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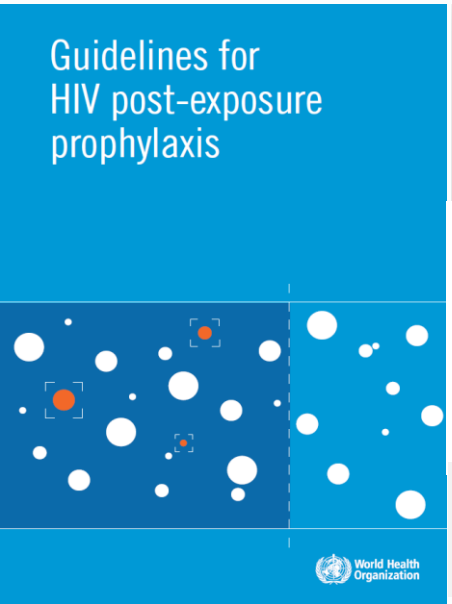
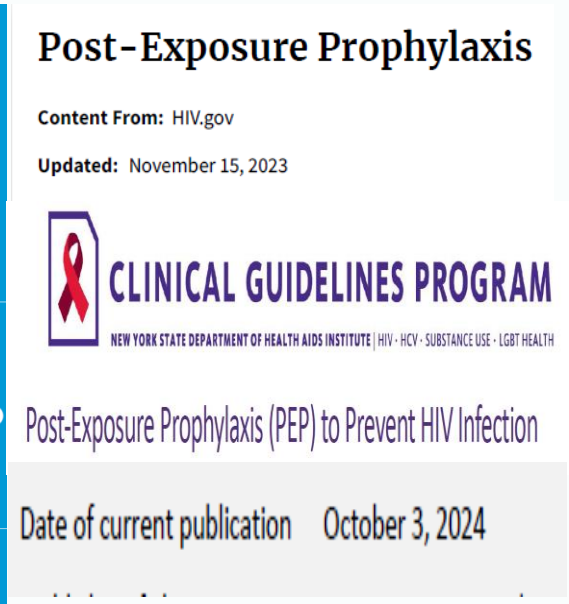
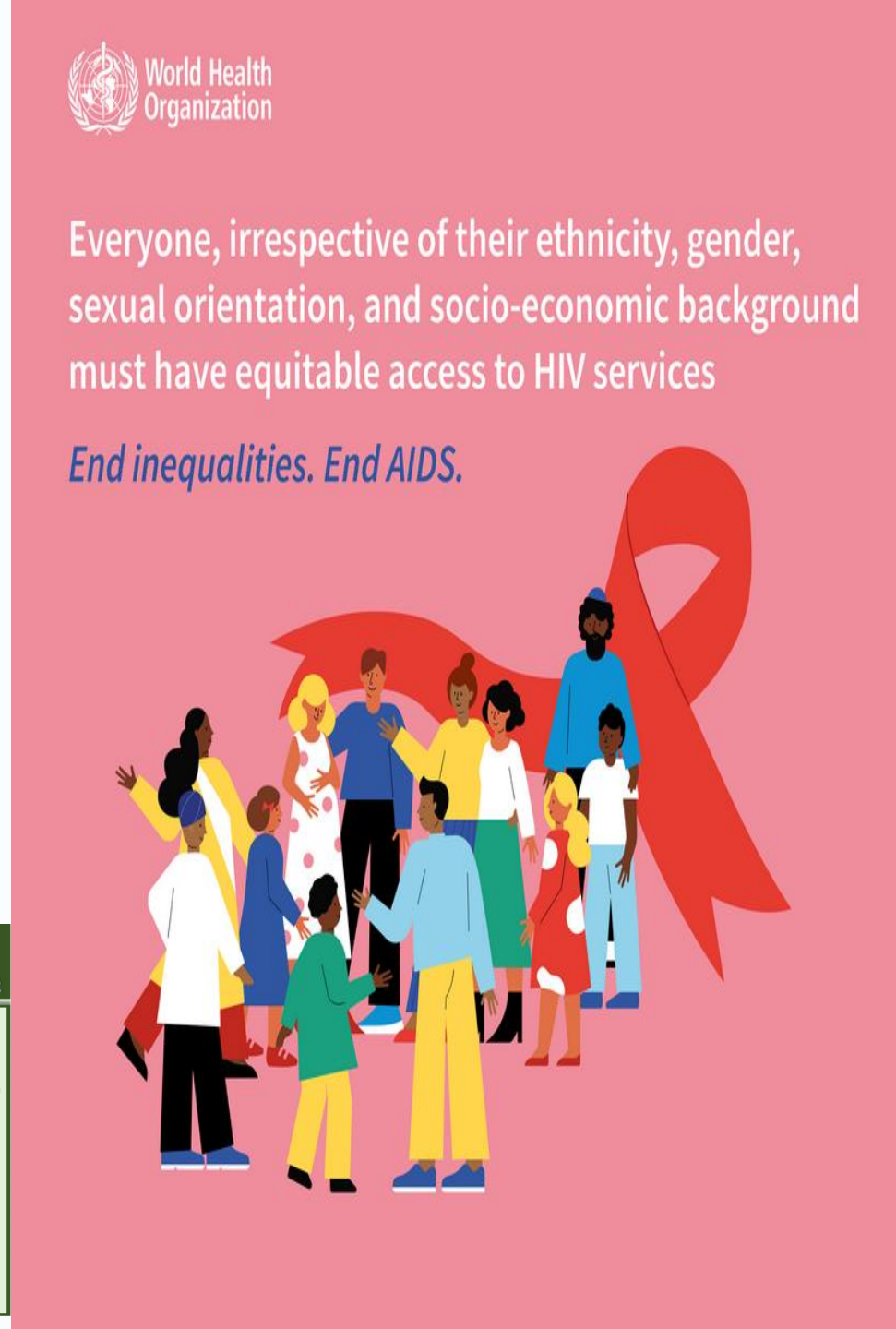
HIV and AIDS fellowship

HIV postexposure prophylaxis







What is post-exposure prophylaxis of HIV

- HIV PEP is the use of ARV medication to prevent acquisition of HIV after a possible exposure.

By halting viral replication and preventing establishment of a persistent infection during the brief interval after the virus has entered the body but before it becomes an established infection.

Guidelines for HIV post-exposure prophylaxis

World Health Organization 2024

Although the principles of exposure management remain unchanged, recommended HIV postexposure prophylaxis (PEP) regimens and the duration of HIV follow-up testing have been updated.

US PHS Guidelines for the Management of Occupational Exposures to HIV

Evaluating Exposure Risk

Occupational exposure:

- **potentially infectious contacts are:**
  - A percutaneous injury (a needlestick or cut with a sharp instrument used on a patient)
  - Contact of mucous membrane or nonintact skin (eg, exposed skin that is chapped, abraded, or afflicted with dermatitis)
- **Body fluids of concern include:**
  - blood, semen, vaginal secretions, other body fluids contaminated with visible blood.
  - Potentially infectious body fluids : cerebrospinal, synovial, pleural, peritoneal, pericardial, and amniotic fluids
- Fluids that are **not** considered infectious unless they contain blood include **feces, nasal secretions, saliva, gastric secretions (vomitus), sputum, sweat, tears, urine.**

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Parenteral Exposure Risk:

- ❑ Needle sharing during injection drug use
- ❑ Percutaneous (needlestick)

➢ Factors that increase risk of transmission through parenteral exposure:

- Hollow-bore needle
- Deep injury (penetration)
- Needle placed in an artery or vein

Sexual Exposure Risk:

- ❑ Receptive anal intercourse, Receptive penile-vaginal intercourse, Insertive anal intercourse, Insertive penile-vaginal intercourse (Absence of barrier protection)

- ❖ Oral sex: HIV transmission has been documented, but rarely. It is prudent to consider non-occupational PEP for receptive oral sex with ejaculation, although discussion about the low risk should occur / Nonintact oral mucosa (oral lesions, gingivitis, wounds)

- ➢ Factors that increase risk of transmission through sexual exposure:

Source with known HIV who is not taking ART or has incomplete viral suppression; acute HIV infection, Presence of genital ulcer disease or other STIs, Trauma at the site of exposure, Blood exposure, Lack of male circumcision

Other Exposure Types:

- Biting: Negligible
- Spitting: Negligible
- Throwing bodily fluids, including semen or saliva: Negligible
- Sharing sex toys: Negligible

➢ Exposures that DO NOT warrant PEP:

Kissing , spitting , oral-to-oral contact in the absence of mucosal damage (mouth-to-mouth resuscitation); human bites not involving blood; exposure to needles or sharps that have not been in contact with an individual with or at risk of HIV

Management of the Exposure Site

Managing the Exposure Site

- appropriate cleansing and minimize further trauma and irritation to the exposed wound site.
- The site of a wound or needlestick injury should be cleaned with soap and water only.
- It is best to avoid use of alcohol, hydrogen peroxide, povidone-iodine, or other chemical cleansers.
- Squeezing the wound may promote hyperemia and inflammation at the wound site, potentially increasing systemic exposure to HIV
- Eyes and other exposed mucous membranes should be flushed immediately with water or isotonic saline.

prescribe PEP

When to prescribe PEP

- The crucial factor that influences PEP efficacy is the **time between exposure and starting PEP drugs.**
- Post-exposure prophylaxis should be offered, and as early as possible, to individuals with suspected or known exposure to HIV, ideally within **24 hours** but **not later than 72 hours**.

An HIV exposure is a medical emergency and rapid initiation of PEP

ideally within 2 hours of and no later than 72 hours after exposure is essential

to prevent infection.

Guidelines for HIV post-exposure prophylaxis

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Post-Exposure Prophylaxis (PEP) to Prevent HIV Infection

October 3, 2024

- PEP blocks viral replication: After percutaneous or mucosal exposure to HIV, local replication of virus occurs in tissue macrophages or dendritic cells . However, if infection cannot be contained at this stage, it is followed within 48 to 72 hours by replication of HIV in regional lymph nodes. Viremia then follows within 72 to 120 hours (3 to 5 days) of virus inoculation.

- By 72 hours after exposure, HIV infection may have been established. If PEP is prescribed after 72 hours and then discontinued after 28 days, the risk of viral rebound with that inadvertent interruption in ART is significant, as is the associated risk of developing resistance to ART; therefore, PEP should not be initiated later than 72 hours after exposure.

- However, we do offer PEP after a longer interval to patients with a very high-risk exposure (eg, sharps injuries from a needle that was in an artery or vein of a source patient with HIV).

For such HCP, The United States Public Health Service suggests that PEP can be offered up to one week after the exposure

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How many drugs should be prescribed for PEP

Recommendation (2014)

- An HIV PEP regimen with two ARV drugs is effective, but three drugs are preferred

Guidelines for HIV post-exposure prophylaxis

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Recommended drug regimens

Adults and adolescents:

- **TDF** + **3TC** (or **FTC**) is recommended as the preferred backbone regimen
- **DTG** is recommended as the preferred third drug

- ATV/r, DRV/r, LPV/r and RAL may be considered as alternative third drug options for post-exposure prophylaxis

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PEP Regimens for Patients Who Weigh ≥40 kg

Preferred single-tablet regimen:

BIC/TAF/FTC by mouth once daily (Biktarvy) (the lower discontinuation rates and minimal adverse effects)

Alternative Regimens:

- **Elvitegravir** / **cobicistat** / **emtricitabine** / **TDF** (Stribild) as a fixed-dose single tablet once per day

رژیم انتخابی	دارو
رژیم سه دارویی ارجح	Tenofovir 300 mg PO qd + Emtricitabine 200 mg PO qd +Dolutegravir 50 mg/d PO qd
رژیم های سه دارویی جایگزین	Tenofovir 300 mg PO qd + Emtricitabine 200 mg PO qd + Atazanavir/r 300/100 PO qd **or** Tenofovir 300 mg Po qd + Lamivudine 150 mg PO BID + Darunavir/r * **or** Zidovudine 300 mg PO BID + Lamivudine 150 mg PO BID + Atazanavir/r 300/100 PO qd **or** Tenofovir 300 mg Po qd + Lamivudine 150 mg PO BID + Darunavir/r

- Clinicians should not initiate TDF/FTC as PEP for any individual with a confirmed CrCl <60 mL/min

- Clinicians should not prescribe the following medications for PEP:

ABC, EFV, IDV, MVC, NFV, NVP

Prescribing frequency and how long to take PEP:

Recommendation (2018)

- A **28-day** prescription of antiretroviral drugs should be provided for HIV post-exposure prophylaxis following initial risk assessment

- Enhanced adherence counselling is suggested for individuals initiating HIV post-exposure prophylaxis

Guidelines for HIV post-exposure prophylaxis

World Health Organization 2024

Adherence strategies

Recommendation (2014)

- Enhanced adherence counselling is suggested for individuals initiating HIV post-exposure prophylaxis

Guidelines for HIV post-exposure prophylaxis

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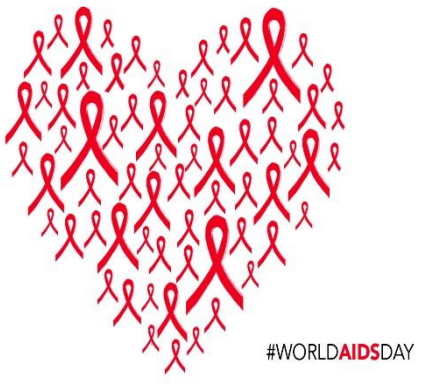
- the average risk of HIV transmission after a percutaneous exposure to HIV-infected blood has been estimated to be approximately 0.3% and after a mucous membrane exposure, approximately 0.09%

- the risk of HBV to a nonimmune individual (including those who have not responded to vaccine), is up to 100-fold (30 percent) higher than for HIV.

- The risk of HCV transmission from an infected source is about six-fold greater (1.8 percent)



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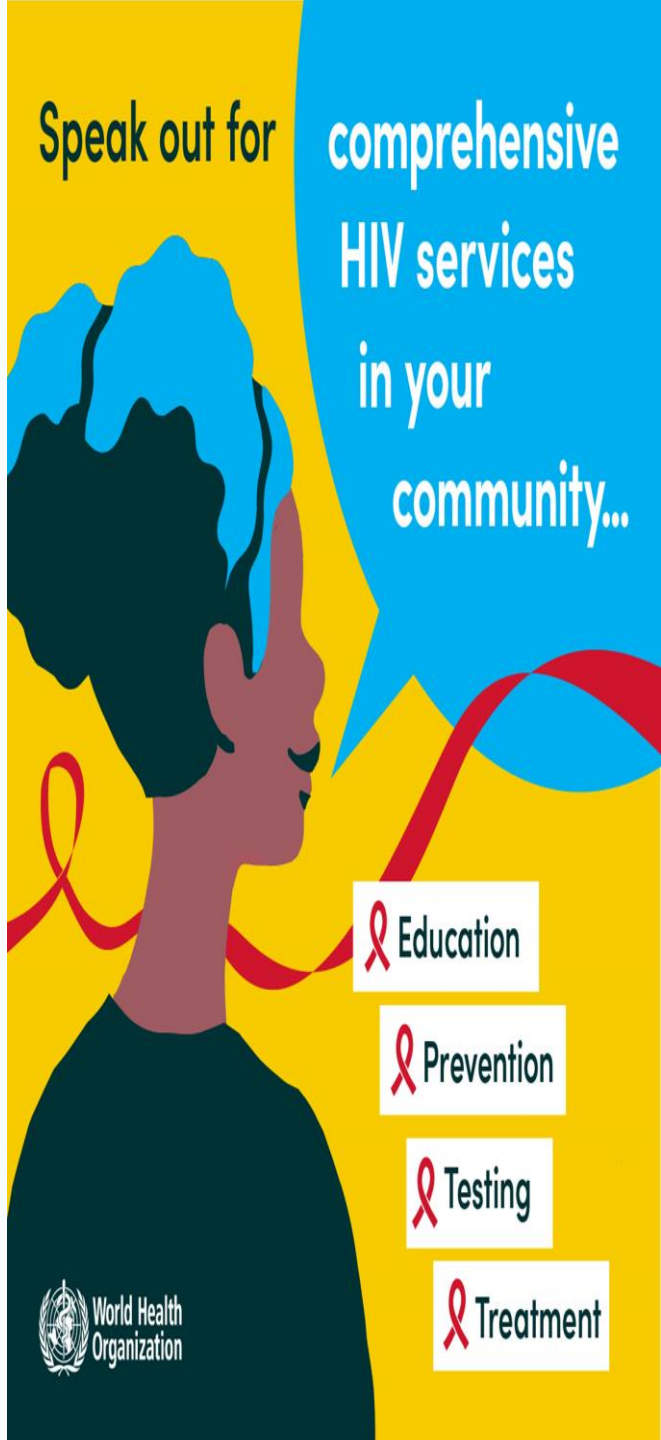
Management of Potential Exposure to HBV and HCV



- ❑ Clinicians should not administer immunoglobulin or antiviral agents for HCV PEP

- ❑ Clinicians should evaluate the source for HBV by testing for HBsAg.

- ➢ initiate the HBV vaccine series in non–HBV-immune individuals

the first dose administered during the initial evaluation , within 24 hours

should not delay the decision to vaccinate while testing for anti-HBs for patients

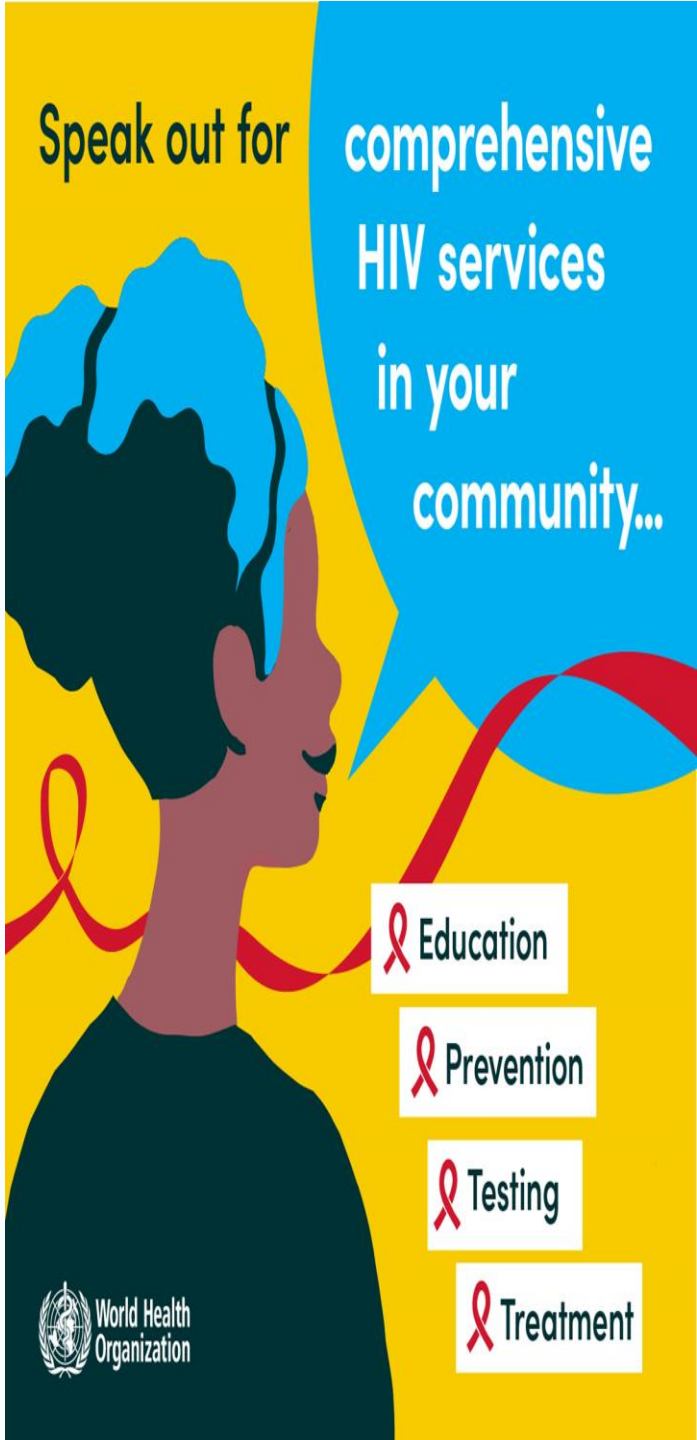
- ➢ Clinicians should administer prophylactic HBIG in an individual exposed to blood or bodily fluid from a source with known HBV infection if the immune status of the exposed individual is unknown or nonimmune.

Ideally, HBIG should be administered as soon as possible, ideally within 7 days.

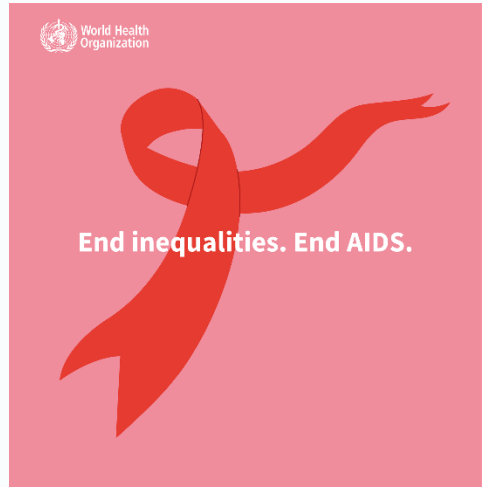
Baseline Testing of the Exposed Individual

and

Sequential HIV Testing and Laboratory Monitoring

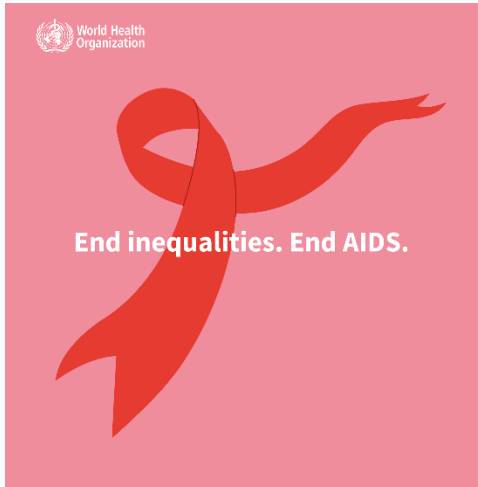


- HIV Ag/Ab testing : baseline , weeks 6 , months 3 *
- HBs Ag, HBs Ab, HBc Ab: baseline, months 6
- HCV Ab: baseline, months 6
- CBC : baseline *
- Serum Cr: baseline
- ALT & AST: baseline, weeks 6
- RPR or VDRL: baseline, weeks 6
- Pregnancy: baseline , weeks 6



- Clinicians should follow up with an in-person visit (preferred) at 4 weeks after exposure

➢ If the exposed individual presents with signs or symptoms of acute HIV seroconversion, clinicians should perform an HIV serologic screening test in conjunction with a plasma HIV RNA assay to diagnose acute HIV infection.

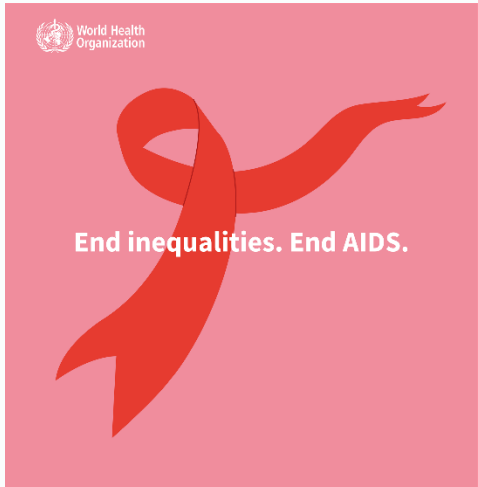


- Risk reduction strategies should be employed to prevent transmission ,

usually means condom use or abstinence from sex and refraining from blood, plasma, organ, tissue, and semen donation until the final follow-up HIV serology is negative

- Candidates for PrEP

- the HPV vaccine for individuals aged 18 to 45 years who have not yet been vaccinated.



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Post-Exposure Prophylaxis (PEP) to Prevent HIV Infection

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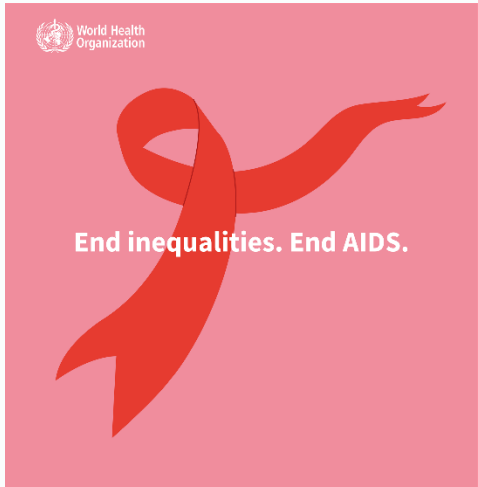
Sexual Assault Exposures:

- Emergency contraception: Offer emergency contraception to individuals of childbearing potential.
- Clinicians should provide empiric treatment for gonorrhea, chlamydia, and trichomoniasis.
- should administer the first dose of the HPV vaccine for individuals aged 18 to 45 years who have not yet been vaccinated.



Where can PEP be provided

NEW recommendation

- HIV PEP should be delivered in community settings

• Community delivery of PEP should complement delivery in other settings, with strong linkages and referral pathways.

Community settings can include a wide range of options, including but not limited to pharmacies, community-based organizations, drop-in centres, mobile clinics and online delivery.

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Who can provide PEP

NEW recommendation

- Task sharing should be employed to dispense, distribute, provide and monitor PEP

• Training, support and supervision for all health workers is essential, including sensitization to stigma and discrimination and key populations.

• Adequate and equitable remuneration is required for community and other health care providers.

• Providers should offer first-line support and post-rape care in line with WHO guid for survivors of sexual assault at the first point of contact and refer to additional support services as needed.

• Tasks can be shared with a range of health workforce teams, including pharmacists, nurses, doctors and trained lay and peer health workers.

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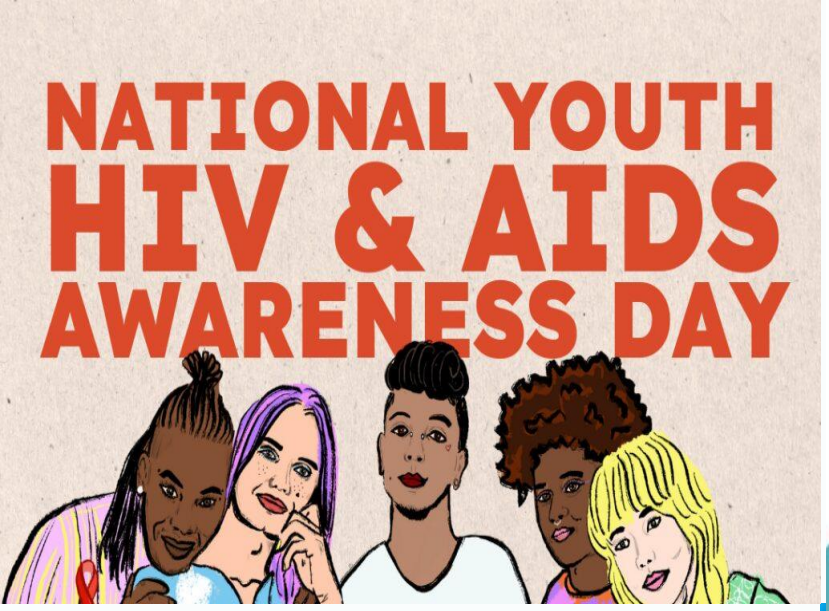
- ❑ New recommendations, discussion, and references added on

Discussion added on PEP-in-pocket, which involves giving individuals with an anticipated low frequency of high-risk HIV exposures a prescription for PEP to be used in the event of an HIV exposure

participants could initiate PEP appropriately on their own, often within a much shorter period between exposure and first PEP dose

- ❑ Ensure the patient understands the need to complete the full 28 days of PEP and explain the adherence requirements.


THE
PATH
THAT
ENDS
AIDS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HIV & AIDS
AWARENESS DAY


LET COMMUNITIES LEAD
World AIDS Day 2


Tell a friend
Test for HIV. It's free, confidential & easy


WORLD AIDS DAY


TOGETHER
WE WILL
END AIDS.


Together, We
We Can
End
We
AIDS