



ART Adherence

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Conflict of Interest Disclosure Statement

- The presenter has no conflicts to declare.

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Learning Objectives

- Identify patient and provider factors that potentially influence antiretroviral therapy (ART) adherence
- Describe means to effectively assess patient's adherence
- Recognize the importance of a patient-centered approach to ART adherence
- Describe strategies to help improve ART adherence

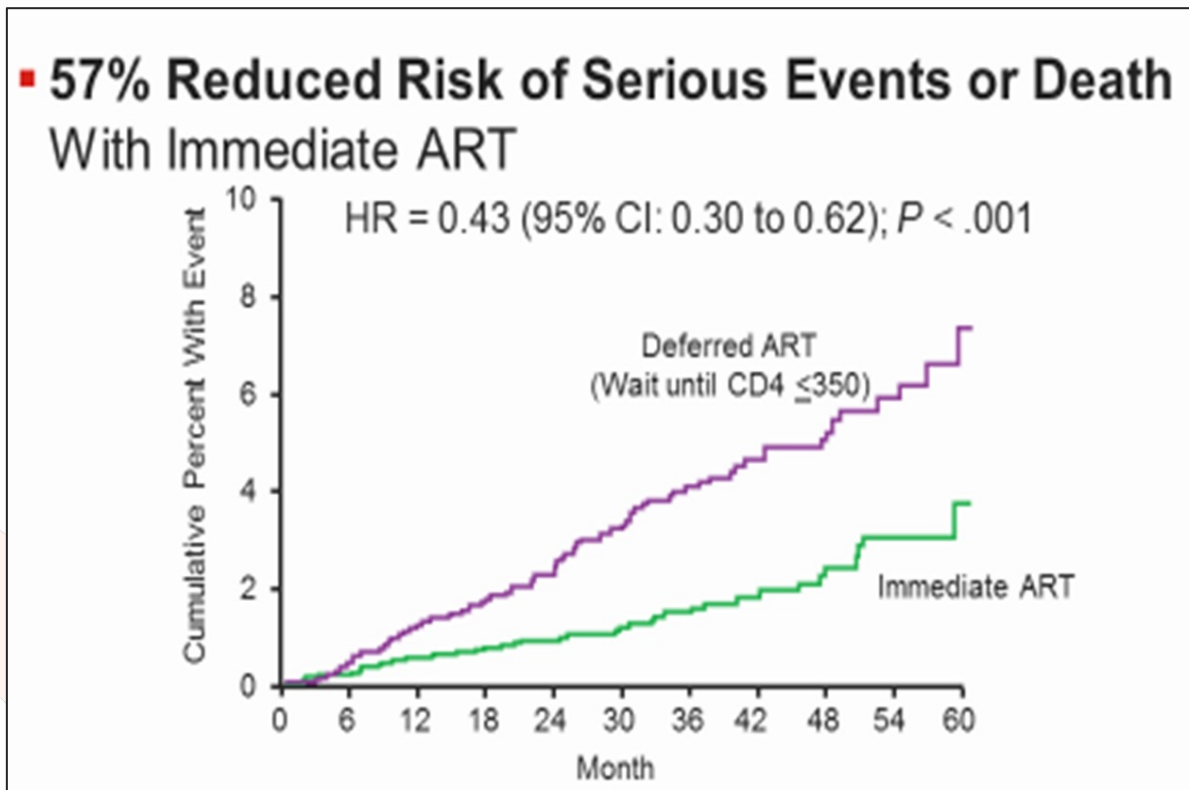
Why Does Adherence Matter?

- Successful control of HIV virus and decreases consequences of HIV infection
- Treatment for HIV most often fails due to a lack of adherence to ART
- With each treatment failure, genotypic mutated HIV becomes more present and more difficult to treat
- Remember- Medication adherence means taking HIV medicines every day exactly as prescribed to assure maximal effect and minimal side effects

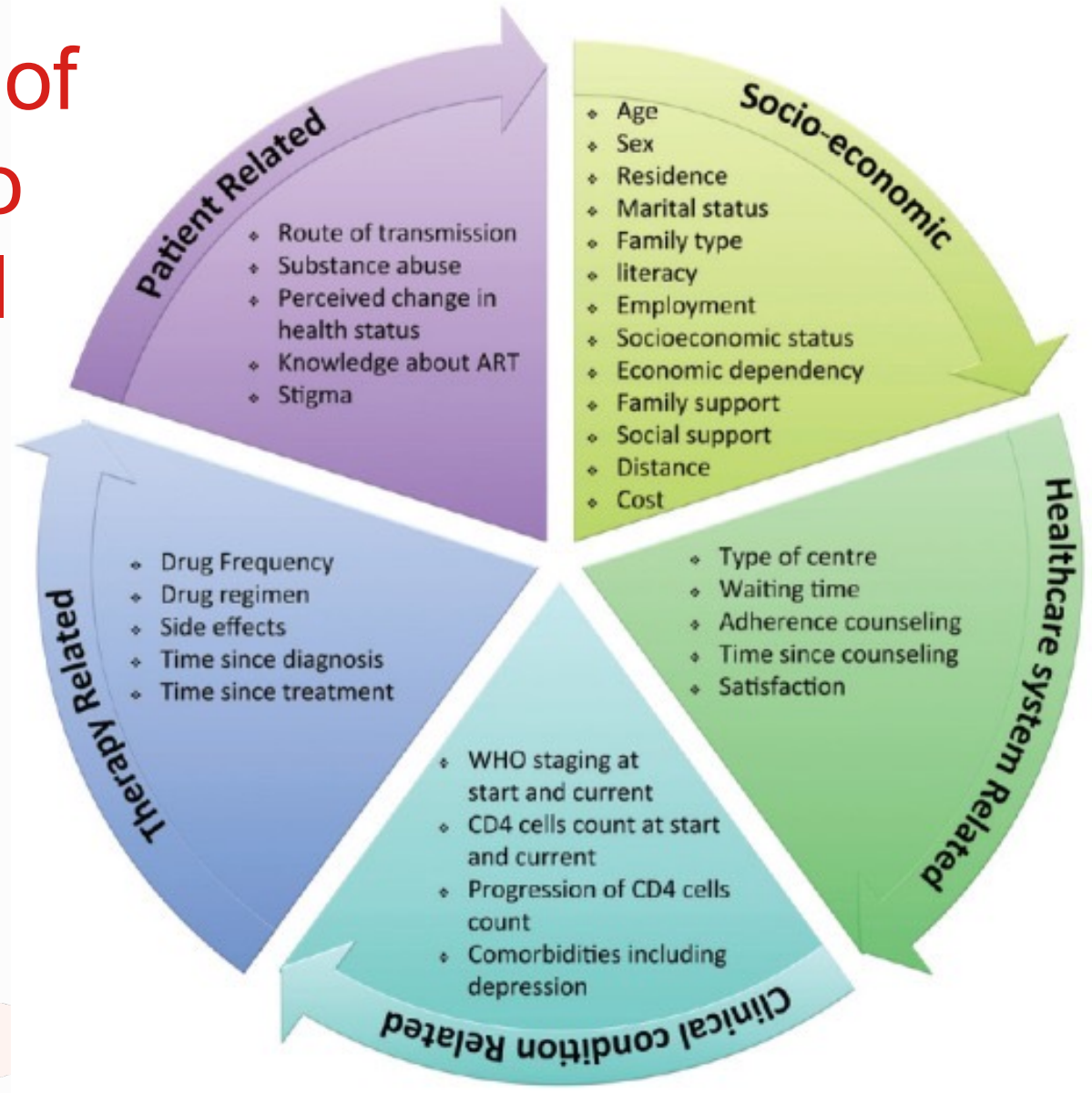
*Suppression of viremia can reduce cardiovascular, renal, and hepatic events thought to be related to ongoing inflammation and immune activation from uncontrolled viremia

HIV Replication Increases Mortality

Total cumulative exposure to replicating virus over time is independently associated with mortality



5 Dimensions of Adherence to Antiretroviral Therapy (ART)



Socio-economic Factors

- Language barriers
- Unstable living conditions; homelessness
- Medication cost
- Cultural beliefs about illness and treatment
- Lack of family or social support network
- Living in rural communities

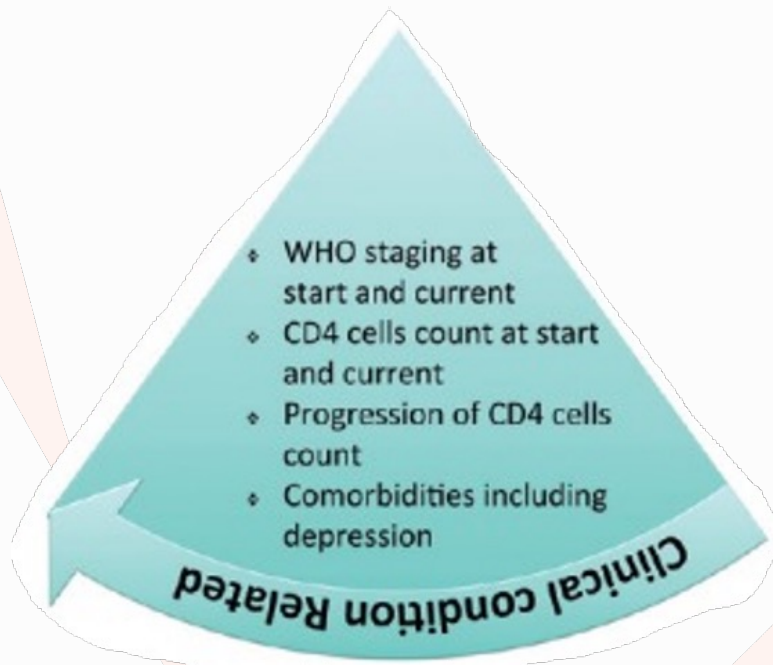


Healthcare System Factors

- Patient-healthcare provider relationship
- Struggling with ART and healthcare providers
 - Perceived limited treatment options, shock at diagnosis
 - Tensions with providers (stigma, paternalism, mistrust)
 - Advocating for and educating oneself
 - Supportive providers

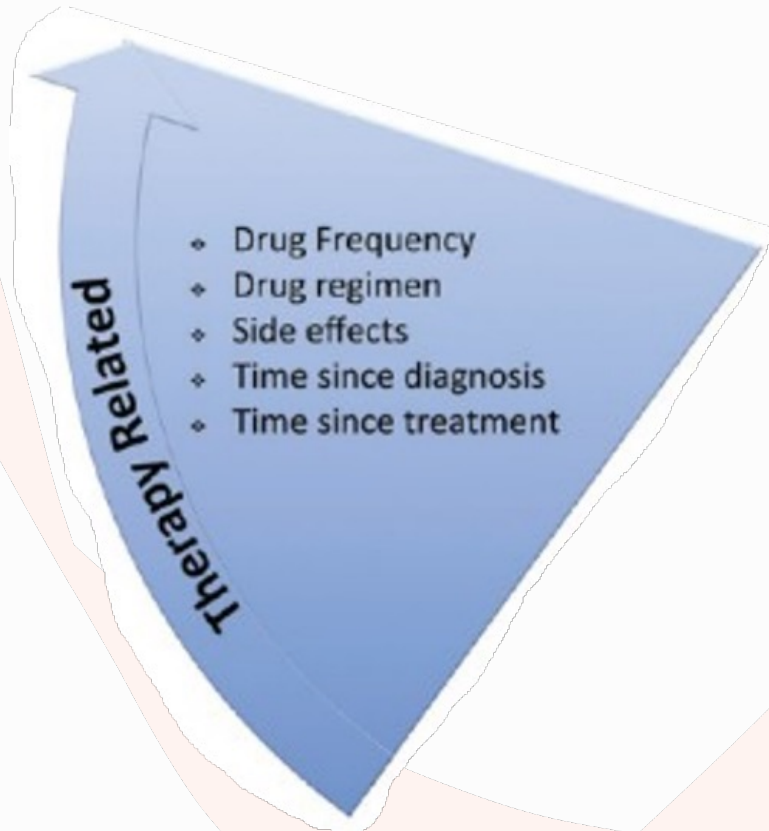


Clinical Condition Factors



- Illness-related demands faced by the patient
- Strong determinants:
 - Severity of symptoms
 - Level of disability
 - Rate of progression
 - Available effective treatments
- Impact dependent on influence of patient's risk perception

ART Factors



- Dosing complexity
- Food requirements
- Struggling with ART and one's body
 - Pill burden
 - Perceived impact on the body
 - Developing medication practices that work for one's life
 - Managing comorbidities

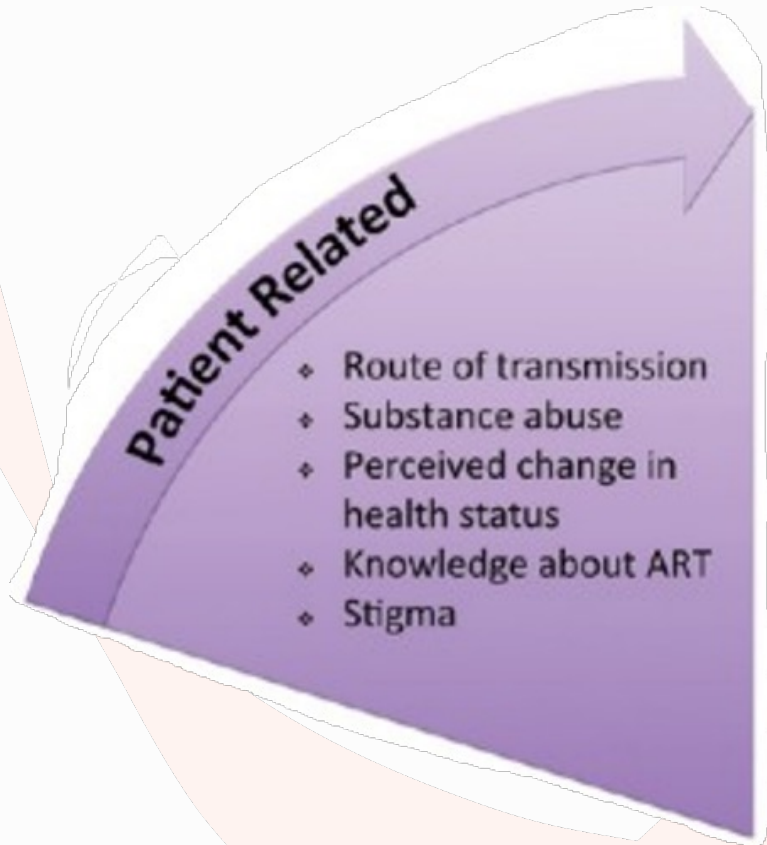
Patient-Related Factors

Physical Factors:

- Impairment (e.g., visual, hearing, cognitive)
- Swallowing problems

Psychological/Behavioral Factors:

- Substance use
- Active depression
- Desire for control over one's life & death, fear of ART, fear of death
- Denial of HIV status
- Beliefs and skepticism about CD4, viral load and ART



Means to Assess Adherence

1. Biochemical Markers

- VL and CD4 count:
 - Is the viral load undetectable?
 - Is the CD4 count increasing/stable?

2. Other Biochemical Markers can also be used

- Some medications will cause changes in some enzymes of the chemistry of the body
 - Bilirubin, red blood cells, creatinine
 - If these change are not seen most likely the client is not taking the medications

3. Management of other co-morbidities/health conditions

- How well a client is adherent to medications to treat other health conditions may indicate how adherent they are to ART

Means to Assess Adherence

4. Self-Report

- Inquire regarding previous adherence history:
 - “When was the last time you missed a dose? What was going on? What do you think caused this to happen?”
- Assess current adherence in a non-judgmental form
 - “Most people find it difficult to take every dose of their medication. What problems do you have?”
 - Rate their adherence using the visual analogues scale (0-100)
- Identify underlying causes for non-adherence from client's point of view
- Explore health beliefs
 - Address psychosocial barriers

ART adherence questionnaire

Please place an “X” on the line below at the point showing your best guess about how much of your current antiretroviral medication you have taken in the **past 30 days**

0% means you have taken none of your current antiretroviral medication, 50% means you have taken half your current antiretroviral medication, 100% means that you have taken every single dose of your current antiretroviral medication in the past 30 days.

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100% Estimate percent indicated %

CAUTION: Patients often overestimate adherence

Key Questions to Ask

- Do you have your medication list or bottles with you?
 - BEWARE: The patient may place/combine different medications within medication bottles
- How do you take this medication?
- How often do you take this medication?
- When do you take this medication?
- Do you take any vitamins, minerals, supplements, traditional/homeopathic remedies? (if yes) How do you take these medications?
- Use other sources of information to gather data regarding adherence

Key Questions to Ask

- Are there any prescription medications that a prescriber recently stopped/changed? What was the reason for the change?
- Are there any prescription medications that you recently stopped/changed?
 - DO NOT ASSUME: The patient may not be taking medication as according to the prescription vials
- What other pills or supplement do you? (if yes) What and how do you take these medications?

Due to issues with brand/generic name or what the medication looks like/is used for you can call pharmacy to get updated dispensing information.

Means to Assess Adherence

5. Engage the patients pharmacy

- Encourage the patient to have all medications dispensed at one pharmacy
- Enroll patients in available pharmacy adherence programs
- Ask the pharmacy for the patient's refill record
 - Determine when the patient will need his/her next refill
- Review prescription drug labels
 - Conduct a manual pill count

Strategies to Improve ART Adherence

- Design a plan the patient can commit to, consider:
 - Patient's daily schedule
 - Tolerance of pill number, size, frequency
 - Issues affecting absorption (e.g., acid suppressants, food requirements)
- Establish trust & maintain good communication
- Medication reminder aids
 - Text messaging
 - Pill boxes, pill box monitors, bubble packing
 - Alarms
- Positive reinforcement & motivational interviewing
- Provide verbal and written instructions
 - Utilize the teach-back method

Strategies to Improve ART Adherence

- Education for each new patient
 - HIV infection basics
 - Goals of therapy
 - Importance of adherence
 - Potential for development of resistance with suboptimal adherence
- Assess for barriers & develop **multidisciplinary** plan
 - Explain process for obtaining ART & refills
 - Transportation to pharmacy and clinic
 - Insurance, copay assistance, AIDS Drug Assistance Programs (ADAP)
 - Rapid start at time of diagnosis

Continue to Advise Adherence even through Missed Doses

- **How many doses can be missed?** As few as possible
- 95% adherence level, remains a recommended goal for achieving maximum therapeutic benefit.
- Provide instructions regarding what to do with a missed dose
- This will vary with each medication and is based on dosing schedule and potential toxicities

<http://www.aidsmap.com/What-level-of-adherence-is-necessary/page/1730440/>

Treatment Interruptions- 'Drug Holidays'

Planned interruptions (up to 2 weeks) when drugs have similar half-lives

- All drugs should be stopped at the same time and restarted together as soon as possible

Planned interruptions (up to 2 weeks) when drugs don't have similar half-lives

- If all drugs are stopped, then HIV has a chance to become resistant to the drug that has a longer half-life
 - Stop the longer half-life drug 2 to 4 weeks before the other drugs are stopped
 - Stop the drug, but replace it with a boosted protease inhibitor for 4 weeks, and then stop all the HIV meds at the same time

Treatment Interruption-‘Drug Holidays’

Should be an agreement between provider and patient and include:

- Length of interruption
- Goal
- Restart strategy
- Negative complications of interruption
 - Rising viral load and falling CD4 could mean a risk of opportunistic infections and illness
 - If condoms or PrEP are not used, HIV can be passed on to a sexual partner.
 - There is a risk of drug resistance developing, particularly if stopping treatment is not done carefully, working with a doctor

Resources

- National Clinician Consultation Center
<http://nccc.ucsf.edu/>
 - HIV Management
 - Perinatal HIV
 - HIV PrEP
 - HIV PEP line
 - HCV Management
 - Substance Use Management
- AETC National HIV Curriculum <https://aidsetc.org/nhc>
- AETC National Coordinating Resource Center
<https://targethiv.org/library/aetc-national-coordinating-resource-center-0>