

Post Exposure Prophylaxis for HIV for Children following sexual assault

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Reason for Update

- Keeping recommendations in line with the CHIVA guideline "Post-exposure Prophylaxis (PEP) Guidelines for children and adolescents potentially exposed to blood-borne viruses" updated in November 2021
- Attempting to simplify prescribing across the age groups
- Improving tolerability for children with respect to how medicines are administered.
- Providing Guidance for across Wales that can be used for children who are seen in the regional SARC but require local follow up.

Learning outcomes

What are the risks of contracting HIV?

What is PEP?

How does it work?

How effective is it?

How do we risk assess exposure?



Medications used and their side effects

What monitoring is needed?

What follow up is required?

What are the risks of contracting HIV?


- The risks of community acquired HIV in children is extremely low and continue to fall as most people living with HIV are on suppressive ART.
- In 2019
 - 94% of those living with HIV were aware of their status
- In 2021
 - 99% of those were accessing ART, and
 - 98% had achieved virus suppression
- [HIV testing, PrEP, new HIV diagnoses, and care outcomes for people accessing HIV services: 2022 report - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/103242/hiv-testing-prEP-new-hiv-diagnoses-and-care-outcomes-for-people-accessing-hiv-services-2022-report.pdf)



What are the risks of contracting HIV? Issues in CSA.

- Children and adolescents remain at risk from a variety of potential exposures including consensual sex and Child sexual abuse (CSA).
- The risk from biting or from community acquired needle stick injuries is extremely low unless the source is known to be HIV infected and not on suppressive antiretroviral treatment (ART).
- HIV infected fluids can not penetrate the skins
- Sexual abuse presents a particular risk in children due to possible multiple exposures, mucosal trauma and the cervical ectopy and epithelial thinness found in children.

[Post-Exposure Prophylaxis \(PEP\) Guidelines for children and adolescents exposed to blood-borne viruses \(chiva.org.uk\)](http://chiva.org.uk)



Estimated risks of HIV Transmission according to the type of exposure from a known HIV positive individual with detectable HIV viral load.

Type of HIV exposure	Risk of Transmission per exposure from HIV positive course NOT on suppressive ART
Occupational needlestick injury that punctures skin	0.3% or 1 in 333
Unprotected receptive anal sex	1.11% or 1 in 90
Unprotected receptive vaginal intercourse	0.1% or 1 in 1000
Human bite	<1 in 10,000

Calculating risks

- Risk of transmission = risk a source is HIV positive with a detectable HIV viral load x risk of exposure.

Example;

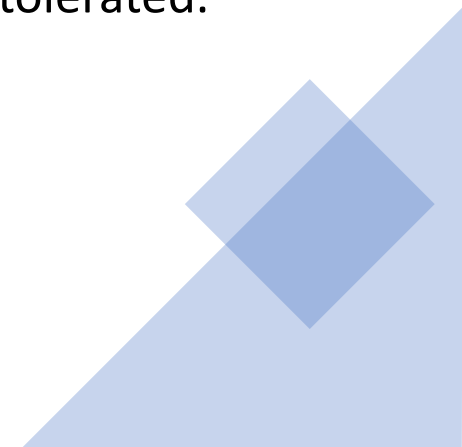
- HIV prevalence in people who use intravenous drugs (2020)= 0.82%
- Detectable viraemia in those with positive antibody = 6%
- Risk of contracting HIV from needle stick therefore $0.82/100 \times 6/100 \times 0.3/100 =$ less than 1 in 100,000

What is PEP?

- PEP, or post-exposure prophylaxis, is a short course of HIV medicines taken very soon after a possible exposure to HIV to try and prevent the virus "taking hold" within the body.
- PEP must be started within 72 hours (3 days) after a possible exposure to HIV.
- PEP should be used only in emergency situations. It is not meant for regular use by people who may be exposed to HIV frequently.

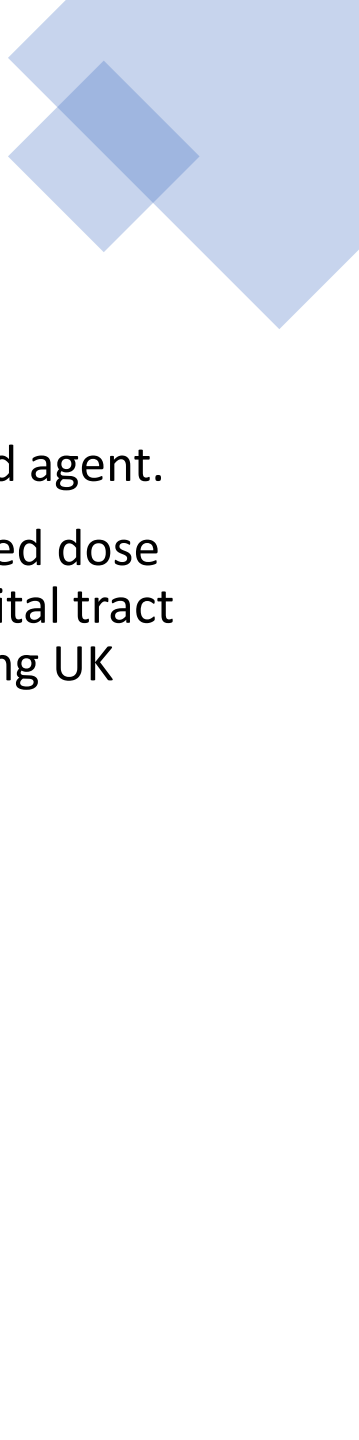


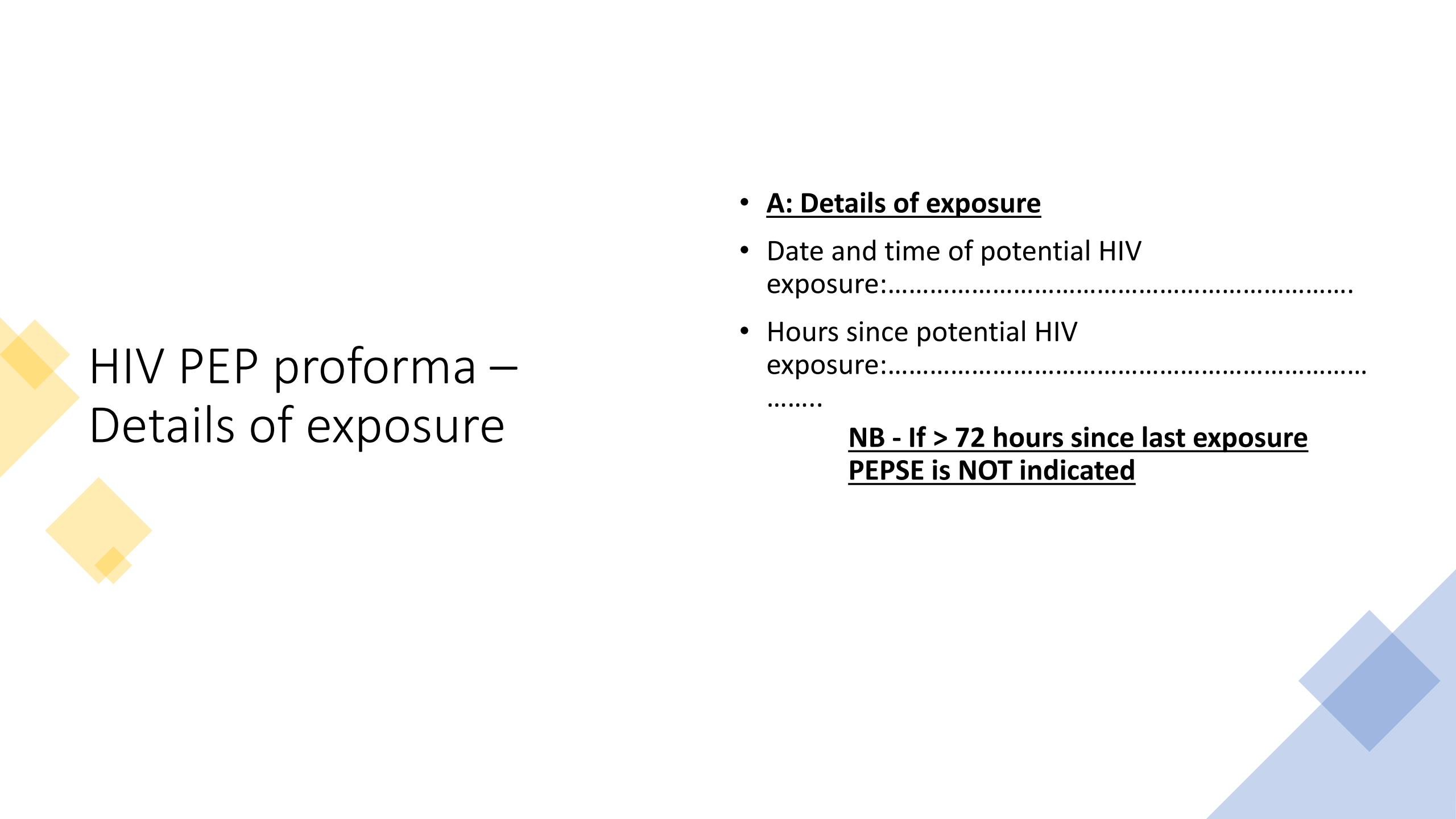
Mechanism of action for HIV PEP

- Presumed mechanism for HIV PEP is that shortly after an exposure to HIV a window exists during which antiretroviral therapy may help diminish or end viral replication.
 - PEP is most effective when given within 24 hours of exposures
 - There may still be benefits up to 72 hours after exposure.
 - PEP should be given for 28 days, if tolerated.
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ART regimens

- PEP is prescribed as a triple therapy;
 - A Dual Nucleoside backbone (INSTI) and a 3rd agent.
 - PEP for adults consists of Raltegravir with the fixed dose of tenofovir and emtricitabine due to its rapid genital tract tissue penetration, efficacy against most circulating UK variants, tolerability, safety and cost.
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HIV PEP proforma – Details of exposure

- **A: Details of exposure**
- Date and time of potential HIV exposure:.....
- Hours since potential HIV exposure:.....
.....


**NB - If > 72 hours since last exposure
PEPSE is NOT indicated**

HIV PEP proforma – details of source

- **B. Details of source:**
- 1. Is source **known** to be HIV positive Yes / No (if No, go to Q2)
- ***If yes:***
- Are they known to be on treatment? Yes / No
- If so,
what.....
.
- Do they **definitely** have an undetectable viral load for > 6months, and have been adherent to their regimen? Yes / No
- Are they known to have a resistant strain of HIV? Yes / No
- Where do they receive their
care



HIV PEP Proforma – details of source

- 2. If not known to be HIV positive, is the source in a **high risk category** for HIV? Yes / No If yes, please specify:
 - MSM (men having sex with men) Yes / No
 - Born, living or have lived in high prevalence area for HIV Yes / No
 - If known, please specify where
.....
 - Commercial sex worker, not from Western Europe Yes / No
 - Injecting drug user from London, Glasgow or other high risk countries Yes / No
 - [HIV estimates with uncertainty bounds 1990-Present | UNAIDS](#)
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Risk assessment

			HIV positive		Unknown	
			Viral load detectable (≥70 IU/ml) or unknown	Viral load undetectable (<70 IU/ml for >6 months)	High risk	Low risk
Sexual Exposure	Receptive - Patient received penis into their body	Anal sex	YES	No	YES	No
		Fellatio with ejaculation*	No	No	No	No
		Fellatio, no ejaculation	No	No	No	No
		Vaginal sex	YES	No	Generally not recommended	No
	Insertive - Patient inserted his penis into another's body	Anal sex	YES	No	Consider*	No
		Fellatio	No	No	No	No
		Vaginal sex	Consider*	No	Consider*	No
	Other	Splash of semen into eye	No	No	No	No
Cunnilingus		No	No	No	No	
Other Exposure	Sharing of injecting equipment		YES	No	Generally not recommended	No
	Human bite (a bite is assumed to constitute breakage of skin with passage of blood)*		No	No	No	No
	Superficial injury with blunt instrument, with no visible blood drawn in injury		No	No	No	No
	Needlestick from a discarded needle in the community		No	No	No	No
	Bodily fluid or blood on intact skin		No	No	No	No

If "consider", discuss with DOSH or prescribe to be reviewed in DOSH at follow-up.



To be completed if PEP given

- **E. To be completed if PEP given**
 - PMH (please note any current severe renal disease – dialysis or renal transplant recipient).....
 - Current medications.....
 - Drug allergies.....
 - **Prescription of PEPSE – please refer to Paediatric drug regimens** PEP is prescribed as triple therapy, a combination of a dual nucleoside backbone (NRTI) with a third agent
 - **AGE of CHILD**
 - **WEIGHT**.....
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Medications available for PEP in the SARC drug cupboard/ fridge

Weight/ Age	PEP Recommendation	PEP alternative
>40kg and over 12 years	Raltegravir 1200mg od (2 x 600mg tablets) + Emtricitabine 200mg/tenofovir disoproxil 245mg (1 combined TRUVADA tablet)	Raltegravir 400mg bd – can be crushed TRUVADA can be crushed and dispersed in 10ml water
>6 years and between 25-40kg	Dolutegravir (50mg tablet) + lamivudine (liquid) and Ziduvudine (liquid)	Dolutegravir tablet can be crushed
<6 years and <25 kg	Dolutegravir (dispersible tablets according to weight see next page) + lamivudine (liquid) and Ziduvudine (liquid)	

Doses

DRUG	FORMULATION	DOSE	SIDE EFFECTS
<p>Raltegravir (RAL)</p> <p>NOTE: different formulations are not bioequivalent.</p> <p>Must specify formulation when prescribing; use chewable tabs for children ≥ 11kg who cannot swallow tablets</p>	<p>Tablet: 400mg, 600mg</p> <p>Chewable tablet: 25mg, 100mg (can be chewed or swallowed)</p>	<p>Tablet: ≥ 40kg 1200mg OD (2x 600mg) or 400mg BD</p> <p>Chewable tablet: 11-13kg 75 mg BD 14-19kg 100mg BD 20-27kg 150mg BD 28-39kg 200mg BD ≥ 40kg 300mg BD</p>	Rash, nausea, hepatitis
<p>Dolutegravir (DTG) NOTE: different formulations are not bioequivalent.</p> <p>Must specify formulation when prescribing</p>	<p>Tablet: 50mg, 25mg, 10mg</p> <p>Dispersible tablets for oral suspension: 5mg tabs</p>	<p>Tablet: >20kg 50mg OD 14-19kg 40 mg OD</p> <p>Dispersible tablet (≥ 4 weeks): 3-5kg 5mg OD 6-9kg 15mg OD 10-13kg 20mg OD 14-19kg 25mg OD ≥ 20kg 30mg OD</p>	Nausea, rash, sleep disturbance

Lamivudine (3TC)	Liquid: 10mg/ml	Liquid: ≥3months 5 mg/kg BD or 10mg/kg OD Max dose 300mg/day	Peripheral neuropathy, nausea, diarrhoea, headache.
Zidovudine (AZT, ZDV)	Liquid: 10mg/ml	Liquid: 4-8kg 12mg/kg BD ≥9-30kg 9mg/kg BD Max dose 300mg BD	Granulocytopenia and/or anaemia, nausea, headache, myopathy, hepatitis, neuropathy.

Doses

Drug interactions

- <http://www.hiv-druginteractions.org>

The screenshot shows the website's header with the University of Liverpool logo and navigation links. Below the header, there are promotional banners for Lenacapavir and COVID-19 therapies. The main content area is divided into three columns: HIV Drugs, Co-medications, and Drug Interactions. Each column has a search bar and a list of items with checkboxes and information icons. The Drug Interactions column currently displays a message indicating that interactions will be shown there.

HIV Drug Interactions UNIVERSITY OF LIVERPOOL Language Apps

About Us Interaction Checkers Prescribing Resources Videos Site News Contact Us Support

Interactions with Lenacapavir (Sunlenca®) now available - [click here](#) for more details

Looking for interactions with COVID-19 therapies, including Paxlovid? [Click here for covid19-druginteractions.org](#)

If a drug is not listed below it cannot automatically be assumed it is safe to coadminister

HIV Drugs **Co-medications** **Drug Interactions**

Search HIV drugs... Search co-medications... Check HIV/ HIV drug interaction

Selected HIV Drugs will be displayed here. Selected Co-medications will be displayed here. Drug Interactions will be displayed here

HIV Drugs	Co-medications	Drug Interactions
<input type="checkbox"/> Abacavir (ABC) ⓘ	<input type="checkbox"/> Abacavir (ABC) ⓘ	
<input type="checkbox"/> Albuvirtide (ABT) ⓘ	<input type="checkbox"/> Abemaciclib ⓘ	
<input type="checkbox"/> Atazanavir alone (ATV) ⓘ	<input type="checkbox"/> Abiraterone ⓘ	
<input type="checkbox"/> Atazanavir/cobicistat (ATV/c) ⓘ	<input type="checkbox"/> Acalabrutinib ⓘ	
<input type="checkbox"/> Atazanavir + ritonavir (ATV/r) ⓘ	<input type="checkbox"/> Acamprosate ⓘ	


The slide features decorative geometric shapes. On the left, there are several overlapping yellow diamonds of various sizes. On the bottom right, there are overlapping blue diamonds. The word "Bloods" is positioned to the right of the yellow diamonds.

Bloods

- Baseline Bloods for HIV (plus Hepatitis screening, and Syphilis) should be taken to ensure that the child/ young person is not already infected.
- Waiting for results should not delay starting PEP.
- FBC, U and E and LFTs should also be taken at the start of treatment
- If taking bloods at the time of the acute SARC medical is not possible it can be delayed until the time of the 1st review.



Monitoring

- A child should not be provided with a full course of PEP as they need a clinical review within 72 hours of starting medication.
 - Depending on the age of the child, and their location this follow may be either with;
 - A local sexual health clinic (generally happy to see young people 13 and over)
 - A local Paediatrician
 - Specialist HIV clinic UHW
 - Specialist advice is available either from the Cardiff Team (paediatric infectious diseases 029 20 742273) or St Mary's Hospital London – on call paediatric infectious diseases 02033126666
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Follow up

- 72 hours after starting PEP
- D 14 - monitor adherence and check FBC, U and E and LFTs
 - Should also have repeat STI swabs and pregnancy test if applicable
- D 28 – Plan to stop medications as course completed. Only repeat bloods if any previous abnormalities.
- Hep B course also to be completed (rapid course 2nd dose at 1 month, 3rd dose at 2 months). Consider booster at 12 months
- 8-10 weeks following exposure (4-6 weeks after completing PEP) repeat HIV testing + Syphilis
- Hep B and C testing to be repeated 4-8 weeks after completing the Hep B vaccination course.



Other considerations

Emergency Contraception

Pregnancy test

Hepatitis B Vaccination

STI screening and follow up plan

Wellbeing support

ISVA referral

Safeguarding

