et al 2008, Sabin et al 2009, de Bruin et al 2010

RECOMMENDATIONS: ADHERENCE TOOLS FOR PATIENTS

- Pagers or text messages which require a response from the patient have been found in multiple studies to increase adherence
 - Safren et al 2003, Lester et al 2009, Hardy et al 2009, Levy 2004
- Often improve clinical outcomes.
 - Hardy and her colleagues reported at the 2009 International HIV Adherence Conference on their studying comparing interactive versus non-interactive reminder devices and found better adherence when interactive devices were used.
 - Lester et al 2009, Hardy et al 2009

PRACTICAL APPLICATIONS*: ADHERENCE TOOLS FOR PATIENTS

- Adherence tools may be more beneficial when combined with education or counseling.
- Studies have evaluated pillboxes, dose planners, reminder alarm device, and EDMs and most found positive effects on adherence.

*Practical applications of A-level recommendations

RECOMMENDATIONS FOR FUTURE RESEARCH

- **Determination of the relative influence of adherence tools in relation to other behavioral or structural intervention components (e.g., education and counseling)**
- **Well-controlled comparative trials for other noninteractive tools, such as pagers, watch alarms, and keychain alarms**

RECOMMENDATIONS: HEALTH SYSTEM/SERVICE DELIVERY

- Using nurse- or community counsellor-based care has adherence and biological outcomes similar to those of doctor- or clinic counsellor-based care and is recommended in under-resourced settings (**II B**).
- Interventions providing case management services and resources to address food insecurity, housing, and transportation needs are recommended (**III B**).
- Integration of medication management services into pharmacy systems may be considered (**III C**).
- Directly administered ART is not recommended for routine clinical care settings (**I A**).

RECOMMENDATIONS FOR FUTURE RESEARCH

- **Effect of cultural, social, and policy-related factors and associated interventions, including cost-effectiveness research**
- **Research into interventions to decrease HIV-associated stigma, particularly with a focus on adherence and biological outcomes**
- **Evaluation of programmatic approaches to optimize clinic staffing through decentralizing adherence support into the community in resource-limited settings**
- **Shifting of ART care from medical to nursing staff in more resource-rich settings**