Clinical education:

HIV prevention strategies U=U, PrEP and PEP

Dr Melanie Bissessor, March 2021

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Learning Objectives

- Describe different HIV prevention strategies
- Utilise relevant clinical tools to prescribe PrEP and PEP
- Provide patient education on the effectiveness and appropriate use of PrEP/PEP

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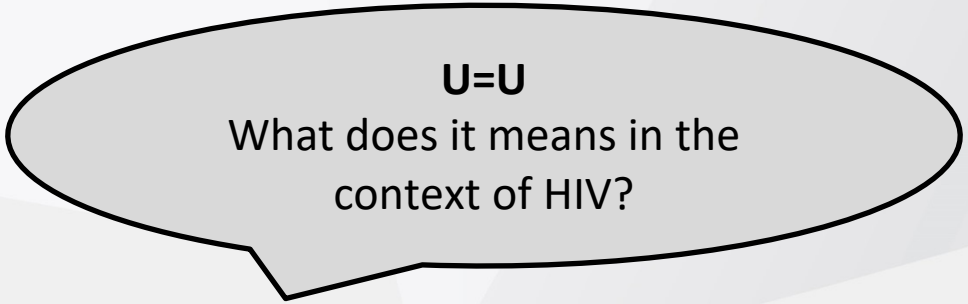
Treatment as Prevention



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U=U – The research

HPTN-052 study
(Cohen et al, 2016)

PARTNER 1 study
(Rodger et al, 2016)

Opposites Attract study
(Bavinton et al, 2018)

PARTNER 2 study
(Rodger et al, 2018)

These studies provide **ROBUST** evidence

If people:

- Take daily ART as prescribed
- Achieve and maintain an **UNDETABLE VIRAL LOAD**

NO RISK of sexually transmitting the virus to an HIV-negative partner.

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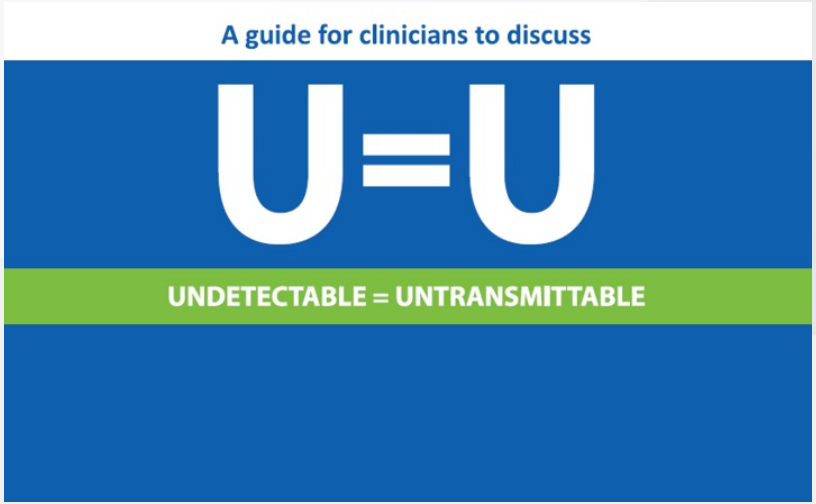
Undetectable = Untransmittable:
A guide for clinicians to discuss U=U



https://ashm.org.au/resources/hiv-resources-list/UequalsU/

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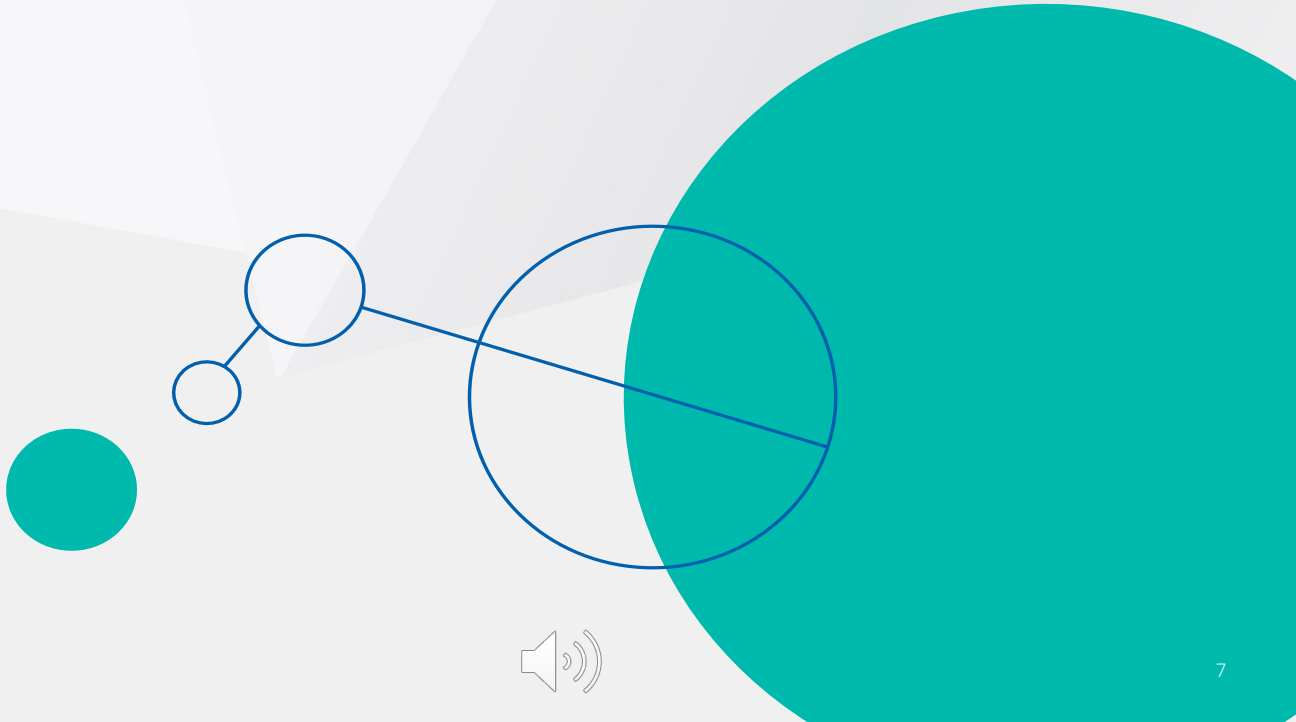
Prevention strategies

HIV medication currently used as prevention as follows:

- **TasP** = Treatment as Prevention
- Use of antiretroviral agent by HIV positive person to prevent ongoing transmission
- **PrEP** = pre-exposure prophylaxis
- Use of antiretroviral agent by HIV negative person **pre** a high-risk encounter to reduce acquisition
- **PEP** = Post-exposure prophylaxis
- Use of antiretroviral agent by HIV negative person **post** a high-risk encounter to reduce acquisition

Pre exposure prophylaxis (PrEP)



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Pre exposure prophylaxis (PrEP)

- Pre-exposure prophylaxis (PrEP) involves the use of **antiretroviral drugs** by HIV uninfected individuals to **reduce HIV acquisition risk**.
- Effective in preventing sexual transmission of HIV in high risk groups
- Listed on the PBS in April 2018
- Truvada has the most evidence base
- Generic alternatives available now

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Efficacy of oral daily PrEP

"Optimal or Consistent Use"
(Taking PrEP daily or at least 4 times per week)

Population	Effectiveness Estimate	Source
Men who have sex with men (MSM)	~99%	Grant, 2014 Liu, 2015 McCormack, 2015 Volk, 2015 Marcus, 2017
Heterosexual Men and Women	~99%	N/A
Persons Who Inject Drugs (PWIDs)	74 – 84%	Choopanya, 2013 Martin, 2015

https://www.cdc.gov/hiv/risk/estimates/preventionstrategies.html

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Adherence is a key determinant of PrEP trial outcome

- Pharmacokinetic analysis of data from the iPrEX trial showed HIV-1 risk reduction of:

  76% for 2 doses per week,

  96% for 4 doses per week,

  99% for 7 doses per week

Anderson et al. Sci Transl Med 2012, 4(151):151ra125.

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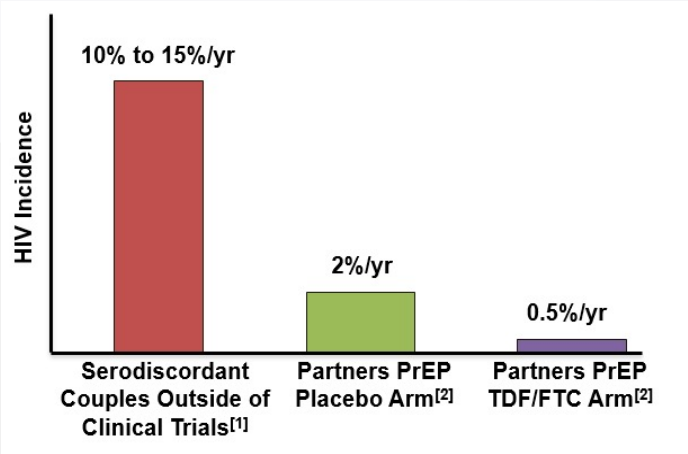
PrEP works together with other HIV prevention strategies

Example from Partners PrEP Study: package of HIV prevention services, including ongoing risk-reduction counseling, HIV testing, ART, treatment of STIs, and other strategies *plus* PrEP synergize to maximally reduce HIV risk



1. Quinn TC, et al. N Engl J Med. 2000;342:921-929. 2. Baeten JM, et al. N Engl J Med. 2012;367:399-410.

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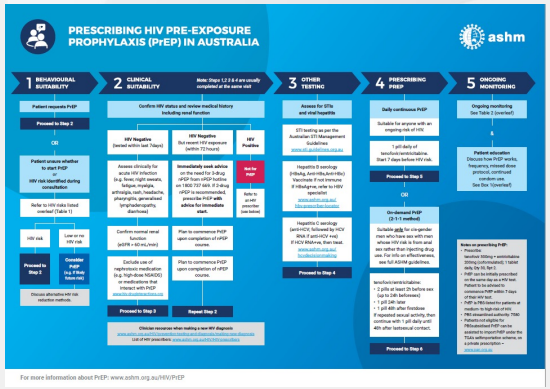
Prescribing PrEP

- Your clinical tools:
- ASHM Decision Making in PrEP

- ASHM PrEP Guidelines



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Prescribing PrEP in Clinical Practice

Prescribing PrEP:

- Listed as a s85 drug
- Any GP can prescribe
- Follow these five steps

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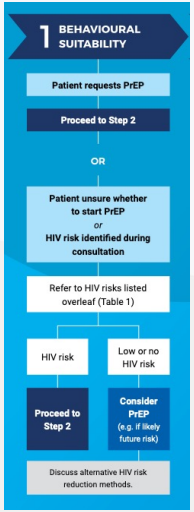
1. Behavioural Suitability



Determined by:

- If patients REQUESTS PrEP

OR

- Patient UNSURE whether to start PrEP
- Clinician INDENTIFIES PrEP indicated during consult

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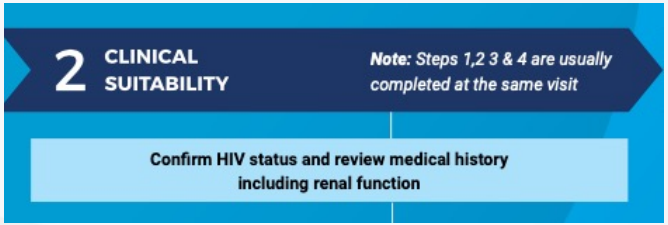
2. Clinical Suitability



Determined by:

- Confirm HIV negative (and any recent HIV risk exposure)
- Confirm normal renal function (eGFR > 60 mL/min)

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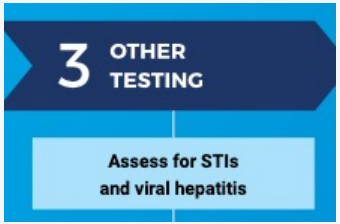
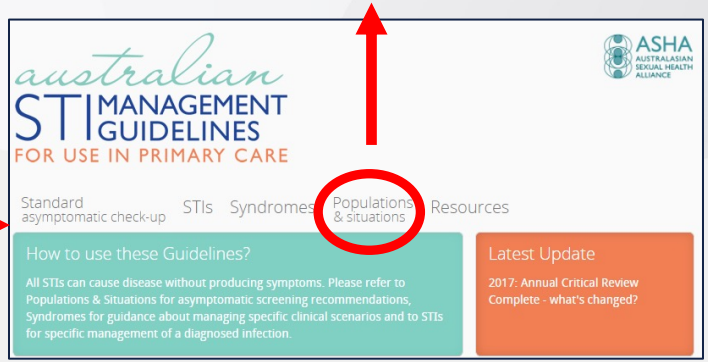
3. Other Testing



This section outlines testing recommendations for certain populations and situations

Determined by:

Use these guidelines and other tests listed in tool



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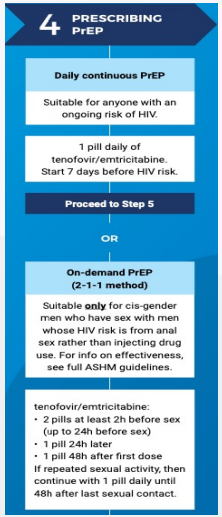
4. Prescribing PrEP



Determined by:

- If patient has ongoing risk or episodic risks/pre-planned risks

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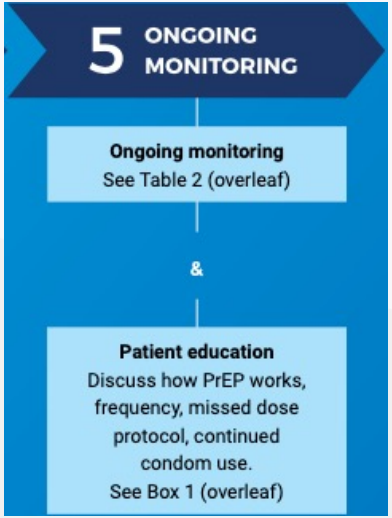
5. Ongoing Monitoring



Test
HIV testing and assessment for signs or symptoms of acute infection
Assess side effects
Hepatitis A serology, Vaccinate if non-immune
Hepatitis B serology Vaccinate if non-immune
Hepatitis C serology
STI (i.e. syphilis, gonorrhoea, chlamydia) as per Australian STI Management Guidelines *
eGFR at 3 months and then every 6 months
Urine protein creatinine ratio (PCR) baseline
Pregnancy test (for women of child-bearing age)

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On-demand PrEP (emerging data)

- Option if exposure only for short periods of time (e.g. during travel), or irregular
- Data on the efficacy of non-daily PrEP dosing are available only for MSM and transgender women, and only from a single randomised, placebo-controlled trial.
- IPERGAY and its open-label extension IPERGAY OLE.
    - Efficacy of an on-demand regimen comprising two pills of TDF/FTC (versus placebo) taken 2–24 hours before potential sexual exposure to HIV, followed by one pill daily until 48 hours had passed after the last act of sexual intercourse.
    - If sex resumed within a week, a single, rather than a double, dose before sex was recommended.
    - If sexual activity resumed > a week later, the loading dose schedule (two tablets) was recommenced, followed by one pill daily until 48 hours had passed after the last act of sexual intercourse.
    - The incidence of HIV was high in the placebo group, and a risk reduction of 86% and 97% was reported in the randomised and open-label phases, respectively

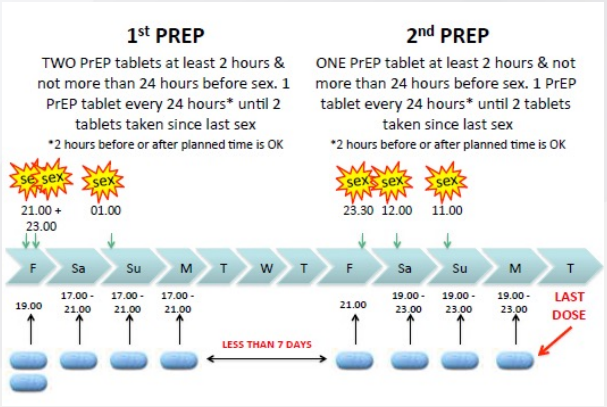
PrEP regimens

1 BEHAVIOURAL ELIGIBILITY → 2 CLINICAL ELIGIBILITY → 3 OTHER TESTING → 4 PRESCRIBING PrEP

<u>On-demand PrEP</u>

This regimen is suitable for MSM who:

- Have a preference for this regimen
- Have at-risk sex less than twice per week
- Can predict when they may have at-risk sex or can delay at-risk sex for 2 hours.
- MSM who may have infrequent risk
- No clear evidence of reduced side-effects but may be of use in those who do experience toxicity.



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Newer PrEP approaches

Topical

Long term injectable

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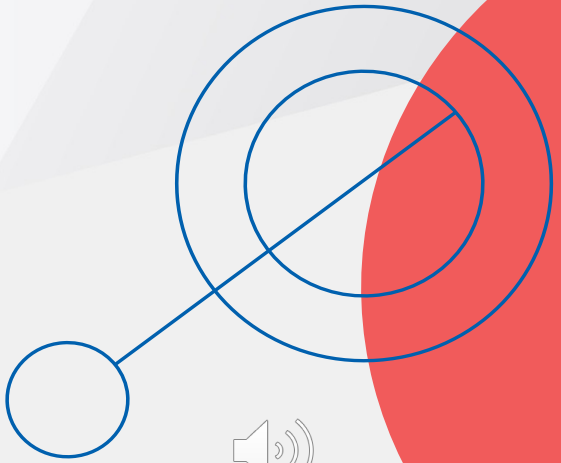
Post-Exposure Prophylaxis (PEP)



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PEP Key Facts

- Use of antiretroviral drugs AFTER exposure to reduce the likelihood of HIV infection
- Evidence: no RCT. Based on animal data, case control, occupational exposure, MTCT prevention data
- 28-day course
- < 72 hours post-exposure (preferably as soon as possible)
- Not PBS-listed, hence only available from NPEP services
- BUT PrEP guidelines advise a process for rapid start of PrEP in case of recent exposure, which is essentially NPEP.
- http://www.pep.guidelines.org.au/:
  - National guidelines on Non-occupational exposure (NPEP) and Occupational exposure
  - Links to State and Territory guidelines
  - Refer to local guidelines for specific protocol/drugs

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Common presentations for NPEP

- Male-to-male sex: Anal, insertive or receptive
- Heterosexual sex: Vaginal
- Sexual assault: Heterosexual, Male-to-male
- Needle sharing/needle assault
- Needle stick injury (park, beach etc)
- Other: Trauma, dermatitis, broken skin exposure

Factors that may increase the risk of HIV transmission

- A high plasma HIV viral load
- A sexually transmissible infection
- A breach in genital mucosal integrity
- Penetrating, percutaneous injuries with a hollow bore needle, direct intravenous or intra-arterial injection with a needle or syringe containing HIV infected blood
- The uncircumcised status of the insertive HIV negative partner practising IAI or IVI.

Prescribing PEP

Your clinical tools:

- ASHM PEP Guidelines

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Prescribing PEP

Essential steps:

1. Assessment of the risk of HIV transmission
2. Immediate Management and follow-up
3. Prescribing PEP

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1. Assessment of the risk of HIV transmission

Risk of transmission =
risk per exposure
x
risk of source being HIV positive

The risk of HIV transmission through a single exposure is determined by:

- The NATURE of the exposure with its risk/exposure
- The risk that the SOURCE is HIV POSITIVE, if their status is UNKOWN
- FACTORS associated with the source and exposed individuals

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Exposure & transmission risk with known HIV positive source

Type of exposure with known HIV-positive source who is NOT on antiretroviral treatment	Estimated risk of HIV transmission/exposure*,†
Receptive anal intercourse (RAI) – ejaculation – withdrawal	 1/70 1/155
Shared needles and other injecting equipment	1/125
Insertive anal intercourse (IAI) uncircumcised	1/160
Insertive anal intercourse (IAI) circumcised	1/900
Receptive vaginal intercourse (RVI)	1/1250
Insertive vaginal intercourse (IVI)	1/2500
Receptive or insertive oral intercourse	Unable to estimate risk – extremely low
Needlestick injury (NSI) or other sharps exposure	1/440
Mucous membrane and non-intact skin exposure	< 1/1000

* These estimates are based on prospective studies, not cross-sectional data or figures derived from modelling. These estimates do not take into account source viral load, which if undetectable markedly reduces risk estimates.

† Human bites are extremely low risk.

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HIV seroprevalence in Australian populations

Community group	HIV seroprevalence (%)
Men who have sex with men (MSM)[8-13]	
• ACT	8.3
• Adelaide	7.4
• Queensland	11.2
• Melbourne	9.5
• Perth	4.2
• Sydney	8.5
Actual seroprevalence may be higher than reported seroprevalence[14]	
People who inject drugs in Australia[15]	
• MSA	30.0
• all others	0.5
Heterosexuals in Australia[16]	
• new blood donors (% donations)	<0.003
• sexual health clinic attendees	<0.5
Female commercial sex workers (Australia)[15]	<0.1
Overall Australian seroprevalence[15]	0.14

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2. Immediate management and follow-up

1. Immediate management of individual
2. Clinical assessment/follow-up
3. Laboratory assessment/follow-up

Test
HIV serology (HIV Ab and HIV Ag wherever possible)
Hepatitis B serology (HBsAg, Anti-HBs and Anti-HBc)*
Hepatitis C serology (HepCAb positive check HCV PCR)†
STI screen†
Syphilis serology†
LFT, EUC
Pregnancy test†

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Immediate Management

- DO NOT DOUCH the vagina or rectum after sexual exposure.
- After oral exposure, spit out blood/body fluids and rinse with water.
- WASH WOUNDS and skin sites that have been in contact with blood or body fluids with soap & water.
- IRRIGATE MUCOUS MEMBRANES AND EYES (remove contact lenses) with water or saline.
- DO NOT INJECT antiseptics or disinfectants into wounds.
- Refer to the PEP Guidelines for full details: http://www.pep.guidelines.org.au/

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What needs to be discussed?

- Risk carefully explained
- HIV PEP has no RCT evidence for effectiveness
- 4-week therapy (can be difficult)
- Protection for others (condom, needle sharing, breast feeding, blood donation, safe work practices)
- Side effects of drugs
- Risks in pregnancy
- Baseline and follow-up testing
- Counselling and support

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Clinical assessment and follow-up

1. Information required about:

- The the EXPOSURE
- The EXPOSED PERSON
- The SOURCE

Provision of PEP should **NOT** be delayed while obtaining information about the source

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PEP recommendations after NON-OCCUPATIONAL exposure to a KNOWN HIV positive source

Type of exposure with known HIV positive source	Estimated risk of HIV transmission per exposure if source NOT on antiretroviral treatment	PEP recommendation	
		Source not on treatment or on treatment with detectable or UNKNOWN viral load	Source viral load KNOWN to be undetectable
Receptive anal intercourse (RAI) - ejaculation - withdrawal	 1/70 1/155	3 drugs	Not recommended*
Shared needles and other injecting equipment	1/125	3 drugs	Not recommended*
Insertive anal intercourse (IAI) (uncircumcised)	1/160	3 drugs	Not recommended*
Insertive anal intercourse (IAI) (circumcised)	1/900	3 drugs	Not recommended*
Receptive vaginal intercourse (RVI)	1/1250	3 drugs	Not recommended*
Insertive vaginal intercourse (IVI)	1/2500	3 drugs	Not recommended*
Receptive or insertive oral intercourse	Not measurable	Not recommended†	Not recommended
Mucous membrane and non-intact skin exposure	< 1/1000	3 drugs	Not recommended

* **Provided the source history is reliable, they are compliant with medication, attend regular follow-up and have no intercurrent STI.**

† PEP may be recommended for receptive oral intercourse with ejaculation if the exposed person has a breach in their oral mucous membrane.

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PEP recommendations after NON-OCCUPATIONAL exposure to a source with UNKNOWN HIV status

Type of exposure to source with unknown HIV status	Estimated risk of HIV transmission per exposure	PEP recommendation
Receptive anal intercourse (RAI) - ejaculation - withdrawal	 1/700* 1/1550*	2 drugs if source MSM or from high prevalence country (HPC)
Shared needles and other injecting equipment	1/12,500† (1/1250 – 1/415‡ if source MSM)	2 drugs if source MSM or from HPC
Insertive anal intercourse (IAI) (uncircumcised)	1/1600*	2 drugs if source MSM or from HPC
Insertive anal intercourse (IAI) (circumcised)	1/9000*	Consider 2 drugs if source MSM or from HPC, particularly if concurrent STI, trauma or blood
Receptive vaginal intercourse (RVI)	1/1,250,000^	Not recommended Consider 2 drugs if source MSM or from HPC
Insertive vaginal intercourse (IVI)	1/2,500,000^	Not recommended Consider 2 drugs if source from HPC
Receptive or insertive oral intercourse	Not measurable	Not recommended
Mucous membrane and non-intact skin exposure	< 1/10,000* (MSM exposure)	Not recommended
Needlestick injury (NSI) from a discarded needle in community	Not measurable	Not recommended

* Based on estimated seroprevalence 10% (9.6%) in MSM.
† Based on estimated seroprevalence 1.0%.
‡ Based on estimated seroprevalence of 29%.
^ Based on estimated seroprevalence 0.1%.

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PEP recommendations after OCCUPATIONAL exposure to a known HIV-positive source

Type of exposure with known HIV-positive source	Estimated risk of HIV transmission per exposure if source not on antiretroviral treatment	PEP recommendation	
		Source not on treatment or on treatment with detectable or UNKNOWN viral load	Source viral load KNOWN to be undetectable
NSI or other sharps exposure	1/440	3 drugs	Consider 2 drugs
Mucous membrane and non-intact skin exposure	< 1/1000	3 drugs	Consider 2 drugs

* PEP may be recommended if needle and syringe contained fresh blood and sufficiently penetrated the skin.

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Which regimen?

2-drug regimens^:

Tenofovir 300mg with lamivudine 300mg (Daily)*

OR

Tenofovir disoproxil fumarate/emtricitabine 300mg/200mg (Daily)

3-drug regimens:

Your preferred 2-drug regimen **PLUS**

dolutegravir 50mg (Daily)

OR

raltegravir 400mg (BD)

OR

rilpivirine 25mg (Daily)

Dolutegravir, raltegravir or rilpivirine as the 3rd drug:
Using three drugs for PEP increases the likelihood of an adverse event e.g. drug-drug interactions and the potential for rhabdomyolysis with raltegravir.

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Commonly prescribed drugs

Regimen	Cost/28-day course* (AUD)
	Very high
Tenofovir 300mg (TDF) with lamivudine 300mg (3TC)	$568.80
Tenofovir disoproxil fumarate/emtricitabine 300mg/200mg (Truvada® (TVD))	$700.30
TDF with 3TC and dolutegravir (DTG)	$1,211.90
TDF with 3TC and raltegravir (RAL)	$1,180.80
TDF with 3TC and rilpivirine (RPV)	$1,102.60
TVD with DTG	$1,343.40
TVD with RAL	$1,312.30
TVD with RPV	$1,234.10
TVD/RPV (Eviplera®)	$953.80
Lamivudine and zidovudine (Combivir®)	$149.10

*Correct as of 28 July 2016, Pharmaceutical Benefits Scheme list prices.

- Recommendations vary by jurisdiction
- 2 vs 3 drugs
  - There is no direct evidence to support the greater or lesser efficacy of 3 over 2 drug preventive regimens.
  - The recommendation for the number of antiretroviral drugs is based on an extrapolation of the possible benefit conferred by increased numbers/classes of drugs for HIV treatment.

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Baseline testing if giving PEP

Test	Baseline (Week 0)	Week 2	Week 4–6	Month 3
HIV serology (HIV Ab and HIV Ag wherever possible)	X		X	X
Hepatitis B serology (HBsAg, Anti-HBs and Anti-HBc)*	X			X
Hepatitis C serology (HepCAb positive check HCV PCR)†	X			X
STI screen†	X	X		X
Syphilis serology†	X		X	X
LFT, EUC	X		X^	
Pregnancy test†	X		X	

- See http://www.pep.guidelines.org.au/ for full baseline testing recommendations and caveats

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Management: What else to consider?

1. Hepatitis B.
2. STIs
3. Hepatitis C
4. Pregnancy. Consider emergency contraception.
5. Tetanus

- If you work in an NPEP service: Provide NPEP medication
- If you don't work in an NPEP service: Discuss with NPEP hotline or local sexual health service and consider immediate start PrEP.
- Arrange follow-up testing, contact tracing and support

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Additional management issues

See http://www.pep.guidelines.org.au/ for full information on:

1. Preventive behaviours whilst being managed for HIV exposure
2. Individuals at risk of HIV transmission who decline PEP
3. Individuals at negligible risk of HIV transmission who request PEP
4. Individuals who re-present for non-occupational PEP (NPEP)
5. Individuals who are on PrEP
6. Transitioning from PEP to PrEP
7. Renal disease
8. Gender identity and history
9. Individuals who have been sexually assaulted
10. Children
11. Prisoners and detainees
12. Individuals who commenced PEP overseas

Who to call for help?

- PEP Hotline: 1800 737 669 (1800 PEP NOW)
- Local sexual health service

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Damian

- 24-year-old MSM recently moved to the city from a rural area
- Past STI: gonorrhoea
- No long-term relationship; mostly casual partners from the internet.
- Damian is waiting outside your clinic at 0800 on Saturday morning; he is very anxious
- He attended a sex on premises venue two nights ago where he had condomless sex. Very late last night he spoke with someone in a chat room, who told him Thursday night at that particular venue is “positive night”. It was suggested he should get drug treatment for HIV

What information do you need?

- The sexual exposure was condomless receptive anal intercourse
- occurred the night before last i.e. 31 hours ago
- contact was unknown to him, but he was “healthy looking”
- Damian has no symptoms to suggest a current STI
- He has only been tested for STIs and HIV once before 3 years ago

What is Damian’s risk of acquiring HIV?

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Estimating the risk

Risk of transmission =
risk per exposure
x
risk of source being HIV positive

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Per exposure transmission risk

At its highest risk

Type of exposure with known HIV positive source	Estimated risk of HIV transmission per exposure if source NOT on antiretroviral treatment	PEP recommendation	
		Source not on treatment or on treatment with detectable or UNKNOWN viral load	Source viral load KNOWN to be undetectable
Receptive anal intercourse (RAI) - ejaculation - withdrawal	1/70 ~~1/155~~	3 drugs	Not recommended*
Shared needles and other injecting equipment	1/125	3 drugs	Not recommended*
Insertive anal intercourse (IAI) (uncircumcised)	1/160	3 drugs	Not recommended*

At its lowest risk

Type of exposure to source with unknown HIV status	Estimated risk of HIV transmission per exposure	PEP recommendation
Receptive anal intercourse (RAI) - ejaculation - withdrawal	~~1/700*~~ 1/1550*	2 drugs if source MSM or from high prevalence country (HPC)
Shared needles and other injecting equipment	1/12,500† (1/1250 – 1/415‡ if source MSM)	2 drugs if source MSM or from HPC
Insertive anal intercourse (IAI) (uncircumcised)	1/1600*	2 drugs if source MSM or from HPC

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Calculating Damian's risk

- Damian's risk of already being HIV positive at baseline is high (he has not tested for a long time).
- At its highest: 1/70 if source is positive and not on treatment.
- At its lowest: 1/1550 (based on estimated seroprevalence 10% ≈ MSM)
- Damian's risk from this exposure lies somewhere between 1/70 and 1/1550

Is PEP indicated?

Yes

- 3 drugs versus 2?
  - condomless RAI with known HIV positive partner:
    - PEP not recommended if source viral load undetectable (this information is not known)
    - 3 drugs if source not on treatment or on treatment with detectable or UNKNOWN viral load
  - condomless RAI with partner of unknown status:
    - 2 drugs
- What is a potential disadvantage of giving Damian 2 drugs?
  - Inadequate if he in fact is already HIV positive
- Baseline HIV testing important (consider HIV rapid test)

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STI testing

What tests would you order?

- HIV 4th generation test
- Syphilis serology
- Urethral swab for chlamydia / gonorrhoea PCR
- Pharyngeal swab for chlamydia / gonorrhoea PCR
- Anal swab chlamydia and gonorrhoea PCR
- Viral hepatitis A, B and C serology
- U+E/Cr if considering PREP in the future

NPEP Regimen

Which 2 drug nPEP regime would you choose and for how long?

- Tenofovir 300mg + emtricitabine 200mg daily 28 days
  or
- Tenofovir 300mg + lamivudine 300mg daily 28 days

- nPEP is not funded by the PBS.
- Local information may be found on the health department websites in each jurisdiction regarding nPEP funding
- Further information about PEP and antiretroviral prescribing is available via the ASHM website at https://www.ashm.org.au/HIV/hiv-management/PEP/

What other issues will you address with Damian?

- Risk behaviours ongoing? Need for PrEP?
- Knowledge
- Engagement for regular STI screening and health promotion
- Serosorting: the hazards
- Sources of accurate health information that are culturally appropriate

Results

HIV test negative

Syphilis negative

Urethral swab PCR and microscopy positive for gonorrhoea

Pharyngeal swab and anal swab PCR positive for gonorrhoea

HBV sAb not detected, cAb positive, sAg detected

HAV Ab detected.

HCV Ab not detected

eGFR >90 ml/min

Further Management

Pharyngeal swab and anal swab PCR positive for gonorrhea - needs treatment

HBV sAb not detected, cAb positive, sAg detected

What further tests would you order?

- HBV Viral load 1,700,000 copies per mL
- HBV eAg detected.
- HBV eAb not detected.
- HBV cAb IgM not detected. IgG detected.
- ALT 16
- Platelets 310

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Further Management

What phase of chronic hepatitis B infection is Damian in?

Immune Tolerance*

What impact does this diagnosis have on his nPEP management?

What impact does this have on PrEP, if any?

When should Damian start his PrEP?

What if he decides to complete the PEP but not start PrEP?

* *Managing chronic hepatitis b is not required or assessed as part of the HIV s100 course. ASHM offers an s100 HBV course for those who are interested.*

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Further Management

Tenofovir, emtricitabine and lamivudine have activity against Hepatitis B.

Clinicians experienced in treating chronic hepatitis B and prescribing PrEP should be involved.

On demand PrEP is contraindicated

Stopping daily PrEP in patients with CHB can be difficult and the hepatitis B clinician should provide guidance as to whether it is safe to stop PrEP

Patients who want PrEP and have chronic HBV should be prescribed TD*/FTC not Tenofovir alone.

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PREP follow up

Box 7.1 PrEP follow-up procedures

At least every 3 months:

- Repeat HIV testing and assess for signs or symptoms of acute infection to document that patients are still HIV negative. Rapid point-of-care tests (POCTs) are not recommended for monitoring patients receiving PrEP
- Test for sexually transmissible infections (STIs). This involves PCR tests for chlamydia (first-pass urine, pharyngeal swab and anal swab) and *Neisseria gonorrhoea*, (pharyngeal swab and anal swab) and a blood test for syphilis serology (1)
- Assess side-effects, PrEP adherence and ongoing PrEP suitability
- Provide an authority streamlined (PBS) prescription or a private prescription of daily TD*/FTC for 90 days (see Providing PrEP for exceptions to this script duration)
- Respond to questions and provide any new information about PrEP use
- Provide support for medication adherence and risk-reduction behaviours.

In addition:

- Repeat pregnancy testing for women of child bearing age
- Test for hepatitis C virus (HCV) in people who inject drugs (PWID) who report continued sharing of injecting equipment and men who have sex with men (MSM) with elevated risk of HCV acquisition (e.g. sexual practices that pre-dispose to anal trauma).

At least every 6 months:

- Monitor estimated glomerular. filtration rate (eGFR), creatinine and urine protein/creatinine ratio
- If the patient has risk factors for renal impairment (e.g. hypertension, diabetes), renal function may require more frequent monitoring and/or may need to include additional tests (e.g. urine protein/creatinine ratio)
- A rise in serum creatinine is not always a reason to withhold treatment if the eGFR remains at or above 60 mL/min/1.73 m^2 but an acute rise in the serum creatinine in a patient on PrEP would need full clinical evaluation and sometimes a review by a renal specialist
- If eGFR is declining steadily (but still at or above 60 mL/min/1.73 m^2), consultation with a renal specialist or other evaluations of possible causes for declining renal function may be indicated.

At least every 12 months:

- Test for hepatitis C

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