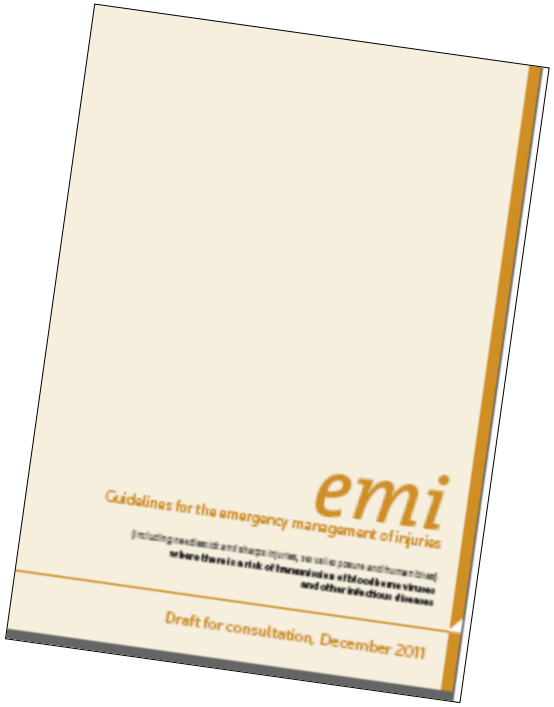
PEP in the ED

Approach to post-exposure prophylaxis after potential blood-borne virus exposure in the Emergency Department

emi

Guidelines for the emergency management of injuries

Standardised guidelines on the management of injuries (such as needlesticks, bites, sexual exposures), where there is a risk of tranmission bloodborne viruses, that could be used in all relevant settings throughout the country and based on best available evidence and expert opinion



www.emitoolkit.ie or via
www.hpsc.ie

emi

Guidelines for the emergency management of injuries

Scientific Advisory Committee of the Health Protection Surveillance Centre

Specialists from:

- Public Health Medicine
- Emergency Medicine
- Infectious Diseases
- Clinical Microbiology
- Dentistry
- Occupational Medicine
- IP and Control Nursing
- Occupational Health Physicians including an Garda Siochána

emi

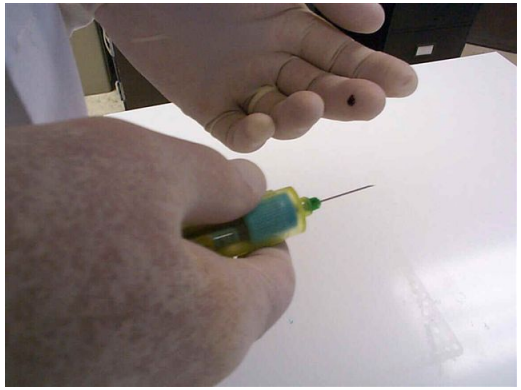
Guidelines for the emergency management of injuries

Guideline Content:

- On-line toolkit, with hyperlinks between sections/appendices
- Patient form
- Algorithms – different exposures
- BBV testing – schedules, tests and interpretation
- Background epidemiological information on HBV, HCV and HIV – for risk assessment
- Management of HBV, HCV, HIV exposure
- Sample leaflets, letters

Talk overview

- Types of injuries seen
- Initial First Aid
- Assessment of exposure
- Investigations
- PEP
- Precautions
- Follow-up



Types of injuries seen in ED

- Occupational blood or body fluid exposure
- Community NSI
- Sexual exposure
- Human bites
- Exposure of mucous membrane or non-intact skin


Prevention is better than cure
DemotivationalPost.com

Prevention of NSI in the ED

- Training and education
- Vaccination program, and knowledge of own HepB vaccination status
- Adequate sharps containers
- Engineering systems – e.g. retracting needles
- Minimise use of needles
- Avoidance of recapping needles
- Use of needleless systems
- Assume all patients are high risk- PPE – goggles, masks, gloves, gowns
- Avoidance of high risk procedures when tired, stressed, unwell or rushed

Initial First Aid following NSI

- Encourage the wound to bleed
- Avoid sucking the wound
- Immediate skin exposures should be washed with warm running water and soap
- Mucous membranes should be flushed with copious amounts of water
- Eyes should be irrigated with saline or water after removal of contact lenses

SAMPLE PROFORMA

Post Exposure Prophylaxis Proforma

1 Patient details

Patient name	Contact telephone
MRN	DOB

2 Medical history

Past medical history

Medication	Drug allergy

3 Time of exposure

Today's date and time

Exposure occurred date and time	Hours since exposure

4 Patient baseline risk

	Yes:	No:	Additional details:
Previous HIV test	☐	☐	
Born in country high prevalence HIV	☐	☐	
History of IVDU	☐	☐	
History of MSM	☐	☐	
History of known bisexual partner (if female)	☐	☐	
History of needle stick injury	☐	☐	
History of blood transfusion	☐	☐	
History of previous PEP	☐	☐	

5 Exposure type

Injury:	Tick:			Tick:			Tick:			Tick:
Needle stick injury	☐	→	Solid needle	☐	→	Visible blood	☐			
			Hollow needle	☐		No visible blood	☐			
Human bite	☐	→	Superficial	☐	→	Visible blood	☐			
			Deep	☐		No visible blood	☐			
Splash	☐	→	Saliva, tears, sweat, urine, faeces	☐	→	Intact skin	☐	→	Small volume	☐
						Mucous membrane	☐		Large volume	☐
			Blood, CSF, synovial, pleural, peritoneal, pericardial, amnionic fluid, semen, vaginal secretion	☐		Non intact skin	☐	→	Small volume	☐
									Large volume	☐
Other	☐	→	If other, please specify:							

6 Source person status

HIV status:	Tick:		Risk group:	Tick:
Unknown	☐	→	Low risk	☐
			High risk (e.g. IVDU, MSM, CSW, COHP)	☐
HIV negative	☐	→	Self report	☐
			Date of test:	
HIV positive	☐	→	Attends GUIDE clinic	☐
			On ART	☐

8 PEP prescribed

PEP for HIV:	Tick:
PEP not prescribed	☐
2 drug PEP: *Truvada* 1 od	☐
3 drug PEP: *Truvada* 1 od + *Kaletra* 2 bd	☐
If other, please specify drug and indication	

→ **If known HIV positive source, discuss with HIV consultant on call.**

7 Checklist

Baseline tests:	Tick:		Tick:
HIV, Hep. B sAg, Hep. C Ab, Syphilis	☐	Emergency contraception if indicated	☐
		Tetanus if indicated	☐
FBC, U&E, LFT's, ALT, Bone profile	☐	Hep. B vaccination stat (unless known Hep. B sAb > 100)	☐
Urine dipstick for protein	☐	Indication for IV IgG? (see protocol)	☐
Pregnancy test, if female	☐	Advised of condom use and window period	☐

9 Follow up

Refer to:	Tick:
General practitioner	☐
Occupational Health Department	☐
Local HIV services	☐

10 Additional Information

Comment:

11 Authorization

Date:	Designation: (Consultant, Registrar, SHO)	Signature:

SAMPLE PROFORMA

Post Exposure Prophylaxis following Sexual Exposure

1 Patient details

Patient name	Contact telephone
MRN	DOB

2 Medical history

Past medical history

Medication	Drug allergy

3 Time of exposure

Today's date and time

Exposure occurred date and time	Hours since exposure

4 Patient baseline risk

	Yes:	No:	Additional details:
Previous HIV test	☐	☐	
Born in country high prevalence HIV	☐	☐	
History of IVDU	☐	☐	
History of MSM	☐	☐	
History of known bisexual partner (if female)	☐	☐	
History of needle stick injury	☐	☐	
History of blood transfusion	☐	☐	
History of previous PEP	☐	☐	

5 Exposure type

	Condom used		Condom intact		Ejaculation		
	Yes:	No:	Yes:	No:	Yes:	No:	Additional information/ Other perceived risk:
Receptive anal	☐	☐	☐	☐	☐	☐	
Insertive anal	☐	☐	☐	☐	☐	☐	
Receptive oral	☐	☐	☐	☐	☐	☐	
Insertive oral	☐	☐	☐	☐	☐	☐	
Receptive vaginal	☐	☐	☐	☐	☐	☐	
Insertive vaginal	☐	☐	☐	☐	☐	☐	

	Yes:	No:		Yes:	No:
Sexual assault	☐	☐	→ Has social worker been contacted?	☐	☐
			→ Has patient been referred to sexual assault unit?	☐	☐

6 Source person status

HIV status:	Tick:		Risk group:	Tick:
Unknown	☐	→	Low risk	☐
			High risk (e.g. IVDU, MSM, CSW, COHP)	☐
HIV negative	☐	→	Self report	☐
			Date of test:	
HIV positive	☐	→	Attends GUIDE clinic	☐
			On ART	☐

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Urine dipstick for protein	☐	Indication for IV IgG? (see protocol)	☐
Pregnancy test, if female	☐	Advised of condom use and window period	☐

9 Follow up

Refer to:	Tick:
General practitioner	☐
Occupational Health Department	☐
Local HIV Clinic	☐

10 Additional Information

Comment:

11 Authorization

Date:	Designation: (Consultant, Registrar, SHO)	Signature:

Risk Assessment

Significant Exposure =

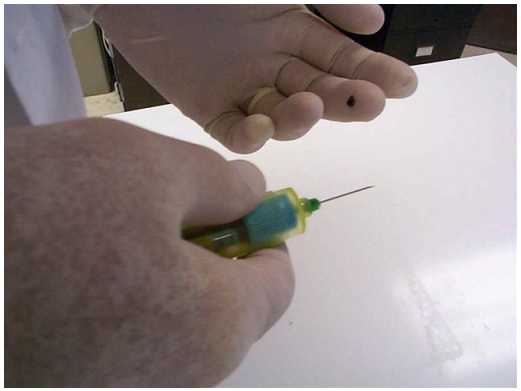
significant injury

plus

high risk material

Significant Exposure

- Percutaneous injuries
- Human bites which breach the epidermis
- Exposure of broken skin to blood or bodily fluids
- Exposure of mucous membranes (incl eye) to blood or bodily fluids
- Sexual exposure



Risk assessment of material

- High risk
  - Blood, bodily fluids containing visible blood, semen and vaginal secretions
- Unknown risk
  - CSF, synovial fluid, pleural fluid, peritoneal fluid, pericardial fluid, amniotic fluid
- Low risk
  - Faeces, urine, vomitus, nasal secretions, saliva*, sputum, sweat, tears

Investigation of Known Source

- Ask if they are known to be infected with HBV, HCV, HIV
- Ask if they have risk factors for BBVs
  - IDU, CSW, MSM, born in endemic country, sexual partner with risk factor
- If BBV status unknown, seek consent for testing
  - HBsAg (if +, then HBeAg, anti-HBe and HBV viral load)
  - anti-HCV (if +, then a HCV RNA test and viral load if RNA+)
  - HIV Ag/Ab (if +, then HIV viral load)

Testing Schedule

BBV testing of recipient where a significant exposure has occurred		
Time of test	**Status of source**	
	1. BBV status unknown OR 2. Negative but high-risk OR 3. Positive for HBV, HCV or HIV	**Negative for HBV, HCV and HIV AND not high-risk**
Baseline*	HBsAg† Anti-HBc Anti-HCV HIV Ag/Ab	Testing of recipient not required
6 weeks	HBsAg† Anti-HCV HCV Ag or RNA HIV Ag/Ab	
3 months	HBsAg† Anti-HCV HCV Ag or RNA HIV Ag/Ab‡	

*Recipient to be given option of testing now, or retaining blood for possible testing later

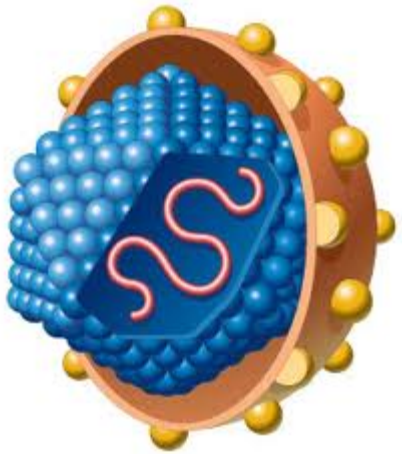
† If recipient documented to have an adequate response to HBV vaccine, it is not necessary to test for HBsAg

‡ If HIV PEP is taken by the recipient, the final HIV Ag/Ab test should be at 3 months from completion of PEP instead of 3 months after the exposure

Assessment of Recipient

- Obtain details of HBV immunisation status if possible
- Ask if they know their infectious status in relation to HBV, HCV, HIV
- Obtain consent for testing:
  - HBsAg, anti-HBc
  - Anti-HCV
  - HIV Ag/Ab

Hepatitis C Virus

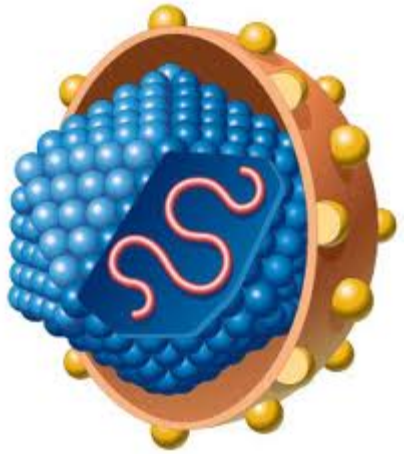


- Prevalence in Ireland
  - 0.5-1.2% chronic HCV infection
  - Estimated at 62-81% anti-HCV in IDUs
  - anti-HCV 37% of prisoners, 81.3% of IDU prisoners

- Transmission Risks:
  - Following a significant risk: 1.8% (0-7%)
  - NSI in community setting: if local IDU population has seroprevalence of 50-90%, estimated transmission risk is 1.62%
  - Low rate of transmission between discordant heterosexual partners: prevalence anti-HCV 2-6% in non-index partner

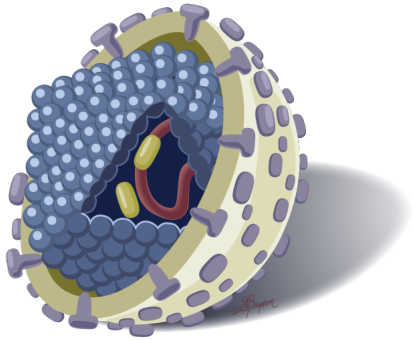
- Increase risk of transmission with co-infection with HIV, hollow needle, deep injuries, high viral load

Hepatitis C Virus



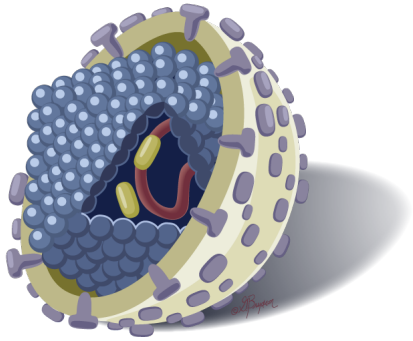
- No proven effective PEP for persons exposed to HCV blood or contaminated body fluids.
- Immunoglobulin (Ig) and antiviral agents are not recommended for PEP
- PEP with interferon has not been demonstrated to reduce the rate of infection and interferon is associated with many side effects
- When HCV transmission is identified early, the individual should be referred to a specialist knowledgeable in the management of acute HCV infection, since early treatment is associated with excellent cure rates.

Hepatitis B Virus



- Prevalence in Ireland (anti HBc%)
  - General population: 1.7% 2003,
  - Antenatal patients: 4.2% in non-EU women, 0.03% in Irish, 2000
  - Prisoners 8.7%, IDU prisoners 18.7%
  - Homeless: 9% 2000
  - Increase 30% 2008 - 2010

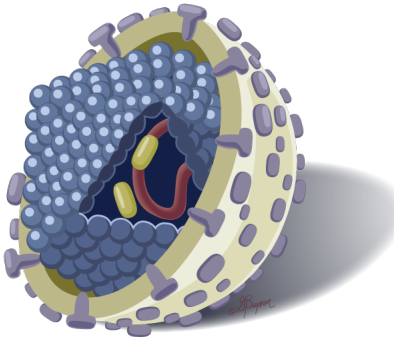
Hepatitis B Virus



- Transmission Risks
  - NSI from source with HBeAg+: 37-62% risk of serological infection
  - NSI from source with HBeAg-: 23-37% risk of serological infection
  - NSI in community setting: if local IDU population has seroprevalvence of 50%, estimated transmission risk is 12-31%
  - Case reports of HBV virus transmission via human bites, butchers knives, barbers wounds, dentists, community NSI

- Ìncreased Transmission with
  - High viral load of source, Presence of e antigen
  - Sexual exposures: type of exposure, viral load of source, presence of STIs, MSM

Hepatitis B Vaccination



- Pre- and post-exposure prophylaxis with HBV Vaccine
- Usual schedule 0,1,6 months
- Accelerated schedule 0,1,2 mo or 0,7,21 day plus 12mo
- 10-15% of adults fail to respond or have a poor response to 3 doses of vaccine
- Low threshold for administering HBV vaccine
- HBV vaccine is highly effective in preventing acute infection after exposure if given within 7 days and preferably within 48 hours
- If recipient is a documented responder to vaccine (anti-HBs ≥10 mIU/ml) – no need for test or vaccine

Hepatitis B Immunoglobulin

- Carries theoretical risk of infection as derived from human plasma
- HBIG is available for short-term passive protection and used with HBV vaccination
- Only indicated where the source is known HBsAg positive, or where the recipient is a known non-responder to HBV vaccine and the source is known to be high risk
- HBIG should ideally be given within 48 hours but not later than 7 days after exposure

Hepatitis B Management

Recipient vaccination status	**Recipient unvaccinated against HBV**	**Recipient not fully vaccinated against HBV (<3 doses)**	**Recipient fully vaccinated against HBV but anti-HBs unknown[4]**	**Recipient documented non-responder to HBV vaccine**	**Recipient known responder to HBV vaccine, ie anti-HBs≥10 mIU/ml**
Source known to be HBsAg positive	Give HBIG Start accelerated HBV vaccine course	Give HBV vaccine dose **Test recipient** anti-HBs urgently Consider HBIG if <10 mIU/mL (Urgent consult to ID/GUM specialist) Recommend vaccination be completed	Give HBV vaccine dose **Test recipient** anti-HBs urgently Consider HBIG if <0 mIU/ml (Urgent consult to ID/GUM specialist)	Give HBIG plus HBV vaccine dose Urgent ID/GUM referral for alternative vaccination strategy	No need for further vaccine dose
Source HBV status unknown but potential high risk, ie from country of high or intermediate prevalence[3]	**Make every effort to test source** Start accelerated HBV vaccine course Recommend vaccination be completed	**Make every effort to test source** Give HBV vaccine dose Recommend vaccination be completed	**Make every effort to test source** Give HBV vaccine dose	**Make every effort to test source** Give HBV vaccine dose Consider HBIG (Urgent consult to ID/GUM specialist) Urgent ID/GUM referral for alternative vaccination strategy	No need for further vaccine dose
Source HBV status unknown - no high risk features, ie normal population risk[5]	Start accelerated HBV vaccine course Recommend vaccination be completed	Give HBV vaccine dose Recommend vaccination be completed	Give HBV vaccine dose	**Make every effort to test source**, Give HBV vaccine dose Urgent ID/GUM referral for alternative vaccination strategy	No need for further vaccine dose
Source HBsAg negative	Routine (opportunistic) HBV vaccination course	Routine (opportunistic) HBV vaccination course	No need for further vaccine dose	Routine ID/GUM referral for alternative vaccination strategy	No need for further vaccine dose

Hepatitis B Management

Recipient vaccination status	Recipient unvaccinated against HBV	Recipient not fully vaccinated against HBV (<3 doses)	Recipient fully vaccinated against HBV but anti-HBs unknown[4]	Recipient documented non-responder to HBV vaccine	Recipient known responder to HBV vaccine, ie anti-HBs≥10 mIU/ml
Source known to be HBsAg positive	Give HBIG[1] Start accelerated[2] HBV vaccine course	Give HBV vaccine dose **Test recipient** anti-HBs urgently Consider HBIG[1] if <10 mIU/mL (Urgent consult to ID/GUM specialist) Recommend vaccination be completed	Give HBV vaccine dose **Test recipient** anti-HBs urgently Consider HBIG[1] if <10 mIU/ml (Urgent consult to ID/GUM specialist)	Give HBIG[1] plus HBV vaccine dose Urgent ID/GUM referral for alternative vaccination strategy	No need for further vaccine dose
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Source HBV status unknown - no high risk features, ie normal population risk[5]	Start accelerated[2] HBV vaccine course Recommend vaccination be completed	Give HBV vaccine dose Recommend vaccination be completed	Give HBV vaccine dose	**Make every effort to test source**, Give HBV vaccine dose Urgent ID/GUM referral for alternative vaccination strategy	No need for further vaccine dose
Source HBsAg negative	Routine (opportunistic) HBV vaccination course	Routine (opportunistic) HBV vaccination course	No need for further vaccine dose	Routine ID/GUM referral for alternative vaccination strategy	No need for further vaccine dose

GUIDELINE

UK guideline for the use of post-exposure prophylaxis for HIV following sexual exposure (2011)

P Benn MBChB FRCP*, **M Fisher** MBBS FRCP† and **R Kulasegaram** LRCP MRCS FRCP‡, **on behalf of the BASHH§ PEPSE Guidelines Writing Group Clinical Effectiveness Group**

*Camden Provider Services, Central and North West London NHS Foundation Trust, London; †Department of HIV/Genitourinary Medicine, Brighton and Sussex University Hospitals NHS Trust, Brighton; ‡Department of Genitourinary Medicine, Guy's and St Thomas' NHS Foundation Trust, London; §British Association for Sexual Health and HIV, London, UK

Summary: We present the updated British Association for Sexual Health and HIV (BASHH) guidelines for post-exposure prophylaxis (PEPSE) to HIV. This document includes a review of the current data to support the use of PEPSE, considers how to calculate the risks of infection after a potential exposure, and provides recommendations on when PEPSE would and would not be considered. We review which agents to use for PEPSE including the potential for drug-drug interactions and make recommendations for monitoring individuals receiving PEPSE. Other areas included are the possible impact on sexual behaviour, cost-effectiveness and issues relating to service provision. Throughout the document, consideration is given to the place of PEPSE within the broader context of HIV prevention strategies and sexual health.

Keywords: post-exposure prophylaxis (PEP), sexual exposure, HIV, antiretroviral therapy, BASHH guidelines

INTRODUCTION AND METHODOLOGY

Scope and purpose

The main objective is to ensure the appropriate use of post-exposure prophylaxis (PEP) following potential sexual exposure (PEPSE) to HIV as a potential method of preventing HIV infection.

This guideline offers recommendations on the potential use of PEPSE, the circumstances in which it may be recommended, the treatment regimens that may be recommended and the appropriate use of subsequent diagnostic tests to measure individual outcomes. This guideline is intended to be complementary to the existing Department of Health (DH)/Expert Advisory Group on AIDS (EAGA) guidance on PEP.[1]

It is aimed primarily at clinicians and policy-makers in sexual health, sexual assault referral centres (SARCs), and primary and emergency care within the UK who should consider the development of appropriate local pathways. It is likely that this guideline will be used by voluntary sector agencies in providing information for individuals who may potentially be exposed to HIV during sexual activity.

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BASHH PEPSE Guidelines Writing Group: Yusef Azad (representing NAT); Valerie Delpech, HIV and STI Department, Centre for Infections, HPA; Julie Fox, Consultant in GU Medicine, Guy's and St Thomas' NHS Foundation Trust; James Hardie, Health Adviser, Chelsea and Westminster Hospital (representing SSHA); David Hawkins, Consultant in GU Medicine, Chelsea and Westminster Hospital; Barbara Hedge, Consultant Clinical Psychologist (representing British Psychological Society); Keith Radcliffe, Consultant in GU Medicine, Whittall Street Clinic, Birmingham (representing Expert Advisory Group on AIDS); Claire Richardson, Pharmacist, Brighton and Sussex University Hospitals NHS Trust (representing HIVPA); Stephen Taylor, Consultant in Sexual Health and HIV Medicine, Birmingham Heartlands Hospital, Consultant Adviser to HM Armed Forces.

Membership of the CEG: Dr Keith Radcliffe (Chair) (BASHH), Dr David Daniels (BASHH NAG), Dr Mark FitzGerald (BASHH), Dr Margaret Kingston (BASHH), Dr Neil Lazaro (RCGP), Dr Gill McCarthy (BASHH) and Dr Ann Sullivan (BASHH).

Stakeholder involvement

The development of this guideline included a writing group with representatives from the British Association for Sexual Health and HIV (BASHH), British HIV Association (BHIVA), EAGA, Society of Sexual Health Advisers (SSHA), HIV Pharmacy Association (HIVPA), Health Protection Agency (HPA), the HIV and Sexual Health Group of the British Psychological Association, the Terrence Higgins Trust (THT) and the National AIDS Trust (NAT). Patients' perspectives were considered by involvement of THT, NAT and discussion at a stakeholder group organized by THT and the

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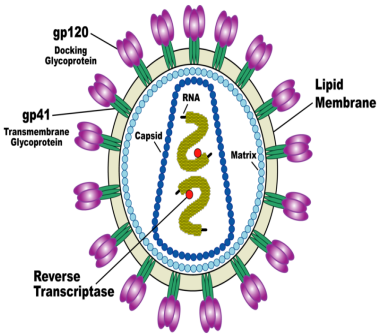
HIV

- Risk of transmission =
  Risk that the source is HIV+ **x** Risk of the exposure

- Risk of exposure increases with high viral load
- Risk of sexual exposure increases with STIs, high viral load, bleeding, if ejaculation occurs

HIV



Risk Type	**Risk the person is HIV +** (irish figures)	**Risk of the exposure**	**Overall risk of HIV**
Receptive anal sex MSM	MSM community HIV prev 10%: 0.1 x	1.11%=0.111%	1/900, 1/90 if known HIV+
Insertive anal sex MSM	MSM community HIV prev 10%: 0.1 x	0.06%=0.006%	1/16,666, or 1/1667 if known HIV+
Receptive oral sex MSM	MSM community HIV prev 10%: 0.1 x	0.02%=0.002%	1/50,000, or 1/5000 if known HIV+
Receptive vaginal sex heterosexual sex	Hetero community HIV prev 1.5%: 0.015 x	0.1%=0.0015%	1/66,666, or 1/1000 if known HIV+
NSI from unknown non high risk hospital pt	Hetero community HIV prev 1.5%: 0.015 x	0.3%=0.0045%	1/22,222, or 1/333 if known HIV+
NSI from community source	IDU preval of HIV approx 10%: 0.1 x	0.3%=0.03%	1/3,333 or 1/333 if known HIV+

BASHH Guidelines 2011 recommend that HIV PEP is only offered when the risk is estimated to be >1/1000

All cases are considered individually

Does HIV PEP Work?

- Retrospective case-controlled study among heathcare workers with occupational exposure showed a 28 day course of zidovudine was protective (OR 0.19; 95% CI 0.06-0.52%)
- There are at least 24 cases where PEP (mainly zidovudine monotherapy) failed to prevent HIV following occupational exposure
- No human evidence to support additional benefit for the use of combination ART for PEP
- No prospective RCTs in PEPSE
- 2 observational studies in Brazil (MSM, women post sexual assault) demonstrated fewer HIV seroconversions amongst PEPSE versus non treated

Factors reducing the efficacy of PEP

- Delayed initiation
  - Commence ASAP but not after 72hrs
- Presence of resistant virus in source
  - Antiretroviral resistance 8%
- Different penetration of drugs into tissue compartments
  - Compartmentalisation of HIV despite optimal viral suppression within the blood may result in differential virus evolution or evolution of resistance
- Poor / non-adherence
- Further high risk sexual exposures

Situations when PEP is considered

adapted from BASHH Guideline 2011

	Source HIV status			
	HIV-positive		Unknown from high prevalence group/area (MSM, IDU,COHP)	Unknown from low prevalence group/area
	Viral load detectable	Viral load undetectable		
Receptive anal sex	Recommend	Recommend	Recommend	Not recommended
Insertive anal sex	Recommend	Not recommended	Consider	Not recommended
Receptive vaginal sex	Recommend	Not recommended	Consider	Not recommended
Insertive vaginal sex	Recommend	Not recommended	Consider	Not recommended
Fellatio with ejaculation	Consider	Not recommended	Not recommended	Not recommended
Fellatio without ejaculation	Not recommended	Not recommended	Not recommended	Not recommended
Splash of semen into eye	Consider	Not recommended	Not recommended	Not recommended
Cunnilingus	Not recommended	Not recommended	Not recommended	Not recommended
Sharing of injecting equipment	Recommend	Not recommended	Consider	Not recommended
Human bite	Consider*	Not recommended	Not recommended	Not recommended
Needlestick from a discarded needle in the community			Consider in very limited circumstance*	Not recommended
Needlestick direct from source	Recommend	Not recommended	Consider	Not recommended
Blood splash to non-intact skin, eye or mouth	Consider	Not recommended	Not recommended	Not recommended

Counselling

- If the risk of HIV is estimated to be high and PEP is being considered, the recipient should receive counselling on the risks and benefits of PEP:
  - The estimated HIV risk.
  - The potentially serious adverse reactions to PEP which must be balanced against the risk of HIV infection.
  - Possible requirement to advise insurance policy of a positive test result
  - The benefits of early identification versus the implications of a positive result.
  - The window period

Baseline investigations prior to prescribing PEP

HIV testing	HIV Ag/Ab	
Hepatitis	HBsAg, anti-HBc, anti HCV	
Safety bloods	FBC, U&E, LFTs, Bone profile	Must be reviewed prior to discharge home
Pregnancy test	Urine strip	
Urinalysis	Dipstick for proteinuria	
Syphilis	If sexual exposure	

Standard treatment regimen

- Truvada® (tenofovir/emtricitabine) one tablet daily, plus Kaletra® (lopinavir/ritonavir) four tablets once daily
- The tablets should be taken with food as this improves tenofovir absorption and may reduce nausea.
- Treatment duration is 4 weeks.
- A starter pack (3-5 days) of medication only should be provided in emergency care.
- It is important that the patient not miss any dose.
- If the source is known to be HIV positive and on antiretroviral drugs, discuss with ID/HIV specialist. If not contactable, commence standard regimen and ensure follow up with ID/HIV specialist urgently.

Side effects

- GI side effects are common and may be relieved by domperidone and/or loperamide
- Headache is common
- Severe side effects are uncommon, but include renal impairment and hepatotoxicity.
- Long-term Truvada therapy may cause proximal renal tubular dysfuntion but this has yet to be reported in the setting of PEP
- A leaflet explaining the contents of the pack, the possible side effects and brief advice on how to deal with them should be provided for future reference by the patient

Special Prescribing Situations

- Renal impairment: Give first dose of Truvada® and discuss with ID/HIV specialist. Kaletra® can be given
- Pregnancy: If indicated, commence same PEP. Ensure urgent specialist follow up.
- Breastfeeding is generally not recommended
- Patients unable to tolerate 3-drug PEP: In exceptional circumstances the regimen can be switched to Truvada® alone after discussion with an ID/ HIV specialist.
- Antiretroviral medications may have potentially serious drug-drug or drug-disease interactions

- Kaletra may reduce effectiveness of OCP

Prescribing HIV PEP

- Only start PEP within 72 hours of the risk event
- The first dose of PEP should be given as soon as possible. It is not necessary to wait for blood results
- PEP should be discontinued immediately if a HIV test on the source is found to be negative, unless the source is at high risk of recent infection
- Antiretrovirals are unlicensed in Ireland for the PEP indication
  - However there are no licensed alternatives and they are widely used internationally and accepted as best practice.

Precautions

- Advise the recipient to adopt safe sex practices (ie use condoms) for 3 months, when most HIV-infected persons are expected to seroconvert
- Refrain from donating blood, plasma, organs, tissue, or semen. The usual duration is two months

Post Sexual Exposure

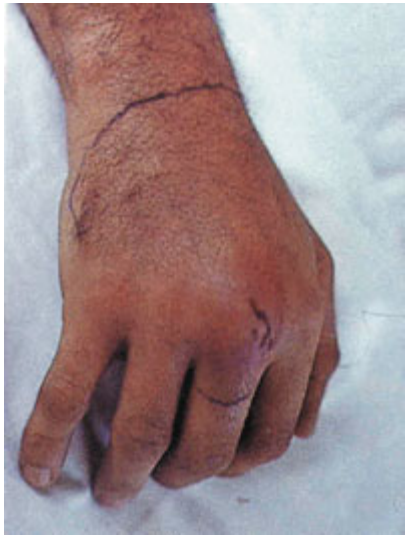
- Prescription of emergency contraception
- Full STI screen at appropriate sexual health clinic
- Facilitate reporting to Gardai/Police
- Appropriate SATU follow-up if indicated

Follow-up

- A recipient started on HIV PEP should be monitored by a clinician specialising in HIV treatment or a clinician with significant experience in managing HIV PEP.
- An urgent referral should be made to ensure that this visit takes place before the starter pack runs out. A Patient Management Form can serve as a referral form for the specialist clinic
- Patients who are not prescribed PEP should be followed up by their GP
- Follow-up arrangements should be recorded in the patient's notes

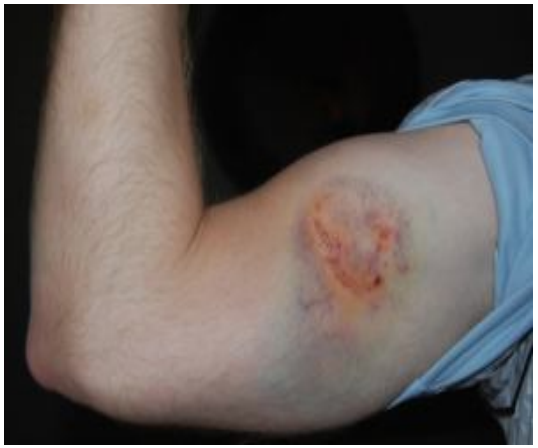
Human bite wounds

- Approximately 10-18% develop infection – mainly bacterial
- Clenched-fist injury ("fight bite") considered the most serious
- **Risk of transmission of BBV is low**
- Only a few isolated case reports in literature of transmission of BBVs
- Only considered a risk if deep tissue injury, biter bleeding from mouth, known to have BBV infection



Management of Bites

- HBV vaccine ± HBIG, v. rarely HIV PEP
- Fight bites may need formal washout in OT
- ± Tetanus PEP
- Evidence for antibiotic use is lacking but would support use in bites involving extremities, cartilaginous structures, face, puncture wounds and high risk patients



Summary

- Prevention is better than cure!
- Basic first aid should be the first step
- Then assess whether the Exposure is significant
  - This requires both significant injury **and** high risk material
- Use the available algorithms for decisions around different exposures and BBV testing
- Patients should be counselled about risks and treatment, and informed about follow-up arrangements and precautions needed
- Documentation needs to be comprehensive
- All patients who are prescribed PEP should be followed up by an ID Specialist
- The main risk from human bite wounds is that of bacterial infection


IF IN DOUBT ...
ASK!