



Caring for Transgender Patients and Clients: Nutrition-Related Clinical and Psychosocial Considerations

DISEASE PREVENTION AND health promotion in the lesbian, gay, bisexual, transgender, and queer (LGBTQ) community has gained significant momentum in the past 3 decades. Prior research has demonstrated marked health disparities among the LGBTQ population, such as elevated rates of cancer, human immunodeficiency virus (HIV), acquired immunodeficiency syndrome, and mental health disorders, compounded by limited access to quality health care.¹ Studies investigating cancer incidence specifically in the transgender population have been limited in size and scope, making it difficult to draw conclusions; however, increased incidence and mortality from cancer have been reported in LGBTQ communities.²⁻⁵ As a result, in October

2016, the National Institutes of Health formally designated sexual and gender minorities as a health-disparate population.²

In the nutrition and dietetics literature, differences in gender-specific diet- and nutrition-related considerations have traditionally been framed as occurring between cisgender, heterosexual males vs cisgender, heterosexual females. However, emerging research has indicated distinct nutrition-related considerations for sexual minorities of the LGBTQ population.³ A landmark study identified significant variations in health risk behaviors within each subcategory of sexual orientation, indicating a need to investigate the dietary considerations of sexual minorities that have historically been grouped into one category.⁶

The transgender population is of particular importance to the nutrition profession, given the medical interventions undertaken to make the transition from one gender to another. An estimated 0.6% of adults in the United States, or 1.4 million, identify as transgender. This figure has approximately doubled in the last decade.⁷ Historic advancements in legal equality and increased cultural acceptance have likely contributed to an increasing number of individuals openly and more willingly describing themselves as transgender.⁸ Furthermore, increased media visibility, access to the internet, and greater support resources for this community have resulted in greater awareness of LGBTQ issues and a reduction in the stigma and some of the previously held stereotypes that often lead to discrimination.⁸ Literature on preventative and primary care of transgender individuals has focused primarily on HIV rates and risk behaviors, with a lesser focus on pelvic examinations, tobacco use, insurance coverage, and cholesterol

screenings.⁹ However, no literature has focused solely on dietary concerns. Thus, the purpose of this paper is to discuss the nutrition-related clinical and psychosocial considerations of transgender individuals based on current evidence.

KEY TERMS

The following key terms are defined according to the American Psychological Association¹⁰ and will be used throughout this paper.

Transgender: an adjective that is an umbrella term to describe the full range of people whose gender identity and/or gender role do not conform to what is typically associated with their sex assigned at birth. Although the term *transgender* is common, not all transgender and gender-nonconforming people self-identify as transgender.

Cisgender: an adjective used to describe a person whose gender identity and gender expression align with sex assigned at birth; a person who is not transgender and gender-nonconforming.

Male to Female (MtF): individuals whose assigned sex at birth was male and who have changed, are changing, or wish to change their body and/or gender role to a more feminized body or gender role. MtF persons are also often referred to as transgender women, transwomen, or trans women.

Female to Male (FtM): individuals assigned a female sex at birth who have changed, are changing, or wish to change their body and/or gender identity to a more masculine body or gender identity. FtM persons are also often referred to as transgender men, transmen, or trans men.

This article was written by **Rabia Rahman, PhD, RD, LD, assistant professor, and Whitney R. Linsenmeyer, PhD, RD, LD, instructor, Department of Nutrition and Dietetics, Saint Louis University, St Louis, MO.**

<https://doi.org/10.1016/j.jand.2018.03.006>
Available online 17 May 2018

The [Continuing Professional Education \(CPE\)](#) quiz for this article is available for free to Academy members through the MyCDRGo app (available for iOS and Android devices) and through www.jandonline.org (click on "CPE" in the menu and then "Academy Journal CPE Articles"). Log in with your Academy of Nutrition and Dietetics or Commission on Dietetic Registration username and password, click "Journal Article Quiz" on the next page, then click the "Additional Journal CPE quizzes" button to view a list of available quizzes. Non-members may take CPE quizzes by sending a request to journal@eatright.org. There is a fee of \$45 per quiz (includes quiz and copy of article) for non-member Journal CPE. CPE quizzes are valid for 1 year after the issue date in which the articles are published.

Strategies for Provision of Care, Treatment and Services	Implementation
<p>Create a welcoming environment that is inclusive of LGBT^a patients.</p>	<ul style="list-style-type: none"> • Prominently post the hospital’s nondiscrimination policy or patient bill of rights. • Waiting rooms and other common areas should reflect and be inclusive of LGBT patients and families. (For example, LGBT-relevant magazines and posters and information about local LGBT resources should be available.) • Décor and images depicting couples and families should include same-sex partners, same-sex patients, and LGBT families. • LGBT-friendly symbols such as the rainbow flag can be displayed in waiting areas, on placards and forms, and on staff badges. This can immediately signal a culture of acceptance. • Create or designate unisex or single-stall restrooms. (Although making a unisex restroom is an important signal of acceptance, patients should be permitted to use restrooms that comport with their gender identity and should not be required to use the unisex restroom.)
<p>Foster an environment that supports and nurtures all patients and families.</p>	<ul style="list-style-type: none"> • Ensure that visitation policies are implemented in a fair and nondiscriminatory manner. • Refrain from making assumptions about a person’s sexual orientation or gender identity based on appearance. (For example, a patient wearing a wedding ring may be partnered with another man or woman; someone whose appearance is typically masculine or feminine may have transitioned from another gender.) • Be aware of misconceptions, biases, stereotypes, and other communication barriers. • Be aware that visible discomfort on the part of staff or other patients in the presence of displays of affection or support can exacerbate an already difficult situation for LGBT families. • Determine mechanisms for handling patient-to-patient discrimination while preserving the dignity of all involved.
<p>Facilitate disclosure of sexual orientation and gender identity while remaining aware that such disclosure (“coming out”) is an individual process.</p>	<ul style="list-style-type: none"> • Honor and respect the patient’s decision and timing with regard to coming out. • Ensure that all forms contain inclusive, gender-neutral language that allows for self-identification. (For example, under “relationship status”, provide options such as “partnered”. For parents, use terminology such as “parent/guardian” that is inclusive of same-sex parents who may or may not be biologically related to the child.)
<p>Advance effective communication.</p>	<ul style="list-style-type: none"> • Keep in mind that patient information is protected by privacy and confidentiality laws. • Use neutral and inclusive language in interviews and when talking with all patients. • Listen to and reflect patients’ choice of language when describing their sexual orientation and how a patient refers to his or her relationship or partner. • If you are unsure of a person’s gender identity, ask gender-neutral questions for clarification (such as “How would you like to be addressed?” or “What name would you like to be called?”). • Be aware of language or questions that assume heterosexuality (such as “Are you married?”). When asking about family relationships ask “Who are the important people in your life?” or “Who is family to you?”
<p><i>(continued on next page)</i></p>	

Figure. Strategies to promote inclusive patient- and family-centered care. Reprinted with permission from reference 42: Lim FA, Brown DV, Justin Kim SM. Addressing health care disparities in the lesbian, gay, bisexual, and transgender population: A review of best practices. *Am J Nurs.* 2014;114(6):24-34. <https://journals.lww.com/ajnonline>.

Strategies for Provision of Care, Treatment and Services	Implementation
Promote community involvement and advocacy.	<ul style="list-style-type: none"> • Provide information and guidance about specific health concerns faced by various LGBT subgroups. • Become familiar with online and local resources available for LGBT health topics. • Be prepared with appropriate information and referrals, and help patients find respectful providers. • Be an advocate for vulnerable LGBT subgroups such as the frail elderly, disenfranchised youth, those who are homeless or uninsured, those who have been victims of violence or bullying, and those with no legal status.
<p>^aLGBT= lesbian, gay, bisexual, transgender.</p>	

Figure. (continued) Strategies to promote inclusive patient- and family-centered care. Reprinted with permission from reference 42: Lim FA, Brown DV, Justin Kim SM. Addressing health care disparities in the lesbian, gay, bisexual, and transgender population: A review of best practices. *Am J Nurs.* 2014;114(6):24-34. <https://journals.lww.com/ajnonline>.

Gender-nonconforming: an adjective used as an umbrella term to describe people whose gender expression or gender identity differs from gender norms associated with their assigned birth sex.

Genderqueer: a term used to describe a person whose gender identity does not align with a binary understanding of gender (ie, a person who does not identify fully as either a man or a woman).

Hormone therapy (gender-affirming hormone therapy, hormone replacement therapy): the use of hormones to masculinize or feminize a person’s body to better align that person’s physical characteristics with his or her gender identity. People wishing to feminize their bodies receive anti-androgens and/or estrogens; people wishing to masculinize their bodies receive testosterone. Hormone therapy may be an important part of medically necessary treatment to alleviate gender dysphoria.

DIETARY CONSIDERATIONS FOR TRANSGENDER PATIENTS AND CLIENTS

Based on the current evidence, dietary considerations for transgender patients and clients are both clinical and psychosocial in nature. Individuals seeking to medically transition may undergo gender-affirming medical interventions of masculinizing or feminizing hormone therapy, as well as surgical reassignment. In adolescents,

treatment may also include suppression of puberty. Specific side effects of hormonal therapy may be within the scope of practice of registered dietitian nutritionists (RDNs). These side effects include weight gain, changes in body composition, altered lipid profiles, and changes in bone composition and other metabolic factors. As a result, the World Professional Association for Transgender Health has identified specific risks associated with hormone therapy.

Specifically, transgender FtM individuals receiving testosterone therapy may exhibit weight gain, increased lean body mass, decreased fat mass, increased low-density lipoprotein levels, decreased high-density lipoprotein levels, delayed prothrombin time, increased hemoglobin and hematocrit, and increased creatinine levels.¹¹⁻¹⁶ The World Professional Association for Transgender Health identifies transgender males as having a likely increased risk for polycythemia; a possible increased risk for hyperlipidemia; and a possible increased risk for cardiovascular disease, hypertension, and type 2 diabetes when other risk factors are present.¹⁷

Transgender MtF individuals receiving estrogen therapy may exhibit changes in high-density lipoprotein and low-density lipoprotein levels, depending on the route of administration; an increase or decrease in blood pressure; an increase in bone mineral density, particularly if an individual undergoes gender reassignment surgery during which the testicles have been removed; and decreased creatinine levels.¹¹⁻¹⁶ The World

Professional Association for Transgender Health identifies transgender females as having a likely increased risk for venous thromboembolic disease and hypertriglyceridemia, a possible increased risk for hypertension, and a possible increased risk for type 2 diabetes when other risk factors are present.¹⁷

Dietary considerations for the transgender population are not only clinical but also psychosocial in nature. Existing research points to a higher prevalence of disordered eating, unhealthy weight control behaviors, weight misperception, and body dissatisfaction among sexual minorities.^{14,18-22} Within the adolescent population, heterosexual males with prior same-sex partners and bisexual males were more likely to consider themselves overweight, despite being at a healthy weight or underweight, whereas sexual-minority males and females were significantly more likely to engage in unhealthy weight control behaviors compared with exclusively heterosexual individuals.²³ Within the college student population, transgender and cisgender sexual minorities reported elevated rates of eating disorders and compensatory behaviors that included use of diet pills, use of laxatives, and induced vomiting.²¹

THE ROLE OF THE RDN

The increased demand for medical treatment by transgender individuals, in conjunction with evidence that this population is health disparate and underserved, supports the need for

highly trained health care providers with expertise in this area.^{24,25} RDNs are in a position to provide appropriate, patient-centered, and compassionate care for this health-disparate population.

Eating Disorders

Although the precise etiology of eating disorders in the transgender population has not been clearly explicated, it is evident that the relationships among sexuality, gender identity, body image, and eating disorders are complex. The higher incidence and multifactorial nature of eating disorders in this population requires a collaborative treatment approach by an interdisciplinary team of experts, including an RDN. Nutrition interventions provided by an RDN have demonstrated improvements in behaviors related to binge eating, increased caloric intake, and purging and significant increases in weight and the amount and variety of foods consumed.²⁶⁻²⁸

Weight Gain

Weight gain is a documented side effect in the transgender population among those undergoing hormone therapy. Although weight gain has been noted in both MtF and FtM individuals, the composition of the gained weight varies. Typically, in MtF transitions, body weight changes reflect an increase in body fat and decrease in lean body mass owing to feminizing hormones, whereas masculinizing hormones in FtM transitions appear to have the opposite effect.²⁹ Within the literature, there exists a dearth of evidence identifying best practices to estimate nutrient needs in the transgender population. Further research investigating the impact of hormone therapy on the calorie needs of transitioning individuals would allow RDNs to work effectively on weight management strategies with their clients. Further research in this area is needed to optimize weight loss efforts and weight management strategies within this specific population. Although successful and lasting treatment interventions for overweight and obesity remain somewhat elusive, evidence suggests that incremental, discrete, and practical lifestyle changes that are implemented with the support of a multidisciplinary team can be

sustainable and effective.³⁰ In addition, existing research has established the effectiveness of nutrition counseling by an RDN on weight loss when compared with counseling provided by other health care professionals.³¹⁻³⁵

Chronic Conditions

Although limited, evidence suggests that transgender adults are more likely to have chronic conditions such as cardiovascular disease, type 2 diabetes mellitus, HIV, cancer, obesity, depression, asthma, chronic obstructive pulmonary disease, and chronic kidney disease.^{36,37} Substantial evidence links dietary factors to increased risk and incidence of chronic disease. However, the elevated prevalence of chronic conditions among the transgender population cannot be attributed to nutrition-related factors alone. The etiology of chronic conditions among the transgender population is multifactorial and complex. Stigmatization of transgender individuals has been implicated as an underlying contributor to adverse health outcomes in this population.³⁷ Although limited research exists on the effects of stigmatization on health outcomes in the transgender population specifically, studies from other stigmatized groups show links between stigma, stress, and negative health effects such as hypertension, diabetes, and cardiometabolic disturbances.³⁷ Furthermore, limitations in access to and utilization of health care services remain a substantial impediment to transgender individuals receiving the care they need, further increasing their risk for chronic disease.¹⁷ Regardless of the etiology of chronic disease in this population, dietary modifications, implemented with the guidance of an RDN, have been shown to improve biomarkers of chronic disease.³⁸ Nutrition counseling in the adult population has been effective in improving overall diet quality, blood glucose levels and glycated hemoglobin values, blood pressure, and lipid levels and in reducing weight and waist circumference,³⁸ thereby reducing overall risk of chronic disease.

APPROPRIATE AFFIRMATIVE PATIENT CARE FOR TRANSGENDER INDIVIDUALS

Although some strides have been made in societal understanding and

acceptance of transgender individuals, access to culturally competent, gender-affirming health care remains limited and contributes to troubling health inequities.³⁹ Research has demonstrated that these disparities are made evident in the prevalence of physical and mental health conditions and are exacerbated by stigma and the inexperience and insensitivity of health care providers. In a follow-up to the 2011 National Transgender Discrimination Survey, the National Center for Transgender Equality, conducted the National Transgender Discrimination Survey and found that discrimination and disparities were evident in the workplace, educational system, community, family structures, and the health care system.^{40,41} Social and economic marginalization have devastating effects on health outcomes for the transgender population. One-third of respondents to the US Transgender Survey reported having at least one negative experience with a health care provider in the past year, including denial of care; verbal, physical, or sexual harassment; and the need to educate the provider about transgender health issues in order to receive appropriate care. In addition, 23% of respondents avoided necessary medical care because of fear of discrimination and mistreatment, as compared with 28% of respondents to the National Transgender Discrimination Survey.^{41,42}

With the staggering consequences of inadequate treatment, it is incumbent upon health care providers and agencies to adopt culturally competent, gender-affirming practices to ensure optimal health care access and provision. Health care providers can take a number of positive steps to eliminate barriers that compromise access to and provision of culturally sensitive care. The Joint Commission has outlined best practices guidelines designed to promote patient-centered and inclusive care for the LGBTQ community (Figure).^{41,42}

Education of Health Care Students

The best practices identified in the Figure are important strategies for providing appropriate affirmative care for transgender individuals. However, increasing transgender cultural

competence during health care training may provide an opportunity to reduce these biases before health care practitioners are working in their respective fields. Although there is evidence that explicit bias against the transgender population is on the decline, implicit bias within the health care system remains pervasive and creates barriers to individuals seeking and receiving appropriate care.^{43,44} In addition to barriers to access to and utilization of health care created by stigmatization and discrimination, transgender individuals often cite providers' lack of knowledge about trans health and health care issues as an obstacle.⁴⁵ The Institute of Medicine, the US Department of Health and Human Services, the American Association of Medical Colleges, and the American College of Physicians have all described gaps in training and education related to LGBTQ issues among health care students and practitioners.^{3,46-48} The widespread prevalence of bias against sexual minorities among health care providers suggests that health care curricula are inadequately addressing stigmatization, if at all. Research suggests that medical school curricula and residency training rarely include LGBTQ health issues.^{49,50}

More germane to the field of nutrition is the lack of research on the inclusion of LGBTQ health issues in nutrition and dietetics curricula. Although there is a dearth of research regarding LGBTQ health and transgender cultural competence training in nutrition and dietetics curricula, there is some evidence from other health care disciplines that introducing trans-specific curricula into students' training improves their knowledge regarding transgender health issues.⁴⁵ However, an increase in knowledge does not always translate into fewer transphobic attitudes and behaviors.⁴⁵ Therefore it is crucial for health care curricula to include bias reduction interventions in conjunction with teaching students how to address the specific health care needs of transgender individuals.

Although the full scope of the role of an RDN in treating transgender individuals has yet to be elucidated, it is clear that an RDN can play an important part in reducing health disparities and providing appropriate and inclusive care. Educational endeavors to

increase health care providers' cultural and clinical competence in providing care to the transgender population is a critical first step in addressing these health inequities.

FUTURE NEEDS

Although certain dietary considerations for the transgender population are known, a marked gap exists in both research and nutrition care guidelines for this health-disparate population. A sound body of literature is needed to identify the nutritional considerations of transgender individuals during and after a medical transition. Given the lack of existing research in this area, exploratory studies may investigate the impact of diet on mitigating known effects of hormonal therapies, the psychosocial concerns of transgender patients and clients as they relate to food intake and behaviors, best practices for applying the nutrition care process to transgender individuals, and the role of the RDN in the health care team providing care to transgender patients and clients.

References

- Office of Disease Prevention and Health Promotion. Healthy People 2020: Lesbian, Gay, Bisexual, and Transgender Health. <https://www.healthypeople.gov/2020/topics-objectives/topic/lesbian-gay-bisexual-and-transgender-health>. Published 2014. Accessed November 20, 2017.
- Pérez-Stable EJ. Director's Message: Sexual and Gender Minorities Formally Designated as a Health Disparity Population for Research Purposes. <https://www.nlm.nih.gov/about/directors-corner/message.html>. Published October 2016. Accessed November 21, 2017.
- Institute of Medicine. The Health of Lesbian, Gay, Bisexual, and Transgender People: Building a Foundation for Better Understanding. <https://www.nap.edu/read/13128/chapter/1>. Published 2011. Accessed November 20, 2017.
- Gibson AW, Radix AE, Maingi S, Patel S. Cancer care in lesbian, gay, bisexual, transgender and queer populations. *Future Oncol*. 2017;13(15):1333-1344.
- Mathews AK, Breen E, Kittiteerasack P. Social determinants of LGBT cancer health inequities. *Semin Oncol Res*. 2018;34(1):12-20.
- Smalley KB, Warren JC, Barefoot KN. Differences in health risk behaviors across understudied LGBTQ subgroups. *Health Psychol*. 2016;35(2):103-114.
- Flores AR, Herman JL, Gates GJ, Brown TN. How many adults identify as transgender in the United States? *The Williams Institute*. Retrieved from, <https://williamsinstitute.law.ucla.edu/wp-content/uploads/How-Many-Adults-Identify-as->

[Transgender-in-the-United-States.pdf](#). Accessed November 20, 2017.

- Gay and Lesbian Alliance Against Defamation. Accelerating Acceptance 2017. https://www.glaad.org/files/aa/2017_GLAAD_Accelerating_Acceptance.pdf. Accessed February 10, 2018.
- Edminston EK, Donald CA, Sattler AR, Peebles JK, Ehrenfeld JM, Eckstrand KL. Opportunities and gaps in primary care preventative health services for transgender patients: A systematic review. *Transgend Health*. 2016;1(1):216-230.
- American Psychological Association. Guidelines for psychological practice with transgender and gender nonconforming people. *Am Psychol*. 2015;70(9):832-864.
- Deutsch MB, Bhakri V, Kubicek K. Effects of cross-sex hormone treatment on transgender men and women. *Obstet Gynecol*. 2015;125(3):605-610.
- Fernandez JD, Tannock LR. Metabolic effects of hormone therapy in transgender patients. *Endocr Pract*. 2016;22(4):383-388.
- Klaver M, Dekker MJHJ, de Musert R, Twisk JWR, den Heijer M. Cross-sex hormone therapy in transgender persons affects total body weight, body fat and lean body mass: A meta-analysis. *Andrologia*. 2017;49(5):1-11.
- Mail PD, Safford L. LGBT disease prevention and health promotion: Wellness for gay, lesbian, bisexual, and transgender individuals and communities. *Clin Res Regul Aff*. 2003;20(2):183-204.
- Pelusi C, Constantino A, Martelli V, et al. Effects of three different testosterone formulations in female-to-male transsexual persons. *J Sex Med*. 2014;11(12):3002-3011.
- Velho I, Figuera TM, Ziegelmann PK, Spritzer PM. Effects of testosterone therapy on BMI, blood pressure, and laboratory profile of transgender men: A systematic review. *Andrology*. 2017;5(5):881-888.
- World Professional Association for Transgender Health. Standards of Care for the Health of Transsexual, Transgender, and Gender Nonconforming People, 7th version. file:///C:/Users/wkline/Downloads/WPATH%20Standards%20of%20Care.pdf. 2016. Accessed November 21, 2017.
- Algars M, Santtila P, Sandnabba NK. Conflicted gender identity, body dissatisfaction, and disordered eating in adult men and women. *Sex Roles*. 2010;63(1):118-125.
- Austin SB, Nelson LA, Birkett MA, Calzo JP, Everett B. Eating disorder symptoms and obesity and the intersections of gender, ethnicity and sexual orientation in U.S. high school students. *Am J Public Health*. 2013;103(2):16-22.
- Conner M, Johnson C, Grogan S. Gender, sexuality, body image and eating behaviours. *J Health Psychol*. 2004;9(4):505-515.
- Diemer EW, Grant JD, Munn-Chernoff MA, Patterson DA, Duncan AE. Gender identity, sexual orientation, and eating-related pathology in a national sample of college student. *J Adolesc Health*. 2015;57(2):144-149.
- Matthews-Ewald MR, Zullig KJ, Ward RM. Sexual orientation and disordered eating

- behaviors among self-identified male and female college students. *Eat Behav.* 2014;15(3):441-444.
23. Hadland SE, Austin SB, Goodenow CS, Calzo JP. Weight misperception and unhealthy weight control behaviors among sexual minorities in the general adolescent population. *J Adolesc Health.* 2013;54(3):296-303.
 24. Unger CA. Hormone therapy for transgender patients. *Transl Androl Urol.* 2016;5(6):877-884.
 25. Colebunders B, Brondeel S, D'Arpa S, Hoebeke P, Monstrey S. An update on the surgical treatment for transgender patients. *Sex Med Rev.* 2017;5(1):103-109.
 26. Laessle RG, Beaumont PJ, Butow P, et al. A comparison of nutritional management with stress management in the treatment of bulimia nervosa. *Br J Psychiatry.* 1991;159:250-261.
 27. O'Connor MA, Touyz SW, Beaumont PJV. Nutritional management and dietary counseling in bulimia: Some preliminary observations. *Int J Eat Disord.* 1987;7:657-662.
 28. Waisberg JL, Woods MT. A nutrition and behaviour change group for patients with anorexia nervosa. *Can J Diet Pract Res.* 2002;63(4):202-205.
 29. Klaver M. Cross-sex hormone therapy in transgender persons affects total body weight, body fat and lean body mass: A meta-analysis. *Andrologia.* 2017;49(5):1-11.
 30. National Institutes of Health; National Heart, Lung, and Blood Institute; North American Association for the Study of Obesity. *The Practical Guide: Identification, Evaluation and Treatment of Overweight and Obesity in Adults.* Bethesda, MD: US Department of Health and Human Services, Public Health Service, National Institutes of Health, National Heart, Lung, and Blood Institute; 2000.
 31. Croft PR, Brigg D, Smith S, Harrison CB, Branthwaite A, Collins MF. How useful is weight reduction in the management of hypertension? *J R Coll Gen Pract.* 1986;36(291):445-448.
 32. Delahanty LM, Sonnenber LM, Hayden D, Nathan DM. Clinical and cost outcomes of medical nutrition therapy for hypercholesterolemia: A controlled trial. *J Acad Nutr Diet.* 2001;101(9):1012-1023.
 33. Willaing I, Ladelund S, Jorgensen T, Simonsen T, Nielsen LM. Nutritional counseling in primary health care: A randomized comparison of an intervention by general practitioner or dietician. *Eur J Cardiovasc Prev Rehabil.* 2004;11(6):513-520.
 34. Diaz R, Esparza-Romero J, Moya-Camarena S, Robles-Sardin A, Valencia M. Lifestyle intervention in primary care settings improves obesity parameters among Mexican youth. *J Am Diet Assoc.* 2010;110(2):285-290.
 35. Nybacka A, Carlstrom K, Stahle A, Nyren S, Hellstrom PM, Hirschberg AL. Randomized comparison of the influence of the dietary management and/or physical exercise on ovarian function and metabolic parameters in overweight women with polycystic ovary syndrome. *Fertil Steril.* 2011;96(6):1508-1513.
 36. Dragon CN, Guerino P, Ewald E, Laffan AM. Transgender Medicare beneficiaries and chronic conditions: Exploring fee-for-service claims data. *LGBT Health.* 2017;4(6):404-411.
 37. White Hughto JM, Reisner SL, Pachankis JE. Transgender stigma and health: A critical review of stigma determinants, mechanisms, and interventions. *Soc Sci Med.* 2015;147:222-231.
 38. Mitchell LJ, Ball LE, Ross LJ, Barnes KA, Williams LT. Effectiveness of dietetic consultations in primary health care: A systematic review of randomized controlled trials. *J Acad Nutr Diet.* 2017;117(12):1941-1962.
 39. Public Religion Research Institute, Jones RP, Cox D. Most Americans favor rights and legal protections for transgender people. <http://www.prrri.org/research/american-attitudes-towards-transgender-people/>. Accessed November 28, 2017.
 40. James SE, Herman JL, Rankin S, Keisling M, Mottet L, Anafi M. *The Report of the 2015 U.S. Transgender Survey.* Washington, DC: National Center for Transgender Equality; 2016.
 41. The Joint Commission. Advancing effective communication, cultural competence, and patient- and family-centered care for the lesbian, gay, bisexual, and transgender (LGBT) community: A field guide. *The California Endowment.* 2011;31-35.
 42. Lim FA, Brown DV, Justin Kim SM. Addressing health care disparities in the lesbian, gay, bisexual, and transgender population: A review of best practices. *Am J Nurs.* 2014;114(6):24-34.
 43. Fallin B. Implicit bias against sexual minorities in medicine: Cycles of professional influence and the role of the hidden curriculum. *Acad Med.* 2015;90(5):549-552.
 44. Dovidio JF, Fiske ST. Under the radar: How unexamined biases in decision-making processes in clinical interactions can contribute to health care disparities. *Am J Public Health.* 2012;102(5):945-952.
 45. McPhail D, Rountree-James M, Whetter I. Addressing gaps in physician knowledge regarding transgender health and healthcare through medical education. *Can Med Assoc J.* 2016;7(2):70-78.
 46. US Department of Health and Human Services. Healthy People 2020 Topics and Objectives: Lesbian, Gay, Bisexual, and Transgender Health. <http://www.healthypeople.gov/2020/topicsobjectives2020/overview.aspx?topicid=25>. Published 2013. Accessed November 28, 2017.
 47. American Association of Medical Colleges. *Implementing Curricular and Institutional Climate Changes to Improve Health Care for Individuals Who Are LGBT, Gender Non-conforming, or Born with DSD: A Resource for Medical Educators.* 1st ed. Washington, DC: American Association of Medical Colleges; 2014.
 48. Daniel H, Butkus R. Lesbian, gay, bisexual and transgender health disparities: Executive summary of a policy position paper from the American College of Physicians. *Ann Intern Med.* 2015;163(2):135-137.
 49. Moll J, Krieger P, Moreno-Walton L, et al. The prevalence of lesbian, gay, bisexual, and transgender health education training in emergency medicine residency programs: What do we know? *Acad Emerg Med.* 2014;21(5):608-611.
 50. Obedin-Maliver J, Goldsmith ES, Stewart L, et al. Lesbian, gay, bisexual, and transgender-related content in undergraduate medical education. *JAMA.* 2011;306(9):971-977.

AUTHOR INFORMATION

Address correspondence to: Rabia Rahman, PhD, RD, LD, Department of Nutrition and Dietetics, Saint Louis University, 3437 Caroline St, St Louis, MO 63124. E-mail: rahmanr@slu.edu

STATEMENT OF POTENTIAL CONFLICT OF INTEREST

No potential conflict of interest was reported by the authors.

FUNDING/SUPPORT

There was no funding support for this article.

AUTHOR CONTRIBUTIONS

Both authors contributed to the literature review and writing of this manuscript.