

Key resource papers for pharmacists

HIV – general (assessments, transmission)

Aberg JA, Kaplan JE, Libman H, et al.; HIV Medicine Association of the Infectious Diseases Society of America. Primary care guidelines for the management of persons infected with human immunodeficiency virus: 2009 update by the HIV medicine Association of the Infectious Diseases Society of America. *Clin Infect Dis*. 2009 Sep 1;49(5):651-81. PMID: 19640227

Cohen MS, Chen YQ, McCauley M, et al.; HPTN 052 Study Team. Prevention of HIV-1 infection with early antiretroviral therapy. *N Engl J Med*. 2011 Aug 11;365(6):493-505. Epub 2011 Jul 18. PMID: 21767103

Cohen MS, Shaw GM, McMichael AJ, Haynes BF. Acute HIV-1 Infection. *N Engl J Med*. 2011 May 19;364(20):1943-54. PMID: 21591946

Cysique LA, Waters EK, Brew BJ. Central nervous system antiretroviral efficacy in HIV infection: a qualitative and quantitative review and implications for future research. *BMC Neurol*. 2011 Nov 22;11:148. Review. PMID: 22107790

Gupta SK, Eustace JA, Winston JA, et al. Guidelines for the management of chronic kidney disease in HIV-infected patients: recommendations of the HIV Medicine Association of the Infectious Diseases Society of America. *Clin Infect Dis*. 2005 Jun 1;40(11):1559-85. PMID:15889353

Kitahata MM, Gange SJ, Abraham AG, et al.; NA-ACCORD Investigators. Effect of early versus deferred antiretroviral therapy for HIV on survival. *N Engl J Med*. 2009 Apr 30;360(18):1815-26. Epub 2009 Apr 1. PMID: 19339714

Letendre S. Central nervous system complications in HIV disease: HIV-associated neurocognitive disorder. *Top Antivir Med*. 2011 Nov;19(4):137-42. Review. PMID: 22156215

McComsey GA, Tebas P, Shane E, et al. Bone disease in HIV infection: a practical review and recommendations for HIV care providers. *Clin Infect Dis*. 2010 Oct 15;51(8):937-46. Review. PMID: 20839968

Strategies for Management of Antiretroviral Therapy (SMART) Study Group, El-Sadr WM, Lundgren JD, Neaton JD, et al. CD4+ count-guided interruption of antiretroviral treatment. *N Engl J Med*. 2006 Nov 30;355(22):2283-96. PMID: 17135583

Thompson MA, Aberg JA, Cahn P, et al.; International AIDS Society-USA. Antiretroviral treatment of adult HIV infection: 2010 recommendations of the International AIDS Society-USA panel. *JAMA*. 2010 Jul 21;304(3):321-33. PMID: 20639566

Tseng A, Foisy M, Hughes C, et al. Role of the Pharmacist in Caring for Patients with HIV/AIDS: Clinical Practice Guidelines. *CJHP* 2012; 65(2):125-145.

When To Start Consortium, Sterne JA, May M, Costagliola D, et al. Timing of initiation of antiretroviral therapy in AIDS-free HIV-1-infected patients: a collaborative analysis of 18 HIV cohort studies. *Lancet*. 2009 Apr 18;373(9672):1352-63. Epub 2009 Apr 8. Review. PMID:19361855

Selecting and Reviewing Therapy Resistance

Clavel F, Hance AJ. HIV drug resistance. *N Engl J Med*. 2004 Mar 4;350(10):1023-35. PMID: 14999114

Hirsch MS, Günthard HF, Schapiro JM, et al. Antiretroviral drug resistance testing in adult HIV-1 infection: 2008 recommendations of an International AIDS Society-USA panel. *Clin Infect Dis*. 2008 Jul 15;47(2):266-85. PMID: 18549313

Drug Interactions

Antoniou T, Tseng AL. Interactions between antiretrovirals and antineoplastic drug therapy. *Clin Pharmacokinet*. 2005;44(2):111-45. PMID: 15656694

Birbeck GL, French JA, Perucca E, et al. Evidence-based guideline: Antiepileptic drug selection for people with HIV/AIDS: report of the Quality Standards Subcommittee of the American Academy of Neurology and the Ad Hoc Task Force of the Commission on Therapeutic Strategies of the International League Against Epilepsy. *Neurology*. 2012 Jan 10;78(2):139-45. PMID: 22218281

Hughes CA, Foisy M, Tseng A. Interactions between antifungal and antiretroviral agents. *Expert Opin Drug Saf*. 2010 Sep;9(5):723-42. PMID: 20345324

Foisy MM, Yakiwchuk EM, Hughes CA. Induction effects of ritonavir: implications for drug interactions. *Ann Pharmacother*. 2008 Jul;42(7):1048-59. PMID: 18577765

Foisy MM, Yakiwchuk EM, Chiu I, Singh AE. Adrenal suppression and Cushing's syndrome secondary to an interaction between ritonavir and fluticasone: a review of the literature. *HIV Med*. 2008 Jul;9(6):389-96. PMID: 18459946

Khoo S, Back D, Winstanley P. The potential for interactions between antimalarial and antiretroviral drugs. *AIDS*. 2005 Jul 1;19(10):995-1005. No abstract available. PMID: 15958830

Lee LS, Andrade AS, Flexner C. Interactions between natural health products and antiretroviral drugs: pharmacokinetic and pharmacodynamic effects. *Clin Infect Dis*. 2006 Oct 15;43(8):1052-9.

Mounier N, Katlama C, Costagliola D, et al. Drug interactions between antineoplastic and antiretroviral therapies: Implications and management for clinical practice. *Crit Rev Oncol Hematol*. 2009 Oct;72(1):10-20. Epub 2008 Dec 12.

Pau AK, Boyd SD. Recognition and management of significant drug interactions in HIV patients: challenges in using available data to guide therapy. *Clin Pharmacol Ther*. 2010 Nov;88(5):712-9. PMID: 20668439

Tseng A, Foisy M. Important Drug-Drug Interactions in HIV-Infected Persons on Antiretroviral Therapy: An Update on New Interactions Between HIV and Non-HIV Drugs. *Curr Infect Dis Rep*. 2012 Feb;14(1):67-82. PMID: 22125049

Specific populations

Women/pregnancy

Clark R. Sex differences in antiretroviral therapy-associated intolerance and adverse events. *Drug Saf.* 2005;28(12):1075-83. PMID: 16329711

Foisy M, Hughes C. Role of the pharmacist in perinatal management of HIV disease. *Am J Health Syst Pharm.* 2011 Nov 15;68(22):2116, 2118, 2120-2. PMID: 22058096

Heidari S, Mofenson L, Cotton MF, et al. Antiretroviral drugs for preventing mother-to-child transmission of HIV: a review of potential effects on HIV-exposed but uninfected children. *J Acquir Immune Defic Syndr.* 2011 Aug 1;57(4):290-6. PMID: 21602695

Oforokun I, Chuck SK, Hitti JE. Antiretroviral pharmacokinetic profile: a review of sex differences. *Gend Med.* 2007 Jun;4(2):106-19. PMID: 17707845

Siegfried N, van der Merwe L, Brocklehurst P, Sint TT. Antiretrovirals for reducing the risk of mother-to-child transmission of HIV infection. *Cochrane Database Syst Rev.* 2011 Jul 6;(7):CD003510. PMID: 21735394

Pediatrics

Cadilla A, Qureshi N, Johnson DC. Pediatric antiretroviral therapy. *Expert Rev Anti Infect Ther.* 2010 Dec;8(12):1381-402. Review. PMID: 21133664

Mofenson LM, Brady MT, Danner SP, et al; Centers for Disease Control and Prevention; National Institutes of Health; HIV Medicine Association of the Infectious Diseases Society of America; Pediatric Infectious Diseases Society; American Academy of Pediatrics. Guidelines for the Prevention and Treatment of Opportunistic Infections among HIV-exposed and HIV-infected children: recommendations from CDC, the National Institutes of Health, the HIV Medicine Association of the Infectious Diseases Society of America, the Pediatric Infectious Diseases Society, and the American Academy of Pediatrics. *MMWR Recomm Rep.* 2009 Sep 4;58(RR-11):1-166. PMID: 19730409. Also available at http://aidsinfo.nih.gov/contentfiles/lvguidelines/oi_guidelines_pediatrics.pdf

Panel on Antiretroviral Therapy and Medical Management of HIV-Infected Children. Guidelines for the Use of Antiretroviral Agents in Pediatric HIV Infection. August 11, 2011; pp1-268. Available at <http://aidsinfo.nih.gov/ContentFiles/PediatricGuidelines.pdf>

Hepatitis co-infection

Brook G, Main J, Nelson M, et al. British HIV Association guidelines for the management of coinfection with HIV-1 and hepatitis B or C virus 2010. *HIV Med.* 2010 Jan;11(1):1-30.

European AIDS Treatment Network (NEAT) Acute Hepatitis C Infection Consensus Panel. Acute hepatitis C in HIV-infected individuals: recommendations from the European AIDS Treatment Network (NEAT) consensus conference. *AIDS.* 2011 Feb 20;25(4):399-409. PMID: 21139491

Koziel MJ, Peters MG. Viral hepatitis in HIV infection. *N Engl J Med.* 2007 Apr 5;356(14):1445-54.

Illicit drug users

Altice FL, Kamarulzaman A, Soriano VV, et al. Treatment of medical, psychiatric, and substance-use comorbidities in people infected with HIV who use drugs. *Lancet*. 2010 Jul 31;376(9738):367-87. PMID: 20650518

Colfax G, Guzman R. Club drugs and HIV infection: a review. *Clin Infect Dis*. 2006 May 15;42(10):1463-9. Epub 2006 Mar 31. PMID: 16619161

HIV-2 infection

Campbell-Yesufu OT, Gandhi RT. Update on human immunodeficiency virus (HIV)-2 infection. *Clin Infect Dis*. 2011 Mar 15;52(6):780-7. PMID: 21367732

Monitoring response to therapy Toxicities/adverse drug reactions

Fisher M, Cooper V. HIV and ageing: premature ageing or premature conclusions? *Curr Opin Infect Dis*. 2012 Feb;25(1):1-3.

Rockwood N, Mandalia S, Bower M, Gazzard B, Nelson M. Ritonavir-boosted atazanavir exposure is associated with an increased rate of renal stones compared with efavirenz, ritonavir-boosted lopinavir and ritonavir-boosted darunavir. *AIDS*. 2011 Aug 24;25(13):1671-3.

Scherzer R, Estrella M, Li Y, Deeks SG, Grunfeld C, Shlipak MG. Association of tenofovir exposure with kidney disease risk in HIV infection. *AIDS*. 2012 Feb 4.

Singhania R, Kotler DP. Lipodystrophy in HIV patients: its challenges and management approaches. *HIV AIDS (Auckl)*. 2011;3:135-43. Epub 2011 Dec 14.

Therapeutic Drug Monitoring

Demeter LM, Jiang H, Mukherjee AL, Morse GD, DiFrancesco R, DiCenzo R, Dykes C, Sista P, Bachelier L, Klingman K, Rinehart A, Albrecht M. A Randomized Trial of Therapeutic Drug Monitoring of Protease Inhibitors in Antiretroviral-Experienced, HIV-1-Infected Patients. *AIDS*. 2009 Jan 28;23(3):357-68. University of Rochester School of Medicine and Dentistry, New York, USA. lisa_demeter@urmc.rochester.edu

Kredo T, Van der Walt JS, Siegfried N, Cohen K. Therapeutic drug monitoring of antiretroviral agents in people with HIV. *Cochrane Database Syst Rev*. 2009 Jul 8;(3):CD007268. Review.

Pau AK, Penzak SR, Boyd SD, McLaughlin M, Morse CG. Impaired maraviroc and raltegravir clearance in a human immunodeficiency virus-infected patient with end-stage liver disease and renal impairment: a management dilemma. *Pharmacotherapy*. 2012 Jan;32(1):e1-6. doi: 10.1002/PHAR.1003.

Patient Counselling Adherence

Ma A, Chen DM, Chau FM, Saberi P. Improving adherence and clinical outcomes through an HIV pharmacist's interventions. *AIDS Care*. 2010 Oct;22(10):1189-94.

Okonsky JG. Problems taking pills: understanding HIV medication adherence from a new perspective. *AIDS Care*. 2011 Dec;23(12):1652-9. doi:10.1080/09540121.2011.579944. Epub 2011 Jun 28.

HIV Post-exposure prophylaxis/Pre-exposure prophylaxis

Anglemyer A, Rutherford GW, Baggaley RC, et al. Antiretroviral therapy for prevention of HIV transmission in HIV-discordant couples. *Cochrane Database Syst Rev*. 2011 Aug 10;(8):CD009153. PMID: 21833973

Okwundu CI, Okoromah CA. Antiretroviral pre-exposure prophylaxis (PrEP) for preventing HIV in high-risk individuals. *Cochrane Database Syst Rev*. 2009 Jan 21;(1):CD007189. PMID: 19160329

Raphael J, Landovitz, M.D., and Judith S. Currier, M.D. Postexposure Prophylaxis for HIV Infection. *N Engl J Med* 2009; 361:1768-1775 October 29, 2009


Young TN, Arens FJ, Kennedy GE, Laurie JW, Rutherford G. Antiretroviral post-exposure prophylaxis (PEP) for occupational HIV exposure. *Cochrane Database Syst Rev*. 2007 Jan 24;(1):CD002835.

Opportunistic Infections

Abdool Karim SS, Naidoo K, Grobler A, et al. Integration of antiretroviral therapy with tuberculosis treatment. *N Engl J Med*. 2011 Oct 20;365(16):1492-501. PMID: 22010915

Blanc FX, Sok T, Laureillard D, et al. CAMELIA (ANRS 1295–CIPRA KH001) Study Team. Earlier versus later start of antiretroviral therapy in HIV-infected adults with tuberculosis. *N Engl J Med*. 2011 Oct 20;365(16):1471-81. PMID: 22010913

Havlir DV, Kendall MA, Ive P, et al.; AIDS Clinical Trials Group Study A5221. Timing of antiretroviral therapy for HIV-1 infection and tuberculosis. *N Engl J Med*. 2011 Oct 20;365(16):1482-91. PMID: 22010914

Kaplan JE, Benson C, Holmes KH, Brooks JT, Pau A, Masur H, Centers for Disease Control and Prevention (CDC), National Institutes of Health, HIV Medicine Association of the Infectious Diseases Society of America. Guidelines for prevention and treatment of opportunistic infections in HIV-infected adults and adolescents: recommendations from CDC, the National Institutes of Health, and the HIV Medicine Association of the Infectious Diseases Society of America. *MMWR Recomm Rep* 2009 Apr 10;58(RR-4):1-207; quiz CE1-4. PubMed 

Karakousis PC, Moore RD, Chaisson RE. Mycobacterium avium complex in patients with HIV infection in the era of highly active antiretroviral therapy. *Lancet Infect Dis*. 2004 Sep;4(9):557-65. Review. PMID: 15336223

Thomas CF Jr, Limper AH. Pneumocystis pneumonia. *N Engl J Med*. 2004 Jun 10;350(24):2487-98. Review. PMID: 15190141

Torre D, Casari S, Speranza F, et al. Randomized trial of trimethoprim-sulfamethoxazole versus pyrimethamine-sulfadiazine for therapy of toxoplasmic encephalitis in patients with AIDS. Italian Collaborative Study Group. *Antimicrob Agents Chemother*. 1998 Jun;42(6):1346-9. PMID: 9624473

Internet Resources

Refer to Table 1 in article “Role of the Pharmacist in Caring for Patients with HIV”

Panel on Antiretroviral Guidelines for Adults and Adolescents. Guidelines for the use of antiretroviral agents in HIV-1-infected adults and adolescents. Department of Health and Human Services. March 27, 2012. p1–239. Available at <http://www.aidsinfo.nih.gov/ContentFiles/AdultandAdolescentGL.pdf>.

Panel on Treatment of HIV-Infected Pregnant Women and Prevention of Perinatal Transmission. Recommendations for Use of Antiretroviral Drugs in Pregnant HIV-1-Infected Women for Maternal Health and Interventions to Reduce Perinatal HIV Transmission in the United States. September 14, 2011; pp 1-207. Available at <http://aidsinfo.nih.gov/ContentFiles/PerinatalGL.pdf>.

Panel on Antiretroviral Therapy and Medical Management of HIV-Infected Children. Guidelines for the Use of Antiretroviral Agents in Pediatric HIV Infection. August 11, 2011; pp 1-268. Available at <http://aidsinfo.nih.gov/ContentFiles/PediatricGuidelines.pdf>.