Clinical Education Initiative
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OCCUPATIONAL POST-EXPOSURE PROPHYLAXIS

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Occupational Post-Exposure Prophylaxis

[Video Transcript]

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- [Tony] Hi, I'm Dr. Tony Urbina, Associate Medical Director with the Spencer Cox Center for Health at St. Luke's and Roosevelt Hospitals in New York City. And a principal investigator for the Clinical Education Initiative of the New York State Department of Health AIDS Institute. Thank you for reviewing the New York State's Clinical Education Initiative video on occupational post-exposure prophylaxis, or oPEP. The information in this video is based on the AIDS Institute guidelines.

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In this video, I will discuss HIV prophylaxis following occupational exposure, including New York State's updated guidelines of the preferred oPEP regimen: when to initiate occupational PEP, baseline and follow up testing of the exposed worker, and finally oPEP for exposed workers who are pregnant or breastfeeding.

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First, I'd like to note that as part of a comprehensive plan to prevent the transmission of blood borne pathogens, employers should implement the use of safety devices and educate workers about how to prevent needlestick injuries. For more information about prevention of needlestick injuries, refer to the PDF accompanying this video titled, "Preventing Needlestick Injuries in Health Care Settings." Even when effective prevention measures are implemented, exposures to blood and bodily fluid do occur. Employers or personnel covered by the Occupational Safety and Health Administration blood borne pathogens standard are obligated to provide post-exposure care, including prophylaxis at no cost to the employee.

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There are many factors to consider when deciding whether to implement oPEP. First and foremost, oPEP should be initiated as soon as possible, ideally within two hours of the exposure. A first dose of the 28-day course of oPEP should be offered to the exposed worker while the evaluation is underway, and reassess when more information is available. Decisions regarding initiation of oPEP beyond thirty-six hours post-exposure should be made on a case-by-case basis, with the understanding that oPEP may be less effective when timing of initiation is prolonged. The uncertainties that are occasionally associated with a given exposure may complicate the decision-making process especially for an inexperienced clinician, and may possibly delay prompt initiation of oPEP.

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The following is meant to serve as a general guide. If the source patient is known to be HIV positive, the exposed worker should complete the 28 day oPEP regimen. If the source patient's HIV status is unknown, obtain consent for rapid testing of the source patient. If the source patient does not have the capacity to consent, consent may be obtained from a surrogate, or if a surrogate is not immediately available, anonymous testing may be done. If the source has capacity to consent but the patient refuses

testing or test positive for HIV, the exposed worker should complete the recommended 28-day oPEP regimen. If the result from testing the source patient is not immediately available or a complete evaluation of the exposure is unavailable within two hours of the exposure, oPEP should be initiated while source testing and further evaluation are underway. If the source patient test negative for HIV, assess their risk of HIV exposure in the last six weeks. If no risk exposure is clearly identified, the oPEP regimen can be discontinued. If the source patient may have had a recent exposure to HIV, obtain an HIV RNA assay from the source patient and continue the oPEP regimen until results are available.

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Prompt initiation of oPEP is recommended for exposure to blood, visibly bloody fluids, or other potentially infectious material. These include semen, vaginal secretions, breast milk, and cerebrospinal, synovial, pleural, peritoneal, pericardial, and amniotic fluids from HIV infected or HIV unknown sources in any of the following significant exposure situations.

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A break in the skin by a sharp object, including hollow bore, solid bore, and cutting needles, or broken glassware that is contaminated with blood, visibly bloody fluid, or other potentially infectious material, or that has been in the source patients' blood vessel, a bite from a patient with visible bleeding in the mouth that causes bleeding in the exposed worker, a splash of blood, visibly bloody fluid, or other potentially infectious material to a mucosal surface, including the mouth, nose, or eyes, a non-intact skin such as dermatitis, chap skin, abrasion, or open wound exposure to blood, visibly bloody fluid, or other potentially infectious material.

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Body sites exposed to potentially infectious fluid should be cleansed immediately. Wound and skin exposure sites should be washed with soap and water; exposed mucous membrane should be flushed with water only. Exposed workers should not attempt to milk or squeeze out needlestick injuries or wounds. Squeezing the wound will cause inflammation and an increase of blood flow to the wound site that may potentiate the entry of HIV.

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Clinicians who do not have access to experienced HIV medical providers should call the National Clinicians Consultation Center PEP line. When using a PEP line, medical providers from New York State should identify themselves as such. Confidential baseline HIV testing of the exposed workers should be obtained at the time the occupational exposure is reported, or within three days of the exposure. Testing must be performed in full compliance with New York State Public Health Law. OPEP should be initiated immediately without waiting for the results of the HIV test.

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The preferred OPEP regimen is tenofovir plus emtricitabine plus raltegravir. Lamivudine may be substituted for emtricitabine. However, a fixed dose combination is available when tenofovir is used with emtricitabine. Zidovudine is no longer recommended in the preferred oPEP regimen. If the source patient is known to be HIV infected, and information is immediately available regarding past and present antiretroviral experience, current level of viral suppression, or resistance profile, the treating clinician in consultation with a medical provider experienced in managing PEP, should individualize the PEP regimen to maximize potential effectiveness against the exposed HIV strain. Initiation of the first dose and continuation of PEP should never be delayed while awaiting this information. The first dose of PEP should be given as soon as possible after exposure, ideally within two hours. For preferred and other alternative oPEP regimens, please see the PDF accompanying the video titled, "Alternative PEP Regimens Following Occupational Exposure," as well as the PDF, "Antiretroviral Drugs to Avoid as PEP Components."

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All expose workers receiving oPEP should be re-evaluated by a medical provider within three days of exposure. During this appointment, the clinicians should assess treatment adherence and side effects or toxicities associated with the oPEP regimen. This appointment also provides the opportunity for further clarification on the nature of the exposure, as well as a review of available source patient data. If indicated, the regimen can be changed when more information becomes available. While receiving oPEP, the exposed workers should be evaluated weekly to assess treatment adherence, side effects of treatment, current physical complaints, and emotional status. Clinicians should also provide risk reduction counseling to HIV exposed workers immediately to prevent potential secondary transmission during the 12-week follow up period.

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HIV exposed workers should be advised to: use condoms to prevent potential sexual transmission, avoid pregnancy and breastfeeding, avoid needle sharing, and refrain from donating blood, plasma, organs, tissue, or semen. During the oPEP treatment period, other blood tests may be indicated to monitor for side effects of treatment. The timing of specific testing indicated varies based on the oPEP regimen used.

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The New York State Department of Health AIDS Institute guidelines recommend that sequential confidential HIV testing be obtained at baseline, week 4, and week 12 post-exposure. The guidelines also state that HIV testing at six months post-exposure is no longer recommended. At 4 weeks and 12 weeks, HIV testing of the exposed workers should be performed with laboratory-based HIV tests rather than rapid point of care test, as these tests are slightly less sensitive. If oPEP is indicated but the exposed worker declines oPEP, serial testing should still be obtained as shown in this table. The table can also be viewed in the PDF accompanying this video titled, "Monitoring Recommendations for OPEP." If at any time the HIV test result is positive, a confirmatory assay must be performed to confirm the diagnosis of HIV infection. If the exposed worker presents with signs or symptoms of acute HIV seroconversion, an HIV serologic screening test should be used in conjunction with a plasma HIV RNA assay to diagnose

acute HIV infection. A fourth generation HIV antigen antibody combination test is a preferred serologic screening test if available.

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Based on increasing clinical experience with combination antiretroviral therapy, oPEP is indicated at any time during pregnancy when a significant exposure has occurred, despite possible risks to the woman and the fetus. The recommended oPEP regimen is the same for pregnant women as for non-pregnant adults.

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While the agents listed in this table are all non-preferred agents for use in oPEP regimens and are therefore unlikely to be used, it is important to note that these agents should not be prescribed to expose workers who are pregnant. Please refer to the PDF accompanying this video titled, "PEP for Exposed Workers Who are Pregnant or Breastfeeding," for more information. Since both HIV and antiretroviral drugs may be found in breast milk, breastfeeding should be avoided for three months after the exposure to prevent HIV transmission and potential drug toxicities.

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When an occupational exposure occurs, the source patient should also be evaluated for both hepatitis B and C. Importantly, the risk of transmission of hepatitis B and C from an occupational exposure is significantly greater than the risk of HIV and if indicated the exposed workers should be appropriately monitored and managed. For more information on the post-exposure management for hepatitis B and C, refer to the PDF accompanying this video titled, "Occupational Exposure to Hepatitis B and C."

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Thank you for watching the Clinical Education Initiative's video on oPEP. With proper guidance and support from the New York State Department of Health, providers can feel more comfortable and confident engaging and providing care for workers potentially exposed to HIV. For more information or assistance with occupational PEP, please call the National Clinicians Consultation Center PEP line, at 1-888-448-4911. You can also visit the Clinical Education Initiative website at www.ceitraining.org, or refer to the PDF accompanying this video entitled, OPEP Guidelines."

[Outro music]