New HIV Diagnosis and ART Initiation in a Woman of Childbearing Age

Module 1 | Learner Guide

OVERVIEW

Goal

The goal of this session is to prepare learners to assess and manage a woman newly diagnosed with HIV using a team-based approach.

Objectives

By the end of the module, the learner will be able to:

1. Recognize the psychosocial effects of a new HIV diagnosis
2. Identify barriers to linkage to care for individuals newly diagnosed with HIV
3. Demonstrate how to support an individual newly diagnosed with HIV with the aim on improving linkage to care and rapid ART initiation for all patients
4. List risk factors related to increased risk of HIV transmission and understand that individuals who are virally suppressed cannot sexually transmit HIV (undetectable = untransmittable or U=U)
5. Discuss appropriate ART regimens for any adult
6. Describe contraception options for women living with HIV and at risk of acquiring HIV
7. Describe the appropriate interprofessional clinical management and follow-up for (a) a newly diagnosed patient and (b) a stable patient with undetectable VL

PEPFAR HRSA Health Resources & Services Administration UCSF Institute for Global Health Sciences AFRE health African Forum for Research and Education in Health Strengthening Interprofessional Education for HIV

Workshop Roadmap

Duration: 80 minutes

Duration	Activity	Content
5 min.	Introduction	
10 min.	1. Discussion	Psychosocial effects of diagnosis
10 min.	2. Discussion	Barriers to linkage to care
10 min.	3. Role-play	Facilitators for linkage to care
10 min. 10 min. (optional)	4. Discussion Group Work	Risk factors of HIV transmission and U=U
10 min.	5. Discussion	ART regimens
10 min. 15 min. (optional)	6. Group Work Group work and Discussion	Contraception options for women
15 min.	7. Discussion and teach back	Management and follow-up
5 min.	Conclusion	

Workshop Setup

Additional learner materials

HEARTS-D Diagnosis and Management of Type 2 Diabetes: pages 13-15, 25

Osteoporosis Management Algorithm

Comprehensive Cervical Cancer Control (WHO): pages 170-173

Acronyms

ART	Zidovudine
CARG	Community ART refill group
CATS	Community Adolescent Treatment Supporters
CrAG	Cryptococcal antigen
DTG	Dolutegravir
EFV	Efavirenz
FTC	Emtricitabine
HBsAg	Hepatitis B virus surface antigen
HIV PrEP	HIV pre-exposure prophylaxis
IPE	Interprofessional Education
NVP	Nevirapine
PEP	Post-exposure prophylaxis
PMTCT	Prevention of mother-to-child transmission of HIV
PWH	People with HIV
QI	Quality improvement
RPR	Reactive plasma regain
SDG	Sustainable Development Goals
TDF	Tenofovir disoproxil fumarate
U=U	Undetectable = Untransmittable
VL	HIV RNA viral load
3TC	Lamivudine

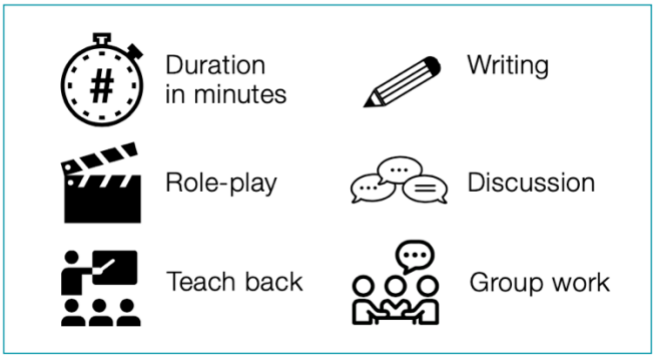
CONTENT WITH OBJECTIVES

Introduction

Facilitator: Read the case vignette aloud.

Case: Blessing is a 24-year-old woman who comes to the HIV clinic to receive HIV positive results and further management. She presents for post-test counseling. She has intentions to eventually start a family and cannot afford not to work.

Activity Components



ACTIVITY 1

Recognize the psychosocial effects of a new HIV diagnosis.

Has anyone told somebody they have been diagnosed with HIV or observed how someone has processed a diagnosis of HIV? If so, would you be willing to share how what this experience was like for you or the patient? Irrespective of your own experiences, what are the psychosocial effects of receiving a new HIV diagnosis?

ACTIVITY 2

Identify barriers to linkage to care for individuals newly diagnosed with HIV.

Before we discuss Blessing's case in further detail, what is the HIV care continuum or care cascade? What are the 95-95-95 goals?

Now look at the graph of the 2019 worldwide HIV care cascade, which depicts progress towards the 2030 targets of 95-95-95. What do you think of the results? What are some barriers to achieving the testing, treatment, and viral suppression targets?

Now that we have described some of the emotional responses to a diagnosis of HIV and the importance of improving linkage and retention are, let's discuss how care teams (nurses, doctors, pharmacists, peer-educators, etc.) can best support Blessing to (1) link her to care, (2) start ART, and (3) continue an ART treatment. What are the important features of post-test counseling?

ACTIVITY 3

Demonstrate how to support an individual newly diagnosed with HIV, with the aim of improving linkage to care and rapid ART initiation for all patients.

Role play using the handout.

ACTIVITY 4

Blessing is curious how she might have contracted HIV. **How is HIV transmitted? What risk factors increase the risk of HIV transmission?**

OPTIONAL ACTIVITY

Which types of exposures have the highest risk of transmitting HIV? Using the cards on your table with types of HIV transmission listed, arrange them from highest risk to lowest risk of HIV transmission after a single exposure from a patient who is not virally suppressed on ART.

Rank the order of risk of HIV infection with exposure to:

- **Percutaneous needle stick**
- **Receptive penile-vaginal intercourse**
- **Insertive anal intercourse**
- **Biting, spitting, throwing body fluids (including semen and saliva)**
- **Insertive penile-vaginal intercourse**
- **Mucous membrane exposure to blood (eg, splash to eye)**
- **Mother-to-child**
- **Receptive anal intercourse**
- **Needle-sharing injection drug use**
- **Blood transfusion**
- **Receptive or insertive penile-oral intercourse**

	Exposure route	Risk per 10,000 expo- sures to an infected source (risk)	Order of risk
Blood- borne exposure	Blood transfusion	9250 (9/10)	
	Needle-sharing injection drug use	63 (1/150)	
	Percutaneous needle stick	23 (1/435)	
	Mucous membrane exposure to blood (e.g., splash to eye)	10 (1/1,000)	
Sexual exposure	Receptive anal intercourse	138 (1/72)	
	Insertive anal intercourse	11 (1/900)	
	Receptive penile-vaginal intercourse	8 (1/1250)	
	Insertive penile-vaginal intercourse	4 (1/2500)	
	Receptive or insertive penile-oral intercourse	0-4	
Perinatal	Mother-to-child	2260	
Other	Biting, spitting, throwing body fluids (including semen and saliva)	Negligible	

ACTIVITY 5

Discuss appropriate ART regimens for any adult

What does “Treat All” mean?

You want to start Blessing on ART. What are ART options for most adults?

Decoding ART

3CT	lamivudine
ABC	abacavir
AZT	zidovudine
TDF	tenofovir
FTC	emtricitabine
DTG	dolutegravir
EFV	efavirenz
NVP	nevirapine
DRV	darunavir
LPV	lopinavir
r	ritonavir

Does Blessing's age have bearing on what ART she is prescribed? 

ACTIVITY 6

Discuss contraception options for women living with HIV and at risk for acquiring HIV.

Blessing is worried that her contraception may have put her at risk for HIV infection. She asks you if her Depo Provera (DMPA-IM) may have increased her risk for contracting HIV.

The Evidence for Contraceptive Options and HIV Outcomes study—commonly called the ECHO study—recently looked at whether or not HIV infection risk and different contraceptive methods were linked. Spend 5 minutes reading the official statement from the WHO, UNAIDS, and UNFPA about the ECHO study results, included in Additional Learner Materials, followed by discussion.

Discuss in your small group the following questions:

1. **What are the main findings of this study?**

2. **What are the implications of this study?**

3. **When and how will you discuss contraception with your HIV-negative female patients?**

OPTIONAL ACTIVITY

Blessing thanks you for the information. She tells you that she does not want to become pregnant right now. She would like to continue with a contraception method, but is worried about how a new medicine might interact with the ART. She asks for your advice on her options. **Use one of the following resources on drug interactions with HIV medicines to determine what advice you would give.**

- Drug interaction table from the AIDSInfo Guidelines for the Use of Antiretroviral Agents in Adults and Adolescents with HIV (relevant information is included in your learner materials; tables and complete guidelines can be accessed from https://aidsinfo.nih.gov/guidelines)
- Drug interaction tool from the University of Liverpool (available from: https://www.hiv-druginteractions.org/checker)

OPTIONAL ACTIVITY

Blessing is also nervous about telling her partner. **How would you counsel her on discussing the diagnosis with her partner?**

ACTIVITY 7

Describe the appropriate interprofessional clinical management and follow-up for (a) a newly diagnosed patient and (b) a stable patient with undetectable VL.

Consider the range of health professionals participating in this training. How should a clinician screen a patient with HIV for referral to other members of a multidisciplinary team? To determine the need for referral, what clinical information should be obtained and what questions should be asked of the patient?

Determine how to arrange follow-up care.

You are nearing the end of the clinic visit. When should Blessing come back for follow-up?

What lab monitoring is necessary at the time of HIV diagnosis?

What is the appropriate follow-up and laboratory monitoring for a stable patient with undetectable HIV RNA? Should follow-up be the same for all patients?

Conclusion

Advance to slide 6 and review the learning objectives as a group. Ask learners to briefly summarize what they learned for each objective with a focus on any particularly challenging areas of the training.

CLINICIAN'S & PHARMACIST'S CORNER

Evidence for Treat All

The evidence for Treat All comes from 2 large pro- spective, randomized clinical trials:

1. START trial: This multi-country trial randomized 4,685 treatment-naïve individuals with CD4 cell count > 500 cells/mm3 to either immediate ART or delayed ART when CD4 cell count <=350 cells/ mm3. After 3 years, they found that early ART reduced the combination of AIDS-related events, serious non-AIDS events, and death significantly (1.8% vs 4.1% in the delayed ART arm). The results of this trial were so strong that they had to stop the trial early because it would be unethical to continue giving patients delayed ART based on these results.

2. TEMPRANO trial: This Cote d'Ivoire trial randomized 849 individuals with CD4+ counts >500 cells/ mm3 to either immediate ART or delayed ART per WHO criteria at the time. They found that those who received early ART were almost half as likely to have an AIDS or non-AIDS related event compared to those on delayed ART.

Dolutegravir Safety in Women of Childbearing Age

It has been controversial whether DTG is safe in women of childbearing age. Recent studies in Botswana had highlighted a possible link between DTG and neural tube defects (birth defects of the brain and spinal cord that cause conditions such as spina bifida) in infants born to women using the drug at the time of conception. This potential safety concern was reported in May 2018 from a study in Botswana that found 4 cases of neural tube defects out of 426 women who became pregnant while taking DTG. Based on these preliminary findings, many countries advised pregnant women and women of childbearing potential to take efavirenz (EFV) instead.

However, data from two large clinical trials comparing the efficacy and safety of DTG and EFV in Africa have now expanded the evidence base. The risks of neural tube defects are significantly lower than what the initial studies suggested. The most recent data reports a rate of neural tube defects of 3/1000 pregnancies for women on DTG at the time of conception vs 1/1000 pregnancies for women on other ART at the time of conception.[16]

DTG is a drug that is more effective, easier to take and has fewer side effects than alternative drugs that are currently used. DTG also has a high genetic barrier to developing drug resistance, which is important given the rising trend of resistance to EFV and nevirapine-based regimens. In 2019, 12 out of 18 countries surveyed by WHO reported pre-treatment drug resistance levels exceeding the recommended threshold of 10%.

References/Resources

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