

Plan of Action for Real-World Translation of LGBTQ Health and Aging Research

Karen I. Fredriksen-Goldsen, PhD,¹ Hyun-Jun Kim, PhD,¹ Glenise L. McKenzie, PhD,² Lisa Krinsky, MSW,³ and Charles A. Emlert, PhD⁴

Abstract

Despite accumulating evidence of health disparities, there exists limited translational research to enhance optimal health and aging of lesbian, gay, bisexual, transgender, and queer-identified* (LGBTQ) older adults. Based on the Health Equity Promotion Model that addresses the distinct needs and strengths of LGBTQ older adults, we underscore the important role of collaborations among researchers, practitioners, and communities to build community capacity. Given the rapidly shifting context, we advance principles to guide future work that will enhance translational research and the development of evidence-based practice so that LGBTQ older adults can reach their full health potential.

Keywords: evidence-based practice, health equity, LGBTQ older adults, sexual and gender minorities, translational research

Introduction

IN THE PAST FEW YEARS, considerable progress has been made in lesbian, gay, bisexual, transgender, and queer (LGBTQ) aging and health research. With rapid growth in the older U.S. population,^{1,2} diversity among older adults is increasingly recognized, including by sexual orientation and gender identity and expression.³ As the field of LGBTQ aging and health research has expanded from relying on small convenience samples and anecdotal experiences to include large community- and probability-based samples, a greater understanding of population health in these communities has been achieved. At this stage of LGBTQ aging and health research, we ponder the question: What comes next?

Research documenting health disparities among LGBTQ older adults and explanatory mechanisms (including historical, structural, and environmental contexts and psychological, social, behavioral, and biological processes) associated with their health and well-being is accumulating. However, to date, there exists limited translation of the work designed to improve the health and well-being of these populations. A recent report from the Institute of Medicine found that although interventions have demonstrated positive outcomes in research settings, they are often not implemented and, therefore, do not have the positive impact that they could have in

real-world settings.⁴ Our objective in this article is to provide a blueprint for the future by advancing a synergistic approach for translational research that will enhance evidence-based practice (EBP) to mitigate health disparities and promote optimal health, aging, and well-being of LGBTQ older adults.

Translational Research: Investigating Health Disparities

Translational research refers to the progression of knowledge from basic research to intervention, including treatment development, implementation, and evaluation. Multiple phases of translational research have been delineated.^{5,6} They include: (1) assessment of health disparities and the identification of modifiable factors that effectively reduce inequities and improve health outcomes; (2) well-designed and executed research that develops and tests clinical interventions; (3) use of the findings for the development of practice guidelines; and (4) an ongoing study to monitor and evaluate population health, morbidity, and mortality.

Aligned with the first step in translational research, initial work on LGBTQ health and aging sought to understand disparities experienced by sexual and gender minorities. A convergence of findings across studies now documents health disparities specific to lesbian, gay, bisexual, and transgender people,⁷ including elevated rates of disability, poor physical health, and mental distress among older adults.⁸⁻¹⁰ Based on the first national probability study of lesbian, gay, and bisexual older adult health, using multi-year data from the National Health Interview Survey (NHIS),¹¹ we found that lesbian,

*A term to describe people whose sexual orientation and/or gender identity or gender expression are fluid and/or do not fit into commonly used labels or categories.³

¹School of Social Work, University of Washington, Seattle, Washington.

²School of Nursing Portland Campus, Oregon Health & Science University, Portland, Oregon.

³LGBT Aging Project, The Fenway Institute, Boston, Massachusetts.

⁴School of Social Work, University of Washington, Tacoma, Washington.

gay, and bisexual adults aged 50 and older, compared with their heterosexual counterparts, had higher rates of 9 out of 12 chronic conditions. Lesbian and bisexual older women reported greater prevalence of arthritis, asthma, heart attack, stroke, and multiple chronic conditions and poor general health, than heterosexual older women. Gay and bisexual older men were more likely to report having angina pectoris and cancer and greater personal care needs compared with heterosexual older men. In addition, lesbian, gay, and bisexual older adults were more likely to report disability, a weakened immune system, low back or neck pain, and mental distress compared with heterosexual individuals. Important subgroup differences within LGBTQ older populations have also been documented and must be taken into consideration. Notably, we found an increased risk of poor health among transgender¹⁰ and bisexual¹² older adults as well as among racial and ethnic minorities,^{13,14} older adults with low socioeconomic status,¹⁵ older gay and bisexual men living with HIV,¹⁶ and the oldest of older adults.¹⁷

Replication studies are now needed to validate the evidence of health disparities, particularly these newly observed findings in chronic health conditions and subgroup differences.¹¹ However, most population-based health and aging studies have not incorporated sexual orientation and gender identity and expression measures, and if they have, small sample sizes of LGBTQ older adults, particularly subgroups (e.g., racial and ethnic minorities, transgender older adults, the oldest old), remain a major concern. Queer-identified older adults are another subgroup that needs more attention in future health disparity research as little is known about the demographics of this population as well as their health and quality of life. Researchers will also need to further articulate best practices for operationalizing queer identities and communities in health disparity and quality of life research. As these fields advance, aggregating multiple year data is an important strategy to increase sample size and improve reliability of the findings, as is the inclusion of questions to ascertain a broader range of sexual and gender identities and behaviors. In addition, oversampling in cities with a high concentration of LGBTQ older adults is an approach to increase sample size to better understand health disparities among LGBTQ older adults.¹⁸

Understanding the Determinants of Health

Translational research calls for the identification of determinants of disparities. In our work, we found that the application of the Health Equity Promotion Model, as a conceptual framework, promotes the comprehensiveness and cohesiveness in investigating the risk and protective factors that affect the aging population in general as well as those that are distinct to LGBTQ older adults.³ The Health Equity Promotion Model³ (Fig. 1) is based on the premise that all individuals have the right to achieve their full health potential; and, incorporating life course perspectives, it takes into account historical, structural, and environmental contexts and multi-factorial mechanisms (including psychological, social, behavioral, and biological processes) that promote or hinder optimal aging, health, and well-being.

By taking into consideration both common and LGBTQ-specific factors (e.g., structural stigma, discrimination and victimization, managing one's sexual and/or gender identity, and community engagement), translational research can identify modifiable factors to be addressed in intervention

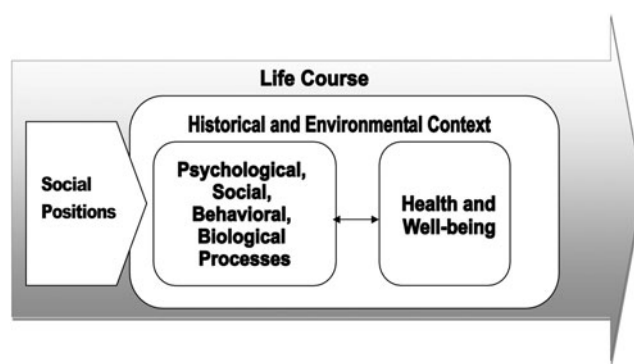


FIG. 1. Health Equity Promotion Model, adapted with permission from Fredriksen-Goldsen and Kim.³

development aimed at LGBTQ older adults. For example, we know that ~80% of primary informal caregivers of older adult care recipients are spouses or adult children.¹⁹ However, most LGBTQ older adults are not married and do not have children,¹⁷ which increases their risk of placement in long-term care facilities. Thus, for LGBTQ older adults, the need for placement further cascades into concerns regarding the potential lack of cultural competence by providers, managing identity by self and family, acceptance by other residents, as well as the more general concerns regarding costs and financial burden.²⁰

The Health Equity Promotion Model³ by design supports the development of culturally responsive interventions by highlighting within-group diversity, for instance, by race and ethnicity, age cohort, sexual orientation, gender identity and expression, and geographic location. Thus, explanatory factors that contribute to such subgroup differences and the intersectionality of identities need to be considered. For example, elevated risks of poor health outcomes for transgender adults are strongly associated with structural factors, including elevated rates of discrimination, victimization, and lack of access to responsive care.¹⁰ Concern over competent and sensitive health-care is consistently voiced by transgender adults, who often forgo needed care.²¹ The fear of incompetent and insensitive care can also be heightened in rural areas as culturally relevant healthcare and human services may be less available.²²

In our research, despite documented disparities, we have learned that most LGBTQ older adults, across subgroups, report good physical and mental health and are satisfied with their lives.²⁰ Factors such as a strong and positive sense of identity, social support, large and diverse social networks, and community engagement have been found to significantly predict these positive health outcomes.^{17,23} Thus, attention to the resilience and strengths of LGBTQ older adults and the protective factors that support their optimal health and aging are important to consider in translational research and help to safeguard against over-problematizing and over-medicalizing of the population.

Additional studies that investigate longitudinal relationships between risk and protective factors and health outcomes among LGBTQ older adults^{24,25} are needed. Such longitudinal studies provide a platform to investigate the trajectory patterns in health outcomes as well as the risk factors that account for early health decline and premature mortality, and the protective factors that buffer against adverse outcomes. Identification of key modifiable factors predicting both short- and long-term health consequences are essential

to develop clinical interventions, both preventive and therapeutic, for LGBTQ older adults.

Clinical Intervention Development and Application

Developing clinical interventions that are responsive to the needs of LGBTQ older adults is a critical phase in the translational research process. As a preliminary step in this process, it must be ascertained in the field whether clinical interventions designed for older adults in general are applicable to LGBTQ older adults and/or when adaptations to interventions are necessary. To date, a few existing interventions that were initially developed and tested with older adults in general have been used in practices with LGBTQ older adults, including mindfulness-based stress reduction (MBSR) and EnhanceFitness.

The LGBT Aging Project of The Fenway Institute in Boston offered MBSR,²⁶ which integrates a mind/body approach to reduce distress while increasing quality of life through mindfulness practice. Assessments at pre- and post-intervention demonstrated that the program reduced symptoms of physical and mental distress significantly, increased the use of mindfulness, and enhanced coping skills, socialization, and the knowledge and trust of local service providers.[†] Generations Aging with Pride in Seattle offered EnhanceFitness, a program designed to increase physical strength and balance, boost activity levels, and elevate mood.²⁷ Utilizing certified instructors, the program was adapted to maximize accessibility for LGBTQ older adults. As a clinically proven program, pre- and post-tests of EnhanceFitness have demonstrated effectiveness at reducing mental distress and increasing physical functioning and social connection. Both of these examples address identified needs of the population through the application of existing evidence-based programs for older adults.

When efficacious interventions are translated for delivery in new contexts, there may be additional challenges in applicability, implementation of strategies, and consistency in measurement.^{28,29} Teri et al.,³⁰ for example, reported on iterative adaptations to an evidence-based intervention to improve care of people with dementia across diverse geographic areas and settings. While maintaining core intervention integrity of the caregiver intervention, we are now testing whether the inclusion of material directly addressing distinct risk factors (e.g., stigma, elevated rates of victimization and discrimination, and differing types of support) will enhance cultural relevance and result in similar or improved outcomes for LGBTQ older adults. Such considerations are particularly important when developing culturally competent interventions for underserved populations who are under-represented in research and clinical trial studies.

Linking Translational Research and EBP

The goal of translational research for advancing the promotion of health for LGBTQ older adults will be enhanced when it is orchestrated with EBP, providing practice guidelines based on a systematic evaluation of the scientific findings of risk and protective factors that predict health outcomes and effects of clinical interventions.⁵ EBP is the “conscientious, ex-

PLICIT, and judicious application” of high-quality research evidence and guidelines to clinical practice,³¹ which involves more than simply understanding the efficacy of an intervention with a new population. EBP requires identifying problems that clients encounter and developing answerable questions with explicit outcomes. Principles have been designed to maximize the success of EBP for specific populations. For example, it is critical to make an informed decision about which evidence-based intervention to implement within the context of a specific population and set of providers.³² The decision making should be triangulated by practice guidelines based on systematically evaluated and graded research evidence, relevant and measurable client outcomes, provider expertise, as well as individual client characteristics and preferences.³²

Although the Patient Protection and Affordable Care Act encourages cultural competency in healthcare settings, including with sexual and gender minorities,³³ practitioners often lack the knowledge and expertise needed to work effectively with LGBTQ older adults. To date, a few practice guidelines have been developed to inform best practices for the assessment of LGBT clients as well as to educate and train practitioners. Examples include the Guidelines for Psychological Practice with Lesbian, Gay, and Bisexual Clients by the American Psychological Association,³⁴ guidelines for physicians in lesbian, gay, bisexual, and transgender healthcare,³⁵ and Key Competencies and Strategies for Culturally Competent Practice with LGBT Older Adults in the Health and Human Services,³⁶ which were developed primarily based on experts’ judgement and consensus. In addition, the Endocrine Society Clinical Practice Guideline for treatment of transsexual people³⁷ includes a grading process to assess the quality of evidence and strength of the recommendations. Given the scarcity of clinical research with LGBTQ older adults, such guidelines make important contributions in providing detailed recommendations to build professional competence in practice with lesbian, gay, bisexual, and transgender clients as well as to build skills in identifying and evaluating risk and protective factors specific to these populations,^{34,35} including older adults.³⁶

As scientific evidence accumulates and is validated through ongoing research, practice guidelines need to be updated regularly by evaluating and grading research findings and expanded to provide the most effective interventions possible. A recent study found that older gay and bisexual men’s excessive drinking was associated with day-to-day discrimination, which likely is associated with stress, whereas older lesbian and bisexual women’s excessive drinking was associated with greater social support,³⁸ likely reflecting community norms. Such research findings illustrate that interventions as well as practice guidelines need to be responsive to subgroups within the LGBTQ communities. Input from LGBTQ service users and their providers is particularly important in the development of practice guidelines in order to evaluate both barriers and resources in LGBTQ communities. Applying practice guidelines, collecting data, and evaluating outcomes over time in the context of the environment and culture of the individuals receiving and delivering treatment is critical to the development of EBP guidelines.

Moving Forward

Translational research focuses on generating evidence-based knowledge and guidelines for practice and ensuring

[†]Krinsky L: EBP services and programs for LGBT older adults and caregivers. [Preconference workshop presentation]. The Development of Evidence-Based Practices: Expanding the Reach to Lesbian, Gay, Bisexual, and Transgender (LGBT) Older Adults. 2016 Gerontological Society of America Annual Scientific Meeting, New Orleans, Louisiana, November 16–20, 2016.

the applicability to communities, whereas EBP is a process for utilizing evidence-based knowledge and implementing best practices for clients. Creating synergy between both of these approaches is needed urgently to advance progress toward improving LGBTQ older adult aging, health, and quality of life. Conducting translational research that addresses the health and aging needs of LGBTQ older adults, and developing and testing culturally relevant clinical interventions will provide the knowledge base for practitioners to advance EBP and practice guidelines. Outcomes, limitations, and challenges identified through evaluating EBP will, in turn, help translational researchers uncover knowledge gaps and investigate new approaches that maximize the applicability and effects of an intervention. Through these processes the gap between research and practice can be diminished, and evidence-based interventions and practices can be implemented more efficiently in real-world settings.⁵

The impact of linking translational research and EBP should be mapped on the multidimensional aspects of the real world, including community, social, economic, cultural, and environmental lives.[‡] To promote health equity, researchers, practitioners, and communities need to develop an impact strategy at the beginning to ensure early engagement of LGBTQ older adults in translational research and EBP.

As we move forward, we emphasize PACT principles to promote a tailored yet flexible approach for the development of strong partnerships between translational researchers, practitioners, and communities with a shared goal to improve the health, aging, and well-being of LGBTQ older adults.

P—Pragmatically strategic through the articulation of a research and practice agenda based on vision, solid research-practice-community collaborations, and the efficient and effective use of resources within a shifting social and political context.

A—Action to understand and then actively address health inequities so that LGBTQ older adults can achieve their full health potential, which requires reaching out to those hidden within hidden communities.

C—Community engagement to support early planned involvement of LGBTQ older adults and providers serving them. Such collaborative work serves to promote health equity through a cohesive social movement promoting informed quality research, development of best practices, and community-level infrastructure development.

T—Translation of research to impact practice and policy more rapidly and meaningfully by a wide range of stakeholders through the mutual exchange and dissemination of knowledge, expertise, and everyday lived experiences.

Conclusion

As evidence of health disparities and determinants accumulates, the field must find new ways to address such challenges proactively by building on the strengths within the LGBTQ older adult community. Synergy between translational research and EBP is essential to improve the lives of

LGBTQ older adults by addressing equity and enhancing the ability of all to reach their full health potential.

Acknowledgments

The authors are grateful to the Gerontological Society of America, the National Institutes of Health, and the National Institute on Aging (R13AG050451) for their support of the preconference workshop, titled “The Development of Evidence-Based Practices: Expanding the Reach to Lesbian, Gay, Bisexual and Transgender (LGBT) Older Adults” presented at the Gerontological Society of America 2016 Annual Scientific Meeting (New Orleans, Louisiana, November 16–20, 2016) from which the information for this article was developed. Special thanks are due to Nancy Morrow-Howell, Linda Harootyan, Rachel Puffer, Patricia D’Antonio, and Judie Lieu for their assistance with funding and the development and implementation of the workshop. The authors thank Dr. Linda Teri for her assistance in the application of EBP principles to an underserved population. They also extend their appreciation to all the scientists and service providers who provided their expertise at the workshop, including Sean Cahill, C.A.E., K.F.-G., Nancy Giunta, Charles P. Hoy-Ellis, H.-J.K., L.K., G.L.M., Anna Muraco, and Shilpen Patel, and the workshop participants who made the event possible.

Disclaimer

Research reported in this article was supported by the National Institute on Aging of the National Institutes of Health under Award Number R13AG050451, (Harootyan and Morrow-Howell, MPI). The content is solely the responsibility of the authors and does not necessarily represent the official views of the National Institutes of Health.

Author Disclosure Statement

No competing financial interests exist.

References

1. He W, Goodkind D, Kowal P: *An Aging World: 2015*. Washington, DC: United States Census Bureau, U.S. Government Publishing Office, 2016.
2. Ortman JM, Velkoff VA, Hogan H: *An Aging Nation: The Older Population in the United States, Current Population Reports, P25-1140*. Washington, DC: United States Census Bureau, 2014.
3. Fredriksen-Goldsen K, Kim HJ: The science of conducting research with LGBT older adults—An introduction to Aging with Pride: National Health, Aging, and Sexuality/Gender Study. *Gerontologist* 2017;57(suppl 1):S1–S14.
4. Committee on Developing Evidence-Based Standards for Psychosocial Interventions for Mental Disorders; Board on Health Sciences Policy; Institute of Medicine; England MJ, Butler AS, Gonzalez ML, editors: *Psychosocial interventions for mental and substance use disorders: A framework for establishing evidence-based standards*. Washington DC: National Academies Press (US), 2015.
5. Khoury MJ, Gwinn M, Yoon PW, et al.: The continuum of translation research in genomic medicine: How can we accelerate the appropriate integration of human genome discoveries into health care and disease prevention? *Genet Med* 2007;9:665–674.

[‡]Hughes M: Improving real lives: Linking LGBTI aging research to practice. [Preconference workshop lecture]. Global Ageing: Building a Framework for Culturally Informed Sexuality, Gender, and LGBTQ Health Research. The 21st IAGG World Congress of Gerontology and Geriatrics. San Francisco, California, July 23–27, 2017.

6. Woolf SH: The meaning of translational research and why it matters. *JAMA* 2008;299:211–213.
7. Institute of Medicine (US) Committee on Lesbian, Gay, Bisexual, and Transgender Health Issues and Research Gaps and Opportunities: *The Health of Lesbian, Gay, Bisexual, and Transgender People: Building a Foundation for Better Understanding*. Washington, DC: National Academies Press (US), 2011.
8. Fredriksen-Goldsen KI, Kim HJ, Barkan SE, et al.: Health disparities among lesbian, gay, and bisexual older adults: Results from a population-based study. *Am J Public Health* 2013;103:1802–1809.
9. Wallace SP, Cochran SD, Durazo EM, Ford CL: The health of aging lesbian, gay and bisexual adults in California. *Policy Brief UCLA Cent Health Policy Res* 2011;(PB2011-2):1–8.
10. Fredriksen-Goldsen KI, Cook-Daniels L, Kim HJ, et al.: Physical and mental health of transgender older adults: An at-risk and underserved population. *Gerontologist* 2014;54:488–500.
11. Fredriksen-Goldsen KI, Kim HJ, Shiu C, Bryan AEB: Chronic health conditions and key health indicators among lesbian, gay, and bisexual older US adults, 2013–2014. *Am J Public Health* 2017;107:1332–1338.
12. Fredriksen-Goldsen KI, Shiu C, Bryan AEB, et al.: Health equity and aging of bisexual older adults: Pathways of risk and resilience. *J Gerontol B Psychol Sci Soc Sci* 2017;72:468–478.
13. Kim HJ, Fredriksen-Goldsen KI: Disparities in mental health quality of life between Hispanic and Non-Hispanic White LGB midlife and older adults and the influence of lifetime discrimination, social connectedness, socioeconomic status, and perceived stress. *Res Aging* 2017;39:991–1012.
14. Kim HJ, Jen S, Fredriksen-Goldsen KI: Race/ethnicity and health-related quality of life among LGBT older adults. *Gerontologist* 2017;57(suppl 1):S30–S39.
15. Emler CA: Social, economic, and health disparities among LGBT older adults. *Generations* 2016;40:16–22.
16. Emler CA, Fredriksen-Goldsen KI, Kim HJ, Hoy-Ellis C: The relationship between sexual minority stigma and sexual health risk behaviors among HIV-positive older gay and bisexual men. *J Appl Gerontol* 2017;36:931–952.
17. Fredriksen-Goldsen KI, Kim HJ, Shiu C, et al.: Successful aging among LGBT older adults: Physical and mental health-related quality of life by age group. *Gerontologist* 2015;55:154–168.
18. Vaughan R: Oversampling in health surveys: Why, when and how? *Am J Public Health* 2017;107:1214–1215.
19. Wolff JL, Kasper JD: Caregivers of frail elders: Updating a national profile. *Gerontologist* 2006;46:344–356.
20. Fredriksen-Goldsen KI, Kim HJ, Emler CA, et al.: *The Aging and Health Report: Disparities and Resilience among Lesbian, Gay, Bisexual, and Transgender Older Adults*. Seattle, WA: Institute for Multigenerational Health, 2011.
21. National Center for Transgender Equality and National Gay and Lesbian Task Force: Injustice at every turn—State reports of the National Transgender Discrimination Survey. 2013. Available at www.thetaskforce.org/injustice-every-turn-state-reports-national-transgender-discrimination-survey Accessed September 16, 2017.
22. Fredriksen-Goldsen KI, Muraco A: Aging and sexual orientation: A 25-year review of the literature. *Res Aging* 2010;32:372–413.
23. Fredriksen-Goldsen KI, Kim HJ, Bryan AE, et al.: The cascading effects of marginalization and pathways of resilience in attaining good health among LGBT older adults. *Gerontologist* 2017;57(suppl 1):S72–S83.
24. Fredriksen-Goldsen KI, Kim HJ: Global forces in the future of LGBT aging: Discrimination, identity, and health over time. [Abstract] *Innov Aging* 2017;1(Suppl_1):1231.
25. Kim HJ, Fredriksen-Goldsen KI: A longitudinal study of social connectedness and health among sexual minority older adults. [Abstract] *Innov Aging* 2017;1(Suppl_1):1232.
26. Kabat-Zinn J: Mindfulness-based interventions in context: Past, present, and future. *Clin Psychol Sci Pract* 2003;10:144–156.
27. Belza B, Snyder S, Thompson M, LoGerfo J: From research to practice: EnhanceFitness, an innovative community-based senior exercise program. *Top Geriatr Rehabil* 2010;26:299–309.
28. Gitlin LN, Marx K, Stanley IH, Hodgson N: Translating evidence-based dementia caregiving interventions into practice: State-of-the-science and next steps. *Gerontologist* 2015;55:210–226.
29. Prowse PTD, Nagel T, Meadows GN, Enticott JC: Treatment fidelity over the last decade in psychosocial clinical trials outcome studies: A systematic review. *J Psychiatry* 2015;18:258.
30. Teri L, McKenzie G, Logsdon RG, et al.: Translation of two evidence-based programs for training families to improve care of persons with dementia. *Gerontologist* 2012;52:452–459.
31. Gilgun JF: The four cornerstones of evidence-based practice in social work. *Res Soc Work Pract* 2005;15:52–61.
32. Melnyk BM, Fineout-Overholt E: *Evidence-Based Practice in Nursing and Healthcare: A Guide to Best Practice*. Philadelphia, PA: Lippincott, Williams, & Wilkins, 2011.
33. Health Resources and Services Administration: Culture, Language, & Health Literacy Resources: Special Populations. 2012. Available at www.hrsa.gov/culturalcompetence/specialpopulations.html Accessed May 17, 2013.
34. American Psychological Association; Hancock K, Alie L, Cerbone A, et al.: Guidelines for psychological practice with lesbian, gay, and bisexual clients. *Am Psychol* 2012;67:10–42.
35. Eckstrand KL, Ehrenfeld JM, eds.: *Lesbian, Gay, Bisexual, and Transgender Healthcare: A Clinical Guide to Preventive, Primary, and Specialist Care*. Cham, Switzerland: Springer International Publishing, 2016.
36. Fredriksen-Goldsen KI, Hoy-Ellis CP, Goldsen J, et al.: Creating a vision for the future: Key competencies and strategies for culturally competent practice with lesbian, gay, bisexual, and transgender (LGBT) older adults in the health and human services. *J Gerontol Soc Work* 2014;57:80–107.
37. 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* 2009;94:3132–3154.
38. Bryan AE, Kim HJ, Fredriksen-Goldsen KI: Factors associated with high-risk alcohol consumption among LGB older adults: The roles of gender, social support, perceived stress, discrimination, and stigma. *Gerontologist* 2017;57(suppl 1):S95–S104.

Address correspondence to:
 Karen I. Fredriksen-Goldsen, PhD
 School of Social Work
 University of Washington
 4101 15th Avenue NE
 Box 354900
 Seattle, WA 98105

E-mail: fredrikk@uw.edu