International Clinical Practice Guidelines for Gender Minority/Trans People: Systematic Review and Quality Assessment

Supplementary/ Web/ Appendices

W1. Search terms used and search strategy for databases searched

W2. Stakeholder and review team priority scoring exercise

W3. Excluded studies at full text stage with reasons for exclusion

W4. Extracted sentences from included studies relating to mortality or quality of life with associated references from clinical practice guidelines

W5. Extracted key recommendations from clinical practice guidelines

W1: Literature searching – Databases searched and search terms used

Embase <1974 to 2019 July 29>
1 transgender.mp. or transgender/ (7297)
2 transsexual.mp. (2070)
3 gender identity/ or gender non-conforming.mp. (15929)
4 non-binary.mp. (219)
5 gender minority.mp. or "sexual and gender minority"/ (1582)
6 transman.mp. (20)
7 transwoman.mp. (25)
8 gender dysphoria.mp. or gender dysphoria/ (1887)
9 gender diversity.mp. (257)
10 1 or 2 or 3 or 4 or 5 or 6 or 7 or 8 or 9 (24836)
11 practice guideline/ or clinical guideline.mp. (387400)
12 10 and 11 (511)
13 limit 12 to yr="2008 - 2020" (460)

Ovid MEDLINE(R) ALL <1946 to July 29, 2019>
1 gender diversity.mp. (225)
2 gender dysphoria.mp. or Transsexualism/ or Gender Dysphoria/ or Gender Identity/ (20817)
3 gender minority.mp. or "Sexual and Gender Minorities"/ (2406)
4 Transgender Persons/ or gender non-conforming.mp. (2429)
5 non-binary.mp. (164)
6 transgender.mp. (5364)
7 transman.mp. (8)
8 transwoman.mp. (13)
9 Transsexualism/ or transsexual.mp. (3855)
10 1 or 2 or 3 or 4 or 5 or 6 or 7 or 8 or 9 (26619)
11 Practice Guidelines as Topic/ or clinical guideline.mp. (112006)
12 10 and 11 (103)

Web of Science
Search terms: (TOPIC: (((((transgender OR gender dysphoria) OR transsexual) OR gender identity) OR transman) OR transwomen) AND TOPIC: (clinical guideline OR practice guideline)) [271 results]

(TOPIC: (gender incongruence) AND TOPIC: (clinical guideline OR practice guideline))

NICE Evidence
Search terms: Transgender, gender dysphoria

CINAHL
(transgender or transsexual or transsexual or gender variant or gender non-conforming or transmen or transwomen or gender dysphoria or gender identity) AND (clinical guideline or practice guideline)

PSYCInfo
(transgender or transsexual or transexual or gender variant or gender non-conforming or transmen or transwomen or gender dysphoria or gender identity) AND (clinical guideline or practice guideline)

AHRQ National Guidelines Clearing House
Search terms: trans, gender identity. Was stopped in 2018 – no update searches available

eGuidelines
Search terms: trans, gender identity

Guidelines International Network
Search terms: Transgender, gender dysphoria, gender identity

WHO website – not searchable on so used Google instead

Google Search terms: WHO transgender guidelines - First 100 hits examined

Update: WHO transgender guidelines 2020

LILACS
Search term: gender dysphoria

W2: Stakeholder prioritisation exercise and comparison with Reviewer Team prioritisation

Domains	Stakeholders (n=19) #						Reviewers (n=6)					
Priority	**1 highest**	**2**	**3**	**4**	**5**	**6 lowest**	**1 highest**	**2**	**3**	**4**	**5**	**6 lowest**
Scope and purpose	***	***** *	*	**	***** *		*	*	*****	**		*
Stakeholder Involvement	***** ****	*	***	**	**	*			*	*	**	*
Rigour of development	*	*	*****	*****	****	**	*****	*				
Clarity and presentation	***	***	*****	***	*	***		*		***	*	
Applicability	*	***** **	**	*****	***			*			*	***
Editorial independence	**	*	**	*		***** ***** *		**			**	*

Key: # Numbers do not all add up to 19 as one stakeholder only gave first two preferences; * stakeholder or reviewer preference vote. Green shows highest priority and red shows lowest priority

W3: Excluded full studies with reasons for exclusion

Full Citation	Reason(s) for exclusion
Ackerley CG, Poteat T, Kelley CF. Human Immunodeficiency Virus in Transgender Persons. *Endocrinol Metab Clin North Am* 2019;**48**:453–64. doi:10.1016/j.ecl.2019.02.007	Not a CPG. Single country.
Adams N, Pearce R, Veale J, *et al.* Guidance and Ethical Considerations for Undertaking Transgender Health Research and Institutional Review Boards Adjudicating this Research. *Transgender Heal* 2017;**2**:165–75. doi:10.1089/trgh.2017.0012	Not a CPG.
ADFAM. Including diverse families: good practice guidelines. 2010. https://adfam.org.uk/files/docs/idf_toolkit.pdf	No TG specific recommendation. Single country.
Akl EA, Kennedy C, Konda K, *et al.* Using GRADE methodology for the development of public health guidelines for the prevention and treatment of HIV and other STIs among men who have sex with men and transgender people. *BMC Public Health* 2012;**12**:386. doi:10.1186/1471-2458-12-386	Not a CPG.
American College of Obstetricians and Gynecologists, Sokkary N, Gomez-Lobo V. Committee Opinion No. 685: Care for Transgender Adolescents. *Obstet Gynecol* 2017;**129**:e11–6. doi:10.1097/AOG.0000000000001861	Not a CPG. Single country.
American Psychological Assoc. Guidelines for psychological practice with transgender and gender nonconforming people. *Am Psychol* 2015;**70**:832–64. doi:10.1037/a0039906	Single country.
American Psychological Association. Multicultural guidelines: An ecological approach to context, identity, and intersectionality, 2017. *Am Psychol Assoc*: 2017.http://www.apa.org/about/policy/multicultural-guidelines.pdf	Single country.
American Society for Reproductive Medicine, American College of Obstetricians and Gynecologists. Prepregnancy counseling: Committee Opinion No. 762. *Fertil Steril* 2019;**111**:32–42. doi:10.1016/j.fertnstert.2018.12.003	Not a CPG. No TG specific recommendation. Single country.
Baggaley R, Armstrong A, Dodd Z, *et al.* Young key populations and HIV: A special emphasis and consideration in the new WHO Consolidated Guidelines on HIV Prevention, Diagnosis, Treatment and Care for Key Populations. *J Int AIDS Soc* 2015;**18**:85–8. doi:10.7448/IAS.18.2.19438	Not a CPG.
Barrett J. Gender Dysphoria in Adults. BMJ Best Pract. 2018.https://bestpractice.bmj.com/topics/en-gb/992	Not a CPG. Single author.
Bekker L-G, Rebe K, Venter F, *et al.* Southern African guidelines on the safe use of pre-exposure prophylaxis in persons at risk of acquiring HIV-1 infection. *South Afr J HIV Med* 2016;**17**. doi:10.4102/sajhivmed.v17i1.455	Single country.
Berli JU, Capitán L, Simon D, *et al.* Facial gender confirmation surgery—review of the literature and recommendations for Version 8 of the WPATH Standards of Care. *Int J Transgenderism* 2017;**18**:264–70. doi:10.1080/15532739.2017.1302862	Not a CPG.
Bhugra D, Gupta S, Schouler-Ocak M, *et al.* EPA Guidance Mental Health Care of Migrants. *Eur Psychiatry* 2014;**29**:107–15. doi:10.1016/j.eurpsy.2014.01.003	Not a CPG. No TG specific recommendation.
Bonifacio JH, Maser C, Stadelman K, *et al.* Management of gender dysphoria in adolescents in primary care. *Can Med Assoc J* 2019;**191**:E69–75. doi:10.1503/cmaj.180672	Not a CPG. Single country.
Bonnington A, Dianat S, Kerns J, *et al.* Society of Family Planning clinical recommendations: Contraceptive counseling for transgender and gender diverse people who were female sex assigned at birth. *Contraception* Published Online First: 2020. doi:10.1016/j.contraception.2020.04.001	Single country.
Boroughs MS, Bedoya CA, O'Cleirigh C, *et al.* Toward Defining, Measuring, and Evaluating LGBT Cultural Competence for Psychologists. *Clin Psychol Sci Pract* 2015;**22**:151–71. doi:10.1111/cpsp.12098	Not a CPG. Single country.
Bourjeily G, Mehta S. Gender diversity in Obstetric Medicine. *Obstet Med* 2019;**12**:55–6. doi:10.1177/1753495X19851711	Not a CPG.
Brown B, Poteat T, Marg L, *et al.* Human Papillomavirus-Related Cancer Surveillance, Prevention, and Screening among Transgender Men and Women: Neglected Populations at High Risk. *LGBT Heal* 2017;**4**:315–9. doi:10.1089/lgbt.2016.0142	Not a CPG.
Brown GR. Recommended revisions to the world professional association for transgender health's standards of care section on medical	Not a CPG. Single author.

care for incarcerated persons with gender identity disorder. *Int J Transgenderism* 2009;**11**:133–9. doi:10.1080/15532730903008073	
Bruessow DM, O'Connor LM, Eaman E, *et al.* Transgender Patients: Considerations for the Family Physician. *Fam Dr A J New York State Acad Fam Physicians* 2019;**7**:36–41.	Not a CPG. Single country.
Burns ZT, Bitterman DS, Liu KX, *et al.* Towards a standard of care in oncology for transgender patients. *Lancet Oncol* 2019;**20**:331–3. doi:10.1016/S1470-2045(18)30942-2	Not a CPG. Single country.
Byne W, Bradley SJ, Coleman E, *et al.* Treatment of gender identity disorder. *Am J Psychiatry* 2012;**169**:875–6. doi:10.1176/appi.ajp.2012.169.8.875	Not a CPG.
Canady V. APA practice guidelines for females focus on their strength, resilience. *Ment Heal Wkly* 2019;**29**:1–8. doi:10.1002/mhw	Not a CPG. Single Country. Single author.
Capitán L, Gutiérrez Santamaría J, Simon D, *et al.* Facial Gender Confirmation Surgery. *Plast Reconstr Surg* 2020;**145**:818e-828e. doi:10.1097/PRS.0000000000006686	Not a CPG. Single Country.
Carswell JM, Roberts SA. Induction and Maintenance of Amenorrhea in Transmasculine and Nonbinary Adolescents. *Transgender Heal* 2017;**2**:195–201. doi:10.1089/trgh.2017.0021	Not a CPG. Single country.
Chen D, Hidalgo MA, Leibowitz S, *et al.* Multidisciplinary Care for Gender-Diverse Youth: A Narrative Review and Unique Model of Gender-Affirming Care. *Transgender Heal* 2016;**1**:117–23. doi:10.1089/trgh.2016.0009	Not a CPG.
Church of England. *Valuing All God's Children: Challenging homophobic, biphobic and transphobic bullying*. 2nd ed. Church of England Education Office 2019. https://www.churchofengland.org/sites/default/files/2019-07/Valuing All God%27s Children July 2019_0.pdf	Not a CPG.
Cohen J, Lo YR, Caceres CF, *et al.* WHO guidelines for HIV/STI prevention and care among MSM and transgender people: Implications for policy and practice. *Sex Transm Infect* 2013;**89**:536–8. doi:10.1136/sextrans-2013-051121	Not a CPG.
Cohen-Kettenis PT, Klink D. Adolescents with gender dysphoria. *Best Pract Res Clin Endocrinol Metab* 2015;**29**:485–95. doi:10.1016/j.beem.2015.01.004	Not a CPG.
Colebunders B, De Cuypere G, Monstrey S. New Criteria for Sex Reassignment Surgery: WPATH Standards of Care, Version 7, Revisited. *Int J Transgenderism* 2015;**16**:222–33. doi:10.1080/15532739.2015.1081086	Not a CPG.
Coxon J, Seal L. Hormone management of trans men. *Trends Urol Men's Heal* 2018;**9**:8–12. doi:10.1002/tre.651	Not a CPG. Single country.
D'Angelo A, Panayotidis C, Amso N, *et al.* Recommendations for good practice in ultrasound: oocyte pick up†. *Hum Reprod Open* 2019;**2019**:1689–99. doi:10.1093/hropen/hoz025	Not a CPG. No TG specific recommendation.
Dahl M, Feldman JL, Goldberg J, *et al.* Endocrine Therapy for Transgender Adults in British Columbia: Suggested Guidelines Physical Aspects of Transgender Endocrine Therapy. 2015. http://www.phsa.ca/transcarebc/Documents/HealthProf/BC-Trans-Adult-Endocrine-Guidelines-2015.pdf	Single country.
Davies S. The Evidence Behind the Practice: A Review of WPATH Suggested Guidelines in Transgender Voice and Communication. *Perspect ASHA Spec Interes Groups* 2017;**2**:64–73. doi:10.1044/persp2.SIG10.64	Single author.
De Antonio IE, Gómez-Gil E. Coordination of healthcare for transsexual persons: A multidisciplinary approach. *Curr Opin Endocrinol Diabetes Obes* 2013;**20**:585–91. doi:10.1097/01.med.0000436182.42966.31	Not a CPG.
de Haan G, Santos G-M, Arayasirikul S, *et al.* Non-Prescribed Hormone Use and Barriers to Care for Transgender Women in San Francisco. *LGBT Heal* 2015;**2**:313–23. doi:10.1089/lgbt.2014.0128	Not a CPG.
de Vries ALC, Cohen-Kettenis PT. Clinical management of gender dysphoria in children and adolescents: The Dutch approach. *J Homosex* 2012;**59**:301–20. doi:10.1080/00918369.2012.653300	Not a CPG.
Dèttore D, Ristori J, Antonelli P, *et al.* Gender dysphoria in adolescents: The need for a shared assessment protocol and proposal of the AGIR protocol. *J Psychopathol* 2015;**21**:152–8.	Not a CPG.
Deutsch MB, Green J, Keatley JA, *et al.* Electronic medical records and the transgender patient: Recommendations from the world professional association for Transgender Health EMR working group. *J Am Med Informatics Assoc* 2013;**20**:700–3. doi:10.1136/amiajnl-2012-001472	Not a CPG. Single country.

Devon Partnership NHS Trust. PG12 Pharmacological Treatment of Gender Dysphoria. 2015.https://www.gires.org.uk/wp-content/uploads/2014/08/PG12-GenderDysphoria.pdf	Single country.
Etienne Tollinche L, Burrows Walters C, Radix A, *et al.* The perioperative care of the transgender patient. *Anesth Analg* 2018;**127**:359–66. doi:10.1213/ANE.0000000000003371	Not a CPG. Single country.
European Society of Human Genetics. Genetic testing in asymptomatic minors: Recommendations of the European Society of Human Genetics. *Eur J Hum Genet* 2009;**17**:720–1. doi:10.1038/ejhg.2009.26	No TG specific recommendation. Single author.
Finlayson C, Johnson EK, Chen D, *et al.* Proceedings of the Working Group Session on Fertility Preservation for Individuals with Gender and Sex Diversity. *Transgender Heal* 2016;**1**:99–107. doi:10.1089/trgh.2016.0008	Not a CPG.
Fisher CB, Fried AL, Desmond M, *et al.* Perceived barriers to HIV prevention services for transgender youth. *LGBT Heal* 2018;**5**:350–8. doi:10.1089/lgbt.2017.0098	Not a CPG.
Francis C, Grober E, Potter E, *et al.* A Simple Guide for Simple Orchiectomy in Transition-Related Surgeries. *Sex Med Rev* 2020:3–7. doi:10.1016/j.sxmr.2019.11.004	Not a CPG. Single country.
Fraser L. Psychotherapy in the world professional association for transgender health's standards of care: Background and recommendations. *Int J Transgenderism* 2009;**11**:110–26. doi:10.1080/15532730903008057	Not a CPG. Single author.
Gamble RM, Taylor SS, Huggins AD, *et al.* Trans-specific Geriatric Health Assessment (TGHA): An inclusive clinical guideline for the geriatric transgender patient in a primary care setting. *Maturitas* 2020;**132**:70–5. doi:10.1016/j.maturitas.2019.12.005	Not a CPG. Single country.
GIRES. Guidance for GPs , other clinicians and health professionals on the care of gender variant people Transgender wellbeing and healthcare. UK Dep. Heal. 2008.https://midessexccg.nhs.uk/medicines-optimisation/clinical-pathways-and-medication-guidelines/chapter-6-endocrine-system-2/1142-guidance-for-gps-and-hormone-treatment-for-gender-dysphoria-1/file	Single country. Out of date.
Goeckenjan M, Glaß K, Torka S, *et al.* Indications for fertility preservation. *Gynakologische Endokrinol* 2019;:71–7. doi:10.1007/s10304-019-0241-3	Not a CPG. Single country.
Griffith C, Akers W, Dispenza F, *et al.* Standards of Care for Research with Participants Who Identify as LGBTQ+. *J LGBT Issues Couns* 2017;**11**:212–29. doi:10.1080/15538605.2017.1380549	Not a CPG. Single country
Guidance on Gender Dysphoria for Nurses. *Nurs Stand* 2013;**28**:10. doi:10.7748/ns2013.10.28.9.10.s10	Not a CPG.
Hagen DB, Galupo MP. Trans* Individuals' Experiences of Gendered Language with Health Care Providers: Recommendations for Practitioners. *Int J Transgenderism* 2014;**15**:16–34. doi:10.1080/15532739.2014.890560	Not a CPG.
Hamidi O, Davidge-Pitts CJ. Transfeminine Hormone Therapy. *Endocrinol Metab Clin North Am* 2019;**48**:341–55. doi:10.1016/j.ecl.2019.02.001	Not a CPG. Single country.
Health Policy Project, Asia Pacific Transgender Network, United Nations Development Programme. *Blueprint for the provision of comprehensive care for trans people and trans communities in Asia and the Pacific*. Washington, DC: Futures Group, Health Policy Project 2015. http://www.asia-pacific.undp.org/content/rbap/en/home/library/democratic_governance/hiv_aids/blueprint-for-the-provision-of-comprehensive-care-for-trans-peop/	Not a CPG.
Heidari S, Babor TF, De Castro P, *et al.* Sex and Gender Equity in Research: rationale for the SAGER guidelines and recommended use. *Res Integr Peer Rev* 2016;**1**:1–9. doi:10.1186/s41073-016-0007-6	Not a CPG.
Hembree W, Cohen-Kettenis P, Gooren L, *et al.* Endocrine treatment of gender-dysphoric/ gender-incongruent persons: an endocrine society clinical practice guideline. *Endocr Pract* 2017;**23**:1437–71.	Reprint of included paper (fully cited).
Hirsch S, Pickering J, Adler R. Meeting the Needs of Trans and Gender Diverse Youth: The Varied, Ubiquitous Role of the Speech-Language Pathologist in Voice and Communication Therapy/Training. *Perspect ASHA Spec Interes Groups* 2019;**4**:111–7. doi:10.1044/2018_PERS-SIG3-2018-0016	Not a CPG. Single country.
House H, Gaines S, Hawkins LA. Sexual and Gender Minority Adolescents: Meeting the Needs of Our LGBTQ Patients and Their Families. *Clin Pediatr Emerg Med* 2019;**20**:9–16. doi:10.1016/j.cpem.2019.02.004	Not a CPG. Single country.
Hughes LD, Berzin OKG, Leung M, *et al.* Adapting Healthcare Quality Measures to Transgender Individuals. *LGBT Heal* 2017;**4**:248–51.	Not a CPG. Single country.

doi:10.1089/lgbt.2017.0009	
Human Rights Campaign, American Academy of Pediatrics, American College of Osteopathic Pediatricians. Supporting & Caring for Transgender Children. 2016.http://hrc.im/supportingtranschildren	Not a CPG. Single country.
IAPAC. IAPAC Protocols for the Integrated Management of HIV and Noncommunicable Diseases. *Int Assoc Provid AIDS care* Published Online First: 2018.https://www.iapac.org/files/2018/07/IAPAC-Protocols-for-the-Integrated-Management-of-HIV-and-Noncommunicable-Diseases_3.pdf	No TG specific recommendation.
IMAP. IMAP Statement on hormone therapy for transgender people. Published Online First: 2015. https://www.ippf.org/sites/default/files/ippf_imap_transgender.pdf	Not a CPG.
In Case You Haven't Heard. *Mental Health Weekly* 2015;**25**:8-8. doi:10.1002/mhw.30307	Not a CPG.
International Association for the Study of Pain. *Guide to Pain Management in Low-Resource Settings*. Seattle: : IASP 2010. https://ebooks.iasp-pain.org/guide_to_pain_management_in_low_resource_settings	Not a CPG. No TG specific recommendation.
International Association of Physicians in AIDS Care. IAPAC – Blueprint to Address the Sexual and Reproductive Health Care and STI/HIV Prevention Needs of Adolescent Girls and Young Women. Published Online First: 2011.https://www.iapac.org/guidance/recommendations/blueprint-to-address-the-sexual-and-reproductive-health-care-and-sti-hiv-prevention-needs-of-adolescent-girls-and-young-women-in-latin-america-and-the-caribbean/	No TG specific recommendation.
International Association of Providers in AIDS Care. Recommendations for the rapid expansion of HIV self-testing in Fast-Track Cities. Published Online First: 2017.http://www.iapac.org/uploads/IAPAC-ASLM-HIVST-FTC-Recommendations-012617.pdf	No TG specific recommendation.
International Planned Parenthood Federation. IPPF. Hormonal contraception: recommendations for women at high risk of HIV. Published Online First: 2017.http://www.ippf.org/sites/default/files/2017-07/ippf_technical_brief_HC_HIV_June2017.pdf	Not a CPG. No TG specific recommendation.
International Planned Parenthood Federation. Putting sexuality back into Comprehensive Sexuality Education: making the case for a rights-based, sex-positive approach. Published Online First: 2016.https://www.ippf.org/sites/default/files/2016-10/Putting Sexuality back into Comprehensive Sexuality Education_0.pdf	Not a CPG. No TG specific recommendation.
Jungwirth, A; Diemer, T; Kopa, Z; Krausz, C; Minhas, S; Tournaye H. *EAU Guidelines on Male Infertility*. European Association of Urology 2018.	Superseded by 2020 CPG with no TG recommendations
Kaltiala-Heino R, Bergman H, Työläjärvi M, *et al.* Gender dysphoria in adolescence: current perspectives. *Adolesc Health Med Ther* 2018; **9**:31–41. doi:10.2147/AHMT.S135432	Not a CPG.
Karasic DH, Fraser L. Multidisciplinary Care and the Standards of Care for Transgender and Gender Nonconforming Individuals. *Clin Plast Surg* 2018;**45**:295–9. doi:10.1016/j.cps.2018.03.016	Derivative, not de novo.
Kemp K, Dibley L, Chauhan U, *et al.* Second N-ECCO Consensus Statements on the European Nursing Roles in Caring for Patients with Crohn's Disease or Ulcerative Colitis. *J Crohn's Colitis* 2018;**12**:760–76. doi:10.1093/ecco-jcc/jjy020	No TG specific recommendation.
Khosla S, Davidge-Pitts C. Skeletal considerations in the medical treatment of transgender people. *Lancet Diabetes Endocrinol* 2019;**7**:893–5. doi:10.1016/S2213-8587(19)30353-5	Not a CPG.
Klein DA, Malcolm NM, Berry-Bibee EN, et al. Quality Primary Care and Family Planning Services for LGBT Clients: A Comprehensive Review of Clinical Guidelines. *LGBT Health*. 2018;**5**:153-170. Doi:10.1089/lgbt.2017.0213	Not a CPG. No TG specific recommendation. Derivative, not de novo. Single country.
Klein M, Sathasivam A, Novoa Y, *et al.* Recent Consensus Statements in Pediatric Endocrinology: A Selective Review. *Pediatr Clin North Am* 2011;**58**:1301–15. doi:10.1016/j.pcl.2011.07.014	Not CPG. Derivative not de novo. No TG specific recommendation.
LGBT Health Program. *Guidelines and Protocols for Hormone Therapy and Primary Health Care for Trans Clients*. Toronto: Sherbourne Health Centre 2015. http://sherbourne.on.ca/lgbt-health/guidelines-protocols-for-trans-care/	Single country. Single author.
MacDonald S, Smith S. Dermatologists guide to cultural competency and the LGBTIQ patient. *Australas J Dermatol* 2018;**59**:85.	Not a CPG.
Martinez C, Rikhi R, Haque T, *et al.* Gender Identity, Hormone Therapy, and Cardiovascular Disease Risk. *Curr Probl Cardiol* 2020;**45**. doi:10.1016/j.cpcardiol.2018.09.003	Not a CPG.

Meyenburg B, Korte A, Moller B, *et al.* Gender identity disorders in childhood and adolescence (F64) / Storungen der Geschlechtsidentitat im Kindes- und Jugendalter (F64). *Prax Kinderpsychol Kinderpsychiatr* 2014;**63**:542–52.	Not a CPG.
Moreno-Pérez Ó, Esteva De Antonio I. Clinical practice guidelines for assessment and treatment of transsexualism. SEEN Identity and Sexual Differentiation Group (GIDSEEN). *Endocrinol y Nutr (English Ed* 2012;**59**:367–82. doi:10.1016/j.endoen.2012.07.004	Single country. Derivative, not de novo.
NHS England. Interim Gender Dysphoria Protocol and Service Guideline 2013/14. Published Online First: 2013.https://www.gendergp.com/wp-content/uploads/2016/03/NHS-Gender-Protocol.pdf	Not a CPG. Single country.
Oliphant J, Veale J, Macdonald J, *et al.* Guidelines for Gender Affirming Healthcare for Gender Diverse and Transgender Children, Young People and Adults in Aotearoa, New Zealand. *N Z Med J* 2018;**131**:86–96.http://www.ncbi.nlm.nih.gov/pubmed/30543615	Single country.
Olson J, Schrager SM, Clark LF, *et al.* Subcutaneous Testosterone: An Effective Delivery Mechanism for Masculinizing Young Transgender Men. *LGBT Heal* 2014;**1**:165–7. doi:10.1089/lgbt.2014.0018	Not a CPG.
Pan American Health Organization [PAHO], John Snow Inc., World Professional Association for Transgender Health, *et al. Blueprint for the Provision of Comprehensive Care for Trans Persons and Their Communities in the Caribbean and Other Anglophone Countries*. Arlington VA: John Snow Inc 2014. https://www.paho.org/hq/dmdocuments/2014/2014-cha-blueprint-comprehensive-anglo-countries.pdf	Not a CPG.
Pan American Health Organization. *Blueprint for the Provision of Comprehensive Care to Gay Men and Other Men Who Have Sex with Men (MSM) in Latin America and the Caribbean*. Washington, D.C.: 2010	No TG specific recommendation.
Patel JM, Dolitsky S, Bachman GA, *et al.* Gynecologic cancer screening in the transgender male population and its current challenges. *Maturitas* 2019;**129**:40–4. doi:10.1016/j.maturitas.2019.08.009	Not a CPG. Single country.
Phillips JC, Patsdaughter CA. Toward a Healthier Tomorrow: Competent Health and HIV Care for Transgender Persons. *J Assoc Nurses AIDS Care* 2010;**21**:183–5. doi:10.1016/j.jana.2010.02.009	Not a CPG.
Potter J, Peitzmeier SM, Bernstein I, *et al.* Cervical Cancer Screening for Patients on the Female-to-Male Spectrum: a Narrative Review and Guide for Clinicians. *J Gen Intern Med* 2015;**30**:1857–64. doi:10.1007/s11606-015-3462-8	Not a CPG.
Pratt-Chapman M, Potter J. Cancer Care Considerations for Sexual and Gender Minority Patients. *Oncol Issues* 2019;**34**:26–36.https://www.accc-cancer.org/docs/documents/oncology-issues/articles/nd19/nd19-cancer-care-considerations-for-sexual-and-gender-minority-patients.pdf?sfvrsn=d116445f_2	Not a CPG. Single country.
Psychological Society of South Africa. *Practice Guidelines For Psychology Professionals Working With Sexually And Gender-Diverse People*. Johannesburg: Psychological Society of South Africa 2017. https://www.psyssa.com/wp-content/uploads/2018/04/PsySSA-Diversity-Competence-Practice-Guidelines-PRINT-singlesided.pdf	Single country.
Radix A, Sevelius J, Deutsch MB. Transgender women, hormonal therapy and HIV treatment: A comprehensive review of the literature and recommendations for best practices. *J Int AIDS Soc* 2016;**19**:1–8. doi:10.7448/IAS.19.3.20810	Not a CPG.
Reilly M, Desousa V, Garza-Flores A, *et al.* Young Children With Gender Nonconforming Behaviors and Preferences. *J Dev Behav Pediatr* 2019;**40**:60–71. doi:10.1097/DBP.0000000000000612	Not a CPG. Single country.
Reisner SL, Pardo ST, Gamarel KE, *et al.* Substance use to cope with stigma in healthcare among U.S. female-to-male trans masculine adults. *LGBT Heal* 2015;**2**:324–32. doi:10.1089/lgbt.2015.0001	Not a CPG.
Safer JD, Tangpricha V. Care of Transgender persons. *N Engl J Med* 2019;**381**:2451–60. doi:10.1056/NEJMcp1903650	Not a CPG. Single country.
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World Health Organization. *Preventing Suicide A Community Engagement Toolkit*. 2018. https://apps.who.int/iris/bitstream/handle/10665/272860/9789241513791-eng.pdf	Not a CPG. No TG specific recommendation.
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Key: CPG = clinical practice guideline; TG = trans people/gender minority

W4: Extracted sentences relating to mortality or quality of life with associated references from Clinical Practice Guidelines

	Author (yr)	In-text statement on Mortality/ Quality of Life (QoL)	Page	References
1	Coleman et al. (2012)	**Mortality:** Two long-term observational studies, both retrospective, compared the mortality & psychiatric morbidity of transsexual adults to those of general population samples (Asscheman et al., 2011; Dhejne et al., 2011). An analysis of data from the Swedish National Board of Health & Welfare information registry found that individuals who had received sex reassignment surgery (191 MtF & 133 FtM) had significantly higher rates of mortality, suicide, suicidal behavior, & psychiatric morbidity than those for a nontranssexual control group matched on age, immigrant status, prior psychiatric morbidity, & birth sex (Dhejne et al., 2011). Similarly, a study in the Netherlands reported a higher total mortality rate, including incidence of suicide, in both pre- & post-surgery transsexual patients (966 MtF and 365 MtF) than in the general population of that country (Asscheman et al., 2011). Neither of these studies questioned the efficacy of sex reassignment; indeed, both lacked an adequate comparison group of transsexuals who either did not receive treatment or who received treatment other than genital surgery. Moreover, transsexual people in these studies were treated as far back as the 1970s. However, these findings do emphasize the need to have good long-term psychological & psychiatric care available for this population. More studies are needed that focus on the outcomes of current assessment & treatment approaches for gender dysphoria.	108	Asscheman H, Giltay EJ, Megens JAJ, *et al.* A long-term follow-up study of mortality in transsexuals receiving treatment with cross-sex hormones. *Eur J Endocrinol* 2011;**164**:635–42. doi:10.1530/EJE-10-1038 Dhejne C, Lichtenstein P, Boman M, *et al.* Long-Term Follow-Up of Transsexual Persons Undergoing Sex Reassignment Surgery: Cohort Study in Sweden. *PLoS One* 2011;**6**:e16885. doi:10.1371/journal.pone.0016885
		QoL: One troubling report (Newfield et al., 2006) documented lower scores on QoL (measured with the SF-36) for FtM patients than for the general population. A weakness of that study is that it recruited its 384 participants by a general email rather than a systematic approach, and the degree and type of treatment were not recorded. Study participants who were taking testosterone had typically being doing so for less than 5 years. Reported QoL qas higher for patients who had undergone breast/chest surgery than for those who had not (p<.001). (A similar analysis was not done for genital surgery.)	108	Newfield E, Hart S, Dibble S, *et al.* Female-to-male transgender quality of life. *Qual Life Res* 2006;**15**:1447–57. doi:10.1007/s11136-006-0002-3
		QoL: In other work, Kuhn & colleagues (2009) used the King's Health Questionnaire to assess the quality of life of 55 transsexual patients at 15 years after surgery. Scores were compared to those of 20 healthy female control patients who had undergone abdominal/pelvic surgery in the past. Quality of life scores for transsexual patients were the same or better than those of control patients for some subscales (emotions, sleep, incontinence,	108	Kuhn A, Bodmer C, Stadlmayr W, *et al.* Quality of life 15 years after sex reassignment surgery for transsexualism. *Fertil Steril* 2009;**92**:1685-1689.e3. doi:10.1016/j.fertnstert.2008.08.126

		symptom severity, and role limitation), but worse in other domains (general health, physical limitation, and personal limitation).		
2	Davies et al. (2015)	**QoL:** A number of studies indicate that speech-therapy intervention is useful in helping gender nonconforming individuals portray their gender identity through speech (Carew, Dacakis, & Oates, 2007; Dacakis, Oates, & Douglas, 2012; Gelfer & Tice, 2013; Hancock & Garabedian, 2013; Meszaros et al., 2005). Such changes to communication are not simply superficial; they can reduce gender dysphoria and improve mental health and quality of life.	117-118	Carew L, Dacakis G, Oates J. The Effectiveness of Oral Resonance Therapy on the Perception of Femininity of Voice in Male-to-Female Transsexuals. *J Voice* 2007;**21**:591–603. doi:10.1016/j.jvoice.2006.05.005 Dacakis G, Oates J, Douglas J. Beyond voice. *Curr Opin Otolaryngol Head Neck Surg* 2012;**20**:165–70. doi:10.1097/MOO.0b013e3283530f85 Gelfer MP, Tice RM. Perceptual and Acoustic Outcomes of Voice Therapy for Male-to-Female Transgender Individuals Immediately After Therapy and 15 Months Later. *J Voice* 2013;**27**:335–47. doi:10.1016/j.jvoice.2012.07.009 Hancock AB, Garabedian LM. Transgender voice and communication treatment: a retrospective chart review of 25 cases. *Int J Lang Commun Disord* 2013;**48**:54–65. doi:10.1111/j.1460-6984.2012.00185.x Mészáros K, Csokonai Vitéz L, Szabolcs I, *et al.* Efficacy of Conservative Voice Treatment in Male-to-Female Transsexuals. *Folia Phoniatr Logop* 2005;**57**:111–8. doi:10.1159/000083572 * Hancock AB, Krissinger J, Owen K. Voice Perceptions and Quality of Life of Transgender People. *J Voice* 2011;**25**:553–8. doi:10.1016/j.jvoice.2010.07.013
3	ECDC (2018)	**Mortality:** the World Health Organization (WHO) and UNAIDS have identified several targets along the continuum of care for hepatitis B virus (HBV), hepatitis C virus (HCV) and HIV. These *include* promoting early diagnosis, scaling up treatment and reducing disease-related mortality [12,13].	3	World Health Organization. Global health sector strategy on viral hepatitis 2016–2021: towards ending viral hepatitis. Geneva: WHO; 2016. World Health Organization. Global health sector strategy on HIV, 2016–2021: towards ending AIDS. Geneva: WHO; 2016.
		QoL (as QALY): Since then, the feasibility of birth cohort testing for HCV has been studied in several European countries, including Ireland, Italy, and Spain [87–89]. In the studies in Ireland and Spain, the authors concluded that to effectively implement birth cohort testing for HCV, each country must determine its own HCV seroprevalence by year in order to successfully develop screening recommendations because risk factors, particularly injecting drug use, can affect the selection of birth cohort. In Italy, authors found that the anti-HCV screening program had an acceptable expenditure increase for the National Health Service compared to the cost per quality-adjusted life year (QALY) of other approved interventions or treatments in Italy."	18	Group HCSGD. Background to recommendation 20: general population or birth cohort screening. Dublin: Health Protection Surveillance Centre; 2017. Ruggeri M, Coretti S, Gasbarrini A, Cicchetti A. Economic assessment of an anti-HCV screening program in Italy. Value Health. 2013;16(6):965–72. Mena A, Moldes L, Meijide H, Canizares A, Castro-Iglesias A, Delgado M, et al. Seroprevalence of HCV and HIV infections by year of birth in Spain: impact of US CDC and USPSTF recommendations for HCV and HIV testing. PLoS ONE. 2014;9(12):e113062.
		QALY: Four cost implication studies of HIV testing in hospital settings have been conducted in UK. They show that universal offer testing was highly cost	23	236. Ong KJ, Thornton AC, Fisher M, Hutt R, Nicholson S, Palfreeman A, et al. Estimated cost per HIV infection diagnosed

		effective if future healthcare costs & QALYs are incorporated into calculations [236-239]		through routine HIV testing offered in acute general medical admission units and general practice settings in England. HIV Medicine. 2016;17(4):247-54. 237. Pizzo E, Rayment M, Thornton A, Rae C, Hartney T, Delpech V, et al. Cost-effectiveness analysis of HIV testing in non-traditional settings-the HINTS study. HIV Medicine. 2014;15:93. 238. Sewell J, Capocci S, Johnson J, Solamalai A, Hopkins S, Cropley I, et al. Expanded blood borne virus testing in a tuberculosis clinic. A cost and yield analysis. J Infect. 2015;70(4):317-23. 239. Alexander H, Brady M, Poulton M. A calculation of the financial impact of opt-out HIV testing in a London Emergency Department (ED). HIV Med. 2016 April.
4	Gilligan et al. (2017)	**Mortality/QoL:** no statements linked to references		
5	Hembree et al. (2017)	**Mortality:** Long-term studies from The Netherlands found no increased risk for cardiovascular mortality (161). … The largest cohort of transgender females (mean age 41 years, followed for a mean of 10 years) showed no increase in cardiovascular mortality despite a 32% rate of tobacco use (161).	3891	161. van Kesteren PJM, Asscheman H, Megens JAJ, Gooren LJG. Mortality and morbidity in transsexual subjects treated with cross-sex hormones. Clin Endocrinol (Oxf). 1997;47(3): 337–343.
		Mortality: A systematic review of the literature found that data were insufficient (due to very low–quality evidence) to allow a meaningful assessment of patient-important outcomes, such as death, stroke, myocardial infarction, or VTE in transgender males (176). Future research is needed to ascertain the potential harm of hormonal therapies (176).	3895	176. Elamin MB, Garcia MZ, Murad MH, Erwin PJ, Montori VM. Effect of sex steroid use on cardiovascular risk in transsexual individuals: a systematic review and meta-analyses. Clin Endocrinol (Oxf). 2010;72(1):1–10.
		Mortality: Another analysis demonstrated that, despite the young average age at death following surgery and the relatively larger number of individuals with somatic morbidity, the study does not allow for determination of causal relationships between, for example, specific types of hormonal or surgical treatment received and somatic morbidity and mortality (263).	3895	**263. Djordjevic ML, Bizic MR, Duisin D, Bouman MB, Buncamper M. Reversal Surgery in regretful male-to-female transsexuals after sex reassignment surgery. J Sex Med. 2016;13(6):1000–1007. *Note title of reference 262:* *262. Simonsen RK, Hald GM, Kristensen E, Giraldi A. Long-term follow-up of individuals undergoing sex-reassignment surgery: somatic morbidity and cause of death. Sex Med. 2016;4(1): e60–e68.*
		QoL: Likewise, a meta-analysis of 19 randomized trials in nontransgender males on testosterone replacement showed no increased incidence of cardiovascular events (185).	3891	185. Calof OM, Singh AB, Lee ML, Kenny AM, Urban RJ, Tenover JL, Bhasin S. Adverse events associated with testosterone replacement in middle-aged and older men: a meta-analysis of randomized, placebo-controlled trials. J Gerontol A Biol Sci Med Sci. 2005;60(11):1451–1457.
6	IAPHCCO (2015)	**Mortality:** The Strategic Timing of AntiRetroviral Treatment (START) study recently showed a 53% reduction in serious morbidity and mortality from HIV due to early ART at CD4 counts of over 500 cells/mm3 (96)	6	96. Lundgren JD, Babiker AG, Gordin F, et al. Initiation of antiretroviral therapy in early asymptomatic HIV infection. N Engl J Med. 2015;373(9):795–807.
		Mortality Increasing early access to ART is associated with decreased AIDS-related morbidity and mortality, as well as reduced risk of HIV transmission	8	167. Grinsztejn B, Hosseinipour MC, Ribaudo HJ, et al. Effects of early versus delayed initiation of antiretroviral treatment on clinical

		(167)		outcomes of HIV-1 infection: results from the phase 3 HPTN 052 randomised controlled trial. Lancet Infect Dis. 2014;14(4):281–290.
		Mortality: Antiretroviral therapy is proven to prevent HIV-related morbidity, mortality, and transmission.(7)	9	7. Montaner JS, Lima VD, Harrigan PR, et al. Expansion of HAART coverage is associated with sustained decreases in HIV/AIDS morbidity, mortality and HIV transmission: the "HIV Treatment as Prevention" experience in a Canadian setting. PLoS One. 2014; 9(2):e87872.
		Mortality: Community-located ART distribution is a cost-effective service delivery model whose rates of attrition and mortality are similar to those at the facility level. (195,196)	10	195. Kredo T, Ford N, Adeniyi FB, Garner P. Decentralising HIV treatment in lower- and middle-income countries. Cochrane Database Syst Rev. 2013;6:CD009987. 196. Chu C, Umanski G, Blank A, Grossberg R, Selwyn PA. HIVinfected patients and treatment outcomes: an equivalence study of community-located, primary care-based HIV treatment vs. hospital-based specialty care in the Bronx, New York. AIDS Care. 2010;22(12):1522–1529.
		Mortality In Uganda, ART distribution at community-based sites was found to be associated with significantly higher rates of retention in care and lower mortality rates. (88, 204)	10	88. Wamboga Magawa J, Mpiima D. Community ART Delivery Model for High Retention of Patients on Antiretroviral Therapy: The AIDS Support Organisation (TASO) Operational Research Findings East and Central Uganda, Resource-Limited Setting. Presented at: 7th IAS Conference on HIV Pathogenesis, Treatment and Prevention; June 30-July 3, 2013; Kuala Lumpur, Malaysia. 204. Grimsrud A, Patten G, Sharp J, Myer L, Wilkinson L, Bekker LG. Extending dispensing intervals for stable patients on ART. J Acquir Immune Defic Syndr. 2014;66(2):e58–e60.
		Mortality /QoL: Today, a person diagnosed with HIV at the age of 20 years if started promptly on ART is expected to live a normal life span, with a highly preserved quality of life.(1)	1	1. Samji H, Cescon A, Hogg RS, et al. Closing the gap: increases in life expectancy among treated HIV-positive individuals in the United States and Canada. PLoS One. 2013; 8(12):e81355.
		QoL: Stigma can negatively shape quality of life, affect mental health, and influence ART use and outcomes. **QoL:** Mental health disorders such as these can result in a poorer quality of life and negatively affect access to and use of HIV services."	5	No linked reference
		QoL: Impact of actions taken to reduce stigma & discrimination & address mental health from a quality-of-life perspective (eg, interventions and programs) on these issues as well as on HIV-related health outcomes.	18	No linked reference
7	Ralph et al (2010)	**Mortality/QoL:** no statements linked to references		
8	Strang et al (2016)	**Mortality/QoL:** no statements linked to references		
9	T'Sjoen et al (2020)	**QoL:** Although the quality of sexual life improves after GAMI, research has demonstrated that it does not reach the levels of cisgender people.(44)	575	44. Nobili A, Glazebrook C, Arcelus J. Quality of life of treatment seeking transgender adults: a systematic review and metaanalysis.

				Rev Endocr Metab Disord 2018;19:199-220.
		QoL: Overall results lean toward favorable sexual outcomes after genital surgeries in trans people, although research into the quality of sexual life in the trans population after GAMI is limited.(44)	580	44. Nobili A, Glazebrook C, Arcelus J. Quality of life of treatment seeking transgender adults: a systematic review and metaanalysis. Rev Endocr Metab Disord 2018;19:199-220.
10	WHO (2011)	**Mortality**: A systematic literature search was conducted on the role of HTC in reducing HIV-related morbidity and mortality, compared with the provision of basic information on HIV prevention and care. The surrogate outcomes were behavioural change and HIV incidence.	39	No direct reference, appears to relate to the systematic review
		Mortality: Alcohol and substance use/dependence is a problem for many MSM and transgender people, and is linked to significant morbidity and mortality.(52)	53	52. Stall R et al. Alcohol use, drug use and alcohol-related problems among men who have sex with men: the Urban Men's Health Study. Addiction, 2001, 96:1589–1601.
		Mortality: OST has been demonstrated to improve both access and adherence to ART, and reduce mortality.(120)	54	120. WHO, UNODC, UNAIDS. *Technical guide for countries to set targets for universal access to HIV prevention, treatment and care for injecting drug users, including access to needle syringe programmes.* Geneva, WHO, 2009. http:// www.unodc.org/documents/hiv-aids/idu_target_setting_guide.pdf (accessed 13 April 2011).
		Mortality: Antiretroviral therapy (ART) is the core pharmacological component of a broad and comprehensive management of HIV infection. ART has significantly decreased the morbidity and mortality from HIV in the past decades. Given that ART represents a biologically targeted intervention, where sexual identities play a minimal role or no role at all on expected effects, there is no reason, biological or other, to differentiate ART recommendations for MSM and transgender people from those formulated for other populations (excluding HIV-infected pregnant women and newborns).	57	No direct reference, appears to come from the systematic review
		QoL: There was no evidence available on issues of quality of life such as inconvenience or decreased desire; however, the values and preferences of the MSM polled by MSMGF showed support for this intervention.(66)	33	66 Arreola S et al. *In our own words: preferences, values, and perspectives on HIV prevention and treatment – a civil society consultation with men who have sex with men and transgender people.* Oakland, California, The Global Forum on MSM and HIV (MSMGF), 2010. http://msmgf.org/files/msmgf//About_Us/Publications/WHO_Report 1.pdf (accessed 19 May 2011)
		QoL: No considerations regarding quality of life such as inconvenience or decreased sexual desire were studied.	35	No direct reference, appears to come from the systematic review
		QoL: No studies were found with information on issues related to quality of life due to the intervention.	44	No direct reference, appears to come from the systematic review
		QoL: Quality of life (inconvenience, unnecessary intervention, anxiety and discrimination) was not measured.	44	No direct reference, appears to come from the systematic review
		QoL: None of the studies reported on HIV or STI incidence or quality of life.	46	No direct reference, appears to come from the systematic review

		QoL: People living with HIV, regardless of ART indication, should also benefit from basic HIV prevention and care, including effective interventions that are simple, relatively inexpensive, improve the quality of life, prevent further transmission of HIV or common opportunistic infections, delay progression of HIV disease and prevent mortality.	59	No linked reference
11	WHO (2012)	**QoL (as QALY):** Using sexual risk behaviour data from the Partners in Prevention trial *(16)*, the cost per HIV infection averted was between US$6000 and $66 000 when PrEP was always used, and the savings per quality-adjusted life year (QALY), a standard measure of cost-benefit, was $260 to $4900. Using "more typical" data that assume less risky sexual behaviour, the cost per HIV infection averted was between ~$0 (break-even) and $26 000 when PrEP was always used, and the cost per QALY gained was between minus $200 (cost-saving) and $1900.	7	16. Celum C et al. Acyclovir and transmission of HIV-1 from persons infected with HIV-1 and HSV-2. New England Journal of Medicine, 2010, 362(5):427–439.
		QoL (as QALY): One cost-effectiveness study in Australia estimated that, if continuous use of PrEP was 90% effective and the program covered only HIV-negative MSM having high-risk sex, it would cost US$47 745 per QALY gained *(18)*. Another cost-effectiveness study from the USA estimated that if PrEP was 90% effective and the program covered only HIV-negative MSM having high-risk sex, it would cost US$107 000 per QALY gained *(19)*. If PrEP was 50% effective, it would cost US$298 000 per QALY gained. Sensitivity analyses showed that the cheaper and more efficacious PrEP is and the more high-risk the population is, the more cost-effective that PrEP would be, with estimates in cost-saving ranging up to over US$300 000 per QALY gained *(20)*. Overall, cost-effectiveness estimates vary widely, depending on model parameter estimates, including efficacy, cost of PrEP, HIV incidence and age of the population.	10-11	18. Anderson J, Cooper D. Cost-effectiveness of pre-exposure prophylaxis for HIV in an MSM population. HIV Medicine, 2009, 10:39. 19. Desai K et al. Modeling the impact of HIV chemoprophylaxis strategies among men who have sex with men in the United States: HIV infections prevented and cost-effectiveness. AIDS, 2008, 22(14):1829–1839. 20. Paltiel AD et al. HIV preexposure prophylaxis in the United States: impact on lifetime infection risk, clinical outcomes, and cost-effectiveness. Clinical Infectious Diseases, 2009, 48(6):806–815.
12	WHO (2016)	**Mortality:** Access and adherence to OST can improve health outcomes (4), reduce overdose and resulting mortality (54)	33	4. Consolidated guidelines on general HIV care and the use of antiretroviral drugs for treating and preventing HIV infection: recommendations for a public health approach. Geneva, World Health Organization, 2013 and Guideline on when to start antiretroviral therapy and on pre-exposure prophylaxis for HIV. Geneva, WHO, 2015 (http://www.who.int/iris/bitstream/10665/85321/1/9789241505727_eng.pdf, accessed 25 February 2014). and Guideline on when to start antiretroviral therapy and on pre-exposure prophylaxis for HIV. Geneva, WHO, 2015. http://apps.who.int/iris/bitstream/10665/186275/1/9789241509565_eng.pdf?ua=154. Spire B, Lucas GM, Carrieri MP. Adherence to HIV treatment among IDUs and the role of opioid substitution treatment (OST). International Journal of Drug Policy, 2007, 18(4):262–270 (https://www.plhivpreventionresources.org/index.cfm?action=main.

				abstract&id=1460 accessed 28 February 2014).
		Mortality: Provision of OST before release can help reduce overdose-related mortality (61).	35	61. Degenhardt L et al. What has been achieved in HIV prevention, treatment and care for people who inject drugs, 2010-2012? A review of the six highest burden countries. International Journal of Drug Policy, 2014, 25:53–60 (http://www.sciencedirect.com/science/article/pii/S095539591300128X, accessed 27 February 2014).
		Mortality: Completing TB treatment is critical to reducing mortality and avoiding the development and spread of drug-resistant TB. It is vital to provide a supportive, non-judgemental and non-discriminatory environment that enables people from key populations to complete treatment, provides additional adherence support measures to improve treatment outcomes, and reduces the risk of continued TB transmission (65). Timely initiation of ART significantly reduces the risk of mortality from HIV-associated TB.	64	65. Policy guidelines for collaborative TB and HIV services for injecting and other drug users: an integrated approach. Geneva, World Health Organization, 2008 (Evidence for Action Technical Papers) (http://whqlibdoc.who.int/publications/2008/9789241596930_eng.pdf accessed 25 February 2014). Integrating collaborative TB and HIV services within a comprehensive package of care for people who inject drugs.- Consolidated guidelines. Geneva, WHO, 2016. http://www.who.int/tb/publications/integrating-collaborative-tb-and-hiv_services_for_pwid/en/
		Mortality: Among those living with HIV who are coinfected with HBV or HCV, liver disease progresses more rapidly and mortality is greater than among those with HBV or HCV who are not living with HIV.	67	No linked reference
		Mortality: Coinfection with HIV and HCV accelerates HCV-related progression of liver fibrosis and leads to a higher rate of end-stage liver disease and mortality (121, 151, 157).	68	121. Benhamou Y et al. Liver fibrosis progression in human immunodeficiency virus and hepatitis C virus coinfected patients. Hepatology, 1999, 30:1054–1058. 151. Deng LP et al. Impact of human immunodeficiency virus infection on the course of hepatitis C virus infection: a meta-analysis. World Journal of Gastroenterology, 2009, 15:996–1003. 157. Pineda JA et al. HIV coinfection shortens the survival of patients with hepatitis C virus-related decompensated cirrhosis. Hepatology, 2005, 41:779–789.
		Mortality: These effects may be magnified in low-income and food-insecure contexts, such as those experienced by many key populations. In turn, poor nutritional status can hasten the progression of HIV disease; low body mass index (BMI) in adults (BMI less than 18.5 kg/m2) is an independent risk factor for HIV disease progression and mortality (4).	73	4. Consolidated guidelines on general HIV care and the use of antiretroviral drugs for treating and preventing HIV infection: recommendations for a public health approach. Geneva, World Health Organization, 2013 and Guideline on when to start antiretroviral therapy and on pre-exposure prophylaxis for HIV. Geneva, WHO, 2015 (http://www.who.int/iris/bitstream/10665/85321/1/9789241505727_eng.pdf, accessed 25 February 2014). and Guideline on when to start antiretroviral therapy and on pre-exposure prophylaxis for HIV. Geneva, WHO, 2015. http://apps.who.int/iris/bitstream/10665/186275/1/9789241509565_eng.pdf?ua=1

Key: ART, antiretroviral therapy; GAMI, gender affirming medical intervention; HIV, human immunodeficiency virus; HTC, HIV testing and counselling; MSM, men who have sex with men; OST,opiate substitution therapy; PrEP, pre-exposure prophylaxis; QALY, Quality-Adjusted Life Year; TB, tuberculosis; * Reference appears in reference list, but not in the main text; ** We believe there is an error here and that the morbidity statement refers to ref 262 not 263. Also noted that references 260 and 261 were the wrong way around.

W5. Extracted Key Recommendations from Clinical Practice Guidelines

	Author (year)	Recommendations
1	Coleman et al. (2012)	None. Reviewer team were unable to extract key recommendations
2	Davies et al. (2015)	*Voice and Communication Intervention for Gender Nonconforming Individuals* 1.Transgender voice and communication services should be offered in the context of a complete approach to transgender health that includes comprehensive primary care and a coordinated approach to psychological and social issues. 2.In working with gender nonconforming clients, the speech-language therapist's primary goal is to help the client develop voice and communication that more closely approximates the client's sense of self. 3.Feminizing/masculinizing voice involves nonhabitual use of the voice-producing mechanism. To prevent the possibility of vocal damage, professional evaluation and assistance are essential. 4.Self-guided voice and communication change without professional supervision is not recommended. Clients intending to pursue self-guided voice change should be encouraged to, at a minimum, have an initial professional assessment and then to consult with their primary care provider if they develop symptoms of vocal fatigue or negative changes to vocal quality. Self-help voice and communication groups should have appropriate clinical support. *Clinical Competence* 1.Voice and communication professionals working with transgender individuals must have a basic understanding of transgender health (including hormonal and surgical feminization/masculinization) and trans-specific psychosocial issues; they must be familiar with basic sensitivity protocols such as use of preferred gender pronoun and name. 2.Gender nonconforming individuals who are seeking voice and communication services for reasons other than speech feminization/masculinization can be treated by trans-sensitive speech-language therapists using standard voice and communication protocols. voice and communication feminization/masculinization requires additional clinical expertise and special clinical protocols. *Client Inclusion and Exclusion* 1.Voice and communication services should be available to the full spectrum of the transgender community, including MtF and MtF transsexuals and others who are gender nonconforming. 2.The need for voice and communication services should not be evaluated based on hormonal use, pursuit of sex reassignment surgery, or length or percentage of time living in the desired gender role. 3.Services should be adapted as needed to fit a client's individual needs, including accommodation relating to speech or hearing disability, mental illness, cognitive disability, learning disability, physical disability, geographic isolation, or incarceration. *Treatment Decisions* 1.The client is responsible for treatment decisions, supported by the clinician's informed professional opinion, assessment data, and any allies the client wishes to be involved. To support fully informed treatment decisions, clients should be informed of the following: a.potential risks and benefits associated with treatment options b. estimated duration of treatment; factors that can influence the duration of treatment 2. Existing protocols for voice and communication feminization should be reviewed and considered when developing individualized treatment plans. As there are no established protocols for speech masculinization, FtMs seeking this service should be informed that the protocol is a trial. 3. While modification of existing protocols is encouraged, all treatment plans (including those using new or experimental techniques) are expected to be based on a clearly articulated, logical, and valid clinical rationale. Departure from existing protocols should be explained as such to the client as part of fully informed consent and should be documented in detail to facilitate evaluation. *Assessment*

		1.Assessment prior to voice and communication feminization/masculinization should include the following: a. psychosocial, voice use, voice health, and medical history b. clinical assessment of speech and voice including: 1.the client's subjective assessment 2.instrumental measurement 3.the clinician's subjective analysis 4.an assessment of potential for change 5.assistance with understanding therapeutic options 2.As there is evidence that behavioral changes (of pitch, inflection, resonance, etc.) may degrade over time, periodic re-evaluation is recommended following treatment with further clinical assistance as needed. *Voice and Communication Therapy* 1.Voice and communication therapy should be individualized based on each person's goals and identity, the risks and benefits of treatment options, and consideration of social and economic issues. 2.Rather than adopting a rigid and artificial set of voice and communication norms, it is recommended that clients be assisted to develop an individualized and context-specific set of norms based on communication patterns in their own social, cultural, work, and home environments. 3.It is clinically optimal to be able to offer both individual sessions and group treatment, with the proportion of time in each format depending on the client's therapeutic needs and goals. *Pitch-Elevating Surgery* 1.As there is no professional consensus regarding the effectiveness and risk-benefit ratio of pitch-elevating surgery, care should be taken to ensure that clients are fully informed of potential risks, postoperative care requirements, and possible outcomes (including decreased pitch). 2.Assessment by both a laryngologist and speech-language therapist is recommended prior to surgery. 3.Prior to surgery, the laryngologist should discuss after-care instructions with the patient and provide written after-care instructions. 4.Voice therapy should be offered following phonosurgery to help the patient adapt to and stabilize the new voice. *Outcome Evaluation* 1.Outcomes should be rigorously evaluated and documented. 2.At minimum, the baseline assessment should be repeated immediately following the end of therapy. Ideally, re-evaluation would take place at 6 months, 1 year, 5 years, and 10 years after treatment. 3.Evaluation should include client satisfaction with the treatment outcome and with the quality of care provided, as well as perceptual and objective measures of voice and communication change. 4.Informal or formal sharing of outcome data (with colleagues, at conferences, in publications, etc.) must occur only if the client has provided fully informed and voluntary written consent. *Research* 1.There is a paucity of data relating to speech feminization/masculinization. Further research in this area is eagerly anticipated. 2.To ensure that participation in research is voluntary, services should not be offered solely as part of a research protocol.
3	ECDC (2018)	The ECDC guidance advocates for the development of an integrated national testing strategy or programme for HIV, HBV and HCV. Such integrated testing strategies or programmes should apply the six core testing principles, respect the individual needs of those tested and incorporate evidence-based interventions. Success in increasing the testing uptake should contribute considerably to the elimination of HIV and combat viral hepatitis as public health threat by 2030. *There are six overarching principles for HIV, HBV and HCV testing programmes in this context:* □ An effective national testing strategy, including a monitoring and evaluation framework, is critical in responding to HIV, HBV and HCV infection. □ Testing should be accessible, voluntary, confidential and contingent on informed consent. □ Appropriate information should be available before and after testing. □ Linkage to care is a critical part of an effective testing programme. □ Normalising HIV, HBV and HCV testing in all healthcare settings; and □ Those carrying out HIV, HBV and/or HCV testing should receive appropriate training and education.

		Who to test? The guidance identifies the following population groups suitable for targeted HIV, HBV and HCV testing due to higher risk of infection and suggest to offer tests to: men who have sex with men (MSM); trans* people; people who inject drugs (PWID); migrants2; household contacts of people diagnosed with HBV; homeless people; sex workers; people in prison; pregnant women; haemodialysis patients; people who have received blood products, organs or surgical interventions before adequate safety and quality regulations were enforced; and sexual or injecting partners of people diagnosed with HIV, HBV and HCV. *Normalising testing* Making the testing offer a routine and with that making the process similar to those for other diagnostic test, helps to reduce stigma and increases testing uptake. The implementation of indicator condition-guided HIV testing provides a useful complement to targeted HIV testing of groups at higher risk. By providing a clinical rationale for testing, this strategy can also help normalise testing and reduce barriers to it, including issues around stigma among healthcare providers and patients alike. *Where to test?* The ECDC guidance outlines where, how and when to test for viral hepatitis and HIV by providing evidence-based options of testing strategies that are applicable to all healthcare settings, as well as testing strategies specifically for: primary healthcare settings; hospital settings; other healthcare settings (e.g. STI clinics, pharmacies, prisons and some drug and harm reduction services); community settings (including drug and harm reduction services); and self-sampling and self-testing. *Frequency of testing* The suggested frequency of testing is: For those at risk of HIV infection – at least once a year and up to every three months depending on ongoing risk, sexual behaviour, history of sexually transmitted infections, use of pre- or post-exposure prophylaxis (PrEP, PEP) and local HIV prevalence or incidence. For those at risk of HBV infection – test those at risk who have not had a complete course of HBV vaccinations based on vaccination history. Retesting up to every 6 to 12 months is only suggested if there is an ongoing risk for either unvaccinated people or vaccine non-responders. For those at risk of HCV infection – consider testing all sex workers, people who inject drugs, trans people, prisoners and migrants, and other populations at risk every 6 to 12 months depending on risk profile. *Testing strategies for all settings* *Focus* *I*n areas of intermediate (HBV/HCV) or high prevalence (HBV/HCV/HIV): Consider identifying those who are unaware they are infected through geographically targeted routine testing. Consider birth cohort or universal one-time testing as option to increase HCV testing coverage, taking into account local epidemiology, affordability and the availability of effective linkage-to-care pathways. *In addition*: Test all patients diagnosed with either HIV, HBV or HCV infection for the other two viruses as per guidelines from the European AIDS Clinical Society (EACS) and European Association for the Study of the Liver (EASL). As per the ECDC antenatal screening guidance: offer pregnant women HBV and HIV tests during the first two trimesters of pregnancy. Offer an HCV test depending on the pregnant woman's risk profile. Only for women at-risk: repeat HIV testing during pregnancy and HBV testing for those who decline HBV vaccination or are non-responders. When a woman tests negative for HIV or HCV and has a partner at higher risk, facilitate testing of her partner. If the partner remains untested or risk factors are unknown, consider retesting the mother later in pregnancy. Voluntary partner notification following a positive diagnosis helps to achieve earlier diagnosis and treatment of exposed (sexual) partners. *Testing in primary healthcare settings* Evidence shows that HIV, HBV and HCV testing in primary care (PHC) is acceptable and may effectively contribute to increase testing coverage and case detection. *Focus* Offer integrated testing to any person attending primary care if they: identify as members of certain risk groups; present with clinical symptoms suggestive of one of three infections; or show laboratory markers (including elevated liver enzymes) compatible with acute or chronic hepatitis or an HIV indicator condition, including a sexually transmitted infection. Rapid testing, dried blood spot testing and testing using venepuncture are all acceptable in primary care. Consider offering all patients who were diagnosed with HBV, HCV or HIV a test for the other two viruses. *Considerations* Although limited, evidence on general population testing in these settings is also encouraging, at least in intermediate- and high-prevalence regions and birth cohorts. Available evidence suggests testing coverage in primary care settings is often suboptimal and caused by factors that discourage

		healthcare professionals from offering tests. Consider interventions to increase test offers, including educational interventions for healthcare staff and clinical decision-making tools. For testing in PHC settings, appropriate clinical care pathways and referral systems need to be established to ensure better linkage to care for people newly diagnosed with HBV, HCV or HIV in primary care. *Testing in hospital settings* Testing for HIV, HBV and HCV in hospital settings is generally accepted by patients and staff and can contribute to better testing coverage and case detection among risk groups or people presenting with HIV indicator conditions. *Focus* Offer integrated testing to any person attending a hospital if they: identify as members of certain risk groups; present with clinical symptoms suggestive of one of three infections; or show laboratory markers (including elevated liver enzymes) compatible with acute or chronic hepatitis or an HIV indicator condition, including a sexually transmitted infection. Studies indicate that routine testing in emergency departments, including universal testing and integrated testing, is also acceptable to patients and staff in hospitals even though it is currently supported by limited evidence on its effectiveness. *Considerations* Test all patients diagnosed with an HIV, HBV and HCV infection in hospital settings for the other two viruses, despite little current evidence on effectiveness. Even though there is little evidence of the effectiveness of any specific intervention over any other, education and training programmes for healthcare staff, campaigns and clinical decision-making tools can support the offer and uptake of integrated testing strategies. *Testing in other healthcare settings* These settings include formal healthcare services (outside hospitals and primary care practices) such as STI, genito-urinary medicine, dermato-venereology and low-threshold clinics, pharmacies, antenatal, prison health, drug and harm reduction and tuberculosis services. *Focus* Based on available evidence for integrated testing in these specific settings: Consider offering all patients diagnosed with an HBV, HCV or HIV infection a test for the other two viruses. Ensure that people who are newly diagnosed with HBV, HCV or HIV are linked to care given that efficient testing strategies in these surroundings need appropriate pathways to care and effective referral systems. *Considerations*: Testing for HIV, HBV and HCV, including integrated testing, in such healthcare settings results in varying degrees of effectiveness regarding the increase of testing coverage and case detection. Limited evidence suggests that rapid diagnostic tests and dried blood spot tests are acceptable and may help to increase testing coverage in such sites. Pharmacies generally offer HIV, HBV and HCV testing under the same quality standards that apply to healthcare settings despite very limited evidence currently on the effectiveness of this activity. Harm reduction services offer and suggest HBV and HCV testing to everyone attending drug and harm reduction services and during their initial assessments. Repeat this offer in case of indicated ongoing risk. Sites serving migrant populations can look into offering relevant testing to people who come from countries with intermediate (HCV) or high HIV, HBV and HCV prevalence. Prison settings can look into offering HIV, HBV and HCV testing to all people in prison as per ECDC guidance on active case finding in prison settings given the higher prevalence of blood-borne viruses in many prison settings. See also the ECDC/European Monitoring Centre for Drugs and Drug Addiction (EMCDDA) guidance on prevention and control of blood-borne viruses in prison settings. STI/genito-urinary/dermato-venereology clinics can consider offering HIV testing to anyone seeking care regardless of symptoms or risk factors as part of the initial screening for STIs according to the International Union against Sexually Transmitted Infections' European guidelines. This includes offering HIV testing to those who: have a high likelihood of exposure to HIV are pregnant regardless of risk factors; or voluntarily seek testing, especially if never tested before. Based on geographic prevalence and risk group, it may be appropriate to suggest HBV testing. *Testing in community settings* Community-based testing services refers to programmes and services that offer voluntary HIV and/or HBV, HCV testing outside formal healthcare facilities. They are designed to target specific population groups and clearly adapted and accessible to those communities. *Focus* There is a role for community-based testing to target groups at higher risk in any national testing strategy. They are acceptable and effective in increasing HIV, HBV and HCV testing coverage and case detection among these groups. Integrated testing and rapid testing may be offered for everyone accessing drug and harm reduction services in a community or outreach testing activities. Rapid testing in the community is acceptable and contributes to increased testing coverage when implemented in such settings. Options based on available evidence for integrated testing in these settings: Linkage to care after HBV and HCV testing in community settings may currently be

		suboptimal, at least for certain risk groups. If testing in community settings is considered within a national testing scheme, clear pathways into care and other services have to be developed. This includes differentiated care pathways for the three infections and other services. Testing services offered by lay providers help to increase testing opportunities, uptake and coverage. *Self-sampling and self-testing* Self-sampling and self-testing are additional options that give people the flexibility and privacy of performing an initial HIV, HBV and HCV test in their own homes or a place they consider convenient. To date, there is little scientific evidence on the effectiveness of self-sampling, especially relating to HCV and HBV, to reach any firm conclusions regarding inclusion in a national testing strategy. There is limited evidence that kits distributed to people attending an STI clinic may increase test coverage and frequency. *Focus* Self-sampling for HIV, HBV and HCV, including possible integrated sampling, is likely acceptable among those most at-risk and may contribute to increased testing coverage and case detection. Limited available evidence suggests that self-testing for HIV among men who have sex with men is acceptable and may increase testing coverage, frequency and case detection. Self-sampling kits can be effectively distributed through a variety of channels, such as pharmacies, healthcare settings, outreach activities and online platforms, but should be based on local circumstances and target populations *Considerations* To ensure effective linkage to care after self-sampling and/or self-testing as part of a testing strategy, clear pathways to care and other services need to be in place or developed, including differentiated care pathways for the three infections. *Contact tracing (includes voluntary partner notification)* Contact tracing, including partner notification, implies that people who may potentially have been exposed to an infection are informed of this possibility and are offered a test. This can also include other interventions depending on the specific infection. Partner notification is a voluntary process in which a trained provider asks a person diagnosed with HIV, HBV and HCV about details of their sexual partners, at-risk drug injecting partners and household contacts as indicated by the diagnosis and then offers to invite them for a test. The identity of the diagnosed person remains anonymous to the contact unless consent is given. *Focus* Even though there is currently limited evidence on the effectiveness of partner notification in increasing testing coverage and case detection, mainly related to HIV, it follows public health logic in response to other communicable diseases to offer voluntary anonymous partner notification to every patient with a newly confirmed diagnosis. There are various strategies to implement partner notification, including passive notification, assisted anonymous notification using a web-based platform and assisted notification with the direct involvement of the service provider. *Considerations* Current implementation of partner notification processes appears to be suboptimal across Europe. While the success of interventions to increase the coverage of partner notification may depend on local factors, including organisational and legal circumstances, educational interventions targeting healthcare workers may prove to be beneficial. *Monitoring integrated national testing strategies or programmes for HBV, HCV and HIV* Monitoring and evaluation is an essential component of any effective testing programme. While strategic information should guide the design of testing initiatives, monitoring and evaluation data permit continuous re-evaluation of targets as well as assessment of programme effectiveness, efficiency and impact. Such data can prove invaluable in planning improvements
4	Gilligan et al. (2017)	1. Core communication skills 1.1. Before each conversation, clinicians should review the patient's medical information, establish goals for the conversation, and anticipate the needs and responses of the patient and family. 1.2. At the beginning of conversations with patients, clinicians should explore the patient's understanding of their disease and collaboratively set an agenda with the patient after inquiring what the patient and family wish to address and explaining what the clinician wishes to address. 1.3. During patient visits, clinicians should engage in behaviors that actively foster trust, confidence in the clinician, and collaboration. 1.4. Clinicians should provide information that is timely and oriented to the patient's concerns and preferences for information. After providing information, clinicians should check for patient understanding and document important discussions in the medical record. 1.5. When patients display emotion through verbal or nonverbal behavior, clinicians should respond empathically. 2. Discussing goals of care and prognosis

		2.1. Clinicians should provide diagnostic and prognostic information that is tailored to the patient's needs and that provides hope and reassurance without misleading the patient. 2.2. Clinicians should reassess a patient's goals, priorities, and desire for information whenever a significant change in the patient's care is being considered. 2.3. Clinicians should provide information in simple and direct terms. 2.4. When providing bad news, clinicians should take additional steps to address the needs and responses of patients. 3. Discussing treatment options and clinical trials 3.1. Before discussing specific treatment options with the patient, clinicians should clarify the goals of treatment (cure v prolongation of survival v improved quality of life) so that the patient understands likely outcomes and can relate the goals of treatment to their goals of care. 3.2. When reviewing treatment options with patients, clinicians should provide information about the potential benefits and burdens of any treatment (proportionality) and check the patient's understanding of these benefits and burdens. 3.3. Clinicians should discuss treatment options in a way that preserves patient hope, promotes autonomy, and facilitates understanding. 3.4. Clinicians should make patients aware of all treatment options, including clinical trials and a sole focus on palliative care. When appropriate, clinicians should discuss the option of initiating palliative care simultaneously with other treatment modalities. If clinical trials are available, clinicians should start treatment discussions with standard treatments available off trial and then move to a discussion of applicable clinical trials if the patient is interested. 4. Discussing end-of-life care 4.1. Clinicians should use an organized framework to guide the bidirectional communication about end-of-life care with patients and families. 4.2. Clinicians should initiate conversations about patients' end-of-life preferences early in the course of incurable illness and readdress this topic periodically based on clinical events or patient preferences. 4.3. Clinicians should explore how a patient's culture, religion, or spiritual belief system affects their end-of-life decision making or care preferences. 4.4. Clinicians should recognize and respond empathically to grief and loss among patients, families, and themselves. Clinicians should refer patients and families to psychosocial team members (eg, social workers, counselors, psychologists, psychiatrists, and clergy) when appropriate. 4.5. Clinicians should identify and suggest local resources to provide robust support to patients, families, and loved ones transitioning to end-of-life care. 5. Using communication to facilitate family involvement in care 5.1. Clinicians should suggest family and/or caregiver involvement in discussions (with patient consent) early in the course of the illness for support and discussion about goals of care. 5.2. Determine if a formal family meeting in a hospital or outpatient setting is indicated at important junctures in care. When possible, ensure that patients, their designated surrogates, and desired medical professionals are present. 6. Communicating effectively when there are barriers to communication 6.1. For families who do not share a common language with the clinician, use a medical interpreter rather than a family interpreter. 6.2. For patients with low health literacy, focus on the most important points, use plain language, and check frequently for understanding. 6.3. For patients with low health numeracy, use pictographs or other visual aids when available, and describe absolute risk rather than relative risk. 7. Discussing cost of care 7. Clinicians should explore whether cost of care is a concern for patients with cancer. 8. Meeting the needs of underserved populations 8.1. Enter clinical encounters with a sense of curiosity, aware that any patient and family, regardless of their background, may have beliefs, experiences, understandings, and expectations that are different from the clinician's. 8.2. Avoid assumptions about sexual orientation and gender identity and use non-judgmental language when discussing sexuality and sexual behavior. 8.3. Remain aware that members of underserved or marginalized populations have an increased likelihood of having had negative past health care experiences, including feeling disrespected, alienated, or unsafe. 9. Clinician training in communication skills 9.1. Communication skills training should be based on sound educational principles and include and emphasize skills practice and experiential learning using role-play scenarios, direct observation of patient encounters, and other validated techniques. 9.2. For communication skills training to be most effective, it should foster practitioner self-awareness and situational awareness related to emotions, attitudes,

		and underlying beliefs that may affect communication as well as awareness of implicit biases that may affect decision making. 9.3. Facilitators of communication skills training should have sufficient training and experience to effectively model and teach the desired communication skills and facilitate experiential learning exercises.
5	Hembree et al. (2017)	*1.0 Evaluation of youth and adults* 1.1. We advise that only trained mental health professionals (MHPs) {and/or trained physicians} who meet the following criteria should diagnose gender dysphoria (GD)/gender incongruence in adults: (1) competence in using the Diagnostic and Statistical Manual of Mental Disorders (DSM) and/or the International Statistical Classification of Diseases and Related Health Problems (ICD) for diagnostic purposes, (2) the ability to diagnose GD/gender incongruence and make a distinction between GD/gender incongruence and conditions that have similar features (*e.g.*, body dysmorphic disorder), (3) training in diagnosing psychiatric conditions, (4) the ability to undertake or refer for appropriate treatment, (5) the ability to psychosocially assess the person's understanding, mental health, and social conditions that can impact gender-affirming hormone therapy, and (6) a practice of regularly attending relevant professional meetings. 1.2. We advise that only MHPs who meet the following criteria should diagnose GD/gender incongruence in children and adolescents: (1) training in child and adolescent developmental psychology and psychopathology, (2) competence in using the DSM and/or the ICD for diagnostic purposes, (3) the ability to make a distinction between GD/gender incongruence and conditions that have similar features (*e.g.*, body dysmorphic disorder), (4) training in diagnosing psychiatric conditions, (5) the ability to undertake or refer for appropriate treatment, (6) the ability to psychosocially assess the person's understanding and social conditions that can impact gender-affirming hormone therapy, (7) a practice of regularly attending relevant professional meetings, and (8) knowledge of the criteria for puberty blocking and gender-affirming hormone treatment in adolescents. 1.3. We advise that decisions regarding the social transition of pre-pubertal youths with GD/gender incongruence are made with the assistance of an MHP or another experienced professional. 1.4. We recommend against puberty blocking and gender-affirming hormone treatment in pre-pubertal children with GD/gender incongruence. 1.5. We recommend that clinicians inform and counsel all individuals seeking gender-affirming medical treatment regarding options for fertility preservation prior to initiating puberty suppression in adolescents and prior to treating with hormonal therapy of the affirmed gender in both adolescents and adults. *2.0 Treatment of adolescents* 2.1. We suggest that adolescents who meet diagnostic criteria for GD/gender incongruence, fulfil criteria for treatment, and are requesting treatment should initially undergo treatment to suppress pubertal development. 2.2. We suggest that clinicians begin pubertal hormone suppression after girls and boys first exhibit physical changes of puberty. 2.3. We recommend that, where indicated, GnRH analogues are used to suppress pubertal hormones. 2.4. In adolescents who request sex hormone treatment (given this is a partly irreversible treatment), we recommend initiating treatment using a gradually increasing dose schedule after a multidisciplinary team of medical and MHPs has confirmed the persistence of GD/gender incongruence and sufficient mental capacity to give informed consent, which most adolescents have by age 16 years. 2.5. We recognize that there may be compelling reasons to initiate sex hormone treatment prior to the age of 16 years in some adolescents with GD/gender incongruence, even though there are minimal published studies of gender-affirming hormone treatments administered before age 13.5 to 14 years. As with the care of adolescents ≥16 years of age, we recommend that an expert multidisciplinary team of medical and MHPs manage this treatment. 2.6. We suggest monitoring clinical pubertal development every 3 to 6 months and laboratory parameters every 6 to 12 months during sex hormone treatment. *3.0 Hormonal therapy for transgender adults* 3.1. We recommend that clinicians confirm the diagnostic criteria of GD/gender incongruence and the criteria for the endocrine phase of gender transition before beginning treatment. 3.2. We recommend that clinicians evaluate and address medical conditions that can be exacerbated by hormone depletion and treatment with sex hormones of the affirmed gender before beginning treatment. 3.3. We suggest that clinicians measure hormone levels during treatment to ensure that endogenous sex steroids are suppressed and administered sex steroids are maintained in the normal physiologic range for the affirmed gender. 3.4. We suggest that endocrinologists provide education to transgender individuals undergoing treatment about the onset and time course of physical changes induced by sex hormone treatment.

		4.0 Adverse outcome prevention and long-term care 4.1. We suggest regular clinical evaluation for physical changes and potential adverse changes in response to sex steroid hormones and laboratory monitoring of sex steroid hormone levels every 3 months during the first year of hormone therapy for transgender males and females and then once or twice yearly. 4.2. We suggest periodically monitoring prolactin levels in transgender females treated with estrogens. 4.3. We suggest that clinicians evaluate transgender persons treated with hormones for cardiovascular risk factors using fasting lipid profiles, diabetes screening, and/or other diagnostic tools. 4.4. We recommend that clinicians obtain bone mineral density (BMD) measurements when risk factors for osteoporosis exist, specifically in those who stop sex hormone therapy after gonadectomy. 4.5. We suggest that transgender females with no known increased risk of breast cancer follow breast-screening guidelines recommended for non-transgender females. 4.6. We suggest that transgender females treated with estrogens follow individualized screening according to personal risk for prostatic disease and prostate cancer. 4.7. We advise that clinicians determine the medical necessity of including a total hysterectomy and oophorectomy as part of gender-affirming surgery. *5.0 Surgery for sex reassignment and gender confirmation* 5.1. We recommend that a patient pursue genital gender-affirming surgery only after the MHP and the clinician responsible for endocrine transition therapy both agree that surgery is medically necessary and would benefit the patient's overall health and/or well-being. 5.2. We advise that clinicians approve genital gender-affirming surgery only after completion of at least 1 year of consistent and compliant hormone treatment, unless hormone therapy is not desired or medically contraindicated. 5.3. We advise that the clinician responsible for endocrine treatment and the primary care provider ensure appropriate medical clearance of transgender individuals for genital gender-affirming surgery and collaborate with the surgeon regarding hormone use during and after surgery. 5.4. We recommend that clinicians refer hormone-treated transgender individuals for genital surgery when: (1) the individual has had a satisfactory social role change, (2) the individual is satisfied about the hormonal effects, and (3) the individual desires definitive surgical changes. 5.5. We suggest that clinicians delay gender-affirming genital surgery involving gonadectomy and/or hysterectomy until the patient is at least 18 years old or legal age of majority in his or her country. 5.6. We suggest that clinicians determine the timing of breast surgery for transgender males based upon the physical and mental health status of the individual. There is insufficient evidence to recommend a specific age requirement.
6	IAPHCCO (2015)	*Optimizing the HIV care environment* 1. Laws that criminalize the conduct of or exert punitive legal measures against MSM, transgender individuals, substance users, and sex workers are not recommended and should be repealed where they have been enacted. 2. Laws that criminalize the conduct of PLHIV based on perceived exposure to HIV, and without any evidence of intent to do harm, are not recommended and should be repealed where they have been enacted. 3. HIV-related restrictions on entry, stay, and residence in any country for PLHIV are not recommended and should be repealed where they have been enacted. 4. Strategies to monitor for and eliminate stigma and discrimination based on race, ethnicity, gender, age, sexual orientation, and/or behavior in all settings, but particularly in health care settings, using standardized measures and evidence-based approaches, are recommended. 5. Proactive steps are recommended to identify and manage clinical mental health disorders (eg, anxiety, depression, and traumatic stress) and/or mental health issues related to HIV diagnosis, disclosure of HIV status, and/or HIV treatment. 6. Enabling PLHIV to take responsibility for their care (eg, self-management, user-driven care) is recommended. 7. Shifting and sharing HIV testing, dispensing of ART, and other appropriate tasks among professional and paraprofessional health worker cadres is recommended. 7a. Use of lay health workers to provide pre-test education and testing and to enhance PLHIV engagement in HIV care is recommended. 7b. Task shifting/sharing from physicians to appropriately trained health care providers, including nurses and associate clinicians, is recommended for ART initiation and maintenance.

		8. Community engagement in every step across the HIV care continuum is recommended. *Increasing HIV testing coverage and linkage to care* 9. Routinely offering opt-out HIV testing to all individuals who present at health facilities is recommended. 10. Community-based HIV testing is recommended to reach those who are less likely to attend facility-based HIV testing. 11. Confidential, voluntary HIV testing in large workplace and institutional settings (military, police, mining/trucking companies, and educational venues) should be considered. (B III) 12. HIV self-testing is recommended with the provision of guidance about the proper method for administering the test and direction on what to do once the results have been obtained. 13. Use of epidemiological data and network analyses to identify individuals at risk of HIV infection for HIV testing is recommended. 14. The offer of HIV testing to partners of newly diagnosed individuals is recommended. 15. Immediate referral to HIV care is recommended following an HIV-positive diagnosis to improve linkage to ART. 16. For high-risk individuals who test HIV negative, offering PrEP is recommended in addition to the provision of free condoms, education about risk reduction strategies, PEP, and voluntary medical male circumcision. 17. Use of case managers and patient navigators to increase linkage to care is recommended. *Increasing HIV treatment coverage* 18. The immediate offer of ART after HIV diagnosis, irrespective of CD4 count or clinical stage, is recommended. 19. First-line ARV regimens with the highest levels of efficacy, lowest adverse event profiles, and delivered in QD fixed-dose combinations are recommended. 20. Viral load testing at least every 6 months is recommended as the preferred tool for monitoring ART response. 21. HIV drug resistance testing is recommended at entry into care or prior to ART initiation and when virologic failure is confirmed. 21a. Where routine access to HIV drug resistance testing is restricted, population-based surveillance is recommended. 22. Community-located ART distribution is recommended. 22a. The use of community-based pharmacies should be considered. *Increasing retention in care, ART adherence, and viral suppression* 23. Systematic monitoring of retention in HIV care is recommended for all patients. 23a. Retention in HIV care should be considered as a quality indicator. 23b. Measuring retention in HIV care using electronic health record and other health system data is recommended. 23c. Use of clinic databases/surveillance systems for HIV clinical monitoring and population-level tracking is recommended. 24. Routine ART adherence monitoring is recommended in all patients. 24a. Viral suppression is recommended as the primary adherence monitoring metric. 24b. Routine collection of self-reported adherence data from patients is recommended. 24c. Pharmacy refill data are recommended for adherence monitoring. 25. Information and communication technologies aimed at supporting patient self-care are recommended. 25a. Mobile health technology using weekly interactive components (eg, 2-way SMS) is recommended. 25b. Alarm devices are recommended as reminders for PLHIV with memory impairment. 26. Patient education about and offering support for medication adherence and keeping clinic appointments are recommended. 26a. Pillbox organizers are recommended, particularly for HIV-infected adults with lifestyle-related barriers to adherence. 27. Neither directly administered nor directly observed ART is recommended for routine clinical care settings. 27a.DirectlyadministeredARTis recommended for people who inject drugs and released prisoners at high risk of ARTnon adherence. 28. Proactive engagement and reengagement of patients who miss clinic appointments and/or are lost to follow-up, including intensive outreach for those not engaged in care within 1 month of a new HIV diagnosis, is recommended. 28a. Case management to retain PLHIV in care and to locate and reengage patients lost to follow-up is recommended. (B II) 28b. Transportation support for PLHIV to attend their clinic visits is recommended. *Adolescents* 29. Removing adult-assisted consent to HIV testing and counseling is recommended for minor adolescents with the capacity to consent. (B II) 30. Adolescent-

		centered services are recommended in both clinical and community-based settings. 31. Informing an adolescent of his/her HIV-positive diagnosis is recommended as soon after diagnosis as feasible. (B II) 32. A transition plan between pediatric and adult HIV care is recommended. *Metrics for and monitoring of the HIV care continuum* 33. A standardized method should be used to estimate the total number of PLHIV (diagnosed and undiagnosed) within a geographic setting. 34. The estimated number of PLHIV in the geographic setting should be the overall denominator for the HIV care continuum. 35. Collection of a minimum set of 5 data elements should be considered to populate the HIV care continuum. Estimated number of PLHIV; Number and proportion of PLHIV who are diagnosed as having HIV; Number and proportion of PLHIV who are linked to care (optional); Number and proportion of PLHIV on ART; Number and proportion of PLHIV on ART who are virally suppressed 36. Where possible, jurisdictions should consider longitudinal cohort measurement of HIV service utilization and treatment outcomes to identify the means to maximize viral suppression through ensuring early access to ART and retention in care.
7	Ralph et al. (2010)	*Recommendation for Penile Fracture* Imaging (cavernosography, US, or MRI) can be used for localization of the injury, while retrograde urethrogram (pre-/perioperative) can be performed if there is a suspicion of a urethral injury. The ultimate decision for surgery is based on clinical findings and once diagnosed, there is no indication for conservative management. *Recommendation for Skin Loss Injuries* There is evidence to support surgical replacement of shaft skin with either split, mesh, or full thickness skin. *Recommendation for Penile Amputation* Critical warm and cold ischemia time is unknown. Surgical reattachment is therefore a clinical decision and is best performed by an experienced microsurgeon. Psychological evaluation should be offered to patients who self-mutilate. If re-implantation fails or is impossible, patients should be referred for phalloplasty at an appropriate time interval. *Definition of Gender Identity Disorder/ Transexualism* The desire for at least 2 years, to live and be accepted as a member of the opposite sex, usually accompanied by the wish to make his or her body as congruent as possible with the preferred sex through surgery and hormone therapy. *Male-to-Female Genital Surgery* Bilateral orchiectomy, amputation of the corpora cavernosa, creation of a neovaginal cavity that is lined by hairless skin, the formation of a sensate neoclitoris, and an aesthetic vulval appearance are the aims of genital surgery. The outcome may be achieved in one or two stages with satisfaction rates of 80% expected. *Female-to-Male Genital Surgery* Breast reduction, oophorectomy, hysterectomy, and vaginectomy should be offered to all patients. There are many phalloplasty techniques involving local or free flaps and mircrosurgery. Patients should be warned that multiple stages are often needed with high urethral and prosthetic complication rates. However, a universal satisfaction rate of 80% should be expected. Metoidioplasty can be offered to those who wish to stand to void but do not want sexual intercourse. *Penile Augmentation – Indications* A stretched penile length of <7cm should be considered as a micropenis with many surgical techniques being recommended. The indications for augmentation in men with a normal-sized penis cannot be drawn from the literature *Penile Augmentation – Surgical Techniques* There are many lengthening techniques described with variable success rates. The complications may be significant. Stretching devices may be an alternative treatment option. All operative methods of girth enhancement have no proven efficacy outcome data. Liquid silicone injection should be discouraged. Psychological assessment should proceed any surgical approach
8	Strang et al. (2016)	*Emergency intakes:* If the adolescent presents in a state of emergency, as some gender dysphoria (GD) referrals do, then as in any assessment, the first priority is risk reduction/safety. Hospitalization may be necessary in extreme cases to prevent self-harm/mutilation, though psychiatric hospital units are often not equipped to work with gender dysphoric adolescents with autism spectrum disorders (ASD), and so outside consultation to the unit may be necessary. Ultimately, engaging

		a therapist with training (or consultation support) in both ASD and gender nonconformity/GD may be a critical step; helping a patient understand that relief is coming and that their gender-needs will be addressed may reduce safety risks, and support further assessment. *ASD assessment:* When an ASD diagnosis is suspected, it is important for an autism specialist to confirm the diagnosis, if a diagnosis has not been established. Whenever possible, a neuropsychological/autism evaluation should be conducted to evaluate the impact of ASD on an adolescent's ability to understand and report GD symptoms as well as engage in therapy/treatments. Evaluations should include assessment of general cognitive skills, executive function skills (impulse control, flexibility, planning, future thinking), communication skills, emotional functioning, self-awareness/social cognition, and capacity for self-advocacy. Knowledge of the young person's capacities will inform the GD diagnosis process (i.e., how to best obtain clinical/diagnostic information and understand that information), as well as deciding on clinical treatment options (i.e., the ability to understand treatments, comply with treatments, consider a range of gender possibilities vs. concrete/black-and-white thinking). *Gender-related assessment:* When gender issues are reported/suspected in an adolescent with ASD, a structured interview should be used to assess for gender dysphoria, including dysphoria over time, intensity of dysphoria, and its pervasiveness. Whenever possible, it is important to obtain additional report from other sources (e.g., parents), as communication, self-awareness, and self-advocacy skills may be vulnerable in adolescents with ASD. It is difficult to separate the assessment and treatment of many of these individuals, because assessment continues throughout the treatment process as the person may develop increased understanding of themselves and increased ability to express their wants and needs. Therefore, gender-related diagnostics may take more time. For some individuals, however, GD diagnosis is immediately clear, such as when the dysphoria has been present for an extended period, the young person is already presenting as a different gender, or when the level of urgency about gender transition is extreme. *Treatment checklist (psychosocial and medical).* Establish appropriate clinical team, ideally a clinician trained in both autism spectrum disorders (ASD) and gender nonconformity/ gender dysphoria (GNC/GD), or clinicians collaborating from each specialty. Address and assess intensity of gender feelings/urgency throughout the treatment process, as assessment often continues during treatment, informing and shaping the goals of the treatment. Key clinical questions: a. Is the GD clear, urgent, pervasive, and persistent over time (i.e., meeting full diagnostic criteria for GD)? If yes, consultation with medical transition services may be indicated (see "If medical transition is indicated" below). b. Does the GD increase or decrease with intervention (e.g., as adolescent develops increased social/self-awareness, executive function flexibility and big picture thinking skills, communication/self-advocacy skills)? Provide psycho-education about and explore the possibility of a range of gender outcomes (e.g., gender spectrum, incorporating aspects of a different gender without full gender transition, etc.) This may require specific approaches targeting ASD related deficits in cognitive flexibility (i.e., reducing all or nothing/black and white thinking). Provide structure, as necessary, for gender exploration, supporting the adolescent's ability to explore gender transition, including clothing, name, pronouns, etc. Parents may need to assume a central role in helping facilitate an individual's exploration of their gender when ASD-related weaknesses in daily living skills, planning and self-advocacy interfere with that exploration. Such family support may include reminding a young person of their gender exploration therapy goals during the week, helping a young person to obtain appropriate clothing to try on, and so forth. Over the course of treatment, assess for signs that the adolescent's experience of GNC/GD is caused by comorbidities or symptoms of ASD (e.g., ASD preoccupations, misinterpreting sexual orientation for gender, etc.) If it becomes clear that a wish to transition is caused by a comorbidity or symptoms of ASD, explore alternative solutions to gender transition. If medical transition is indicated during the process, ensure that a pediatric endocrinologist (or similar medical specialist) trained in GD is engaged in the treatment to discuss risks/benefits of pubertal blockade and/or cross sex hormones. The endocrinologist/medical specialist and other treatment providers (e.g., autism specialist) should collaborate around diagnostics and treatments. If medical treatments begin, provide concrete psycho-education about treatment side effects, risks and benefits and ensure that these issues are understood by the adolescent with concurrent GD and ASD. Consider the accessibility and appropriateness of adjunct gender and/or ASD-related supports/services. Provide support, coaching, and vetting as needed. For example, an LGBT youth group leader may require some coaching in how to welcome and engage a person with ASD, and an autism skills group provider may

		require support in how to work with a GD/gender nonconforming adolescent.
9	T'Sjoen et al. (2020)	1.We advise that HCPs when working with trans people recognize the diversity of genders, including male, female, and nonbinary individuals. 2. We advise that HCPs when working with trans people openly ask for the individual gender experience of the person seeking treatment, including which pronouns and name they like to be addressed with, and recognize this may change in the future. 3. We advise that HCPs when working with trans people critically reflect upon discriminatory factors influencing both access to and outcomes of gender-related health-care services and make the necessary changes to accommodate all trans individuals. 4. We advise that HCPs when working with trans people should critically reflect on their own possible prejudices, ethics, and power positions. 5. We advise that HCPs when working with adult trans people should explain the result of the clinical assessment with the aim of a shared understanding and shared responsibility. 6. We advise that HCPs assessing gender diverse children and adolescents support the exploration and expression of the youth's experienced gender and help to reduce experienced barriers for those seeking care. 7. We advise that HCPs assessing gender diverse children and adolescents take a developmental approach that includes that gender-related developmental pathways may be more open to change in prepubescent gender diverse children than in pubescent gender diverse adolescents and adults. 8. We advise that HCPs assessing gender diverse children and adolescents assess resilience and vulnerabilities and treat (or refer for treatment) possible mental health problems. 9. We advise that HCPs assessing gender diverse children and adolescents support parents and/or legal guardian and school and other important social networks (when possible) to provide a safe and accepting home and school environment. 10. For prepubescent gender diverse children who desire to live in a role consistent with their experienced gender identity, we advise the HCPs advise that parents and the social environment consider social transitioning of the child after discussing the pros and the cons and while providing continuous psychological support. 11. For pubertal gender diverse adolescents, we advise that HCPs inform and explore all nonmedical and medical options, including the effect that GAMIs (puberty blockers, hormones as well as surgical) may have on sexuality and fertility and if indicated, facilitate GAMIs. 12. In countries requiring an assessment process including a clinical diagnosis to access GAMI, we advise that HCPs assessing trans adolescents for GAMI have the expertise in reaching the required diagnosis for their health service 13. We advise that HCPs working with trans people should inform trans adults seeking GAMI of its effect and assess the capacity of the individual to reach an informed consent regarding GAMI. 14. We advise that, in view of the strong evidence regarding the high levels of mental health problems in adults presenting at trans health services, particularly in those not on hormone treatment, HCPs whose role is informing and assessing the capacity to consent for GAMI in trans people wishing these interventions should have expertise in mental health to be able to identify those requiring further support from mental health professionals to allow for the best possible outcome of GAMI. 15. We advise that HCPs whose role is informing and assessing the capacity to consent for GAMI in trans people wishing these interventions should explore resilience and social support, in view of its association with health-related quality of life and psychological well-being. 16. We advise that HCPs whose role is informing and assessing the capacity to consent for GAMI in trans people wishing these interventions should inform clients about the effect that GAMIs (hormones and surgical) may have on sexual health and fertility. 17. In countries requiring an assessment process including a clinical diagnosis to access GAMI, we advise that HCPs assessing trans adults for GAMI have the expertise in reaching the required diagnosis for their health service. 18. We advise initiating pubertal hormone suppression in trans adolescents, when gender incongruence or nonconformity is assessed, interfering psychosocial difficulties are addressed if possible, and after they show their first pubertal changes (Tanner stage G2) and when they have sufficient capacity to give informed consent. 19. We advise in adolescents desiring masculinizing hormone treatment, when they have sufficient capacity to give informed consent, puberty induction with testosterone, often using a gradually increasing dose schedule. 20. We advise that before initiation of gonadotropin-releasing hormone analogs (GnRHa) or progestogen and/or testosterone, the hormone-prescribing physician should screen for conditions that may worsen with the start of treatment.

		21. If masculinization is desired, we advise testosterone therapy with monitoring of serum sex steroid levels and signs of virilization. 22. We advise the hormone-prescribing physician discusses the effects and possible adverse health effects of GnRHa, progestogen, and/or testosterone treatment, including fertility preservation options, based on the person's goals before any hormonal intervention. 23. We advise informing trans subjects on the expected changes upon GnRHa, progestogen, and/or testosterone initiation on its effect on body satisfaction and on sexual function (desire and activity) and considering the role that factors such as relationship status and possible surgical interventions will play. 24. We advise initiating pubertal hormone suppression in trans adolescents, when gender incongruence or nonconformity is assessed, interfering psychosocial difficulties are addressed if possible, and after they show their first pubertal changes (Tanner stage G2) and when they have sufficient capacity to give informed consent. 25. We advise in adolescents desiring feminizing hormone treatment, when they have sufficient capacity to give informed consent, puberty induction with 17beta-estradiol, often using a gradually increasing dose schedule. 26. We advise that before initiation of GnRHa or antiandrogen and/or estrogen treatment, the hormone-prescribing physician needs to screen for conditions that may worsen with the start of treatment. 27. If feminization is desired, we advise estrogens and/or antiandrogen therapy with monitoring of serum sex steroid levels and signs of feminization. 28. We advise the hormone-prescribing physician discusses the effects and possible adverse health effects of GnRHa, antiandrogen, and/or estrogen treatment, including fertility preservation options and consequences for genital surgery, based on the person's goals before any hormonal intervention. 29. We advise informing trans clients on the expected changes upon GnRHa, estrogen, and/or anti-androgen initiation and its effect on body satisfaction, sexual desire and activity and considering the role factors such as relationship status and possible surgical interventions can play 30. We advise HCPs should be aware of potential sexual problems during all surgical phases of treatment. 31. We advise that regardless of surgical pathways, HCPs should be aware of diversity in sexual practices in trans people. 32. We advise that surgeons performing GAS collaborate with sexologists with knowledge and experience with trans people, if available.
10	WHO (2011)	*Recommendations on human rights and non-discrimination in health-care settings* 1. Legislators and other government authorities should establish antidiscrimination and protective laws, derived from international human rights standards, in order to eliminate discrimination and violence faced by MSM and transgender people, and reduce their vulnerability to infection with HIV, and the impacts of HIV and AIDS. 2. Health services should be made inclusive of MSM and transgender people, based on the principles of medical ethics and the right to health. *Recommendations on HIV prevention, care and treatment* *Prevention of sexual transmission* 3. Using condoms consistently during anal intercourse is strongly recommended for MSM and transgender people over not using condoms. 4. Using condoms consistently is strongly recommended over serosorting for HIV-negative MSM and transgender people. Serosorting is suggested over not using condoms by HIV-negative MSM and transgender people under specific circumstances as a harm reduction strategy. 5. Not offering adult male circumcision to MSM and transgender people for the prevention of HIV and STI is suggested over offering it 6. Offering HIV testing and counselling to MSM and transgender people is strongly recommended over not offering this intervention 7. Offering community-based HIV testing and counselling linked to care and treatment to MSM and transgender people is strongly recommended over not offering such programmes *Behavioural interventions, information, education, communication* 8. Implementing individual-level behavioural interventions for the prevention of HIV and STIs among MSM and transgender people is suggested over not implementing such interventions. 9. Implementing community-level behavioural interventions for the prevention of HIV and STIs among MSM and transgender people is suggested over not implementing such interventions. 10. Offering targeted internet-based information to decrease risky sexual behaviours and increase uptake of HIV testing and counselling among MSM and transgender people is suggested over not offering such information. 11. Using social marketing strategies to increase the uptake of HIV/STI testing and counselling and HIV services among MSM and transgender people is suggested over not using such strategies.

		12. Implementing sex venue-based outreach strategies to decrease risky sexual behaviour and increase uptake of HIV testing and counselling among MSM and transgender people is suggested over not implementing such strategies. Substance use and prevention of bloodborne infections 13. MSM and transgender people with harmful alcohol or other substance use should have access to evidence-based brief psychosocial interventions involving assessment, specific feedback and advice. 14. MSM and transgender people who inject drugs should have access to needle and syringe programmes and opioid substitution therapy. 15. Transgender people who inject substances for gender enhancement should use sterile injecting equipment and practise safe injecting behaviours to reduce the risk of infection with bloodborne pathogens such as HIV, hepatitis B and hepatitis C. *HIV care and treatment.* 16. MSM and transgender people living with HIV should have the same access to ART as other populations. ART should be initiated at CD4 counts of ≤350 cells/mm3 (and for those in WHO clinical stage 3 or 4 if CD4 testing is not available). Access should also include management of opportunistic infections, co-morbidities and treatment failure. 17. MSM and transgender people living with HIV should have access to essential interventions to prevent illness and HIV transmission including, but not limited to, care and support and antiretroviral therapy. *Recommendations on prevention and care of other sexually transmitted infections* 18. MSM and transgender people with symptomatic STIs should seek and be offered syndromic management and treatment. 19. Offering periodic testing for asymptomatic urethral and rectal N. gonorrhoeae and C. trachomatis infections using NAAT is suggested over not offering such testing for MSM and transgender people. Not offering periodic testing for asymptomatic urethral and rectal N. gonorrhoeae infections using culture is suggested over offering such testing for MSM and transgender people. 20. Offering periodic serological testing for asymptomatic syphilis infection to MSM and transgender people is strongly recommended over not offering such screening 21. MSM and transgender people should be included in catch-up HBV immunization strategies in settings where infant immunization has not reached full coverage
11	WHO (2012)	1: In countries where HIV transmission occurs among serodiscordant couples, where discordant couples can be identified and where additional HIV prevention choices for them are needed, daily oral PrEP (specifically tenofovir or the combination of tenofovir and emtricitabine) may be considered as a possible additional intervention for the uninfected partner. 2: In countries where HIV transmission occurs among men and transgender women who have sex with men and additional HIV prevention choices for them are needed, daily oral PrEP (specifically the combination of tenofovir and emtricitabine) may be considered as a possible additional intervention.
12	WHO (2016)	*HIV prevention* 1 The correct and consistent use of condoms with condom-compatible lubricants is recommended for all key populations to prevent sexual transmission of HIV and sexually transmitted infections (STIs). 2 Oral pre-exposure prophylaxis (PrEP) containing tenofovir disproxil fumerate (TDF) should be offered as an additional prevention choice for key populations at substantial risk of HIV infection as part of combination HIV prevention approaches. 3 Post-exposure prophylaxis (PEP) should be available to all eligible people from key populations on a voluntary basis after possible exposure to HIV. 4 Voluntary medical male circumcision (VMMC) is recommended as an additional important strategy for the prevention of heterosexually acquired HIV infection in men, particularly in settings with hyperendemic and generalized HIV epidemics and low prevalence of male circumcision. *Harm reduction* 5 All people from key populations who inject drugs should have access to sterile injecting equipment through needle and syringe programmes. 6 All people from key populations who are dependent on opioids should be offered and have access to opioid substitution therapy in keeping with WHO guidance. 7 All people from key populations with harmful alcohol or other substance use should have access to evidence-based interventions, including brief psychosocial interventions involving assessment, specific feedback and advice. 8 People likely to witness an opioid overdose should have access to naloxone and be instructed in its use for emergency management of suspected opioid

		overdose. *HIV testing and counselling (HTC)* 9 Voluntary HTC should be routinely offered to all key populations both in the community and in clinical settings. Community-based HIV testing and counselling for key populations, linked to prevention, care and treatment services, is recommended, in addition to provider-initiated testing and counselling. *HIV treatment and care* 10 Key populations living with HIV should have the same access to antiretroviral therapy (ART) and to ART management as other populations. 11 All pregnant women from key populations should have the same access to services for prevention of mother-to-child transmission of HIV (PMTCT) and follow the same recommendations as women in other populations. *Prevention and management of coinfections and co-morbidities* 12 Key populations should have the same access to tuberculosis prevention, screening and treatment services as other populations at risk of or living with HIV. 13 Key populations should have the same access to hepatitis B and C prevention, screening and treatment services as other populations at risk of or living with HIV. 14 Routine screening and management of mental health disorders (depression and psychosocial stress) should be provided for people from key populations living with HIV in order to optimize health outcomes and improve their adherence to ART. Management can range from co-counselling for HIV and depression to appropriate medical therapies. *Sexual and reproductive health* 15 Screening, diagnosis and treatment of sexually transmitted infections should be offered routinely as part of comprehensive HIV prevention and care for key populations. 16 People from key populations, including those living with HIV, should be able to experience full, pleasurable sex lives and have access to a range of reproductive options. 17 Abortion laws and services should protect the health and human rights of all women, including those from key populations. 18 It is important to offer cervical cancer screening to all women from key populations, as indicated in the WHO 2013 cervical cancer screening guidelines. 19 It is important that all women from key populations have the same support and access to services related to conception and pregnancy care, as indicated by WHO guidelines, as women from other populations. *Critical enablers* 1 Laws, policies and practices should be reviewed and revised where necessary, and countries should work towards decriminalization of behaviours such as drug use/injecting, sex work, same-sex activity and non-conforming gender identity and toward elimination of the unjust application of civil law and regulations against people who use/inject drugs, sex workers, men who have sex with men and transgender people. 2 Countries should work towards implementing and enforcing antidiscrimination and protective laws, derived from human rights standards, to eliminate stigma, discrimination and violence against people from key populations. 3 Health services should be made available, accessible and acceptable to key populations, based on the principles of medical ethics, avoidance of stigma, non-discrimination and the right to health. 4 Programmes should work toward implementing a package of interventions to enhance community empowerment among key populations. 5 Violence against people from key populations should be prevented and addressed in partnership with key population led organizations. All violence against people from key populations should be monitored and reported, and redress mechanisms should be established to provide justice

Key: {text}, appeared in corrected version; AIDS acquired immune deficiency syndrome; ART, antiretroviral therapy; CD4, T-cell; ECDC, European Centre for Disease Prevention and Control; FtM, female to male; GAMI, gender affirming medical intervention; GAS, gender affirming surgery; HBV, hepatitis B virus; HCV, hepatitis C virus; HCP, health care professional; HIV, human immunodeficiency virus, MSM, men who have sex with men; MtF, male to female; PWID people who inject drugs; STI, sexually transmitted infection; WHO, World Health Organization.