Advanced Training in Sexual Health Medicine

About this logbook

The Logbook should demonstrate adequate exposure to clinical cases to be submitted at the end of Advanced Training in Sexual Health Medicine.

A Logbook of cases should be kept by each trainee during the Sexual Health Medicine Advanced Training program. The purpose of the Logbook is to:

- HIV Medicine and/or Reproductive cases seen during the program contributing to the achievement of specific curriculum learning goals.
- provide detail of the specific patient management and outcomes for each case
- reflect on how each case has contributed to learning and development
- provide a platform for discussion with supervisors.

Requirement

Over the course of training, trainees are required to complete:

• 1 x HIV medicine logbook
• 1 x Reproductive Health logbook
• 1 x Logbook for any 6-month elective undertaken (recommended)

Guidance for trainees when completing and submitting their logbook:

- 50 cases per logbook.
- For the HIV logbook, complex PEP/ PrEP cases can be included, however should not exceed 5 out of the total 50 cases.
- Cases should demonstrate patient demographic diversity, and broad clinical heterogeneity and complexity.
- The logbook should not include notes directly copied and pasted from a patient file, rather it should be a description of the case and outcomes, including investigation and management.
- Most cases should include learning or personal reflections, trainees should highlight appropriate contemporary guidelines, literature or evidence which assisted in understanding, learning and/ or patient management. These should be reference in an academic referencing style (e.g. AMA/ Harvard).

How to complete this logbook

Trainee - complete logbook

1. Download and save a local copy of this template. One logbook per requirement should be maintained over the course of training.
2. Review the required case types and number of case types required.
3. Plan how you will meet these requirements.
4. Enter the case information into the template.

Trainee - submit the logbook via TMP

- Submit your logbook for review via the TMP at the end of Advanced Training.

Outcome / TMP training record

- Submit your logbook in TMP at the end of your final phase of training.
- The Training Program Committee in Sexual Health Medicine review logbook submissions to confirm the requirement is completed.
- Once you have fulfilled an individual training requirement, it will be updated as complete in TMP.

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Training information

Trainee name Patricia Jackson

Training start date	Foundation year 2023
Training end date	Transition to Fellowship 2026
Submission date	09.03.2026
Supervisor(s)	Dr. Evelyn Reed
Accredited training site	Metropolitan Hospital 1, NSW

Resources
Sexual health medicine curriculum standards • Learning goal links: ○ Learning goal 10: Investigations and procedures (EPA) ○ Learning goal 14: HIV (Knowledge) ○ Learning goal 17: Reproductive health (knowledge)
Sexual health medicine learning, teaching and assessment programs
TMP home page
TMP instructions – logbooks

This is a sample logbook to demonstrate the level of detail required. All Doctor and patient information has been de-identified. This logbook is an example of the required types of information trainees should provide in their logbook and does not contain the required number of cases as per the learning, teaching and assessment programs.

Record of Cases					
	Date	**Age of Patient**	**Diagnosis or Condition**	**Management considerations, and patient outcomes**	**Reflections on the case**
1.	19/04	31 yo M	Routine HIV 6m review	**Clinical details** • 31 yo Caucasian Australian born bisexual male LHIV • on biktarvy, nil issues/ SEs • last bloods 6m ago – VL 32, CD4 350 • Heavy ICE use & chemsex, affecting his job as a compounding pharmacist • Has been sent home, arguments with bosses • Poor diet and losing weight, low mood • Appears drug affected in consult • Initially reluctant to discuss, just wanted ART script and to 'get out of here' • Review appointment booked for 1m later specifically to discuss ICE use and check in • Feels like he is spiralling • No thoughts specifically self-harm, or suicidal intent, but feels that the ICE is self-destructive behaviour **Management** • Open and non-judgemental discussion • Acknowledged important and brave steps of attending the consult today with a view to seeking support • Referred for counselling and to pos central for peer support + addiction support (D&A counselling) • Continue to revisit at future appointments	• Methamphetamine use disorder is highly prevalent among PLHIV and is a significant public health problem (1). • Crystal methamphetamine associated with deleterious health outcomes, such as drug dependence, physical and mental health disorders (2). • Emerging evidence suggests that the combination of HIV infection and ICE/ meth use can exacerbate chronic inflammation and telomere shortening, associated with increased risk of CV disease, declines in motor function and neurocognitive function (1,3). • HIV care providers should be aware of appropriate external support services for referral as required that are local and up to date. **References** 1. Walter TJ, Iudicello J, Cookson DR, Franklin D, Tang B, Young JW, Perry W, Ellis R, Heaton RK, Grant I, Minassian A, Letendre S, On Behalf Of The Translational Methamphetamine Aids Research Center Tmarc. The Relationships between HIV-1 Infection, History of Methamphetamine Use Disorder, and Soluble Biomarkers in Blood and Cerebrospinal Fluid. Viruses. 2021 Jul 1;13(7):1287. doi: 10.3390/v13071287. PMID: 34372493; PMCID: PMC8310127. 2. Drysdale K, Bryant J, Dowsett GW, Lea T, Treloar C, Aggleton P, Holt M. Priorities and practices of risk reduction among gay and

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					bisexual men in Australia who use crystal methamphetamine for sex. Int J Drug Policy. 2021 Jul;93:103163. doi: 10.1016/j.drugpo.2021.103163. Epub 2021 Feb 16. PMID: 33601217. 3. Mehta SR, Iudicello JE, Lin J, Ellis RJ, Morgan E, Okwuegbuna O, Cookson D, Karris M, Saloner R, Heaton R, Grant I, Letendre S; TMARC Group. Telomere length is associated with HIV infection, methamphetamine use, inflammation, and comorbid disease risk. Drug Alcohol Depend. 2021 Apr 1;221:108639. doi: 10.1016/j.drugalcdep.2021.108639. Epub 2021 Feb 16. PMID: 33621803; PMCID: PMC8026664.
2.	3/5	18 yo M	New diagnosis HIV and latent TB	**Clinical details** • 18 yo North American born MSM with new HIV diagnosis, attends the HIV clinic to start ART • Attended the clinic for routine screening • Results showed late latent syphilis, RPR 16 and fully evolved western blot. • No prior STI screening • Diagnosis had been delivered by another physician 2 weeks ago • Attends today to start treatment • HIV VL 700,000, CD4 500, HLB57 negative, genotype pending • On HIV baseline bloods → positive QTFN gold • No symptoms/ signs of active TB, CXR clear • Commenced on treatment with biktarvy prior to results of genotype, and treatment for latent TB with isoniazid and pyridoxine	• Overseas born MSM continue to be an at risk population and are less likely to be taking PrEP than Australian born MSM • From UTD (1): ○ *WW ¼ pop have TB and 90-95% of these (without HIV) will NOT develop active disease → in vast majority of cases, the human immune system can control TB* ○ *9% of all new TB cases globally occur in HIV infected patients* ○ *Globally is leading cause of mort in PLHIV (⅓ deaths!)* ○ *MDR TB (resistance to isa and rif) is a growing challenge esp in Asia Pacific* ○ *Aus has one of lowest TB notification rates WW - estd 5% pop with LTBI in 2016*

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				Management • Treatment discussed with senior clinicians; Liverpool interactions checked - these TB meds have no interactions with biktarvy (majority of issues come with treatment of active TB with RIF) • Continue the meds for 9m with close monitoring of LFTs especially in the first few months (start at 2 weeks, then monthly for first 3m)	○ *86% of Aus cases are among overseas born* ○ *Higher rates in First Nations (6 x that of non-indigenous)* • Rationale for treatment of latent TB in HIV, to prevent re-activation in the event of moderate to severe immunosuppression **References** 1. Manzies D. Treatment of latent tuberculosis infection in nonpregnant adults with HIV infection. UpToDate. Jan 2021. https://www.uptodate.com.acs.hcn.com.au/contents/treatment-of-latent-tuberculosis-infection-in-nonpregnant-adults-with-hiv-infection?search=latent%20TB%20in%20HIV&source=search_result&selectedTitle=1~150&usage_type=default&display_rank=1
3.	50 yo M	12/06	Transfer of care	**Clinical details** • 50 yo MSM, Diagnosed 1991 • Multi-resistant virus • Managed in multiple centres – NSW/ QLD/ VIC • Commenced ART ○ Zidovudine monotherapy – 10 years ○ Kaletra (lopinavir/r) + zidovudine ○ Kaletra + lamivudine ○ IL trial 5 years (IL + kaletra + 3TC) ○ Stribild 2014 • Elvitegravir + cobi, TDF, FTC • Ceased due to psychiatric SEs ?when Currently on • Darunavir/r + dolutegravir + etraverine + TDF • (4 tabs mane, 1 tab nocte)	• PLHIV who are treatment experienced often have fixed perceptions re: current medications relating to SEs of older meds • It is incredibly important to respect the patient's experience and journey and offer all available options with accurate and UTD information • Use of dual treatments for HIV in the setting of multi-drug resistance can provide a good option for many patients as a means to reduce pill burden JULUCA SWORD 1, 2, Efficacy and safety of dol-rilpivirine • 2 x open label RCTs to assess efficacy of Juluca vs 3 drug treatment with PI/ Insti or NNRTI base

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				• **Very keen to reduce pill burden, fall out with last prescriber, does not want to be on PIs**
				
				PMH:
				• Mental health
				  ○ schizoaffective disorder, depression
				• Substance abuse
				  ○ ICE, alcohol
				  ○ Now sober, studying to become a D&A counsellor
				• Bowel ca aged 18 – regular FU colonoscopies
				• hep B, C, spont cleared
				• Syphilis
				• Smoker
				• Vit D deficiency
				
				Serology 26/4
				• VL 26/3 <20 copies/ml
				• CD4 507
				
				Genotype 2015:
				• NRTIs resistant
				• Susceptible NNRTIs
				• Susceptible PIs (however previous bad reaction with some of these drugs – **does not like PIs)**
				• Integrase inhibitors susceptible
				
				• Complex patient
				
				• Well involved in his care and keen to maintain autonomy and control
				• Discussed in the HIV case MDT at clinic
				• Potential option includes Juluca – no documented resistance
				
				Management
					• ALL treatment experienced with VL <50 prior to switch
					• **Efficacy data out to 3 years - non inf to their prev oral regimen, 3 drug insti, NNRTI or PI base**
					• Can't use in severe hepatic impairment or if will need treatment for hep c, no resistance known to DOL or RPV.
					• DOL/RPV switch without hep b, without prior failure or documented resistance was associated with durable VL suppression at 2 years that was non-inf to 3 drug insti, NNRTI or PI regimen
					• Can only switch those suppressed for 6m
					
					References
					1. Llibre JM, Hung C-C, Brinson C, Castelli F, et al. Efficacy, safety, and tolerability of dolutegravir-rilpivirine for the maintenance of virological suppression in adults with HIV-1: phase 3, randomised, non-inferiority SWORD-1 and SWORD-2 studies. *Lancet*. 2018;391(10123):839-849.
					2. van Wyk J, Orkin C, Rubio R, et al. Durable suppression and low rate of virologic failure 3 years after switch to dolutegravir + rilpivirine 2-drug regimen: 148-week results from SWORD-1 and SWORD-2 randomized clinical trials. *J Acquir Immune Defic Syndr*. 2020;85:325-330. doi: 10.1097/QAI.0000000000002449

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				• Seen in clinic • Discussion from case meeting discussed • Switch to Juluca, review at 2/52 and 4/52 initially for repeat VL • Switched to Juluca with careful monitoring of VL - remains VL UD in future, excellent adherence • The patient was very happy with a single pill regimen and remained well engaged in treatment	
4.	27 yo F	17/7	Newly diagnosed female, 10/40 gestation	**Clinical details** • 22 yo African female, newly diagnosed with HIV via antenatal screening with GP (positive screening and fully evolved WB) • 10/40 gestation, not planned but decision to keep • Never testing for HIV or STIs previously • No antenatal screening PMH • Nil DH • Folic acid • NKDA SH • Hetero female, husband African, (his HIV status unknown) • Both moved to Australia 7 years ago on protection visa via refugee and humanitarian program O/E: • No evidence of opportunistic infections • Normal vital signs • Urine bHCG in clinic positive • Investigation findings: • Serum bHCG 100,000, dating scan 10 weeks 3 days, viable pregnancy (from GP)	• Higher rates of unintended pregnancy in women living with HIV (esp. those from CALD backgrounds) • Higher rates of stigma and discrimination experienced by PLHIV from CALD backgrounds • Possibility of reproductive coercion • Difficulties when providing care for patient with English as second language (social work, case management, peer support) – need for MDT – high risk pregnancy • Medicare affecting choice of meds and antenatal care – we were able to get her compassionate access eviplera, very difficult to get RAL on compassionate access • PLHIV from CLAD backgrounds experience higher rates of intimate partner violence • While breast feeding not recommended in high income countries for women living with HIV, women who express a deep desire to breast feed should be supported in this decision – MDT/ paeds/ ID/ sexual health/ midwife/ community health – monthly VL testing of Mum and baby • Perhaps the most complex part of this case was disclosure to the partner – navigation of

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				• STI screen – HVS CT & NG negative, syphilis EIA, TPPA & RPR non-reactive • Hepatitis A antibodies detected, hepatitis B core & surface antibodies detected, hepatitis C antibodies not detected. • QTFN gold negative • HIV VL 146000, CD4 330, HLAB57 negative, genotype no resistance mutations detected to NNRTIs, NRTIs or PIs. • FBE, U&Es, LFTs, PO4, Vitamin D, lipids and glucose all within normal limits. • Patient very upset by diagnosis, scared for potential stigma and discrimination if anyone in the small community in Victoria should find out. Does not plan to tell anyone about her diagnosis, including her husband… • Very keen to start treatment as soon as possible and wants to do everything she can to prevent transmission to her child. **Management** • HIV baseline bloods • Commenced treatment eviplera (FTC, TDF, RPV) – discussion with senior physician and ID physician (Michelle Giles) • At this stage, patient strongly encouraged to inform her husband of the diagnosis, offered counselling, and offered for her and partner to come in together • Case referred to hospital for joint care with O&G/ID/sexual health **Further review** • at 20/40 weeks – VL undetectable • At 30 weeks 225 copies/ml • Reports missing her ART on occasion as she has been trying to hide it from her partner. • Has still not disclosed to her husband.	the law relating to disclosure is not simple and, in this case, not disclosing was in the best interest of the patient. However, it is still important that the partner is tested and doing nothing could be considered negligent from a medical viewpoint. The aim of discussing the case with the GP was to encourage testing without disclosure from the patient, thereby reducing her risk from his reaction. **References** 1. Young CR, Kaida A, Kabakyenga J, Muyindike W, Musinguzi N, Martin JN, Hunt PW, Bangsberg DR, Haberer JE, Matthews LT. Prevalence and correlates of physical and sexual intimate partner violence among women living with HIV in Uganda. PLoS One. 2018 Aug 27;13(8):e0202992. doi: 10.1371/journal.pone.0202992. PMID: 30148854; PMCID: PMC6110509. 2. Saxena A, Deschamps MM, Dorvil N, Christophe I, Rosenberg R, Jean-Gilles M, Koenig S, Pape JW, Dévieux JG. Association between intimate partner violence and HIV status among Haitian Women. Glob Public Health. 2019 Nov;14(11):1557-1568. doi: 10.1080/17441692.2019.1602156. Epub 2019 Apr 18. PMID: 30999807. 3. https://hivlegal.ashm.org.au/criminal-law/

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				• Has not disclosed to any other family members or friends (only doctors and counsellors at the clinic & RWH ID). • On further discussion re: relationship with her husband, she admits that she is frightened of him and regular intimate partner violence. • Patient wants to breast feed – strong cultural expectation and desire to do so, also states that if she doesn't will arouse suspicion • Social work involved • Long discussion with patient about her and baby's safety long term and short term • Given now 30 weeks, discussed importance of getting viral load undetectable prior to delivery – therefore reinforced adherence, discussed putting tablet in multi-vitamin bottles • Discussion re: mode of delivery and importance of being undetectable to ensure that NVD is possible – though this will be decided by ID and O&G) (From hospital notes) • VL UD at 38 weeks • Had NVD at 39 weeks • Infant given IV zidovudine • Patient was supported to breast feed with input from midwives and O&G, with regular VL monitoring • On future review at the SH clinic: • Patient did not disclose to her husband • From ID notes at post-natal review, it was felt that the risk of harm to the patient from husband was greater than risk to husband and priority was with patient • Patient had agreed for SW at the hospital to contact child services to attend a home visit • I called the patient's GP - she was seeing him for work medical and we discussed including a HIV test as part of this work up.	

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5.	15/8	32 yo F	Complex new HIV diagnosis with AIDS defining illness	**Clinical details** • 32 yo African female student, in Australia on a student visa. Recent application for PR and HIV test as part of the medical for this is positive (fully evolved WB). • Single, reports no sex for the last 8 years. • Saw the GP 1/12 ago for investigation of sweats, lethargy, and cough. Prescribed antis from the GP. Cough and fevers ongoing. PMH: • Nil DH: • Nil O/E: • Obs NAD, oxygen sats 94% RA, did not desaturate on walking • decreased AE left base • CV and abdo exam NAD • Baseline bloods performed including TB QTFN gold • Sputum for MCS, PJP giemsa/ silver staining, AFBs • CXR Baseline bloods: • CD4 192 (12%) • VL 12,000 • Hep A immune, Hep B immune past infection, Hep C negative • FBE Hb 10, normocytic, LFTs NAD, U&Es eGFR 70 • CXR showed left sided pleural effusion • Sputum pending **Management**	**1. DDx cough, fever and sweats in a PLHIV:** • TB • PJP • Lymphoma • MAC • Community acquired pneumonia/ atypical CAP • Other rare infectious: • Pseudomonas, staphylococcus, aspergillus sp, cryptococcus, toxoplasma, CMV **2. DDx renal impairment in this case:** • HIV associated nephropathy • TB associated nephropathy • Other infection associated nephropathy • Amoxicillin associated interstitial nephritis **3. Limitations of what can be done in the outpatient department and when patients need to be referred for urgent inpatient care.** **4. Starting ARVs with TB co-infection in woman of child-bearing age** • Drug interactions esp. with RIF and ARVs + TB meds and contraception • Need to double dose DOL in this case

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				• Patient referred to ID at the local hospital for further workup and initiation of ARVs – from hospital letter: • Sputum negative for AFBs, went onto have pleural biopsy – MTB/RIF PCR reactive (no RIF resistance), treated presumptively for TB with 2m RIF, ETH, ISA and pyridoxine + 4m ISA + RIF step down • Commenced on DOL (BD dosing needed as RIF is potent CYP450 inducer) and TDF/FTC (cannot give TAF with RIF – therefore TDF chosen with careful monitoring of renal function • Also currently single, not thinking about trying to conceive – referred to SH for discussion re: slight increased risk NTDs and contraception (2/1000 vs 1/1000 for women not on ARVs/ DOL) • Referred back to clinic for ongoing HIV care • Discussion re: contraception – with RIF options are limited to high dose oestrogen OCP or non-hormonal methods, for now she will not have sex – revisit options once off RIF • Continued on DOL/ TDF/ FTC • Renal function improved with time on ARVs, therefore most likely HIV associated nephropathy	
6.	26/9	68 yo M	HIV and co-morbidities	**Clinical details** • 68 yo MSM diagnosed with HIV 8 years ago. • Married to a female partner – no sex last 10 years with wife. Sexually active with male CSPs. Has declined HIV treatment with ARVs. Wife is not aware of diagnosis (she does know he is MSM), patient adamant that sexual activity with her ceased long before last negative HIV test, and no risk (discussed at several consults). • At diagnosis CD4 count was 725 (28%), with steady decline over the last few years. Also at baseline: • Genotype no resistance • HLAB5701 negative	1. Complex psychological issues surrounding gender and sexuality and generational disparities. 2. DDx of renal impairment in PHIV • DM • HTN • GN • HIV AN • Drug toxicity (?NSAID use for OA)

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				• Hepatitis A immune, hepatitis B immune vaccination, hepatitis c negative
				• Syphilis EIA negative
				
				• Most recent CD4 285 (22%), HIV VL 28,000.
				• Reduction in eGFR over the last 3 years – from >90 to 58
				
				PMH:
				• Diabetes
				• OA R) knee
				• Low mood
				
				Meds:
				• Metformin
				• Panadol osteo
				• Sertraline
				
				• Describes relationship with wife as a lifelong friendship
				• Sleep in separate beds
				• She is aware MSM but they do not talk about it
				• Has 2 adult daughters and grandkids
				• Drinks approx. 2 bottles wine/ week
				
				Management
				• Long discussion re: benefits of treatment, particularly in relation to:
				  ○ CV risk
				  ○ Bone related co-morbidities
				  ○ HIV related malignancies
				  ○ Life-prolonging treatment, progression to AIDS without treatment
				• Referred for counselling at clinic
				• Wife attended counselling with him and diagnosis was disclosed – response was supportive
				• Reviewed one month later – agreed to commence on ARVs	

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7.	19/10	32 yo M	HIV seroconversion illness	**Clinical details** • 32 yo MSM presents with flu like illness and rash • Australian born MSM • Condoms always for anal sex but has two regular partners with whom he has a 'bareback agreement' • Presented to walk-in STI service with 2/7 hx of sore throat, rash predominantly on trunk and back, and swollen cervical LNs. • Counselled about the possibility of HIV seroconversion illness. • Sample taken for HIV serology • Indeterminate western blot (p24, gp 41 and gp 60 bands present), p24 and neutralising antibodies positive • Nil other PMH • Nil DH • Works as a carpenter • Not openly out • On review 5/7 later advised that these results are consistent with acute HIV infection • CD4 310, VL 1200,000 compies/ml • His symptoms had improved during the interim period between appointments, and he thought that he had a simple viral URTI. Was quite shocked by diagnosis, and had sex with the 2 men 24 hours ago (CLIAS and CLRAS) **Management** • Referral to counselling – saw him on the day • Urgent referral to contact tracing – saw him on the day • Re: treatment – options include biktarvy, DOL + Truvada/ descovy • Opts for biktarvy, commenced on treatment on day of review • At 1m, VL 157, CD4 550	• When to commence ART – evidence to suggest that starting ART at time of seroconversion reduces the viral reservoir and can have improved longer-term outcomes (1,2) • adjustment to diagnosis and how this can vary between individuals • Need to contact the two recent partners for PEP **References** 1. Leite TF, Delatorre E, Côrtes FH, Ferreira ACG, Cardoso SW, Grinsztejn B, de Andrade MM, Veloso VG, Morgado MG, Guimarães ML. Reduction of HIV-1 Reservoir Size and Diversity After 1 Year of cART Among Brazilian Individuals Starting Treatment During Early Stages of Acute Infection. Front Microbiol. 2019 Feb 11;10:145. doi: 10.3389/fmicb.2019.00145. PMID: 30804915; PMCID: PMC6378917. 2. De Clercq J, Rutsaert S, De Scheerder MA, Verhofstede C, Callens S, Vandekerckhove L. Benefits of antiretroviral therapy initiation during acute HIV infection. Acta Clin Belg. 2022 Feb;77(1):168-176. doi: 10.1080/17843286.2020.1770413. Epub 2020 May 29. PMID: 32468932.

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				• Ongoing review – VL became and remained UD • Saw counsellors, doing well mentally, linking with community organisation and peer support	

8.	15/3	36 yo M	Avascular necrosis L) hip	Clinical details:
				• 36 yo MSM living with HIV.
				• Intermediate/ high resistance to all NRTIs, was diagnosed in 2003 and commenced ART in 2007.
				• Good viral suppression on treatment, (sustained UDVL) and CD4 good 567.
				• Currently on DOL + evotaz (atazanavir and cobicistat)
				• Treatment history as follows:
				  ○ Evotaz + dolutegravir March 20xx – present
				  ○ Etraverine, atazanavir, ritonavir, September 20xx – March 20xx
				  ○ Raltegravir May 20xx – March 20xx
				  ○ Zidovudine July 20xx – May 20xx
				  ○ Truvada and Etraverine April – July 20xx
				• Smoker 10 pack year history (20 per day)
				
				# AVN left hip
				• Diagnosed via CT, following fall at work approx. 1 year ago
				• Has been seen by ortho and is planned for L) THR, has had no medical work up from a bone point of view.
				• On further discussion, no other meds, no steroid use, minimal alcohol.
				• Sent for a DEXA few weeks ago – results nad.
				• Ca/ Mg/ Phos/ vit d all within normal levels
				• I am concerned about the potential capacity to contribute to AVN? Limited option to switch due to his genotype
				
				# hypercholesterolemia
				• Total chol creeping up since 2016
				• Most recent is 8.3 with HDL 1.8, LDL 4.7 and ratio 6.4
				• Non smoker
					• **HIV is a cause of secondary OP** (3.68 increased risk OP in PLHIV compared to HIV neg)
					• Increased fracture risk in PLHIV than HIV neg
					• On initiation of ART – 2-6% bone loss – regardless of the ART used
					• START study
					• Early initiation of ART associated with greater bone loss than delayed therapy. In first year of ART 2% loss of BMD observed, similar to bone loss that occurs with glucocorticoids".
					• **Greatest post initiation loss with TDF**
					  ○ Data supports that BMD loss may be reversible on cessation of TDF
					  ○ The bone toxicity associated with TDF is thought to be associated with *proximal tubule toxicity, resulting in phosphate wasting and increased bone turnover.*6
					  ○ Also PIs are associated
					• HIV proteins increase osteoclastic activity and prompt osteoblast apoptosis - therefore HIV itself leads to reduced bone mass
					• HIV gp 120 upregulated RANKL
					• HIV inflammation → cytokines, TNF and these increase osteoclast activity
					• ON
					• Inadequate blood supply to bone
					• 100 x increased risk in PHIV compared to gen pop
					• Associated with steroid use, IVDU, low CD4

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				• Evidence seems to suggest atazanavir is not associated with CV as older PIs?? • I have started a small dose of rosuvsatin 5mg daily (also noted potential interaction with cobi) • Framingham risk score 2.7% (BP 130/84) **Management** • Discussed with senior colleagues: • ? ARVs contributing to bone loss • ? need for BMD scan • Was referred for BMD at the local hospital → no osteopenia (normal T and Z score at the hip and lumbar spine) • Referred to ID for opinion on ARVs • They felt current ARVs were not contributing to AN and this was an association with HIV itself rather than the meds • Continued current regimen	• Roll of HIV in causing a kind of vasculitis related to anti-phospholipid syndrome, plus pro-inflam cytokines (INF and TNF) • Esp at hips • Disease progression can mean → THR and can go on to involve the other hip • IN this patient – need for regular FRAX score and repeat BMD as appropriate • Smoking cessation advice!! References: https://hivmanagement.ashm.org.au/bone-disease-in-patients-with-hiv-infection/ Hoy JF, Grund B, Roediger M, et al. Immediate Initiation of Antiretroviral Therapy for HIV Infection Accelerates Bone Loss Relative to Deferring Therapy: Findings from the START Bone Mineral Density Substudy, a Randomized Trial. *J Bone Miner Res*. 2017;32(9):1945-1955. doi:10.1002/jbmr.3183
9.	3/8	49 yo M	Poor adherence and public health risk of HIV transmission	**Clinical details** • 49 yo Aboriginal MSM • Seen by me Feb 20xx • Also under care of Aboriginal Medical Services 1. HIV care • Poor adherence with ARVs • Was on descovy + prescobix (DRN/cobi) • Runs low on meds so does 1 week on/ week odd, currently off treatment for approx. 1m • Copy of results from AMS, VL 26600, CD4 7% (50) • Has not been taking Bactrim • Was on weekly fluconazole for recurrent fungal infections – nails, skin, oral candidiasis and has not been taking this	• Lasting effects of colonisation in the trust and engagement Aboriginal and Torres Strait Islander people have with Westernised, largely white medical systems (1), it is within our role as healthcare providers to acknowledge this, advocate and seek to improve engagement with health care services for First Nations Australians in ways that are acceptable to them and that are culturally appropriate • HIV diagnoses are increasing in First Nations men and women, how can we improve HIV prevention in this population? (2)

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				2. Sexual health • Seeing male CSPs off grinder and visiting SOPVs • Is aware that he is potentially transmissible while viraemic, has been referred to partner notification officers several times, has previously ran away when they were at his door and this seems to have been lost to FU • Discussed the law regarding disclosure and taking steps to prevent transmission O/E: • Nil oral thrush at present • Fungal looking rash on chest Issues: • Severe immunocomprise – AIDS defining illness (oral candidiasis) • Needs ARVs, needs bactrim • Public health risk in terms of transmission to others • Previous genotype in 2013 – high level resistance • Decision made at clinic review to restart Bactrim • Repeat genotype and await results prior to starting ARVs given risk of resistance (can key all mutations in to the Stanford database) • Results from this consult – VL 5090, CD4 80 • Genotype back – plugged all mutations in to the standford database and the only two drugs with full susceptibility are darunavir and tenofovir (also had integrase resistance)!! • Commenced on DRN/cobi and TAF/FTC (same treatment as previous) • 2 active drugs – if we lose one of these, may not be able to treat his HIV	• Important to consider archived resistance in people who are treatment experienced • When off treatment, HIV quickly returns to wild type **References** 1. *National Update on HIV, viral hepatitis and sexually transmissible infections in Australia 2009–2018* (2020) *National update on HIV, viral hepatitis and sexually transmissible infections in Australia 2009–2018 | Kirby Institute*. Available at: https://www.kirby.unsw.edu.au/research/reports/national-update-hiv-viral-hepatitis-and-sexually-transmissible-infections-australia-2009-2018. 2. Croucher, R. (2021). Bringing rights home—mapping an agenda on promoting, protecting and fulfilling human rights in Australia. Available at: https://humanrights.gov.au/about/news/speeches/social-determinants-and-health-indigenous-peoples-australia-human-rights-based

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				• Long discussion with patient regarding this and risk of progression with AIDS Urgently referred to the PNOs (seen in clinic) – with a view to escalation if they cannot make contact ongoing Discussed at clinic HIV case conference: • How can we improve adherence ?S100 prescriber at AMS would be better for him, more regular review, counselling, taxi vouchers • Ongoing discussions with GP at AMS • Trial terbinafine topically for rash to reduce pill burden – if we can improve adherence, may not need weekly fluconazole prophylaxis	
10.	14/06	56 yo F	Elite controller	**Clinical details** • 56 yo Caucasian Australian born female LWHIV • diagnosed in 1998 after giving blood • married to African male, travelled through S.Africa before coming to Aus - his immigration HIV test was neg • then was re-tested when she was pos - and found to be pos also • have both been seeing immunology at local hospital is an 'elite controller' • has never been on treatment • maintains UDVL or low level viraemia • CD4 has stayed around 1500 PMH • euthyroid goitre DH • nil NKDA ex smoker - smoked from 1994 - on/ off • kids aged 26 and 30	• Limited evidence regarding elite controllers and commencement of treatment • Viral reservoirs • Chronic inflammation and role of this in HIV associated disease Palacios et al: • The majority of patients with HIV infection have progressive active viral transcription and replication, which results in loss of $CD4^+$ T cells, appearance of clinical symptoms, and disease progression. • In a few rare cases, however, this increase in viremia is not observed, and immunity is maintained in these individuals. • These are asymptomatic patients who maintain low levels of viral replication in the absence of antiretroviral treatment, either: • elite controllers (control viremia to undetectable levels) OR • long-term nonprogressors (LTNP) who maintain low levels of viremia and high levels

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				• they are HIV neg (tested when husband was diagnosed) • they are not aware of patient and husband diagnosis • husband is on treatment • unsure what • he also has chronic hep b **Management** • Long discussion around definition 'elite controller' • expert opinion is activation of the immune response can lead to increased cardiovascular risk, increased risk of HIV associated malignancies • possible reservoirs of infections even though VL on serum is UD • potential for peaks and troughs in VL that we miss with infrequent testing • opinion is that treatment may reduce long term CV risk and reduce HIV viral reservoirs • discussed potential treatment options - would try single pill with few Ses – e.g. dovato • she prefers to stay off treatment for now • discussion with Prof T - increase frequency of VL testing • do today - 2m, 4m to see what is happening • re-visit treatment option depending on results • At further review – her VL remained UD <20 and she prefers to stay off treatment	of $CD4^+$ T cells for more than 10 years without treatment ASHM HIV management • HIV controller refers to people with HIV-1 infection who maintain undetectable HIV viral loads in the absence of ART • Approximately 0.6% of people with HIV infection are considered elite controllers (HIV RNA < 50 copies/mL) • people who naturally control HIV infection with plasma HIV RNA levels between 50 and 2000 copies/mL have been referred to viraemic controllers • Elite controllers exhibit-stronger **HIV specific immune responses** compared with people who do not control viral replication and are also **more likely to possess alleles of human leucocyte antigen (HLA)-B genes that are associated with slow progression of HIV disease, such as HLA-B*5701;** however these factors do not explain the elite controller phenotype in the majority of people. • in one study, 10% of such people had CD4+ T cell counts < 350/mL and 3% had AIDS, which were associated with greater immune activation, when compared with HIV-negative controls, and appeared to be related to increased plasma levels of lipopolysaccharide. Therefore, CD4+ T cell depletion may occur despite optimal control of HIV replication. Although there is clearly an overlap between the LTNP and elite controller groups, not all LTNP have a low

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					HIV viral load, and not all elite controllers have high CD4+ T cell counts. → not clean cut, there is a cross over Promer et al. • ART in HIV elite controllers remains controversial, because current evidence does not definitively demonstrate that the benefits of ART outweigh risk in this patient population • However, it is the opinion of the authors that in developed countries, where first-line ART regimens have minimal toxicities, treatment of elite controllers should be strongly considered. **References** 1. Palacios JA, Pérez-Piñar T, Toro C, et al. Long-term nonprogressor and elite controller patients who control viremia have a higher percentage of methylation in their HIV-1 proviral promoters than aviremic patients receiving highly active antiretroviral therapy. *J Virol*. 2012;86(23):13081-13084. doi:10.1128/JVI.01741-12 2. ASHM Health. HIV Guide for Clinical Care (https://hivmanagement.ashm.org.au/natural-history-of-hiv-infection/disease-progression/ 3. Promer K, Karris MY. Current Treatment Options for HIV Elite Controllers: a Review. Curr Treat Options Infect Dis. 2018 Jun;10(2):302-309. doi: 10.1007/s40506-018-0158-8. Epub 2018 Apr 16. PMID: 30344450; PMCID: PMC6191047.

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11.	19/3	29	PrEP in serodiscordant heterosexual couples trying to conceive	**Clinical details** • Philippine born 29F with HIV positive male partner requesting advice re PrEP and trying to conceive. • BG Male partner – diagnosed HIV 2016. On Triumeq. Good treatment adherence. VL UD • Monogamous relationship of duration 3 years, married. Planning to conceive. • For contraception and HIV transmission prevention, they have been using condoms reliably. • Client is anxious re HIV transmission despite RMP being VL UD and risk of HIV to herself and future pregnancy • She has had pre-natal testing with GP – nil issues identified • Nil significant PMHx. • Meds : Pregnancy multivitamin with min folic acid 500mcg **Management** • Confirm RMP VL UD • Reassure client of message U=U – that undetectable means untransmissible • As per CDC guidelines, PrEP should still be discussed with this client with regards to the benefits to prevent HIV acquisition & perinatal transmission, potential adverse effects of PrEP during conception, intrapartum and post partum periods including breastfeeding. • Advise client that the Australian Therapeutic Goods Administration (TGA) has classified TDF as Category B3 – "Drugs which have been taken by only a limited number of pregnant women and women of childbearing age, without an increase in the frequency of malformation or other direct or indirect harmful effects on the human fetus having been observed. Studies in animals have shown evidence of an increased occurrence of fetal damage, the significance of which is considered uncertain in humans."	• It is important to explain that condomless sex with a partner with undetectable viral load is not associated with an increase of HIV acquisition. However, despite the message of U=U, there is usually increased levels of anxiety around pregnancy and associated risks to mother and foetus. Hence, women who are trying to conceive (TTC) may feel additional concern over HIV transmission, in particular mother-to-child transmission (MTCT). In addition, The risk of HIV acquisition increases approximately x2 during pregnancy with associated higher risk mother-to-child HIV transmission as the VL is much higher in the acute HIV infection phase (ASHM, 2019). Hence, it beneficial to ensure HIV transmission is prevented during conception and pregnancy. • The subsequent Partners PrEP study examined pregnancy outcomes for 30 women who continued to use PrEP during pregnancy vs 96 who did not. They found that there was no increase in adverse pregnancy outcomes or restrictions in infant growth between the groups. (Heffron R et al. 2018). However, as per Australian TGA, the woman should also be informed re the Category B3 status of TDF so she can make a fully informed decision re starting/continuing PrEP. • This client had no other medications, but if a client did, it would be vital to cross check each medication (OTC/prescribed) to endure there are no DDI which would adversely

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				• However, ASHM PrEP Guidelines still recommends that PrEP can be commenced prior and continued during pregnancy in women at risk of HIV acquisition or who are significantly anxious about HIV acquisition (ASHM, 2021) • Offer for RMP to have consultation and attend for VL testing (if not a client of the services) • If not, consent should be obtained from the RMP to discuss their HIV with their partner • Client agreed to commence PrEP daily – on demand PrEP (used overseas at this time) has not been shown to be effective for vaginal exposure to HIV • Importance of adherence emphasised due to physiological changes of pregnancy which may affect the effective drug concentrations • Standard PrEP initiation testing done and PrEP commenced	affect the effectiveness of TDF/FTC as PrEP in this situation. • The client should take TDF/FTC as PrEP daily, firstly as PrEP on demand on not applicable for prevention of vaginal HIV transmission. Secondly, there are physiological changes in pregnancy (particularly in 2nd & 3rd trimester) associated with increased volume of distribution that can affect the drug concentration levels. To ensure that the drug concentrations are at therapeutic levels, daily adherence should be emphasised (Clinical Info HIV, 2023) **References** 1. ASHM. 2021. ASHM National PrEP Guidelines https://prepguidelines.com.au/ Published 2023. 2. Clinical Info HIV.gov Guideline. 2023. Pre-exposure Prophylaxis (PrEP) to Prevent HIV During Periconception, Antepartum, and Postpartum Periods https://clinicalinfo.hiv.gov/en/guidelines/perinatal/pre-exposure-prophylaxis-prep-prevent-hiv 3. Heffron R et al. 2018. Partners Demonstration Project and the Partners PrEP Study Pregnancy outcomes and infant growth among babies with in utero exposure to tenofovir-based preexposure prophylaxis for HIV prevention. AIDS 2018;32:1707-13.
12.	16/5	61	WLHIV + CST guideline	**Clinical details** • 61 WLHIV on Triumeq (DTG/ABC/3TC).	• Overall, PLHIV are more likely to develop AIDs-defining cancers - cervical cancer, anal

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				• Diagnosed HIV in 2005.Good virological suppression with ART adherence. Overdue for pap smear. Last done Feb 2017. Was advised to return for routine screening in 1 year. • PMHx: CKD sec to hypertensive nephrosclerosis, HTN, Asthma, Anxiety, Smoker 5-10/day, Visual impairment sec to Stargardt's syndrome, elevated BMI. • Meds: Triumeq, Atacand, Seretide 2 puffs BD, Ventonlin PRN. **Management** • Clarified good treatment adherence. • Advised that the cervical screening program has recently changed and now HPV testing is conducted to assess for risk of cervical cancer development based on the oncogenic HPV types. • As HPV is a precursor of cervical cancer, a longer period between tests is now recommended. • Previously pap smear testing was recommended 2 yearly for general population and yearly for HIV positive women. Now CST is 5 yearly for the general population and 3 yearly for HIV women. • However, if she has any HPV detected, she will need to be referred for colposcopy for further assessment. • WLHIV are at higher risk of cervical cancer than the general population. • As a smoker, this client will have an increased risk as well. • Speculum exam was conducted for CST sampling into liquid medium to enable liquid based cytology (LBC) to be done if HPV testing is positive. • Result: No HPV detected. • Advice: Rescreen in 3 years. • Reminded to participate in both 2 yearly breast and bowel cancer screening.	cancer, lung cancer, non-Hodgkin's lymphoma and Kaposi sarcoma. Thus, PLHIV should be encouraged to participate in the national screening programs (HPV, bowel cancer, breast cancer) where early detection can reduce morbidity and mortality rates. • In HIV-positive women, cervical prevalence of oncogenic HPV is higher than the general population (Cancer Council, 2022). In addition, HIV-positive status and HPV infection is associated with pre-cancerous cervical lesions and a higher rate of cervical cancer in women (Cancer Council, 2022). • HPV 16 and 18 are detected in approximately 70% of cervical cancers (Cancer Council, 2022) Up to 67% of women can self-resolve HPV infection by 12 months (Cancer Council, 2022). However, resolution success is dependent on the HPV type, woman's age and other factors. • In this client's case, if she had HPV detected, the 2 main risk factors which would reduce her ability to self-resolve the HPV infection are being HIV positive, and smoking status. • If a WLHIV had any type HPV detected, the Cancer Council (2022) recommends colposcopy referral, preferably by an experienced colposcopist in a tertiary centre, and that the entirely anogenital tract (cervical, vaginal, vulval, perianal and anal) should be assessed. For treatment, they recommend excision only and that test of cure should be undertaken at 12 months post treatment and then as per guidelines (Cancer Council, 2022)

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					References 1. Cancer Council. 2022. Oncogenic HPV types 16 and/or 18. https://www.cancer.org.au/clinical-guidelines/cervical-cancer/cervical-cancer-screening/management-of-oncogenic-hpv-test-results/oncogenic-hpv-types-16-and-or-18 2. Cancer Council. 2022. 16. Screening in immune-deficient women. https://www.cancer.org.au/clinical-guidelines/cervical-cancer/cervical-cancer-screening/screening-in-immune-deficient-women 3. Cancer Council. 2022. Test of Cure after treatment for HSIL (CIN2/3). https://www.cancer.org.au/clinical-guidelines/cervical-cancer/cervical-cancer-screening/management-histologically-confirmed-high-grade-squamous-abnormalities/test-of-cure-after-treatment-for-hsil-cin2-3
13.	2/12	68	LHIV for ARV Switch for pill regimen simplification	**Clinical details** • 68MSM LHIV on Descovy/Dolutegravir. Diagnosed 2019. Good treatment adherence. Takes ARV nocte. Requests single pill regimen as he would like to travel again. Worried about taking the wrong numbers of pills. Requesting if possible to be on LA Cabenuva. • PMHx • L RCC with L total nephrectomy • CKD stage 3b/4 (elevated Cr baseline 160-190 stable) • Gout • Lap cholecystectomy 2019	• It is important to recognise that PLHIV may like to change their ARV for various reasons. In this case, although the client would have preferred a non-visible form of ARV (Cabenuva), he is not a suitable candidate for it. Nonetheless, the option of a single pill is acceptable as a compromise as he feels more able to resume travel (pre COVID) with less pills to take with him. The fear that he will miscalculate the number of pills is also reduced as he has half less pills to bring. \ • As he has been switched to Biktarvy, it is important to monitor his renal function and

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				• Type 2 DM – lifestyle and diet controlled • Elevated BMI Wt 102kg • Meds • Febuxostat 80mg daily • Colchicine 0.5 mcg PRN • Magnesium supplements – Advised to take 12hrs apart from ARV due to chelation risk • Social/Sexual history • Usual sexual partners are from overseas due to feeling stigma here due to CALD and MSM status • Reports stigma feels worse now as he has HIV • Now that borders are open for travel, he is keen to return to previous schedule of travelling overseas in Malaysia/China/Thailand/Vietnam for a few months at a time • Results 2/12/22 • Cr 162 eGFR 37 • VL147 copies/mL CD4 680 (40%)	ensure that his HIV ARV is reviewed if his CrCl <30ml/min as he will need to be change from Biktarvy to another ARV regimen. • Cabenuva ○ No dose adjustment for PO/IM CAB or RPV is required in patients with mild/moderate renal impairment. RPV decreases tubular secretion of creatinine and increased measure serum creatinine but does not affect glomerular filtration. CAB does not have any effect on renal function. Hence, Cabenuva should be used in caution with patients with severe/end stage renal impairment. These patients should be monitored more frequently for adverse events, including as RPV absorption/metabolism may be affected leading to increased drug levels. (Clinical Info HIV, 2023) **References** 1. Clinical Info HIV Guidelines. 2023. Carbotegravir https://clinicalinfo.hiv.gov/en/guidelines/pediatric-arv/cabotegravir 2. Clinical Info HIV Guidelines. 2023. Rilpivirine. https://clinicalinfo.hiv.gov/en/guidelines/pediatric-arv/rilpivirine 3. Clinical Info HIV Guidelines. 2023. Bictegravir https://clinicalinfo.hiv.gov/en/guidelines/pediatric-arv/bictegravir

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				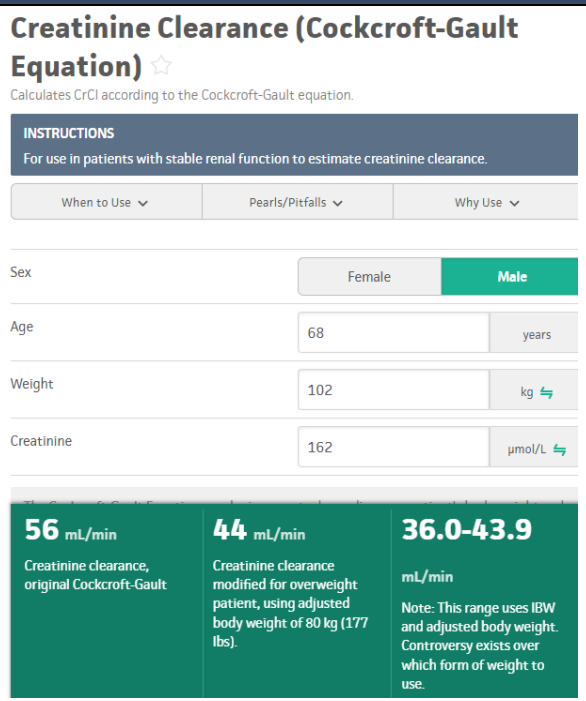 **Management** • Calculate baseline - CrCl 44 • Provide information that Cabenuva contains carbotegravir and rilpiverane. • While no dose adjustment is required, it is not recommended for people with severe/end stage renal failure – which he is not at that stage yet . • However, as it is a LA ARV, if there is any adverse effect to Cabenuva, we would not be able to remove the ARV from his system to reduce any harm. • In addition, the LA ARV schedule is monthly dosing then bimonthly dosing. • With the PO ARV, he would be able to self administer up to 6 months of HIV treatment	

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				• Client agreed with this information • Current regimen: TDF/FTC/DTG • Recommend regimen: Biktarvy (BIC/TAF/FTC) – single pill. 3DR. high barrier to resistance • Biktarvy dosing is not recommended in patients with CrCl <30ml/min – so this is safe for his renal function • Neither of his other 2 medications were available for cross checking on the Liverpool HIV drug checker – which does not mean that there are no interactions. • Continue close monitoring of HIV VL • Client was agreeable and provided Biktarvy script today • Booked for review 4/52 – VL 164 (Stable) • Due to elevated VL approaching 200 copies, requested to repeat VL in 6/52 – VL 40	