

The National Curriculum in Reproductive Psychiatry is committed to evidence-based care, diversity, equity, and inclusion. We acknowledge both gaps in the current scientific literature and the scope and extent of our expertise as reproductive psychiatrists, which is especially true in the topics of Infertility and Perinatal Loss and their mental health impacts. Most studies of the psychiatric issues in infertility patients and those experiencing perinatal loss focus on a subset of the patient population, most often cis-gendered women (and their male partners), and often represent individuals who are white. More research is needed on diverse populations, including the LGBTQ+ community, BIPOC communities, and individuals who are not partnered.

We are committed to continued collaboration across disciplines and uniting the knowledge of a breadth of specialists as we continue our own education in the creation, revision, and distribution of our modules to empower and educate our colleagues in mental health in providing excellent patient care.

Below are a few of the topics we continue to highlight (excerpts from Hutner, Catapano, Nagle-Yang, Williams, and Osborne 2022):

Race and Infertility:

In the United States, some studies find no difference in infertility across racial, ethnic, or economic categories, while others find increased rates of infertility in Black and American Indian/Alaskan Native women (Lynch 2019; Shirazi and Rosinger 2020). Whether or not there are discrepancies in rates of infertility, however, there are certainly discrepancies in access to infertility treatment (which is expensive and often not covered by insurance) and in the success of treatment (Insogna and Ginsburg 2018; Janitz, Peck and Craig 2019). Numerous studies have found that Black, Hispanic, and Asian women have lower clinical pregnancy rates and/or live birth rates after IVF compared to White women (Humphries et al. 2016). These differences are also true for pregnancies after oocyte donation (Zhou et al. 2020).

1. Humphries LA, Chang O, Humm K, et al.: Influence of race and ethnicity on in vitro fertilization outcomes: systematic review. *Am J Obstet Gynecol* 214(2):212.e1-212.e17, 2016
2. Insogna IG, Ginsburg ES: Infertility, inequality, and how lack of insurance coverage compromises reproductive autonomy. *AMA J Ethics* 20(12):E1152-1159, 2018
3. Janitz AE, Peck JD, Craig LB: Racial/ethnic differences in the utilization of infertility services: A focus on American Indian/Alaska Natives. *Matern Child Health J* 23(1):10-18, 2019
4. Lynch CD: There are racial and ethnic disparities in infertility, indeed, but we need better data. *Paediatr Perinat Epidemiol* 33(2):126-128, 2019

5. Shirazi TN, Rosinger AY: Reproductive health disparities in the USA: Self-reported race/ethnicity predicts age of menarche and live birth ratios, but not infertility. *J Racial Ethn Health Disparities* 2020
6. Zhou X, McQueen DB, Schufreider A, et al.: Black recipients of oocyte donation experience lower live birth rates compared with White recipients. *Reprod Biomed Online* 40(5):668-673, 2020

Race and Perinatal Loss:

While research on racial disparities in spontaneous abortion is surprisingly scarce, some studies indicate higher rates of loss in Black women compared to White women (Price 2006). Since lower socioeconomic status, lower education, and income below poverty are also risk factors for recurrent loss, this racial difference may be partly due to socioeconomic differences. Non-Hispanic Black women have the highest risks for IUFD and early infant death compared to other populations (MacDorman and Gregory 2015; Muglu et al. 2019; Mukherjee et al. 2013). Some of this difference is likely attributable to the higher rates of preterm birth and pregnancy morbidities in the Black population, while some may also represent disparity in access to quality health care (Martin, Hamilton, Osterman and Driscoll 2019).

1. MacDorman MF, Gregory EC: Fetal and perinatal mortality: United States. *Natl Vital Stat Rep* 64(8):1-24, 2015
2. Martin JA, Hamilton BE, Osterman MJK, Driscoll AK: Births: Final data for 2018. *Natl Vital Stat Rep* 68(13):1-47, 2019
3. Muglu J, Rather H, Arroyo-Manzano D, et al.: Risks of stillbirth and neonatal death with advancing gestation at term: A systematic review and meta-analysis of cohort studies of 15 million pregnancies. *PLoS Med* 16(7):e1002838, 2019
4. Price SK: Prevalence and correlates of pregnancy loss history in a national sample of children and families. *Matern Child Health J* 10(6):489-500, 2006

Race and Access to Psychological Support:

Engagement in mental health treatment appears to be influenced by racial, cultural, and economic factors. For instance, studies of Black women in the U.S. found that many grieving women chose not to utilize perinatal loss support psychological treatments due to a lack of racial diversity in the groups (Boyden et al. 2014; Van and Meleis 2003). Outreach to high-risk groups and research regarding barriers to care are needed, as are culturally sensitive treatment approaches.

1. Boyden JY, Kavanaugh K, Issel M, et al.: Experiences of African American Parents Following Perinatal or Pediatric Death: A Literature Review, *Death Studies* 38(6):374-380, 2014
2. Van P, Meleis AI: Coping with grief after involuntary pregnancy loss: Perspectives of African American women. *J Obstet Gynecol Neonatal Nurs* 32(1):28–39, 2003

Assisted Reproductive Technology and LGBTQ+ Families:

The use of ART in populations with infertility has different mental health implications than the use of ART in populations where it is an important opportunity to build a family, such as with LGBTQ+ families. While ART for family-building in same-sex couples is routine, and there is a good evidence base for fertility preservation for transgender men and women, we are still building evidence about pregnancy in transgender individuals. Transgender men may choose to cryopreserve mature oocytes prior to gender affirmation surgery, while transgender women may choose to freeze their sperm (Armuan et al. 2020; Ethics Committee of the ASRM 2015; Hembree et al. 2009). Evidence indicates that ovarian stimulation and oocyte retrieval have excellent rates of success in transgender men, even if undertaken after testosterone therapy has been initiated, and increasingly this path to fertility preservation is undertaken in adolescence prior to gender-affirming surgery (Adeleye, Cedars, Smith and Mok-Lin 2019; Amir et al. 2020).

1. Adeleye AJ, Cedars MI, Smith J, Mok-Lin E. Ovarian stimulation for fertility preservation or family building in a cohort of transgender men. *J Assist Reprod Genet.* 2019 Oct;36(10):2155-2161. doi: 10.1007/s10815-019-01558-y. Epub 2019 Aug 21. PMID: 31435820; PMCID: PMC6823342
2. Amir H, Oren A, Klochendler Frishman E, et al.: Oocyte retrieval outcomes among adolescent transgender males. *J Assist Reprod Genet* 37(7):1737-1744, 2020
3. Armuan G, Dhejne C, Olofsson JI, et al.: Attitudes and experiences of health care professionals when caring for transgender men undergoing fertility preservation by egg freezing: a qualitative study. *Ther Adv Reprod Health* 14:2633494120911036, 2020
4. Ethics Committee of the ASRM: Access to fertility services by transgender persons: An Ethics Committee opinion. *Fertil Steril* 104(5):1111-1115, 2015
5. Hembree WC, Cohen-Kettenis P, Delemarre-van de Waal HA, et al.: Endocrine treatment of transsexual persons: An Endocrine Society clinical practice guideline. *J Clin Endocrinol Metab* 94:3132–3154, 2009

Third-Party ART with Gamete Donation (Ovum and Sperm Donation):

ART with donor sperm is common; between 2015-2017, an estimated 440,986 women used donor sperm for either IUI or IVF procedures (Arocho, Lozano and Halpern 2019). Common reasons for conception through sperm donation include male factor infertility, single motherhood, and family-building for lesbian couples. While some of these individuals will suffer the stresses and psychological consequences associated with infertility, others will be approaching ART without infertility and may have different experiences. Ovum donation is much less common as it requires time-intensive ovarian stimulation protocols; it is estimated that 10% of IVF cycles in the United States use ovum donation (ASRM 2018). Common reasons for egg donation include advanced maternal age, premature menopause, infertility due to previous treatments with toxic medications such as chemotherapy, or the creation of an embryo in same-sex couples.

1. American Society for Reproductive Medicine: Assisted Reproductive Technologies 2018. Retrieved from <https://www.reproductivefacts.org/news-and-publications/patient-fact-sheetsand-booklets/documents/fact-sheets-and-info-booklets/assisted-reproductive-technologiesbooklet/>
2. Arocho R, Lozano EB, Halpern CT: Estimates of donated sperm use in the United States: National Survey of Family Growth 1995-2017. *Fertil Steril* 112(4):718-723, 2019

Perinatal Loss in LGBTQ+ Families:

Most studies on the psychological and psychiatric aspects of perinatal loss include cisgender women, typically in heterosexual relationships. Very few studies exist examining the experience of perinatal loss in LGBTQ+ families. For these families, pregnancy is often achieved through assisted reproductive technologies, and these pregnancies often require a high degree of effort and planning. Consequently, these pregnancy losses are experienced as highly distressing (Peel 2010; Wojnar 2007). A concept of "double disenfranchisement" has been proposed (Cacciatore and Raffo 2011), as historically, many LGBTQ+ families have been devalued by the wider society. Thus, their perinatal loss represents a "double loss," and their isolation in their grief represents a "double disenfranchisement."

1. Cacciatore J, Raffo Z: An exploration of lesbian maternal bereavement. *Soc Work* 56(2):169- 177, 2011
2. Peel E: Pregnancy loss in lesbian and bisexual women: an online survey of experiences. *Hum Reprod* 25(3):721–727, 2010
3. Wojnar D: Miscarriage experiences of lesbian couples. *J Midwif Womens Health* 52:479–485, 2007

Gender Differences and Perinatal Loss:

To date, all studies of men's responses to perinatal loss have focused on cisgender heterosexual men, and studies are needed that focus upon the unique experience of miscarriage, IUFD, or neonatal death in men who have chosen to become parents through surrogacy or adoption (Obst, Due, Oxlad and Middleton 2020). In heterosexual couples, perinatal loss has been found to have varied effects on men. These effects are essential to clarify as they may affect couples' relationships, which can have downstream effects on a woman's functioning.

1. Obst KL, Due C, Oxlad M, Middleton P: Men's grief following pregnancy loss and neonatal loss: a systematic review and emerging theoretical model. BMC Pregnancy Childbirth 20:11, 2020

Additional Resources:

Infertility

<https://rtzhope.org/lgbtq>

<https://www.lgbtqreproductiveloss.org/>

<https://www.fertilityforcoloredgirls.org/>

Perinatal Loss

<https://rtzhope.org/lgbtq>

<https://www.lgbtqreproductiveloss.org/>

<https://www.postpartum.net/get-help/psi-online-support-meetings/>

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1. Adeleye AJ, Cedars MI, Smith J, Mok-Lin E. Ovarian stimulation for fertility preservation or family building in a cohort of transgender men. *J Assist Reprod Genet.* 2019 Oct;36(10):2155-2161. doi: 10.1007/s10815-019-01558-y. Epub 2019 Aug 21. PMID: 31435820; PMCID: PMC6823342
2. American Society for Reproductive Medicine: Assisted Reproductive Technologies 2018. Retrieved from <https://www.reproductivefacts.org/news-and-publications/patient-fact-sheetsand-booklets/documents/fact-sheets-and-info-booklets/assisted-reproductive-technologiesbooklet/>
3. Amir H, Oren A, Klochendler Frishman E, et al: Oocyte retrieval outcomes among adolescent transgender males. *J Assist Reprod Genet* 37(7):1737-1744, 2020
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7. Cacciatore J, Raffo Z: An exploration of lesbian maternal bereavement. *Soc Work* 56(2):169- 177, 2011
8. Chen D, Matson M, Macapagal K, Johnson EK, Rosoklija I, Finlayson C, Fisher CB, Mustanski B. Attitudes Toward Fertility and Reproductive Health Among Transgender and Gender-Nonconforming Adolescents. *J Adolesc Health.* 2018 Jul;63(1):62-68. doi: 10.1016/j.jadohealth.2017.11.306. Epub 2018 Mar 2. PMID: 29503031; PMCID: PMC6067953
9. Chen D, Kolbuck VD, Sutter ME, Tishelman AC, Quinn GP, Nahata L. Knowledge, Practice Behaviors, and Perceived Barriers to Fertility Care Among Providers of Transgender Healthcare. *J Adolesc Health.* 2019 Feb;64(2):226-234. doi: 10.1016/j.jadohealth.2018.08.025. Epub 2018 Oct 26. PMID: 30661518
10. Downing J, Everett B, Snowden JM. Differences in Perinatal Outcomes of Birthing People in Same-Sex and Different-Sex Marriages. *Am J Epidemiol.* 2021 Nov 2;190(11):2350-2359. doi: 10.1093/aje/kwab148. PMID: 34010958; PMCID: PMC8799892
11. Ethics Committee of the ASRM: Access to fertility services by transgender persons: An Ethics Committee opinion. *Fertil Steril* 104(5):1111-1115, 2015
12. Ethics Committee of the American Society for Reproductive Medicine. Electronic address: asrm@asrm.org. Access to fertility treatment irrespective of marital status, sexual orientation, or gender identity: an Ethics Committee opinion. *Fertil Steril.* 2021

Aug;116(2):326-330. doi: 10.1016/j.fertnstert.2021.03.034. Epub 2021 Apr 24. PMID: 33906744

13. Hembree WC, Cohen-Kettenis P, Delemarre-van de Waal HA, et al: Endocrine treatment of transsexual persons: An Endocrine Society clinical practice guideline. *J Clin Endocrinol Metab* 94:3132–3154, 2009
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19. Jones C. Intersex, infertility and the future: early diagnoses and the imagined life course. *Sociol Health Illn*. 2020 Jan;42(1):143-156. doi: 10.1111/1467-9566.12990. Epub 2019 Sep 12. PMID: 31515827
20. Leung A, Sakkas D, Pang S, Thornton K, Resetkova N. Assisted reproductive technology outcomes in female-to-male transgender patients compared with cisgender patients: a new frontier in reproductive medicine. *Fertil Steril*. 2019 Nov;112(5):858-865. doi: 10.1016/j.fertnstert.2019.07.014. Epub 2019 Oct 6. PMID: 31594633
21. Lynch CD: There are racial and ethnic disparities in infertility, indeed, but we need better data. *Paediatr Perinat Epidemiol* 33(2):126-128, 2019
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23. Martin JA, Hamilton BE, Osterman MJK, Driscoll AK: Births: Final data for 2018. *Natl Vital Stat Rep* 68(13):1-47, 2019
24. Moravek MB. Fertility preservation options for transgender and gender-nonconforming individuals. *Curr Opin Obstet Gynecol*. 2019 Jun;31(3):170-176. doi: 10.1097/GCO.0000000000000537. PMID: 30870185
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27. Payne JG, Erbenius T. Conceptions of transgender parenthood in fertility care and family planning in Sweden: from reproductive rights to concrete practices. *Anthropol Med*. 2018 Dec;25(3):329-343. doi: 10.1080/13648470.2018.1507485. PMID: 30686027.
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30. Rowlands S, Amy JJ. Preserving the reproductive potential of transgender and intersex people. *Eur J Contracept Reprod Health Care*. 2018 Feb;23(1):58-63. doi: 10.1080/13625187.2017.1422240. Epub 2018 Jan 11. PMID: 29323576.
31. Schwartz AR, Moravek MB. Reproductive potential and fertility preservation in transgender and nonbinary individuals. *Curr Opin Obstet Gynecol*. 2021 Aug 1;33(4):327-334. doi: 10.1097/GCO.0000000000000729. PMID: 34173770
32. Shirazi TN, Rosinger AY: Reproductive health disparities in the USA: Self-reported race/ethnicity predicts age of menarche and live birth ratios, but not infertility. *J Racial Ethn Health Disparities* 2020
33. Tam MW. Queering reproductive access: reproductive justice in assisted reproductive technologies. *Reprod Health*. 2021 Aug 2;18(1):164. doi: 10.1186/s12978-021-01214-8. PMID: 34340704; PMCID: PMC8327458
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37. Wu HY, Yin O, Monseur B, Selter J, Collins LJ, Lau BD, Christianson MS. Lesbian, gay, bisexual, transgender content on reproductive endocrinology and infertility clinic websites. *Fertil Steril*. 2017 Jul;108(1):183-191. doi: 10.1016/j.fertnstert.2017.05.011. Epub 2017 Jun 1. PMID: 28579417
38. Zhou X, McQueen DB, Schufreider A, et al: Black recipients of oocyte donation experience lower live birth rates compared with White recipients. *Reprod Biomed Online* 40(5):668-673, 2020