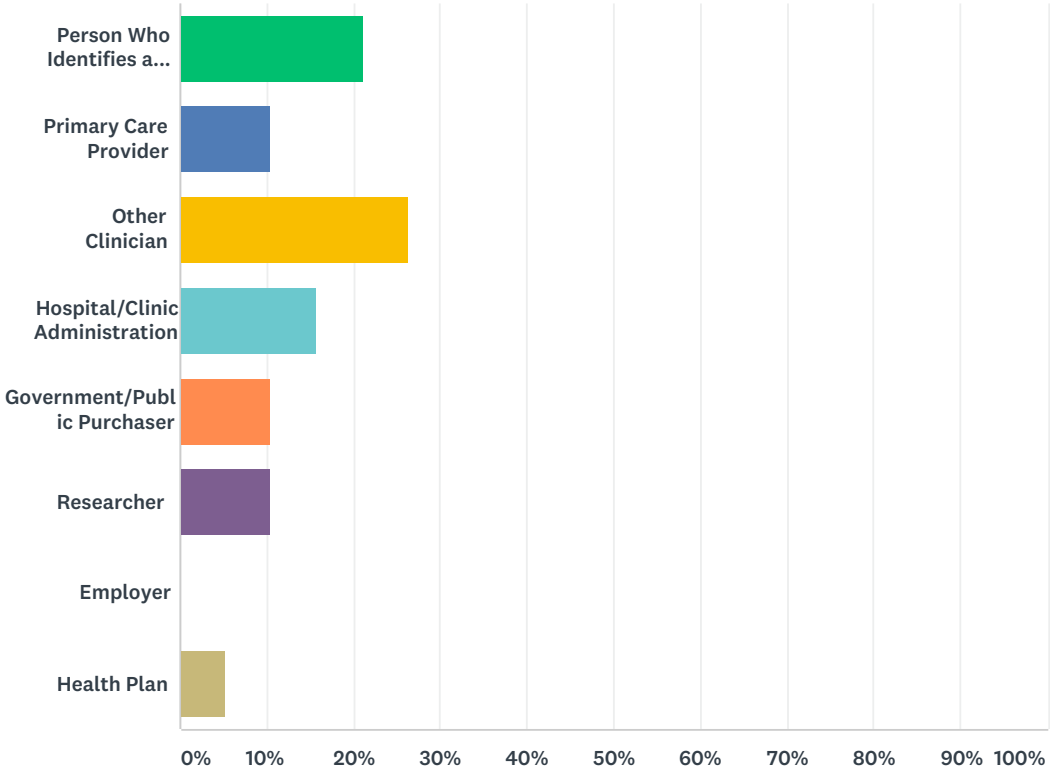
Q1 What sector do you represent? (Choose the option that is the best fit.)

Answered: 19 Skipped: 0



ANSWER CHOICES	RESPONSES	
Person Who Identifies as LGBTQ	21.05%	4
Primary Care Provider	10.53%	2
Other Clinician	26.32%	5
Hospital/Clinic Administration	15.79%	3
Government/Public Purchaser	10.53%	2
Researcher	10.53%	2
Employer	0.00%	0
Health Plan	5.26%	1
TOTAL		19

#	OTHER (PLEASE SPECIFY)	DATE
1	Community-based HIV service organizatoin	8/22/2018 10:37 AM
2	LGBTQ person who provides HR support to Healthcare Employees	8/17/2018 3:48 PM
3	Psychiatric Nurse Practitioner	8/12/2018 10:34 AM
4	psychiatric nurse practitioner	8/8/2018 8:50 PM
5	Washington State Psychological Association	8/7/2018 10:16 AM
6	Quality Improvement Organization	8/4/2018 9:11 PM

7	HIV and primary care/LGBT care physician	8/1/2018 8:26 AM

Q2 Do you have any comments on the purpose statement (pg 3)?

Answered: 15 Skipped: 4

#	RESPONSES	DATE
1	We support the purpose statement of aligned care delivery for LGPTQ people and improved health equity.	8/24/2018 4:22 PM
2	Thank you for your work on these recommendations. Planned Parenthood Votes Northwest and Hawaii (PPVNH) shares the Bree Collaborative's commitment to creating a health care system that works for everybody and that addresses the unique health care needs and disparities of LGBTQ individuals.	8/23/2018 11:13 PM
3	On page 5, persons who identify as LGBTQ are the first stakeholder group listed under the "Specific Stakeholder Actions and Quality Improvement Strategies" section. This signals greater responsibility and onus for taking action on the group that has been targeted and marginalized by medical systems. We like the section overall and think it should be included but LGBTQ people should not be called out on the list first. On pages 5 and 19, the resource lists are very Seattle-centric. We suggest adding more resources that are located outside of Seattle (beyond just the Rainbow Center in Tacoma) and include HIV service providers (such as Cascade AIDS Project, Lifelong and PCAF), and other queer youth programs (such as OASIS in Tacoma and GLOBE in Everett).	8/22/2018 10:37 AM
4	No	8/17/2018 3:48 PM
5	seems very specific and clear	8/15/2018 2:54 PM
6	I found the purpose statement to be very thorough and well written.	8/12/2018 10:34 AM
7	no	8/8/2018 8:50 PM
8	This is well-written and appropriate	8/7/2018 2:03 PM
9	no	8/7/2018 10:16 AM
10	I think the first paragraph adequately states the purpose (goal). The rest is (appropriate) background.	8/4/2018 9:11 PM
11	.	8/3/2018 8:31 AM
12	fghbxfb	8/1/2018 10:37 AM
13	good	8/1/2018 8:26 AM
14	I think that this statement accurately portrays our current state in Washington.	7/30/2018 3:25 PM
15	"Approximately 3.5% of Americans identify as lesbian, gay, or bisexual and 0.3% of American adults are transgender although many people have had same sex sexual experiences" = delete everything after "although" because it currently reads as equating being bi and trans with having same sex experiences, which is not always the case. Furthermore, this guideline is targeted to to people who identify as LGBTQ - not straight people who have has same sex experiences, as evidenced by the immediate following sentences, "Lesbian, gay, bisexual, transgender, and questioning or queer (LGBTQ) people share common challenges and have health care needs distinct from those who do not identify as LGBTQ. While all people share baseline health care needs, the LGBTQ population is also at a higher risk for specific medical problems." - these are great - keep them. You have no information on the specific health risks that bisexual people face. Why? There are stats for the other letters in LGBT. This is an example of something called "bi erasure". Please google it before you proceed with any edits to this document, as it will come up in my comments frequently. Same comment re: specific health risks for trans people, especially Black trans women. They are the most marginalized group within the LGBTQ community and yet there are no statistics in this section about the disparities and oppression they face.	7/30/2018 11:21 AM

Q3 Do you have any comments on focus area one: Communication, Language, and Inclusive Environments?

Answered: 19 Skipped: 0

#	RESPONSES	DATE
1	In addition to noted specific areas of improvement, recommend inclusion of HR components such as training and tools to support inclusive communication.	8/24/2018 4:22 PM
2	Creating an inclusive environment involves a variety of factors and we encourage you to expand these recommendations. In addition to the existing recommendations, providers should ensure that print materials are gender inclusive in both language and imagery/graphics. For example, anatomy charts on the wall in exam room should be labeled “Reproductive Anatomy” rather than “Female Reproductive Anatomy.”	8/23/2018 11:13 PM
3	cc	8/23/2018 11:22 AM
4	On pages 4, 5, 6, 10, 12, 14, and 16, the sections on “Communication, Language, and Inclusive environments”, “Screening” and “Sexual History” (specifically the “types of sex” parts), should reference mirroring the appropriate and non-stigmatizing language the patient uses to describe their own bodies and body parts. For example, if a transman doesn’t use the word vagina, asking if he has vaginal sex can be offensive. • http://www.deanspade.net/wp-content/uploads/2011/02/Purportedly-Gendered-Body-Parts.pdf • https://lgbtihealth.org.au/sites/default/files/Alliance%20Health%20Information%20Sheet%20Inclusive%20Language%20Guide%20on%20Intersex%2C%20Trans%20and%20Gender%20Diversity_0.pdf • https://www.lgbthealtheducation.org/wp-content/uploads/2017/01/Sexual-Health-among-Transgender-People.pdf On page 15, in the section on “Gender of sex partners”, it’s not clear that the first two questions (Do you have sex with men, women, or both? What is the sex of your sex partners?) really shouldn’t be used. Please make it more explicit that these are examples of ways the questions are inappropriately asked.	8/22/2018 10:37 AM
5	No	8/17/2018 3:48 PM
6	again, clear guidelines are present	8/15/2018 2:54 PM
7	no	8/12/2018 10:34 AM
8	no	8/8/2018 8:50 PM
9	It is comprehensive and well-written	8/7/2018 2:03 PM
10	a	8/7/2018 1:54 PM
11	inclusiveness	8/7/2018 10:16 AM
12	I understand there's a whole taxonomy of gender and sexual identity with dozens of descriptors on social media. Some guidance on how to deal with this might be helpful. I think the term "cis" was used without definition.	8/4/2018 9:11 PM
13	no	8/3/2018 12:24 PM
14	Inclusive environments require inclusive governance. It is a best practice for LGBTQ persons to be involved on boards of directors, patient advisory committees, planning and evaluating programs, and staff positions. The Recommendations could be strengthened by emphasizing the importance of working WITH the population.	8/3/2018 8:31 AM
15	No	8/1/2018 10:39 AM
16	dgg	8/1/2018 10:37 AM
17	good	8/1/2018 8:26 AM
18	I have seen many different examples of language, it seems like there would need to be agreement on what language for pronouns will be used rather than each person making up their own words.	7/30/2018 3:25 PM

19	"Persons Who Identify as LGBTQ • Find a primary care provider that you feel comfortable talking with about your health care needs. " -- is the Bree Collaborative going to do anything to facilitate this identification process? Otherwise, this is telling a group of people who are systematically denied health care coverage to go try out PCP's until they find one they like.	7/30/2018 11:21 AM

Q4 Do you have any comments on focus area two: Screening and Taking a Social and Sexual History?

Answered: 19 Skipped: 0

#	RESPONSES	DATE
1	Based on the increased frequency of depression and sexually transmitted infections agree with the addition of focused history.	8/24/2018 4:22 PM
2	-The LGBTQ community has a history of unethical treatment and probing by the medical community. Because of this history, verbal and/or written rationale should be provided as to why screening is taking place on each item (mental health, social history, sexual history, etc.) before beginning the screening. Additionally, information should be provided in advance of screening about what impact, if any, the patient's answers will have on their ability to access the care they seek. -During sexual history intakes, questions about sexual history should not be gendered or use heteronormative assumptions of what sex is. Questions should address relevant risk factors based on the anatomy of the patient and their sexual partner(s), as well as sexual behaviors beyond penetrative vaginal or anal sex between two cisgender people. -Screening for intimate partner violence (IPV) should include an awareness of how IPV can manifest in non-heteronormative relationships. Appropriate referral resources should be available for LGBTQ people who disclose IPV. -Marital status should not be used as a criteria for screenings as it is often a stand-in for an assumption of monogamy.	8/23/2018 11:13 PM
3	ViiV Healthcare supports routine, opt-out HIV screening for all persons ages 13-64 be a part of routine clinical care in all health care settings, as recommended by the Centers for Disease Control and Prevention (CDC) since 2006. (https://www.cdc.gov/mmwr/preview/mmwrhtml/rr5514a1.htm)	8/23/2018 11:22 AM
4	On page 5, under the past sexual history section, include what methods you have used to reduce their risk of acquiring HIV or other STIs as a means of identifying where the person is in relation to risk reduction. On page 7, in the "HIV and STI screening" section, screening for Hep B should also be emphasized for MSM On pages 4, 6, and 15/16, the "Screening and Taking a Social and Sexual History" section should include in the chart a section on what methods the patient has used to reduce their risk of acquiring HIV or other STIs.	8/22/2018 10:37 AM
5	No	8/17/2018 3:48 PM
6	No	8/15/2018 2:54 PM
7	no	8/12/2018 10:34 AM
8	no	8/8/2018 8:50 PM
9	I disagree with the section about assessing the patient's comfort with a sexual history and explaining confidentiality before taking a sexual history. This can make things more awkward and often implies that the provider is uncomfortable or expects the patient to be uncomfortable. I think it's fine to say, "Now I am going to ask some questions about your sex life," but the sexual history should be matter-of-fact like other areas of the medical history	8/7/2018 2:03 PM
10	a	8/7/2018 1:54 PM
11	yes	8/7/2018 10:16 AM
12	It's appropriate to distinguish sex (anatomy) from gender and I think it's done well	8/4/2018 9:11 PM
13	no	8/3/2018 12:24 PM
14	.	8/3/2018 8:31 AM
15	No	8/1/2018 10:39 AM
16	fghbxfb	8/1/2018 10:37 AM
17	emphasize more about history of trauma and sexual abuse since very prevalent in this population, especially among non-binary people	8/1/2018 8:26 AM

18	This part could be uncomfortable for some providers. Education about HOW to take a history will be very important.	7/30/2018 3:25 PM
19	The absence of recommended questions on sexual orientation / identity is another example of bi erasure in these guidelines. For example, a bisexual man partnered with a woman in a monogamous relationship would answer the following to the questions on page 15: Male, Male, Women, Female, and depending on his past sexual experience, either just Female, or Male and Female. But you can see how it's entirely possible that this man would get coded as straight, if you rely on sexual activity alone to define queer identity. (This is a major flag for me that likely no queer patients were involved in the development of this document.) The premise of this statement, "examples that allow providers to ask patients about their sexual history in order to identify gender and sexual minorities and provide appropriate care" is extremely flawed, and at odds with earlier emphasis on adhering to the patient's own identity labels and gender pronouns. The only way to identify "gender and sexual minorities" is to ask the minorities themselves. If the point of these guidelines is to help the healthcare system figure out how to affirm identities and deliver care accordingly, you need to have the same attitudes towards collecting sexual identity labels as you do with gender identity labels.	7/30/2018 11:21 AM

Q5 Do you have any comments on focus area three: Areas Requiring LGBTQ-specific standards and systems of care?

Answered: 19 Skipped: 0

#	RESPONSES	DATE
1	Agree with recommendations.	8/24/2018 4:22 PM
2	• To provide a recommendation to screen certain populations for infections that are “more common among sexual and gender minorities” sends a dangerous message that there is a causal relationship between the LGBTQ community and specific STI’s or infections. These are the exact misperceptions that lead to implicit bias and substandard, or even negligent, health care. Screening recommendations should be located within CDC guidelines. For example, it is recommended that everyone have awareness of their HIV status and that further screening be done based on behaviors, not sexual identities.	8/23/2018 11:13 PM
3	Page 4: On the bullet listed as “HIV, HCV, or other STI screening,” ViiV recommends that it be stated as “routine testing for HIV and HCV, as well as screening for other STIs.” As noted in the Centers for Disease Control and Prevention “Revised Recommendations for HIV Testing of Adults, Adolescents, and Pregnant Women in Health-Care Settings” (https://www.cdc.gov/mmwr/preview/mmwrhtml/rr5514a1.htm) traditional screening for HIV on the basis of perceived risk or patient disclosed risk behaviors fails to identify a substantial number of persons who are HIV infected. Routine HIV testing reduces the stigma associated with testing. Under HIV Treatment and Engagement in Care: (page 4) 1. ViiV Healthcare encourages the State to facilitate coordination of efforts between the state Department of Health, Ryan White, and Medicaid programs on efforts to facilitate HIV testing, care, and treatment. For example, ViiV recommends including appropriate Medicaid staff in meetings of End AIDS Washington, Ryan White Planning Councils, etc. 2. ViiV encourages the state to adopt HIV quality measures that focus on the diagnosis, treatment and suppression of viral load in all state programs and efforts, Specifically, the outcomes-based Viral Load Suppression measure is included in the Medicaid Adult Core Measure Set, is endorsed by the National Quality Forum (VLS measure #2082) and has demonstrated that it is valid and feasible to collect. ViiV Healthcare believes that it is critically important to ensure the Medicaid program advances high-quality care for people living with HIV (PLWH) by tracking and publicly-reporting on viral load suppression. The use of these measures helps support adherence to current HIV clinical guidelines and federal guidelines. Furthermore, tracking and reporting HIV-related quality measures from the Adult Medicaid Core Set will help to ensure their future inclusion on the CMS Medicaid Scorecard, which will encourage greater transparency and accountability for all state Medicaid programs in caring for PLWH.	8/23/2018 11:22 AM
4	On page 10 under “Areas Requiring LGBTQ-specific Standards of Care”, the bullet “Consider identifying MSM specialty providers” should be expanded to identify LGBTQ specialty providers Starting on page 8, the section for HIV should also include referrals to appropriate community-based resources such as medical case management, housing, mental health, etc.	8/22/2018 10:37 AM
5	Yes, use of the term "men" without the prefix of cis comes across as invalidating trans person's identities. Even the method of use seems to be focused on trans women, as trans men are called out separately in other sections, while there is no mention of trans women.	8/17/2018 3:48 PM
6	No	8/15/2018 2:54 PM
7	no	8/12/2018 10:34 AM
8	no	8/8/2018 8:50 PM
9	This looks good. Appreciate the resources.	8/7/2018 2:03 PM
10	a	8/7/2018 1:54 PM
11	yes	8/7/2018 10:16 AM
12	Comprehensive and done well	8/4/2018 9:11 PM
13	The summary table on page 4 lists Hep C- it would be appropriate to include Hepatitis B screening as well. Also to specify vaccinations as to include Hep A and B.	8/3/2018 12:24 PM

14	The language in this section and elsewhere in the document is binary in many places where it does not need to be or shouldn't be. Is MSM the issue, or anal sex? The recommendations should focus on activities, body parts, etc, and not on whether they relate to a Man or a Woman.	8/3/2018 8:31 AM
15	No	8/1/2018 10:39 AM
16	fghbxfb	8/1/2018 10:37 AM
17	N/A	8/1/2018 8:26 AM
18	Our organization uses EPIC, there will be changes that need to be made in the system to adhere to these guidelines.	7/30/2018 3:25 PM
19	"For people with cervical or breast tissue Due to women who have sex with women being less likely to undergo" - this starts out strong with inclusive language, but then immediately neglects the fact that trans men often have cervical and breast tissue, and are probably even less likely to have screening than women who have sex with women. Add a section on mental health, as suicide and intimate partner violence rates among trans people (especially trans people of color) are at crisis levels.	7/30/2018 11:21 AM

Q6 Do you have any comments on recommendations to Persons Who Identify as LGBTQ (pg 5)?

Answered: 19 Skipped: 0

#	RESPONSES	DATE
1	Agree with recommendations.	8/24/2018 4:22 PM
2	The recommended resources and conversations can be very valuable for persons who identify as LGBTQ; however, structural barriers in the health care system often prevent LGBTQ individuals from taking these steps. The emphasis of this report should shift to system-level changes to ensure that responsibility for remedying health disparities is not placed primarily on those experiencing such disparities. We encourage the Collaborative to restructure the report to place a stronger emphasis on system-level changes and/or to add language clarifying that these recommendations may be unrealistic for many LGBTQ individuals who experience systemic barriers to accessing health care in the first place, such as lack of insurance coverage or the inability to find a safe, non-judgmental health care provider. Similarly, before issuing guidance to LGBTQ patients to disclose gender identity, pronouns, name, and chosen family to health care providers, ensure that the guidance includes acknowledgment of the real or perceived lack of safety some patients may have in health care settings. Patients should be guided to disclose information relevant to their care and comfort, insomuch as they feel their safety will be intact if they do so.	8/23/2018 11:13 PM
3	cc	8/23/2018 11:22 AM
4	On page 5, persons who identify as LGBTQ are the first stakeholder group listed under the "Specific Stakeholder Actions and Quality Improvement Strategies" section. This signals greater responsibility and onus for taking action on the group that has been targeted and marginalized by medical systems. We like the section overall and think it should be included but LGBTQ people should not be called out on the list first.	8/22/2018 10:37 AM
5	I like the inclusion of the Q Card. I've worked with and associated with LGBTQA+ youth for several years and have never heard of this card. But I've heard and seen of similar cards of autistic adults, and they seem to work well. I would even make a recommendation that providers have cards in their lobbies for LGBTQA+ persons to access, since the majority of card placements target queer youth.	8/17/2018 3:48 PM
6	No	8/15/2018 2:54 PM
7	no	8/12/2018 10:34 AM
8	no	8/8/2018 8:50 PM
9	No	8/7/2018 2:03 PM
10	a	8/7/2018 1:54 PM
11	yes	8/7/2018 10:16 AM
12	none	8/4/2018 9:11 PM
13	no	8/3/2018 12:24 PM
14	As noted above, recommend that LGBTQ persons participate in advisory or governance or leadership roles in health care settings.	8/3/2018 8:31 AM
15	No	8/1/2018 10:39 AM
16	fghbxfb	8/1/2018 10:37 AM
17	N/A	8/1/2018 8:26 AM
18	In this section it refers to the "free" Q card. Nothing is free. Is this something that you are suggesting that organizations pass out or where would they get one? I like the idea of this helping to increase communication with health care providers.	7/30/2018 3:25 PM

19	"Persons Who Identify as LGBTQ • Find a primary care provider that you feel comfortable talking with about your health care needs. " -- is the Bree Collaborative going to do anything to facilitate this identification process? Otherwise, this is telling a group of people who are systematically denied health care coverage to go try out PCP's until they find one they like.	7/30/2018 11:21 AM

Q7 Do you have any comments on recommendations for Primary Care Providers (pg 6-8)?

Answered: 19 Skipped: 0

#	RESPONSES	DATE
1	Agree with recommendations. Support easily available resources including education and referral information.	8/24/2018 4:22 PM
2	• In addition to the recommendations listed, guidance to primary care providers about language and communication should include specific stipulations about all written materials/records as well as communication when the patient is not present.	8/23/2018 11:13 PM
3	cc	8/23/2018 11:22 AM
4	On pages 4, 5, 6, 10, 12, 14, and 16, the sections on “Communication, Language, and Inclusive environments”, “Screening” and “Sexual History” (specifically the “types of sex” parts), should reference mirroring the appropriate and non-stigmatizing language the patient uses to describe their own bodies and body parts. For example, if a transman doesn’t use the word vagina, asking if he has vaginal sex can be offensive. • http://www.deanspade.net/wp-content/uploads/2011/02/Purportedly-Gendered-Body-Parts.pdf • https://lgbtihealth.org.au/sites/default/files/Alliance%20Health%20Information%20Sheet%20Inclusive%20Language%20Guide%20on%20Intersex%2C%20Trans%20and%20Gender%20Diversity_0.pdf • https://www.lgbthealtheducation.org/wp-content/uploads/2017/01/Sexual-Health-among-Transgender-People.pdf On page 7, in the “HIV and STI screening” section, screening for Hep B should also be emphasized for MSM Starting on page 8, the section for HIV should also include referrals to appropriate community-based resources such as medical case management, housing, mental health, etc.	8/22/2018 10:37 AM
5	There are the same wording issues in this section as mentioned in Question 5. First off, I want to say great job on the guidelines. However getting them implemented in a manner that is not offensive may be difficult, as some providers lack the cultural sensitivity needed to make connection with populations outside of their own social grouping. I would recommend the inclusion of resources that help organizations address issues on how to engage minority populations in a holistic and respectful way (respectful for the patient). Some of this can be seen in Table 2, but it's just as important for an organization to know who to reach out to for training, consulting, etc... as it is to provide high quality health care. Cancer Screening Section would read better as: Discuss regular, appropriate cervical cancer screening and breast caner screening with patients with cervical and breast tissue for patients who are at higher risk of cervical and breast caner including cis women, trans men, and patients that are assigned female at birth. To my knowledge the person women have sex with or method of sex does not increase the risk of breast cancer. One this that should be added is prostate cancer in trans women and patients assigned male at birth who still have their prostate. Insurance and providers often forget this in trans women.	8/17/2018 3:48 PM
6	very specific guidelines outlined	8/15/2018 2:54 PM
7	Thank you for making a specific point of including a recommendation for pediatrics.	8/12/2018 10:34 AM
8	no	8/8/2018 8:50 PM
9	See answer to #4 above	8/7/2018 2:03 PM
10	a	8/7/2018 1:54 PM
11	yes	8/7/2018 10:16 AM
12	none	8/4/2018 9:11 PM
13	no	8/3/2018 12:24 PM
14	.	8/3/2018 8:31 AM

15	Include something about medical intake forms not basing questions on gender assumptions (aka "female" subsections asking about pregnancy and uterine health) but base it on body parts. Assigned sex at birth doesn't equate to what body parts a person has now and should be screened for.	8/1/2018 10:39 AM
16	fghbxfb	8/1/2018 10:37 AM
17	N/A	8/1/2018 8:26 AM
18	This will require education of PCPs as well as multiple changes to our EMR. This all takes time.	7/30/2018 3:25 PM
19	Add sexual identity to the recommendations for screening. See comments for question 4.	7/30/2018 11:21 AM

Q8 Do you have any comments on recommendations for Clinics, Hospitals, and Health Systems (pg 9)?

Answered: 19 Skipped: 0

#	RESPONSES	DATE
1	Agree with recommendations. Support need to be able to better document patient chosen pronouns, social and sexual history. Consider reporting on quality metrics by Sexual orientation and gender identification.	8/24/2018 4:22 PM
2	In addition to the existing recommendations, we suggest recommending that health systems include in regular audits/reviews of records (all records, not just those related to gender affirming care) a gender checkbox ensuring that records consistently represent the patient's name, pronouns, and gender accurately.	8/23/2018 11:13 PM
3	cc	8/23/2018 11:22 AM
4	No	8/22/2018 10:37 AM
5	The one problem I have with the Fenway survey is that is standardizes the use of "male" and "female" as cis man and cis woman. The survey does this through the use of male and female both of the cis gender options as well as the "assigned at birth" options. Utilizing the same terms for both helps to normalize the idea that cis is the normative standard and trans is a deviation from that standard.	8/17/2018 3:48 PM
6	very specific guidelines outlined	8/15/2018 2:54 PM
7	no	8/12/2018 10:34 AM
8	no	8/8/2018 8:50 PM
9	No	8/7/2018 2:03 PM
10	a	8/7/2018 1:54 PM
11	yes	8/7/2018 10:16 AM
12	none	8/4/2018 9:11 PM
13	no	8/3/2018 12:24 PM
14	Again, Clinics, Hospitals, and Health Systems should have LGBTQ persons in governance, advisory, leadership roles. And, for their entire clinic population, clinic leadership should monitor outcomes of care (hedis and other measures) stratified by population group to make sure marginalized populations are evidencing good outcomes.	8/3/2018 8:31 AM
15	Medical records should have a way of indicating whether someone is trans or to override automated systems that exclude sex based results. People have missed early stage prostate cancer and other body part specific diseases because results were automatically excluded based on the gender in the chart. Use the term "sex assigned at birth" rather than birth gender.	8/1/2018 10:39 AM
16	fghbxfb	8/1/2018 10:37 AM
17	N/A	8/1/2018 8:26 AM
18	Please do not give us unrealistic timeframes for completing these recommendations. This will be a multi year project.	7/30/2018 3:25 PM
19	This would have been a great opportunity to recommend patient engagement as a strategy to make the environment more inclusive. Recommend that clinics can *actually involve* their queer patients in the development of these protocols and language - I guarantee a hospital's list of LGBTQ resources will be a trillion times more useful to patients if a queer/trans person (especially a queer/trans person of color) is involved in supporting this effort.	7/30/2018 11:21 AM

Q9 Do you have any comments on recommendations for Health Plans (pg 10)?

Answered: 19 Skipped: 0

#	RESPONSES	DATE
1	Coverage for appropriate services based on tissue screening needs. Easier process for documentation of services needed/provided to allow for adequate reimbursement.	8/24/2018 4:22 PM
2	We strongly support all of the recommendations included in this draft. However, we also feel that these recommendations should be more robust in order to better address the barriers that LGBTQ individuals, particularly transgender individuals, face in using health insurance to access health care. In addition to the recommendations listed, we suggest that the following recommendations be added in order to ensure equitable health care access for LGBTQ individuals, particularly transgender individuals: -All insurance payers should provide gender affirming care training to their staff, particularly customer service representatives and others who are likely to provide support for enrollees seeking to access gender affirming care. -Medical management techniques, such as requiring pre-authorization for certain care, should not be more burdensome for LGBTQ patients than they would be for other patients accessing the same service. For example: If a cisgender person does not require pre-authorization for a certain service or treatment, a transgender person should also not be required to obtain pre-authorization for the same procedure. LGBTQ individuals should not be required to take other extra steps, such as calling a special phone number or obtaining a letter from a mental health professional, that are not required of other enrollees for similar services. -Health plans should take steps to ensure equity in wait times when such medical management techniques are in place. Plans must have adequate clinical review staff familiar with gender affirming care in order to ensure that pre-authorization wait times for these services are comparable to wait times for other services. -Plan information provided to enrollees should include information about medical treatment of gender dysphoria in addition to mental health treatment. Similarly, health plans and other payers should provide clear, easy-to-understand guidance for providers explaining how to bill for gender affirming services in order to minimize delays to care and billing. -Employers should select health plans that cover fertility treatments to increase equity in family planning for employees.	8/23/2018 11:13 PM
3	Based on learnings from New York and its statewide Ending the Epidemic Plan, ViiV Healthcare sees value in promoting idea sharing among health plans to increase retention in care and viral load suppression rates for people living with HIV. This would require identifying leaders in a specific area and providing them with the platform to share their work with other plans with the hope that this shared learning meets the objectives of Bree's work. For example, New York has set up quarterly forums (via webinar) that allow health plans to learn from one another, increase/develop their knowledge in HIV care, and share best practices. The Bree could consider including a recommendation that Washington replicate best practices from New York's Ending the Epidemic efforts. Some of those best practices could be incorporated into the broader LGBTQ care section including HIV, transgender care, hormone therapy, and reproductive coverage.	8/23/2018 11:22 AM
4	On page 10 under "Areas Requiring LGBTQ-specific Standards of Care", the bullet "Consider identifying MSM specialty providers" should be expanded to identify LGBTQ specialty providers	8/22/2018 10:37 AM
5	I would include cancer and health screenings as necessary for the patient. I.e. trans women need to have access to an OBGYN and patient need to have access to cervical, breast and prostate cancer screening as necessary.	8/17/2018 3:48 PM
6	No	8/15/2018 2:54 PM
7	no	8/12/2018 10:34 AM
8	no	8/8/2018 8:50 PM
9	No	8/7/2018 2:03 PM
10	a	8/7/2018 1:54 PM
11	yes	8/7/2018 10:16 AM
12	none	8/4/2018 9:11 PM

13	no	8/3/2018 12:24 PM
14	.	8/3/2018 8:31 AM
15	Don't consider treatments for gender dysphoria in the same categories as cisgender cosmetic surgeries. Hair removal and breast removal/augmentation can be lifesaving treatments and often more essential in treating dysphoria than genital surgery, especially for daily life and safety.	8/1/2018 10:39 AM
16	fghbxfb	8/1/2018 10:37 AM
17	Need to emphasize to health plans that gender affirmation hormones and surgery should be covered. some insurances do not cover well and this should be advocated more.	8/1/2018 8:26 AM
18	NO	7/30/2018 3:25 PM
19	Add a line about increasing access and decreasing co-pays for mental health.	7/30/2018 11:21 AM

Q10 Do you have any additional comments or is there anything our Recommendations are missing?

Answered: 19 Skipped: 0

#	RESPONSES	DATE
1	Encourage additional recommendations for public health and other avenues of education for both providers of care and for LGBTQ people.	8/24/2018 4:22 PM
2	We appreciate the Purpose Statement's recognition that "Those who identify as LGBTQ are diverse and from many socioeconomic backgrounds, races, ethnicities, and cultures. Disparities can be magnified when LGBTQ persons are also part of a racial or ethnic minority, a fact important to policy initiatives and clinical care." It is critical that all recommendations listed are grounded in this lens of intersectionality. Intersectionality, first defined by Kimberle Crenshaw, is the "interconnected nature of social categorizations such as race, class, and gender as they apply to a given individual or group, regarded as creating overlapping and interdependent systems of discrimination or disadvantage." Intersectionality can inform stakeholders about the historical, political, and economic roots of many risk factors, behaviors, and decision-making processes of patients. Health disparities and risk factors do not exist in isolation, and service delivery recommendations should be informed by intersectionality. To that end, we recommend that training be the foundation of all of the recommendations to primary care providers and clinics, hospitals and health systems. We also suggest that these recommendations more explicitly recognize the way that individuals' intersectional identities may impact their care. For example, the resources for the LGBTQ community listed on page 5 should include more resources for LGBTQ individuals who also identify as people of color or immigrants, if available. The recommendations on page 6 on creating inclusive environments should include recommendations related to race, immigration status, and other marginalized identities.	8/23/2018 11:13 PM
3	ViiV Healthcare encourages the Bree Collaborative to adopt HIV quality measures that focus on the diagnosis, treatment and suppression of viral load for PLWH. Specifically, a HRSA-owned, viral load suppression outcome measure exists, is endorsed by the National Quality Forum, (NQF #2082), and is part of the Medicaid Adult Core Measure Set. This outcome measure has demonstrated that it is valid and feasible to collect and align with CMS' "Meaningful Measures" initiative. .(U.S. Center for Medicare & Medicaid Services. Meaningful Measures Hub. https://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/QualityInitiativesGenInfo/MMF/General-info-Sub-Page.html. Accessed August 15, 2018.) Washington's Performance Measure Coordinating Committee (PMCC) makes recommendations with respect to the Washington State Common Core Set, and should be encouraged to include HIV as a priority disease state for quality measure reporting, along with the other measures Washington currently reports to CMS.	8/23/2018 11:22 AM
4	On pages 4, 5, 6, 10, 12, 14, and 16, the sections on "Communication, Language, and Inclusive environments", "Screening" and "Sexual History" (specifically the "types of sex" parts), should reference mirroring the appropriate and non-stigmatizing language the patient uses to describe their own bodies and body parts. For example, if a transman doesn't use the word vagina, asking if he has vaginal sex can be offensive. • http://www.deanspade.net/wp-content/uploads/2011/02/Purportedly-Gendered-Body-Parts.pdf • https://lgbtihealth.org.au/sites/default/files/Alliance%20Health%20Information%20Sheet%20Inclusive%20Language%20Guide%20on%20Intersex%2C%20Trans%20and%20Gender%20Diversity_0.pdf • https://www.lgbthealtheducation.org/wp-content/uploads/2017/01/Sexual-Health-among-Transgender-People.pdf Under the past sexual history sections, include what methods you have used to reduce their risk of acquiring HIV or other STIs as a means of identifying where the person is in relation to risk reduction.	8/22/2018 10:37 AM
5	If you're going to use the term trans, you need to use the term cis. And you need to designate the gender you're talking about.	8/17/2018 3:48 PM
6	No	8/15/2018 2:54 PM
7	no	8/12/2018 10:34 AM
8	no	8/8/2018 8:50 PM

9	No	8/7/2018 2:03 PM
10	a	8/7/2018 1:54 PM
11	yes	8/7/2018 10:16 AM
12	No	8/4/2018 9:11 PM
13	no	8/3/2018 12:24 PM
14	.	8/3/2018 8:31 AM
15	In recommendations for Washington State Agencies, please add "recognition of more than two genders" so that more systems can align with the "X" gender designation on Washington State birth certificates.	8/1/2018 10:39 AM
16	fghbxfb	8/1/2018 10:37 AM
17	in the "Washington State" needs, should highlight that there are currently very few surgeons who perform any type of gender affirmation surgery, and some of those who do also don't accept all insurances. A big need for this state, especially in some geographic areas of this state (including Seattle!) is better access to genital surgery (all types) and even for breast surgery	8/1/2018 8:26 AM
18	NO	7/30/2018 3:25 PM
19	n/a - see above.	7/30/2018 11:21 AM

Q11 Do you have any comments or suggestions to help these recommendations be adopted across Washington State?

Answered: 19 Skipped: 0

#	RESPONSES	DATE
1	Recommend development of centers of excellence in Washington state to support care of LGBTQ people. Development of referral networks. Training program development and availability. Reporting on health disparities by sexual orientation and gender identification.	8/24/2018 4:22 PM
2	Thank you again for your work and for the opportunity to provide feedback!	8/23/2018 11:13 PM
3	ViiV Healthcare applauds the Bree Collaborative for taking up such a critical issue, and appreciates the opportunity to comment.	8/23/2018 11:22 AM
4	I would strongly suggest having a focus group with just LGBT-identified community members and providers prior to finalizing the report and recommendations, as the Workgroup appears to be overwhelmingly cis and hetero.	8/22/2018 10:37 AM
5	Boeing has an excellent health plan that includes many of these recommendations and Swedish has a ~20 online training that start's with the patient's experience and moves on to the importance of an accepting culture. Being able to point to respected community and industry members and say, "This is a model of how it could work," encourages those who may struggle getting from Current State to Optimal Care.	8/17/2018 3:48 PM
6	It would be useful to have all health care systems disseminate these guidelines to clinics and practitioners	8/15/2018 2:54 PM
7	no	8/12/2018 10:34 AM
8	Every human being deserves dignity and respect	8/8/2018 8:50 PM
9	No additional comments- thank your for doing this	8/7/2018 2:03 PM
10	a	8/7/2018 1:54 PM
11	yes	8/7/2018 10:16 AM
12	I think it's a good report.	8/4/2018 9:11 PM
13	Local public health departments work with providers everyday and can have an important role in disseminating and supporting these recommendations.	8/3/2018 12:24 PM
14	.	8/3/2018 8:31 AM
15	No	8/1/2018 10:39 AM
16	fghbxfb	8/1/2018 10:37 AM
17	Page 9 is a typo "Non-confirming People" instead of "non-conforming"	8/1/2018 8:26 AM
18	Assist with the development of the language we are to use.	7/30/2018 3:25 PM
19	Involve LGBTQ people in implementation planning.	7/30/2018 11:21 AM

Q12 Name:

Answered: 16 Skipped: 3

#	RESPONSES	DATE
1	Kim Herner	8/24/2018 4:22 PM
2	Leslie Edwards	8/23/2018 11:13 PM
3	Kristen Tjaden	8/23/2018 11:23 AM
4	Erick Seelbach	8/22/2018 10:37 AM
5	Gabriella A Madsen	8/17/2018 3:48 PM
6	Roberta A. Jackson, SLP	8/15/2018 2:55 PM
7	Jill Elbracht	8/12/2018 10:34 AM
8	Julie Dombrowski	8/7/2018 2:03 PM
9	Lucy A. Homans, Ed.D.	8/7/2018 10:17 AM
10	JOHN VASSALL	8/4/2018 9:12 PM
11	Nigel Turner	8/3/2018 12:24 PM
12	Raleigh Watts	8/3/2018 8:32 AM
13	Caleb Wilvich	8/1/2018 10:40 AM
14	Rachel Bender Ignacio	8/1/2018 8:27 AM
15	Debbie Raniero	7/30/2018 3:25 PM
16	Liz Kellogg	7/30/2018 11:22 AM

Q13 Email Address:

Answered: 16 Skipped: 3

#	RESPONSES	DATE
1	kim_herner@valleymed.org	8/24/2018 4:22 PM
2	leslie.edwards@ppvnh.org	8/23/2018 11:13 PM
3	kristen.x.tjaden@viivhealthcare.com	8/23/2018 11:23 AM
4	eseelbach@pcaf-wa.org	8/22/2018 10:37 AM
5	gabriella.madsen@providence.org	8/17/2018 3:48 PM
6	rjackson@ewu.edu	8/15/2018 2:55 PM
7	jelbracht@prcounseling.org	8/12/2018 10:34 AM
8	jdombrow@uw.edu	8/7/2018 2:03 PM
9	lucy.homans@gmail.com	8/7/2018 10:17 AM
10	JOHNV@QUALISHEALTH.ORG	8/4/2018 9:12 PM
11	nturner@tpchd.org	8/3/2018 12:24 PM
12	rrwatts@cdchc.org	8/3/2018 8:32 AM
13	cwilvich@fredhutch.org	8/1/2018 10:40 AM
14	rbi13@uw.edu	8/1/2018 8:27 AM
15	DebbieRaniero@chifranciscan.org	7/30/2018 3:25 PM
16	lizsage.k@gmail.com	7/30/2018 11:22 AM

Q14 Organization:

Answered: 15 Skipped: 4

#	RESPONSES	DATE
1	Valley Medical Center	8/24/2018 4:22 PM
2	Planned Parenthood Votes Northwest and Hawaii (PPVNH)	8/23/2018 11:13 PM
3	ViiV Healthcare	8/23/2018 11:23 AM
4	PCAF	8/22/2018 10:37 AM
5	Providence Health Services supporting Swedish Medical Center.	8/17/2018 3:48 PM
6	Eastern Washington University-Communication Sciences and Disorders Dept	8/15/2018 2:55 PM
7	Palouse River Counseling	8/12/2018 10:34 AM
8	University of Washington	8/7/2018 2:03 PM
9	Washington State Psychological Association	8/7/2018 10:17 AM
10	QUALIS HEALTH	8/4/2018 9:12 PM
11	Tacoma-Pierce County Health Department	8/3/2018 12:24 PM
12	Country Doctor Community Health Centers	8/3/2018 8:32 AM
13	Fred Hutch / HICOR	8/1/2018 10:40 AM
14	University of Washington	8/1/2018 8:27 AM
15	CHI Franciscan Health	7/30/2018 3:25 PM

Alicia Parris

From: Karen I Fredriksen-Goldsen <fredrikk@uw.edu>
Sent: Friday, August 24, 2018 4:53 PM
To: BREE Program
Subject: Bree Public Comment Request on Two Recommendations: LGBTQ Health Care and Suicide Care
Attachments: Health-Disparities-Among-Lesbian-Gay-and-Bisexual-Older-Adults-Results-from-a-Population-Based-Study.pdf; Count-Me-In-Response-to-Sexual-Orientation-Measures-Among-Older-Adults.pdf; Creating-a-Vision-for-the-Future-Key-Competencies.pdf; Physical-and-mental-health-of-transgender-older-adults-An-at-risk-and-underserved-population.pdf; The-Physical-and-Mental-Health-of-Lesbian-Gay-Male-and-Bisexual-LGB-Older-Adults-The-Role-of-Key-Health-Indicators-and-Risk-and-Protective-Factors.pdf; Chronic Health Conditions and Key Health Indicators Among LGB Older US Adults.pdf; CV KFG 8.2018.pdf

Dear Bree Collaborative members,

Thank you for sending the excellent draft report, LGBTQ Health Care Recommendations. I am currently the Principal Investigator of multiple NIH studies on health disparities of LGBTQ midlife and older adults. While I was scheduled to present at one of the Bree Collaborative meetings, unfortunately I was very ill and could not attend. Thus, I appreciate this opportunity to provide feedback.

Overall, I deeply appreciate the work of the committee and think you have provided a strong analysis of existing materials with sound recommendations. I would suggest that you further consider the distinct risks of specific subpopulations of LGBTQ people. My research has focused on health disparities in marginalized populations, with a focus on the physical and mental health of LGBTQ older adults. Using population-based data from Washington state, we have found that LGB older adults experience significant health disparities, which differs by subgroups. In addition, we have documented many disparities among transgender older adults. We have also documented key barriers to care for LGBTQ older adults although to date they remain largely invisible in services, research and health care education. Because of the distinct risks and barriers to care that LGBTQ older adults face, specific training on best practices for serving this population is needed across health care settings.

I'm attaching a few of our papers that highlight the disparities experienced by LGBTQ older adults as well as one on competencies needed in health care settings to better address the needs of this underserved population. I'm also attaching my cv, which lists other relevant publications.

If you have any questions or need additional information, please feel free to contact me.

Sincerely,

Karen

Karen I. Fredriksen Goldsen, PhD
Professor
Director, Healthy Generations, Hartford Center of Excellence
PI: Aging with Pride: NHAS (National Health, Aging, and Sexuality/Gender Study) (NIH/NIA, R01)

Chronic Health Conditions and Key Health Indicators Among Lesbian, Gay, and Bisexual Older US Adults, 2013–2014

Karen I. Fredriksen-Goldsen, PhD, Hyun-Jun Kim, PhD, Chengshi Shui, PhD, and Amanda E. B. Bryan, PhD

Objectives. To examine disparities in chronic conditions and health indicators among lesbian, gay, and bisexual (LGB) adults aged 50 years or older in the United States.

Methods. We used data from the 2013 and 2014 National Health Interview Survey to compare disparities in chronic conditions, health outcomes and behaviors, health care access, and preventive health care by sexual orientation and gender.

Results. LGB older adults were significantly more likely than heterosexual older adults to have a weakened immune system and low back or neck pain. In addition, sexual minority older women were more likely than their heterosexual counterparts to report having arthritis, asthma, a heart attack, a stroke, a higher number of chronic conditions, and poor general health. Sexual minority older men were more likely to report having angina pectoris or cancer. Rates of disability and mental distress were higher among LGB older adults.

Conclusions. At substantial cost to society, many disparities in chronic conditions, disability, and mental distress observed in younger LGB adults persist, whereas others, such as cardiovascular disease risks, present in later life. Interventions are needed to maximize LGB health. (*Am J Public Health.* 2017;107:1332–1338. doi:10.2105/AJPH.2017.303922)

Awareness of the health disadvantages faced by sexual minority adults has increased substantially in recent years. In *Healthy People 2020*,[1] lesbian, gay, and bisexual (LGB) adults were named for the first time in national health objectives, and the National Institutes of Health recently identified sexual minorities as health-disparate populations.[2]

However, insufficient population-based research data have been gathered on the health of sexual minorities.[3] Moreover, despite the rapid growth of the older segment of the sexual minority population and the likelihood of health care needs increasing with age,[4] research investigating health disparities among sexual minority older adults is particularly limited. Until recently, no national-level data were available to assess the health of sexual minority older adults. As a result, many questions remain regarding the health of this group, particularly whether health disparities observed in the general sexual minority adult population persist or diminish at older ages.

Health disparities among sexual minorities have been documented in the general population aged 18 years and older. There is evidence based on national data that LGB adults have elevated rates of some chronic health conditions relative to heterosexual adults, including cancer, arthritis, hepatitis, and lung disease.[5] In comparison with heterosexual adults, poorer self-rated general physical and mental health, higher rates of disability, and greater degrees of functional limitation have been reported among LGB adults in multiple US population-based studies,[6,7] including the National Health Interview Survey (NHIS), which has included a sexual orientation question since 2013.[8] Differences in health behaviors have been documented as well, including elevated rates of excessive drinking (particularly among sexual minority women)[6] and smoking.[8] Moreover, lesbians and bisexual women have been found to face elevated barriers to accessing health care, including lack of insurance and financial barriers.[8]

Population-based data specific to sexual minority older adults are much more limited, and no studies to our knowledge have analyzed national-level disparities in this specific population. Although existing state-level data have consistently revealed heightened risks of poor mental health, poor general health, and disability among LGB older adults,[9,10] findings are mixed regarding disparities in rates and severity of chronic health conditions, which are of particular concern in the LGB older adult population as a result of their potential to dramatically affect quality of life, functional disability, mortality, and health care costs.[11]

In one study involving state-level population-based data from adults aged 50 years or older in Washington State, rates of cardiovascular disease and obesity were higher among lesbians than among heterosexual women; however, rates of chronic conditions were not elevated among gay or bisexual men after adjustment for sociodemographic characteristics.[9] In contrast, in an investigation of adults aged 50 to 70 years old in California, there were no differences by sexual orientation in rates of

ABOUT THE AUTHORS

All of the authors are with the School of Social Work, University of Washington, Seattle.

Correspondence should be sent to Karen I. Fredriksen-Goldsen, PhD, 4101 15th Ave NE, Box 354900, Seattle, WA 98105 (e-mail: fredrikk@uw.edu). Reprints can be ordered at http://www.ajph.org by clicking the "Reprints" link.

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cardiovascular disease or other chronic conditions among women, but gay and bisexual men showed elevated rates of diabetes and hypertension relative to heterosexual men.[10] Using NHIS data, Gonzales and Henning-Smith[12] found that older men and women in same-sex cohabiting partnerships were less likely than those in opposite-sex partnerships to report having a chronic condition.

Taken together, these sparse and divergent findings highlight the need to use nationally representative data to more fully investigate disparities in chronic conditions and other key health indicators among sexual minority older women (lesbians and bisexual women) and men (gay and bisexual men). The study described here, based on national data, is to our knowledge the first to examine the extent to which sexual orientation and gender are related to disparities in chronic health conditions, general health outcomes, health behaviors, health care access, and preventive health care specifically among adults aged 50 years or older in the United States. Our aim was to provide a more comprehensive understanding of the aging needs of the increasingly diverse older adult population.

METHODS

We derived our aggregated population-based data from the 2013 and 2014 versions of the NHIS, the largest in-person household health survey of the US noninstitutionalized population; we analyzed data from the subsample of adults aged 50 years or older.[9] In 2013, for the first time, the survey assessed sexual orientation. Survey respondents were asked "Which of the following best represents how you think of yourself?" Response categories were as follows: gay or lesbian, straight (not gay or lesbian), bisexual, something else, and don't know. We included in our study participants who self-identified as gay, lesbian, bisexual, or straight. Our sample comprised 18 669 heterosexual women, 14 141 heterosexual men, 197 lesbians, 229 gay men, 55 bisexual women, and 55 bisexual men. We applied pooled weights throughout our analyses to adjust for the unequal probabilities of sample selection arising from the study design and nonresponse.

Measures

Chronic health conditions. Participants were asked whether they had ever been told by a doctor or other health professional that they had had a stroke, a heart attack, angina pectoris, high blood pressure, chronic obstructive pulmonary disease, asthma, arthritis, low back or neck pain, diabetes, cancer, and weakened immune system. Obesity was defined as a body mass index of 30 kilograms per meter squared or greater.[13] We computed numbers of chronic conditions[14] by summing the conditions (other than weakened immune system, which was included only in 2013) reported by each participant.

General health outcomes. The NHIS assessed participants' general health via self-evaluations.[15] We dichotomized general health categories into good (good, very good, or excellent) and poor (fair or poor). Disability was measured through participants' affirmative responses to any of the following items:

1. trouble with seeing, even when wearing glasses or contact lenses;
2. activity limitations attributable to hearing problems;
3. difficulty in walking up 10 steps without resting or walking a quarter of a mile without using any special equipment;
4. needing help with bathing or showering;
5. needing help in handling routine needs; or
6. being limited in any way because of difficulty remembering or experiencing periods of confusion.[16]

Limitations in activities of daily living (ADLs) and instrumental ADLs (IADLs) were assessed by asking whether participants, because of a physical, mental, or emotional problem, needed help with personal care (e.g., eating, bathing, dressing) and routine needs (e.g., everyday household chores, shopping, doing necessary business), respectively.[15] Mental distress was measured via the 6-item Psychological Distress Scale ($\alpha = 0.87$); a summed score greater than 6 was coded as reflecting mental distress.[17]

Health behaviors, health care access, and preventive health care. Among those who had smoked 100 or more cigarettes, current and former smokers were distinguished by whether or not they currently smoked.[15] Excessive drinking was defined as women having 4 or more and men having 5 or more drinks on a single occasion during the preceding month.[18] Former drinkers were categorized as those who had consumed at least 12 drinks during their lifetime but no drinks in the preceding year.[19] Physical activity was defined according to a combined duration of moderate and vigorous activities of 150 minutes or more per week as recommended by the Centers for Disease Control and Prevention.[20] Those who reported experiencing any of 4 types of sleep problems (trouble falling asleep, trouble staying asleep, taking sleep aid medication, and not waking up feeling well rested in the past week) 3 times or more a week[21] were categorized as having sleep problems.

We assessed health care access according to whether participants had health insurance coverage and a primary source of care (a place to go when they were sick or needed advice about health). Preventive health care was assessed according to whether participants had had a blood pressure screening, flu shot, or mammogram (among women aged 50–70 years) in the preceding 12 months and whether they had ever had an HIV test.

Sociodemographic characteristics. The sociodemographic characteristics assessed included age in years, race/ethnicity (non-Hispanic White vs other), household income (200% or below vs more than 200% above the federal poverty level), employment status (employed vs not employed), educational attainment (high school or less vs at least some college), relationship status, and living arrangement (living alone vs living with someone). Relationship status was categorized as married, partnered (living with a partner), or single (widowed, divorced, separated, or never married).

Statistical Analysis

We used Stata version 14.0 in conducting our analyses.[22] All analyses were conducted separately by gender. Sexual orientation was dichotomized into sexual minority (lesbian, gay, bisexual) or heterosexual, with heterosexuals treated as the reference group.

First, we used the adjusted Wald test to compare estimates of sociodemographic characteristics according to sexual orientation. Second, we estimated prevalence rates for health indicators by sexual orientation.

We conducted a series of logistic and linear regressions as appropriate, controlling for socioeconomic covariates (age, race/ethnicity, income, and education) that have been found to be associated with health disparities,[23,24] to test associations between sexual orientation and chronic health conditions and other health indicators. Also, we assessed the statistical significance of differences in sociodemographic characteristics and key health indicators between sexual minority subgroups (lesbians vs bisexual women and gay men vs bisexual men).

We applied balanced repeated replications methodology to calculate standard errors.[25] This method incorporates the specific complex sampling designs of the NHIS, with each sampling stratum having exactly 2 sampling units. We used the Survey package in R[26] to derive a 308 × 308 Hadamard matrix and used the first 300 entries in computing balanced repeated replication weights.

RESULTS

In comparison with heterosexual older women, sexual minority older women were younger and had higher household incomes, educational attainment levels, and employment rates, whereas the racial/ethnic backgrounds of the 2 groups were comparable (Table 1). Sexual minority older women were less likely than heterosexual older women to be married, more likely to be partnered, and equally likely to be single. There were no significant differences in number of children in the household or likelihood of living alone. Subgroup comparisons revealed that bisexual women had lower incomes than lesbians, were more likely to be married, and were less likely to be partnered.

In comparison with heterosexual older men, sexual minority older men were significantly younger and had higher educational levels; however, there were no differences in income or employment status. Sexual minority older men were more likely than heterosexual older men to be non-Hispanic White, less likely to be married, more likely to be partnered, and more likely to be single. In addition, they were more likely to live alone and had fewer children in the household. According to subgroup comparisons, bisexual older men were older and less likely to be employed than gay older men; although members of the 2 groups were equally likely to be married, bisexual older men were less likely to be partnered, and they had more children in the household.

Chronic Health Conditions

Table 2 presents data on the prevalence of chronic health conditions according to sexual orientation and gender and the results of significance tests after control for demographic characteristics. Sexual minority older women were more likely than heterosexual older women to have experienced a stroke, a heart attack, asthma, arthritis, low back or neck pain, and a weakened immune system but were less likely to have diabetes. Sexual minority older women had a significantly higher number of chronic conditions than heterosexual older women. Among sexual minority older women, lesbians were more likely than bisexual women to report having had a stroke (adjusted odds ratio [OR] = 2.79; $P < .05$), a heart attack (adjusted OR = 4.47; $P < .01$), or arthritis (adjusted OR = 3.15; $P < .001$).

Sexual minority older men were more likely than heterosexual older men to report angina pectoris, low back or neck pain, cancer, and a weakened immune system; they were less likely to be obese. The likelihood of a weakened immune system (adjusted OR = 10.25; $P < .001$) and obesity (adjusted OR = 2.77; $P < .001$) was higher among gay older men than among bisexual older men, whereas bisexual older men were more likely to have low back or neck pain (adjusted OR = 1.57; $P < .05$).

General Health Outcomes

As shown in Table 3, after adjustment for demographic characteristics, sexual minority older women were more likely than heterosexual older women to report poor general health, disability, and mental distress; they were less likely to report ADL limitations. Among sexual minority older women, lesbians were more likely than bisexual women to report poor general health (adjusted OR = 2.22; $P < .001$) and disability (adjusted OR = 2.66; $P < .001$), whereas bisexual women were more likely to report ADL limitations (adjusted OR = 0.08; $P < .01$).

Sexual minority older men were more likely than heterosexual older men to report disability, ADL and IADL limitations, and mental distress. Among sexual minority older men, gay men were more likely than bisexual men to report ADL limitations (adjusted OR = 4.40; $P < .01$), and bisexual men were more likely to report mental distress (adjusted OR = 1.93; $P < .05$).

Health Behaviors

Table 4 shows that, after control for demographic characteristics, sexual minority older women were more likely to engage in excessive drinking than heterosexual older women and were more likely to be former drinkers and smokers. Also, sexual minority older women were more likely than heterosexual older women to experience sleep problems. Rates of physical activity did not differ according to sexual orientation. Subgroup comparisons showed that lesbians were more likely than bisexual women to be former drinkers (adjusted OR = 2.66; $P < .001$).

In comparison with heterosexual older men, sexual minority older men were more likely to be current smokers and to engage in excessive drinking. Physical activity and sleep problems were not associated with sexual orientation among older men. Subgroup comparisons revealed that bisexual men were more likely than gay men to be current smokers (adjusted OR = 2.13; $P < .01$).

Health Care Access and Preventive Health Care

After adjustment for demographic characteristics, sexual minority older women were more likely than heterosexual older women to have insurance coverage; there were no significant differences in having a usual source of care (Table 4). In terms of preventive care, adjusted analyses showed that sexual minority older women were more likely to have had a blood pressure screening and HIV test than were heterosexual older women.

Older men were comparable with respect to health care access across sexual orientation groups. Sexual minority older men were more likely than heterosexual older men to have had a flu shot and an HIV test during the preceding year. Subgroup comparisons showed that gay men were more likely than bisexual men to have had an HIV test (adjusted OR = 1.70; $P < .05$).

TABLE 1—Sociodemographic Characteristics Among Women and Men Aged 50 Years or Older, by Sexual Orientation: National Health Interview Survey, United States, 2013–2014

		Lesbian/Bisexual Women				Gay/Bisexual Men		
Characteristic	Heterosexual Women (n = 18 669), Mean or % (95% CI)	Total (n = 252), Mean or % (95% CI)	Lesbian (n = 197), Mean or % (95% CI)	Bisexual (n = 55), Mean or % (95% CI)	Heterosexual Men (n = 14 141), Mean or % (95% CI)	Total (n = 284), Mean or % (95% CI)	Gay (n = 229), Mean or % (95% CI)	Bisexual (n = 55), Mean or % (95% CI)
Age, y	64.4 (64.3, 64.5)	58.6*** (58.0, 59.3)	58.4 (57.6, 59.2)	59.6 (58.2, 61.0)	63.3 (63.2, 63.4)	60.7*** (60.0, 61.4)	60.0 (59.2, 60.8)	63.9*** (62.4, 65.3)
Non-Hispanic White race/ethnicity	74.0 (73.6, 74.5)	75.0 (70.8, 78.8)	74.5 (69.7, 78.9)	77.0 (69.2, 83.3)	75.3 (74.8, 75.8)	83.2*** (80.9, 85.3)	84.2 (81.5, 86.6)	78.5 (72.2, 83.6)
Income ≤200% of poverty level	30.8 (30.2, 31.4)	23.8*** (20.3, 27.8)	21.6 (17.9, 25.7)	34.1* (25.0, 44.5)	24.8 (24.3, 25.4)	24.5 (21.3, 28.1)	23.3 (19.7, 27.4)	31.0 (24.7, 38.1)
Employed	40.1 (39.6, 40.6)	57.0*** (52.5, 61.4)	56.4 (51.4, 61.3)	59.7 (50.5, 68.3)	50.4 (49.9, 51.0)	49.4 (44.7, 54.1)	53.3 (48.0, 58.6)	31.0*** (24.1, 38.9)
High school education or less	44.1 (43.6, 44.6)	22.5*** (19.4, 26.1)	22.5 (18.8, 26.7)	22.6 (16.2, 30.5)	41.3 (40.7, 41.9)	25.6*** (21.9, 29.6)	26.1 (22.1, 30.6)	22.9 (17.1, 30.0)
Relationship status								
Married	54.3 (53.8, 54.9)	26.1*** (22.3, 30.3)	23.6 (19.4, 28.3)	37.6* (28.0, 48.3)	70.0 (69.6, 70.5)	21.7*** (18.8, 24.9)	21.5 (17.9, 25.6)	22.8 (16.3, 30.8)
Partnered	2.6 (2.5, 2.8)	30.9*** (26.8, 35.3)	34.5 (29.8, 39.5)	14.8*** (7.6, 26.6)	3.7 (3.5, 3.9)	21.8*** (18.9, 25.1)	24.6 (21.1, 28.5)	8.9*** (5.0, 15.5)
Single	43.0 (42.5, 43.6)	43.0 (38.8, 47.3)	42.0 (37.3, 46.7)	47.7 (37.9, 57.6)	26.3 (25.8, 26.7)	56.5*** (53.0, 59.9)	53.9 (50.0, 57.8)	68.3** (59.6, 76.0)
No. of children in household	0.2 (0.2, 0.2)	0.2 (0.1, 0.2)	0.2 (0.1, 0.2)	0.1 (0.0, 0.2)	0.2 (0.2, 0.2)	0.1* (0.1, 0.2)	0.1 (0.0, 0.1)	0.5** (0.2, 0.8)
Lives alone	27.3 (26.9, 27.8)	24.7 (21.5, 28.2)	23.9 (20.3, 27.9)	28.3 (21.7, 36.0)	19.4 (19.0, 19.8)	44.1*** (40.6, 47.7)	44.3 (40.4, 48.2)	43.4 (35.1, 52.0)

Note. CI = confidence interval. Wald tests were used to compare demographic characteristics between heterosexuals and lesbian, gay, and bisexual participants as well as between lesbians/gays and bisexuals.
*$P < .05$; **$P < .01$; ***$P < .001$.

DISCUSSION

To our knowledge, this is the first national population-based study to comprehensively investigate disparities in chronic health conditions and other key health indicators among sexual minority older adults. In comparison with heterosexual older adults, sexual minority older adults exhibited a significantly higher likelihood of chronic health conditions and other disparities; however, they also showed some positive health indicators. As the population ages, the prevalence of chronic conditions increases,[27] and these conditions represent some of the most common, costly, and preventable of all health problems.[11] It is critical that groups at elevated risk for chronic health conditions be identified and targeted for prevention efforts, both to improve their health and well-being and to control health care expenditures.

Sexual minority older adults in this study were more likely than heterosexual older adults to experience low back or neck pain and weakened immune systems, which have not been examined in previous studies. These disparities, along with consistent findings of elevated distress and disability among sexual minority older adults[7,8] and poor general health among sexual minority older women, particularly lesbians,[8] likely reflect the substantial toll of marginalization and stigma across the life course.[4,28] Chronic stressors can affect physical health over the life span through an accumulation of allostatic load, causing acceleration of aging.[29] In studies of sexual and gender minority older adults, discrimination and victimization have been shown to be the strongest predictors of poor health outcomes.[30,31]

Some of the disparities found with chronic health conditions may develop earlier in adulthood and persist into older age. Gonzales et al. observed this pattern for the higher likelihood of having multiple chronic conditions among lesbians and bisexual women aged 18 years or older.[8] In addition, previous studies have consistently shown heightened risks of asthma[6] and arthritis[5] among sexual minority women and cancer among sexual minority men.[5,32] Other disparities documented in this study, including disparities in cardiovascular disease risks such as stroke and heart attack among sexual minority older women and angina pectoris among men, seem to first emerge in older adulthood. Interestingly, disparities in obesity, although well documented,[33] were not significantly different by sexual orientation among women in this study. This finding could reflect a leveling effect, with rates of obesity among older heterosexual women reaching a level comparable to rates among sexual minority

TABLE 2—Chronic Health Conditions Among Women and Men Aged 50 Years or Older, by Sexual Orientation: National Health Interview Survey, United States, 2013–2014

	Women			Men		
Health Indicator	Heterosexual (Ref), % or Mean (95% CI)	Lesbian/Bisexual, % or Mean (95% CI)	Adjusted OR or IRR (95% CI)	Heterosexual (Ref), % or Mean (95% CI)	Gay/Bisexual, % or Mean (95% CI)	Adjusted OR or IRR (95% CI)
Chronic conditions						
Stroke	5.1 (4.9, 5.3)	6.8 (5.2, 9.0)	2.12 (1.57, 2.87)[a]	5.5 (5.2, 5.7)	2.5 (1.6, 4.0)	0.56 (0.27, 1.17)
Heart attack	4.3 (4.1, 4.4)	6.4 (4.5, 9.0)	2.28 (1.58, 3.29)[a]	8.7 (8.4, 9.0)	8.0 (6.3, 10.0)	1.08 (0.83, 1.40)
Angina pectoris	3.0 (2.8, 3.1)	2.8 (1.9, 4.1)	1.29 (0.88, 1.90)	4.8 (4.6, 5.0)	6.9 (5.0, 9.4)	1.69 (1.21, 2.35)
High blood pressure	50.0 (49.6, 50.5)	39.0 (35.1, 43.0)	0.88 (0.74, 1.04)	51.3 (50.7, 51.9)	46.4 (42.7, 50.3)	0.94 (0.80, 1.10)
Chronic obstructive pulmonary disease	6.0 (5.8, 6.2)	5.2 (4.0, 6.7)	1.08 (0.83, 1.41)	5.7 (5.5, 6.0)	5.3 (4.0, 6.9)	1.06 (0.71, 1.57)
Asthma	13.7 (13.4, 14.0)	18.0 (15.7, 20.5)	1.28 (1.12, 1.53)	9.0 (8.7, 9.3)	9.9 (8.0, 12.2)	1.06 (0.77, 1.44)
Arthritis	44.7 (44.2, 45.2)	50.3 (46.0, 54.6)	1.57 (1.32, 1.88)[a]	34.2 (33.6, 34.8)	28.9 (25.6, 32.5)	0.84 (0.71, 1.01)
Low back/neck pain	39.8 (39.3, 40.3)	53.0 (48.4, 57.5)	1.78 (1.46, 2.17)	35.5 (35.0, 36.1)	40.2 (36.6, 43.8)	1.21 (1.04, 1.41)[b]
Diabetes	15.9 (15.6, 16.2)	10.6 (8.8, 12.7)	0.77 (0.63, 0.96)	18.7 (18.3, 19.1)	14.2 (11.6, 17.2)	0.85 (0.68, 1.07)
Obesity	30.6 (30.1, 31.1)	35.4 (31.4, 39.4)	1.18 (0.98, 1.41)	30.9 (30.4, 31.5)	24.2 (21.2, 27.5)	0.67 (0.55, 0.80)[a]
Cancer	16.3 (15.9, 16.7)	14.6 (12.1, 17.6)	1.07 (0.88, 1.30)	16.2 (15.8, 16.7)	19.0 (16.2, 22.2)	1.41 (1.17, 1.69)
Weakened immune system[c]	10.1 (9.6, 10.5)	17.2 (12.2, 23.7)	1.69 (1.16, 2.46)	5.0 (4.6, 5.3)	15.2 (11.6, 19.6)	3.16 (2.25, 4.43)[a]
No. of chronic conditions[d]	2.3 (2.3, 2.3)	2.4 (2.3, 2.6)	1.18 (1.11, 1.25)	2.2 (2.2, 2.2)	2.1 (1.9, 2.2)	0.98 (0.93, 1.04)

Note. CI = confidence interval; IRR = incidence risk ratio; OR = odds ratio. Significance tests adjusted for age, race/ethnicity, income, and education, and heterosexual women and men were coded as the reference groups.

[a]Disparity is significantly more prevalent among lesbians or gay men than among their bisexual counterparts at an α level of 0.05.

[b]Disparity is significantly more prevalent among bisexual men than among their gay counterparts at an α level of 0.05.

[c]Item available in 2013 only.

[d]Includes stroke, heart attack, angina, high blood pressure, chronic obstructive pulmonary disease, asthma, arthritis, low back or neck pain, diabetes, obesity, and cancer. A negative binomial model was applied for significance tests, and IRRs are reported.

women; it could also reflect selection bias resulting from premature mortality among those who are obese in younger adulthood.

We found higher likelihoods of ADL and IADL limitations among gay and bisexual older men, which have not been previously documented in other studies of younger LGB adults.[8] Such limitations may be associated with higher rates of disabling chronic conditions, such as cancer and angina pectoris, and likely require additional access to formal and informal caregiving. Yet, we found that sexual minority older men were more likely to live alone and less likely to have children in the household, which may result in an increased risk of social isolation in old age. Although sexual minority men had higher levels of education, this advantage did not lead to concomitant gains in resources such as income or employment.

Sexual minority older women exhibited lower rates of diabetes and a lower risk of

TABLE 3—General Health Outcomes Among Women and Men Aged 50 Years or Older, by Sexual Orientation: National Health Interview Survey, United States, 2013–2014

	Women			Men		
Health Indicator	Heterosexual (Ref), % (95% CI)	Lesbian/Bisexual, % (95% CI)	Adjusted OR (95% CI)	Heterosexual (Ref), % (95% CI)	Gay/Bisexual, % (95% CI)	Adjusted OR (95% CI)
Poor general health	20.0 (19.6, 20.4)	25.0 (20.8, 29.6)	1.75 (1.36, 2.24)[a]	19.8 (19.4, 20.3)	19.5 (16.8, 22.5)	1.18 (0.94, 1.47)
Disability	44.9 (44.4, 45.4)	44.9 (40.7, 49.2)	1.57 (1.32, 1.87)[a]	34.37 (33.8, 34.9)	38.1 (34.3, 42.0)	1.46 (1.22, 1.75)
ADL limitations	4.9 (4.6, 5.1)	0.9 (0.5, 1.5)	0.34 (0.20, 0.59)[b]	3.0 (2.8, 3.2)	5.8 (4.0, 8.4)	2.64 (1.82, 3.82)[a]
IADL limitations	9.5 (9.2, 9.8)	7.4 (5.5, 9.9)	1.30 (0.93, 1.82)	5.3 (5.1, 5.5)	7.5 (5.5, 10.2)	1.87 (1.31, 2.66)
Mental distress	17.2 (16.8, 17.6)	21.6 (18.6, 25.0)	1.33 (1.08, 1.63)	12.8 (12.4, 13.2)	19.2 (16.2, 22.6)	1.64 (1.29, 2.08)[b]

Note. ADL = activity of daily living; CI = confidence interval; IADL = instrumental activity of daily living; OR = odds ratio. Significance tests adjusted for age, race/ethnicity, income, and education, and heterosexual women and men were coded as the reference groups.

[a]Disparity is significantly more prevalent among lesbians or gay men than among their bisexual counterparts at an α level of 0.05.

[b]Disparity is significantly more prevalent among bisexual women or men than among their lesbian or gay counterparts at an α level of 0.05.

TABLE 4—Health Behaviors, Health Care Access, and Preventive Health Care Among Women and Men Aged 50 Years or Older, by Sexual Orientation: National Health Interview Survey, United States, 2013–2014

	Women			Men		
Health Indicator	Heterosexual (Ref), % (95% CI)	Lesbian/Bisexual, % (95% CI)	Adjusted OR (95% CI)	Heterosexual (Ref), % (95% CI)	Gay/Bisexual, % (95% CI)	Adjusted OR (95% CI)
Health behaviors						
Current smoker	12.7 (12.4, 13.1)	14.4 (11.8, 17.6)	0.97 (0.76, 1.23)	16.6 (16.2, 17.1)	21.4 (18.5, 24.6)	1.30 (1.10, 1.54)[a]
Former smoker	26.7 (26.2, 27.1)	34.8 (30.9, 39.0)	1.57 (1.32, 1.86)	38.4 (37.8, 38.9)	35.1 (31.5, 38.8)	0.99 (0.84, 1.18)
Excessive drinker[b]	9.4 (9.0, 9.8)	18.0 (14.2, 22.5)	1.53 (1.17, 2.02)	19.6 (18.9, 20.3)	25.81 (21.9, 30.2)	1.28 (1.00, 1.62)
Former drinker	19.4 (19.0, 19.8)	23.9 (20.2, 28.1)	1.57 (1.27, 1.96)[c]	22.0 (21.6, 22.5)	16.4 (13.9, 19.2)	0.84 (0.69, 1.03)
Physical activity ≥ 150 min/wk	37.5 (37.0, 38.1)	45.4 (41.2, 49.7)	1.02 (0.86, 1.20)	43.9 (43.2, 44.5)	48.8 (45.2, 52.5)	1.02 (0.87, 1.20)
Sleep problem	49.0 (48.5, 49.5)	64.0 (59.8, 68.0)	1.74 (1.46, 2.08)	41.8 (41.2, 42.4)	45.9 (42.1, 49.7)	1.14 (0.97, 1.34)
Health care access						
Insurance coverage	92.5 (92.2, 92.7)	93.8 (91.6, 95.4)	1.61 (1.20, 2.16)	91.8 (91.5, 92.1)	89.8 (87.4, 91.8)	0.86 (0.64, 1.16)
Primary source of care	95.0 (94.8, 95.2)	95.1 (93.2, 96.6)	1.25 (0.84, 1.86)	91.9 (91.6, 92.2)	91.1 (88.9, 92.9)	1.00 (0.77, 1.31)
Preventive health care						
Blood pressure screening	93.7 (93.4, 93.9)	95.6 (94.1, 96.8)	1.62 (1.07, 2.48)	90.4 (90.0, 90.7)	91.3 (89.4, 93.0)	1.21 (0.95, 1.55)
Mammogram[d]	61.0 (60.5, 61.6)	57.9 (53.4, 62.3)	0.85 (0.70, 1.02)	. . .	. . .	. . .
Flu shot	58.4 (57.9, 58.8)	56.1 (51.5, 60.5)	1.10 (0.91, 1.33)	52.2 (51.6, 52.8)	64.7 (61.2, 68.1)	1.95 (1.64, 2.33)
HIV test	24.0 (23.6, 24.4)	47.3 (43.1, 51.5)	2.07 (1.74, 2.47)	27.6 (27.1, 28.1)	76.1 (72.3, 79.5)	8.32 (6.81, 10.16)[c]

Note. CI = confidence interval; OR = odds ratio. Significance tests adjusted for age, race/ethnicity, income, and education, and heterosexual women and men were coded as the reference groups.

[a]Disparity is significantly more prevalent among bisexual women or men than among their lesbian or gay counterparts at an α level of 0.05.

[b]Data available in 2014 only.

[c]Disparity is significantly more prevalent among lesbians or gay men than among their bisexual counterparts at an α level of 0.05.

[d]Includes only women between 50 and 75 years of age.

ADL limitations despite heightened risks in some chronic conditions, poor general health, and disability. It will be important in future research to examine how some protective factors, such as physical activity and socioeconomic resources, among sexual minority older women might help delay the progression to certain chronic diseases and limitations in independent living. Sexual minority older women had higher incomes, educational levels, and employment rates than heterosexual older women despite heightened risks in several health indicators. They were also more likely to have health insurance coverage, whereas NHIS data for adults aged 18 years or older indicate that sexual minority women are more likely than heterosexual women to lack health insurance coverage.[8] It may be that sexual minority older women were aware at a younger age that they had to support themselves and were more likely to seek education and employment despite the traditional roles for women at the time. Recent policy changes may also help them secure health insurance.

The recognition of sexual minority families in the Affordable Care Act (Pub Law No. 111-148) as well as the 2013 Supreme Court decision in Windsor v. United States (570 US ___, 2013) may have made it easier for working sexual minority individuals and those who were married to obtain health insurance.

With respect to health behaviors, our data revealed more sleep problems among sexual minority older women than heterosexual women, a potentially understudied health issue in this population. Sexual minority men, as in previous studies, were more likely to report smoking.[8] However, we also found signs of resilience among sexual minority older adults. Sexual minority older women were more likely to report being former drinkers and smokers, suggesting that many of these women take action to reduce such adverse health behaviors and promote their own health as they age. In addition, as a positive sign that LGB older adults are accessing preventive care, sexual minority older adults fared better than heterosexual older adults in terms of HIV testing, blood pressure screening (among women), and flu shots (among men).

Previous studies have shown that greater levels of social support and community connectedness are associated with good health and optimal aging among LGB older adults.[30] Future studies need to examine aspects of both resilience and risk as a means of understanding the complex health issues in these populations.

Although studies involving larger samples of bisexual older adults are needed, our findings reveal important differences among sexual minority subgroups that need to be considered in prevention, intervention development, and research. Bisexual people may experience elevated stress and social isolation, in part as a result of marginalization within lesbian and gay communities as well as society in general. This disadvantaged status may have contributed to our findings that bisexual older men were at elevated risk for low back or neck pain, mental distress, and smoking and that bisexual older women were at greater risk for poverty.

Limitations

Although the results of our study have important implications for public health

research and practice, there are a few limitations. Our findings are based on self-reported data; incorporating objective measures would likely reduce errors in estimates. The sampling weights may not have adequately adjusted for sampling bias because of the possibility of higher nonresponse rates on sexual orientation questions among those in older age brackets and racial/ethnic minority groups.[34,35] The samples of sexual minority older adults in this study were not large enough to allow investigation of health disparity differences among such subgroups. Because the NHIS collects information annually, pooled multiple-year data will allow for further evaluation of the diverse experiences of sexual minority older adults and for the development of targeted prevention efforts and interventions to improve the health of this population. Although the inclusion of a sexual orientation item in the NHIS is an important step forward, data regarding gender identity and expression are still lacking.

Conclusions

This study is a significant step forward in understanding health disparities among sexual minority older adults. Our findings present a complex picture of sexual minority older adult health and suggest both that health disparities persist into older adulthood and that new health concerns emerge with the aging of the sexual minority population. Targeted prevention and intervention programs are needed to identify sexual minority older adults at greatest health risk and to promote good health in later life. AJPH

CONTRIBUTORS

K. I. Fredriksen-Goldsen originated the study, synthesized the conceptualization and analyses, and led the overall preparation of the article. H.-J. Kim contributed to the data analyses and assisted in the conceptualization, interpretation, and synthesis of the findings and discussion. C. Shiu conducted the data analyses, assisted in conducting the literature review, and contributed to the conceptualization and interpretation of the findings. A. E. B. Bryan assisted in conducting the literature review and in developing the article. All of the authors participated in the writing and editing of the article.

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HUMAN PARTICIPANT PROTECTION

The institutional review board of the University of Washington approved this study. Publicly available data were used in the study.

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Count Me In: Response to Sexual Orientation Measures Among Older Adults

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Count Me In: Response to Sexual Orientation Measures Among Older Adults

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Abstract

Health disparities exist among sexual minority older adults. Yet, health and aging surveys rarely include sexual orientation measures and when they do, they often exclude older adults from being asked about sexual orientation. This is the first population-based study to assess item nonresponse to sexual orientation measures by age and change over time. We compare response rates and examine time trends in response patterns using adjusted logistic regressions. Among adults aged 65 and older, the nonresponse rate on sexual orientation is lower than income. While older adults show higher nonresponse rates on sexual orientation than younger adults, the nonresponse rates have significantly decreased over time. By 2010, only 1.23% of older adults responded don't know/not sure, with 1.55% refusing to answer sexual orientation questions. Decisions to not ask sexual orientation among older adults must be reconsidered, given documented health disparities and rapidly changing social trends in the understanding of diverse sexualities.

Keywords

sexual minority health, measurement, sexual orientation, LGB, LGBT, older adults, aging

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Introduction

As the U.S. population undergoes dramatic demographic shifts, it is becoming increasingly diverse (U.S. Census, 2011; Vincent & Velkoff, 2010). As part of the increasing diversity, lesbian, gay, and bisexual (LGB) adults are estimated to comprise between 3.4% of the population based on sexual orientation identity (Gates & Newport, 2012) and up to 11.0% when sexual attraction is also considered (Gates, 2011). The Institute of Medicine (2011) reports that little is known about the health of lesbian, gay, bisexual, and transgender (LGBT) older adults. *Healthy People 2020* states research on sexual orientation is needed to inform and shape future health initiatives (U.S. Department of Health and Human Services, 2012).

Based on the inclusion of sexual orientation measures in some epidemiologic national health surveys, elevated risk of poor mental health is found among young and middle-aged LGB adults (Cochran, Mays, & Sullivan, 2003); higher likelihood of problematic alcohol consumption and drug use among lesbian and bisexual women and higher tobacco use among bisexual women (Drabble & Trocki, 2005); and higher prevalence of obesity among lesbians (Boehmer, Bowen, & Bauer, 2007). In addition, there is mounting evidence of mental and physical health disparities among LGB adults from state-level population-based health surveys. For example, LGB adults are at elevated risk of poor health, including a greater number of physical health conditions (Boehmer et al., 2007; Cochran & Mays, 2007; Dilley, Simmons, Boysun, Pizacani, & Stark, 2010), functional limitations (Conron, Mimiaga, & Landers, 2010; Fredriksen-Goldsen, Kim, & Barkan, 2012), and mental distress (Cochran & Mays, 2007; Dilley et al., 2010) compared to heterosexual adults.

Findings emerging from state-level population-based studies suggest that many of the health disparities that have been identified among LGB adults of younger age (Conron et al., 2010) persist into middle and older adulthood (Fredriksen-Goldsen, Kim, Barkan, Muraco, & Hoy-Ellis, 2013; Wallace, Cochran, Durazo, & Ford, 2011). While the inclusion of sexual orientation measures in public health surveys has provided evidence that young and middle-aged adults respond to sexual orientation questions (Ridolfo, Miller, & Maitland, 2012; VanKim, Padilla, Lee, & Goldstein, 2010), to what extent older adults respond to these questions is not yet known.

The knowledge of health disparities is crucial to inform the development of efficacious interventions to improve health. Yet, the field of LGB adult health, especially among older adults, is stymied by the lack of pertinent data collected. In fact, most national and state-level health surveys do not ask

sexual orientation measures, and among the population-based surveys that include sexual orientation measures, many only ask them of young and middle-age adults, excluding older adults (Redford & Van Wagenen, 2012). For example, the National Health and Nutrition Examination Survey (2011) asks about sexual orientation only among those aged 18–59. The National Survey of Family Growth (2012) also includes measures of sexual orientation, but the survey is only conducted with adults aged 18–44. Even in state-level health surveys, few include sexual orientation measures, and among those that do, many exclude older adults. The California Health Interview Survey, the largest state health survey, asks sexual orientation measures to adults but only up to the age of 70 (UCLA Center for Health Policy Research, 2012).

The rationale for not asking older adults sexual orientation identity questions seems to be anchored by several assumptions, including that older adults will neither understand nor respond to such measures and that such measures are "too sensitive" for older age-groups. For example, in a state-based health survey, only adults aged 18–64 were asked about sexual orientation measures based on the following rationale: "Surveyors reported that some older respondents seemed confused when asked the sexual orientation measure. A significantly higher percentage of adults aged 65 and older responded 'don't know'" (VanKim et al., 2010, p. 2393). The Williams Institute concludes "surveys that include sexual orientation measures are focused primarily on middle-aged adults" (The Sexual Minority Assessment Research Team, 2009, p. 27).

Despite the growing evidence that adults respond to sexual orientation questions with a low item nonresponse rate, little remains known about the response patterns to sexual orientation questions by age and changes over time. The Behavioral Risk Factor Surveillance System for Washington State (BRFSS-WA) was one of the earliest population-based studies to include a self-report sexual orientation measure for adults of all ages, providing a unique opportunity to investigate item response patterns by age and changes over time. In this article, we will utilize data from the BRFSS-WA to examine the following research questions:

Are their differences in item nonresponse rates on sexual orientation measures between differing age-groups (18–49; 50–64; and 65 and older)?
Are the item nonresponse rates on sexual orientation similar with those observed on other demographic measures?
How have item nonresponse patterns to sexual orientation measures changed over time among adults of differing ages?

Method

In this study, we utilized data from the BRFSS-WA, an annual telephone survey examining health behaviors and conditions of noninstitutionalized adults aged 18 and older, with core measures developed by the Centers of Disease Control and Prevention (CDC) and state-added questions. Further information can be found at http://www.cdc.gov/brfss. Washington State included a state-added measure of sexual orientation in 2003; so for this study, we aggregated data from 2003 to 2010, with a total unweighted N of 172,628 (2003: $n = 18{,}644$; 2004: $n = 18{,}587$; 2005: $n = 23{,}302$; 2006: $n = 23{,}760$; 2007: $n = 25{,}881$; 2008: $n = 22{,}532$; 2009: $n = 20{,}294$; and 2010: $n = 19{,}628$).

In terms of sexual orientation, BRFSS-WA asks respondents the following question: "Now I'm going to ask you a question about sexual orientation. Do you consider yourself to be heterosexual, that is straight; homosexual, that is gay or lesbian; bisexual, or something else? Remember your answers are confidential." In the event that respondents asked for clarification or inquired why such questions were being asked, the interviewer responded: "Research has shown that some sexual minority community members have important health risk factors, such as smoking. We are collecting information about sexual orientation to learn whether this is true in Washington. You don't have to answer any question if you don't want." The sexual orientation question is followed by the CDC core questions including health status, health care access, health conditions, health behaviors, and sociodemographic information. Nonresponses consist of those who answered "don't know" or "not sure" and those who refused to answer.

Age was categorized into three groups, adults aged 18–49, 50–64, and 65 and older. For the purpose of understanding background characteristics of survey respondents by age, we examined sexual orientation (lesbian/gay, bisexual, heterosexual, and other), gender (men vs. women), income ($\leq$200% federal poverty level [FPL] vs. > 200% FPL), education ($\leq$high school vs. $\geq$some college), and race/ethnicity (Hispanic, Non-Hispanic White, African American, Asian American/Pacific Islander, American Indian, Multiracial, and Other).

Statistical Analysis

Stata version 11.0 (StataCorp LP, College Station, TX) was used for data analyses. Data were weighted to adjust for the unequal probability of respondent selection and telephone noncoverage to ensure sample representativeness

of the population. Comparisons of weighted prevalence were conducted utilizing 95% confidence intervals (CIs); a difference between two weighted prevalence rates is significant at the α level of .05 if corresponding 95% CIs do not overlap. First, we estimated overall weighted prevalence of background characteristics by age-groups including age 18–49, 50–64, and 65 and older. Second, nonresponse rates (either "don't know/not sure" or "refuse to answer;" not including missing data due to partial completion of the survey) on sexual orientation, income, education, and race/ethnicity and their 95% CI were estimated for the three age-groups. A logistic regression was applied to examine to what extent age was associated with nonresponse on sexual orientation, after controlling for gender, income, education, and race/ethnicity. In addition, specific types of nonresponses on sexual orientation were further examined by estimating weighted prevalence of "don't know/not sure" and "refuse to answer." Finally, weighted rates of "don't know/not sure" along with 95% CIs on sexual orientation among the three age-groups were estimated by the survey year. Adjusted logistic regressions were applied to assess whether the rates of "don't know/not sure" change by the survey year in each age-group, after controlling for gender, income, education, and race/ethnicity. The same adjusted logistic analyses were applied to the rates of "refuse to answer" on sexual orientation.

Results

Background Characteristics

Table 1 presents key background characteristics by the three age-groups. The weighted estimates of women significantly increase by age when 95% CIs for adults aged 18–49, 50–64, and 65 and older are compared. Adults aged 65 and older are less likely than those aged 18–49, but more likely than those aged 50–64 to report their household income at or below 200% FPL. The education level for adults aged 65 and older is similar with that for adults aged 18–49 but is lower than that for adults aged 50–64. Racial and ethnic diversity decreases as age increases. The prevalence of non-Hispanic Whites for adults aged 65 and older is significantly higher than that for both adults aged 18–49 and 50–64, and the prevalence of Hispanics, African Americans, Asian Americans or Pacific Islanders, American Indian/Alaska Natives, and those multiracial significantly decreases as age increases.

The prevalence of lesbians/gay males and bisexuals decreases with increased age. The rates of lesbians/gay males and bisexuals among adults

Table 1. Weighted Prevalence Estimates of Background Characteristics by Age: Washington State Behavioral Risk Factor Surveillance System (BRFSS-WA), 2003–2010.

	Total	18–49	50–64	65 and older
Background	Weighted % [95% CI]	Weighted % [95% CI]	Weighted % [95% CI]	Weighted % [95% CI]
Gender, women	50.55 [50.19, 50.90]	49.12 [48.60, 49.64]	50.20 [49.65, 50.75]	56.77 [56.19, 57.36]
Income, $\leq$ 200% federal poverty level	32.39 [32.03, 32.76]	37.29 [36.75, 37.84]	20.93 [20.46, 21.41]	31.97 [31.38, 32.57]
Education, $\leq$ high school	32.44 [32.10, 32.79]	35.14 [34.63, 35.66]	23.56 [23.10, 24.03]	36.16 [35.61, 36.71]
Race/ethnicity				
Hispanic	7.88 [7.66, 8.11]	11.38 [11.02, 11.74]	3.18 [2.97, 3.39]	1.63 [1.48, 1.79]
Non-Hispanic White	81.96 [81.65, 82.27]	76.25 [75.77, 76.72]	89.17 [88.79, 89.53]	93.02 [92.69, 93.33]
African American	1.82 [1.71, 1.93]	2.22 [2.06, 2.40]	1.34 [1.20, 1.49]	0.99 [0.87, 1.13]
Asian American/Pacific Islander	3.89 [3.72, 4.07]	5.04 [4.78, 5.32]	2.49 [2.28, 2.71]	1.59 [1.42, 1.78]
American Indian	1.24 [1.16, 1.33]	1.42 [1.31, 1.55]	1.13 [1.02, 1.25]	0.70 [0.61, 0.81]
Multiracial	2.86 [2.73, 2.99]	3.30 [3.11, 3.50]	2.40 [2.24, 2.57]	1.85 [1.70, 2.01]
Other	0.34 [0.30, 0.40]	0.39 [0.32, 0.47]	0.30 [0.24, 0.37]	0.22 [0.17, 0.29]
Sexual orientation				
Heterosexual	96.87 [96.73, 97.01]	96.06 [95.83, 96.27]	97.68 [97.51, 97.84]	98.82 [98.68, 98.94]
Gay or lesbian	1.59 [1.50, 1.69]	1.88 [1.75, 2.03]	1.48 [1.36, 1.62]	0.58 [0.50, 0.68]
Bisexual	1.31 [1.22, 1.42]	1.83 [1.68, 2.00]	0.65 [0.56, 0.74]	0.32 [0.26, 0.39]
Other	0.23 [0.19, 0.27]	0.23 [0.17, 0.30]	0.19 [0.16, 0.23]	0.28 [0.22, 0.35]

Note. CI = confidence interval. 95% CIs were computed to compare population estimates of background characteristics by age-groups.

aged 65 and older are 0.58% and 0.32%, respectively, and these rates are significantly lower than the rates of lesbians/gay males and bisexuals among adults aged 50–64, which are 1.48% and 0.65%, respectively. In addition, the prevalence rates of lesbians/gay males and bisexuals for adults aged 50–64 are significantly lower than those for adults aged 18–49, which are 1.88% and 1.83%, respectively. The rates of identifying as "other" were not different between the three age-groups. The overall response rates on sexual orientation measures from 2003 to 2010 are 98.43% (95% CI = [98.28, 98.56]) among adults aged 18–49, 98.50% (95% CI = [98.35, 98.63]) among adults aged 50–64, and 95.96% (95% CI = [95.73, 96.19]) among adults aged 65 and older.

Nonresponse Rates on Sexual Orientation

Next, we estimate nonresponse rates on sexual orientation including responding "don't know/not sure" and "refuse to answer" compared with estimated nonresponse rates on other demographic questions. Table 2 demonstrates that when considering 95% CIs, the nonresponse rate on sexual orientation is notably lower than the nonresponse rates on income, whereas the nonresponse rate on sexual orientation is slightly higher than that on education and race/ethnicity. This pattern is observed across all three age-groups. For example, among adults aged 65 and older, the nonresponse rates on sexual orientation, income, education, and race/ethnicity are 4.04%, 17.68%, 0.28%, and 0.91%, respectively.

Additional analyses reveal that those who did not respond to income, education, and race/ethnicity show higher likelihood of nonresponse on sexual orientation. While nonresponse rates on sexual orientation among those who responded to income, race/ethnicity, and education are 1.52% (95% CI = [1.43, 1.62]), 1.85% (95% CI = [1.76, 1.95]), and 1.94% (95% CI = [1.85, 2.04]), nonresponse rates on sexual orientation among those who did not respond to the other demographic measures are 5.33% (95% CI = [4.92, 5.76]), 12.69% (95% CI = [10.50, 15.26]), and 26.02% (95% CI = [18.77, 34.87]), respectively.

As Table 2 demonstrates, adults aged 65 and older show significantly higher nonresponse rates, than younger age-groups, on sexual orientation as well as income and education when 95% CIs are compared. We found that the association between nonresponse on sexual orientation and age remains significant, even after controlling for gender, income, education, and race/ethnicity; the adjusted odds of nonresponse on sexual orientation for adults aged 18–49 (adjusted odds ratio [AOR] = 0.31; $p < .001$) and 50 to 64

Table 2. Weighted Item Nonresponse Rates on Sexual Orientation, Income, and Education by Age: Washington State Behavioral Risk Factor Surveillance System (BRFSS-WA), 2003–2010.

		Sexual orientation					
	Total		Don't know/not sure	Refuse to answer	Income	Education	Race/ethnicity
Age	Weighted % [95% CI]	AOR[a]	Weighted % [95% CI]	Weighted % [95% CI]	Weighted % [95% CI]	Weighted % [95% CI]	Weighted % [95% CI]
Total	1.93 [1.84, 2.03]	—	0.75 [0.69, 0.82]	1.18 [1.11, 1.25]	12.16 [11.91, 12.42]	0.16 [0.14, 0.19]	1.16 [1.08, 1.25]
18–49	1.57 [1.44, 1.72]	0.31***	0.66 [0.57, 0.76]	0.92 [0.82, 1.02]	11.77 [11.40, 12.16]	0.14 [0.11, 0.19]	1.25 [1.13, 1.38]
50–64	1.50 [1.37, 1.65]	0.43***	0.41 [0.34, 0.50]	1.09 [0.98, 1.21]	9.69 [9.37, 10.03]	0.13 [0.10, 0.18]	1.10 [0.99, 1.23]
65 and older	4.04 [3.81, 4.27]	(ref)	1.68 [1.54, 1.84]	2.35 [2.18, 2.54]	17.68 [17.24, 18.14]	0.28 [0.22, 0.35]	0.91 [0.81, 1.03]

Note. CI = confidence interval; AOR = adjusted odds ratio; nonresponse rates on income, education, and race/ethnicity included both the rates of "don't know/not sure" and rates of "refuse to answer;" 95% CIs of weighted estimates were computed to compare item nonresponse rates by age-groups.

[a]An adjusted logistic regression was applied to examine to compare the odds of item nonresponse on sexual orientation by age-groups with coding age 65 and older as the reference group and after controlling for gender, income, education, and race/ethnicity.

***$p < .001$.

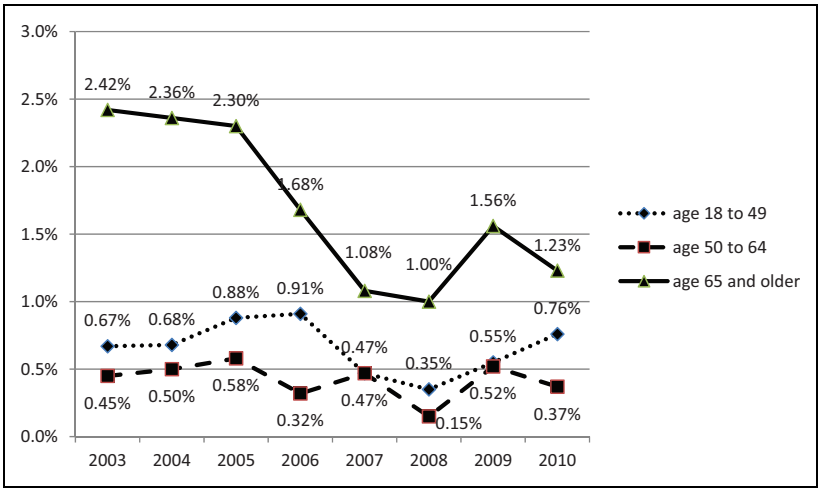

Figure 1. Time trends in rates of "don't know/not sure" on sexual orientation by age: Washington state behavioral risk factor surveillance system, 2003–2010 (unweighted $n = 172{,}628$).

(AOR = 0.43; $p < .001$) were significantly lower than those for adults aged 65 and older.

The specific types of nonresponse to sexual orientation are illustrated in Table 2. Overall, 0.75% responded "don't know/not sure" and 1.18% refused to answer. Those aged 65 and older were more likely to respond "don't know/not sure" and to "refuse to answer" than the younger population groups, including those aged 18–49 and those aged 50–64, when 95% CIs are compared.

Trends in Nonresponse Rates on Sexual Orientation

Figure 1 depicts the rates of "don't know/not sure" by survey year and age-groups. In 2003, the rate of "don't know/not sure" nonresponse for adults aged 65 and older (2.42%; 95% CI = [1.90, 3.07]) is significantly greater than that for those aged 18–49 (0.67%; 95% CI = [0.46, 0.99]) and for those aged 50–64 (0.45%; 95% CI = [0.26, 0.78]). The rates for those aged 65 and older significantly decrease over time, and it dropped to 1.23% (95% CI = [0.96, 1.58]) in 2010. The result of an adjusted logistic regression indicates that among adults aged 65 and older, the odds of responding "don't know/not sure" significantly decreased with each survey year (AOR = 0.88; $p < .001$),

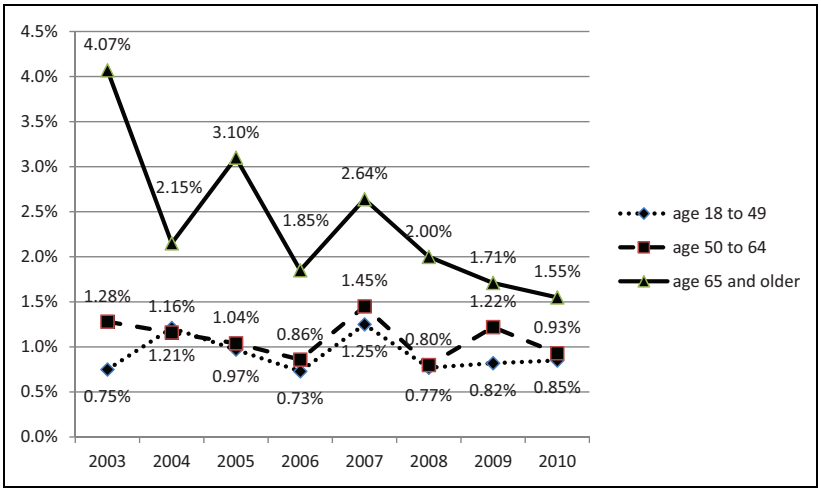

Figure 2. Time trends in rates of "refuse to answer" on sexual orientation by age: Washington state behavioral risk factor surveillance system, 2003–2010 (unweighted $n = 172{,}628$).

even after adjusting for gender, income, education, and race/ethnicity. We did not observe significant changes of "don't know/not sure" rates over time among adults aged 18–49 and 50–64.

The rates of "refuse to answer" on sexual orientation by survey year and age-groups demonstrate similar patterns (Figure 2). The refusal rate for adults aged 65 and older (4.07%; 95% CI = [3.34, 4.95]) is higher than those for adults aged 18–49 (0.75%; 95% CI = [0.56, 0.99]) and 50–64 (1.28%; 95% CI = [0.91, 1.78]) in 2003. The difference in the refusal rates by age-groups decreased and became more narrow over time; the refusal rate for adults aged 65 and older decreased to 1.55% (95% CI = [1.23, 1.97]) in 2010. According to adjusted logistic regressions, among adults aged 65 and older, the odds of refusing to answer significantly decreased by survey year (AOR = 0.87; $p < .001$). The refusal rates for both adults aged 18–49 and 50–64 are low at approximately 1% and do not show significant change over the specified years.

Discussion

Existing research illustrates that LGB adults experience systematic health disparities (Conron et al., 2010; Dilley et al., 2010; Fredriksen-Goldsen,

Emlet, et al., 2013; Fredriksen-Goldsen, Kim, et al., 2013; Institute of Medicine, 2011; Wallace et al., 2011). Obtaining quality data on LGB adults of all ages is necessary to address health disparities and identify modifiable factors. Yet, sexual orientation measures are rarely included in public health surveys and when included, they are often only asked of younger and middle-aged adults, with age-based restrictions resulting in the exclusion of older adults. Yet, our findings not only confirm that most adults, including those aged 65 and older, respond to sexual orientation measures (with 98% response rate in 2003 through 2010), the response rate on sexual orientation is more than 10% higher than that of household income.

These findings mirror those found among adults, 18 and older, in other studies. For example, in New Mexico BRFSS, adults aged 18 and older are also less likely to refuse to answer on sexual orientation measures compared to income (VanKim et al., 2010). In the Nurses' Health Study II, less than 1% of adult women refused to respond to sexual orientation measures, and the refusal to answer such questions did not result in the refusal to complete the remaining survey questions (Case et al., 2006). Among adults in general, measures of sexual orientation, when included as part of a standard demographic set of questions, have been found to be no more sensitive than other demographic questions (Scout & Senseman, 2011).

Some argue that survey respondents fail to respond to sexual orientation questions not because the questions are too "sensitive," but because they have rarely thought about or do not understand sexual orientation identity (Miller & Ryan, 2011; Ridolfo et al., 2012). Our findings suggest that there has been significant societal change and only a very small number of respondents do not understand sexual orientation measures. Concomitant with such changes, field testing of sexual orientation measures have been conducted for inclusion in the National Health Interview Survey (The Office of Minority Health, 2011).

This study identified important nonresponse patterns by age-group, which may reflect age and/or cohort effects, taking into account both historical and social context. While those aged 18–49 compared to 50–64 have comparable response rates to sexual orientation measures, those aged 65 and older are significantly more likely to answer "don't know/not sure" or to "refuse to answer." Perhaps, more importantly, however, within an 8-year period, the nonresponse rates among adults aged 65 and older on sexual orientation measures declined significantly. The "don't know/not sure" rate among adults aged 65 and older was, by 2010, only 1.23%, and the refusal rate was low at 1.55%. The rapid change we found in the response to sexual orientation measures among older adults may reflect the rapid social change that is

occurring in our society and the increasing understanding of diverse sexual orientations across growing segments of the population. In fact, the findings presented here show a relatively steeper drop in nonresponse in 2006, which was when the state of Washington debated and passed statewide nondiscrimination legislation prohibiting discrimination by sexual orientation and gender identity.

Despite age-group differences, the findings reveal that the vast majority of older adults aged 65 and older do respond to sexual orientation measures. Interestingly, in pilot research, we found that a small proportion of older adults, across differing sexual orientations, did not understand specific terms used to describe sexual orientation since they may not be familiar with categories such as heterosexual, lesbian, gay, or bisexual. An earlier study, also, found that some older respondents do not understand the term heterosexual (Haseldon & Joloza, 2009). More recently, a preliminary study using cognitive interviewing, conducted by Redford and Van Wagenan (2012), assessed the feasibility of sexual orientation measurement tools for older adults and found most adults aged 65 and older comprehend the meaning of sexual orientation categories, concluding that such questions are appropriate to ask on population-based surveys.

The findings in this study support the elimination of age restrictions to sexual orientation measures in research and public health and aging-related surveys. In order to respond to the growing needs of LGBT adults, including LGBT older adults, it is imperative that quality data on both sexual orientation and gender identity be collected and that age restrictions be eliminated. Both New Mexico BRFSS in 2009 (VanKim & Padilla, 2010) and Massachusetts BRFSS in 2010 (Interuniversity Consortium for Political and Social Research News, 2010), for example, removed the previous age-based restriction of 64 years on the sexual orientation questions and also began collecting data on gender identity.

In *Healthy People 2020*, it states that "There is growing recognition that data sources are limited for certain subpopulations of older adults, including the aging lesbian, gay, bisexual, and transgender populations" (U.S. Department of Health and Human Services, 2012). Yet, most recent population estimates indicate that nearly 100 million Americans are aged 50 and older (U.S. Census Bureau, 2011), with exponential growth expected over the next few decades. Based on population estimates and adjusting for nonresponse bias, we estimate that 2.4% of adults aged 50 and older identify as lesbian, gay, bisexual, or transgender, accounting for more than 2.4 million older adults. Given that the number of older adults in the United States is projected to more than double by 2030, LGBT adults aged 50 and older will account for more than 5 million people.

While this study highlights findings regarding the response patterns of older adults to sexual orientation measures, limitations must be considered. The data used are only representative of Washington State and not generalizable to the U.S. population. Further research is needed to examine variation by state and to determine when and under what conditions people of all ages self-report sexual orientation in surveys. The BRFSS relies on a telephone survey with English- and Spanish-speaking callers, and the method may not reach persons who do not have a landline or who do not speak English or Spanish.

As we move forward, a comprehensive approach to data collection is needed to better understand health and sexual orientation among diverse populations. Assessment of multiple dimensions of sexuality is needed, including sexual orientation identity, sexual behavior and function, attraction, and romantic and intimate relationships. In future research, it is essential to consider how intersecting identities influence response patterns to sexual orientation identity measures. The inclusion of gender identity measures is also desperately needed because transgender adults (Institute of Medicine, 2011), including transgender older adults, evidence pronounced health disparities (Fredriksen-Goldsen, Cook-Daniels, et al., 2013; Fredriksen-Goldsen, et al., 2011). Innovative ways of measuring sexual orientation and behavior and gender identity are needed to reduce age and cultural biases in health and aging-related surveys.

Population-based data to estimate prevalence of health indicators for LGBT populations of all ages are needed. Given national health objectives (U.S. Department of Health and Human Services, 2012), it is imperative that population-based surveys integrate sexual orientation identity and related measures for all ages. Moreover, nonresponse patterns that emerge should not be simply ignored, but fully investigated so measures can be constructed to mitigate potential age and cultural biases. Existing myths that sexual orientation identity measures are too sensitive or controversial for older adults are unfounded and decisions to not ask such questions must be reconsidered in light of rapidly changing social trends and increasing awareness of diverse sexualities.

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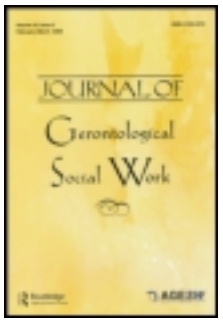

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Creating a Vision for the Future: Key Competencies and Strategies for Culturally Competent Practice With Lesbian, Gay, Bisexual, and Transgender (LGBT) Older Adults in the Health and Human Services

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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

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Sexual orientation and gender identity are not commonly addressed in health and human service delivery, or in educational degree programs. Based on findings from Caring and Aging with Pride: The National Health, Aging and Sexuality Study *(CAP), the first national federally-funded research project on LGBT health and aging, this article outlines 10 core competencies and aligns them with specific strategies to improve professional practice and service development to promote the well-being of LGBT older adults and their families. The articulation of key competencies is needed to provide a blueprint for action for addressing the growing needs of LGBT older adults, their families, and their communities.*

KEYWORDS diversity, minority aging, lesbian, gay, bisexual, transgender, LGBT, educational standards, cultural competency training

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INTRODUCTION

By 2030, the number of lesbian, gay, bisexual, and transgender (LGBT) older adults in the United States will likely more than double, with 10,000 baby boomers turning 65-years old every day and continuing to do so for the next 17 years (Pew Research Center, 2010). LGBT adults are estimated to comprise between 3% and 4% of the general US adult population (Gates & Newport, 2012), and up to 11% when considering both sexual behavior and attraction (Gates, 2011). Yet, as a result of historical, social, and cultural forces, LGBT older adults have largely been invisible in the American landscape (Fredriksen-Goldsen & Muraco, 2010). Aging, combined with a history of marginalization and discrimination, increases the potential vulnerability of LGBT older adults, given heightened risks of discrimination and victimization, and the fear of and potential difficulty in accessing culturally responsive services.

LGBT older adults are an at-risk population, experiencing significant aging and health disparities (Fredriksen-Goldsen, Kim, et al., 2011). The first national and federally-funded research project, *Caring and Aging With Pride: The National Health, Aging and Sexuality Study* (CAP), was designed to better understand the risk and protective factors associated with aging, health, and well-being of LGBT midlife and older adults. In a comparison of key health indicators by sexual orientation, lesbian, gay, and bisexual older adults have higher rates of poor mental health and disability than their older heterosexual peers (Fredriksen-Goldsen, Kim, Barkan, Muraco, & Hoy-Ellis, 2013). The risk of cardiovascular disease and obesity is higher among older lesbians and bisexual women than for older heterosexual women; older gay and bisexual men are more likely than heterosexual men of similar age to have poor general health and to live alone (Fredriksen-Goldsen, Kim, Barkan, et al., 2013). Transgender older adults experience the highest rates of victimization as compared to nontransgender lesbian, gay, and bisexual adults, and have even higher rates of disability, stress, and poor mental and physical health (Fredriksen-Goldsen, Cook-Daniels, et al., 2013).

Despite the adversity experienced by many LGBT older adults, they display remarkable resilience. Many have built vibrant communities and a sensibility that they can count on each other, as exemplified during the height of the AIDS pandemic in the United States (Rofes, 1998). Many LGBT older adults have created close, intimate families of choice, comprised of loved ones, including current and former partners and friends (Heaphy, 2009). Yet, population estimates suggest that one-third to one-half of older gay and bisexual men live alone, without adequate services or supports (Fredriksen-Goldsen, Kim, Barkan, et al., 2013; Wallace, Cochran, Durazo, & Ford, 2011). In the CAP project, 61% of gay and 53% bisexual male participants reported experiencing loneliness (Fredriksen-Goldsen, Kim, et al., 2011).

Many in the LGBT community have been affected by the HIV/AIDS crisis. It is estimated that within 2 years, half of the 1.2 million Americans living with HIV will be 50 years old or older (High, Brennan-Ing, Clifford, Cohen, & Deeks, 2012). Even those who are not HIV-positive themselves have been affected by HIV, experiencing trauma and survivors' guilt through multiple cumulative losses from experiencing the deaths of friends, partners, and other loved ones (Rofes, 1998). This can have serious deleterious consequences for health and aging, which providers need to be aware of and be prepared to address (Wight, LeBlanc, de Vries, & Detels, 2012).

Need for LGBT-Specific Competencies

Social work students and practitioners often lack adequate knowledge and skills for competent practice with LGBT populations (Camilleri & Ryan, 2006; Fredriksen-Goldsen, Woodford, Luke, & Gutierrez, 2011; Logie, Bridge, & Bridge, 2007; Obedin-Maliver et al., 2011; Swank & Raiz, 2010), even though educational accreditation bodies address the need for preparedness for culturally competent practice. For example, the Council on Social Work Education (CSWE) prioritizes multicultural competency as an essential factor in both educational training and practice, with the inclusion of sexual and gender minority groups in definitions of multiculturalism (CSWE, 2008; National Association of Social Workers [NASW], 2008). The Patient Protection and Affordable Care Act mandates cultural competency in healthcare settings (Health Resources and Services Administration, 2012), with multiple initiatives intended to address health disparities and improve cultural competency with special populations, including LGBT and older adult populations.

Over the past several years, considerable efforts have also been made to increase the competence of both students and practitioners working with an aging population. Such competencies have been infused into social work curricula (Lee & Waites, 2006), as "social workers interact with older adults and their families in nearly all practice settings—child welfare, health and mental health, schools, domestic violence, and substance use to name a few—but are typically not formally prepared to do so" (CSWE Gero-Ed Center, 2013, para. 3). Additionally, efforts have been made to improve the competence of geriatric social work practitioners (Geron, Andrews, & Kuhn, 2005).

Knowledge, skills, and attitudes are three central components of culturally competent practice (Van Den Bergh & Crisp, 2004), which is foundational to removing barriers to accessing quality services and ensuring a qualified workforce in the health and human services. The identification of key competencies and content to support culturally competent practice is needed to provide a blueprint for action to address the growing social and health needs of LGBT older adults, their families, and their communities. The articulation and development of key competencies in this article is

based on specific research findings with LGBT older adults and extant literature, as well as within the context of core competencies required by the CSWE (2008) Educational Policy and Accreditation Standards (EPAS), and the 2009 Geriatric Social Work Competency Scale II with Life-long Leadership Skills (GSW II). In this article, we outline key competencies and specific strategies to promote culturally competent practice with LGBT older adults and their families, and suggest specific strategies and resources to support these competencies.

METHODOLOGY

Competencies are composed of knowledge, attitudes, and values that are actualized through practice behaviors and assessable, measurable skills. The competencies articulated herein were developed based on a review of existing LGBT health and aging literature, CAP research findings, and an analysis of both CSWE's (2008) EPAS 10 core competencies, and the 2009 GSW II. The GSW II assesses micro and macro levels of practice via 50 skill-statements, utilizing a 5-point Likert scale (0 = *not skilled at all*, through 4 = *expert skill*). See CSWE (2010) for a full description of the iterative process used to establish these competencies.

In assessing each of the established sets of competencies, we asked, "What particular skills, knowledge, or attitudes are uniquely necessary for culturally competent practice with LGBT older adults at the required generalist level?" We also provide relevant background for each competency and suggest teaching content and resources to support attainment of students' and practitioners' competency at the generalist level. It is important to recognize that social work students engage in direct practice through foundational and advanced practica, and postdegree social work practitioners are required to engage in ongoing continuing education. Thus, the distinction between social work students and practitioners in regards to culturally competent practice and education is to some degree blurred.

Through the lens of LGBT aging, for this project we assessed the existing literature, the CAP findings, and both sets of competencies (i.e., EPAS, GSW II) for congruency and divergency for social work practice with LGBT older adults. Quotes from LGBT older adults who participated in the CAP study are included to highlight their voices and first-hand knowledge as they pertain to culturally competent practice. This process culminated with the 10 competencies recommended in this article, which are aligned with the the CSWE EPAS and the GSW II, and are summarized in Appendix A. These competencies are tailored to account for the unique circumstances, strengths, and challenges facing LGBT older adults.

1. Critically Analyze Personal and Professional Attitudes Toward Sexual Orientation, Gender Identity, and Age, and Understand How Factors Such as Culture, Religion, Media, and Health and Human Service Systems Influence Attitudes and Ethical Decision-Making

Heterosexism is the dominant culture's valuing of heterosexuality as the only natural, normal expression of human sexuality. When heterosexism is internalized, individuals, groups, and institutions hold and enact associated anti-LGBT stereotypes, beliefs, and attitudes. These may manifest in overt acts of victimization and discrimination, or covertly as attitudes existing below the level of awareness, inadvertently supporting discriminatory behaviors and conditions (Szymanski, Kashubeck-West, & Meyer, 2008).

Societal and internalized heterosexism also underlies ethical dilemmas in working with people with nonheteronormative identities. As a 66-year-old lesbian from the CAP study shared, "isolation, finding friend support, caregiving, and health are the biggest issues older gay persons face. Who will be there for us; who will help care for us without judgment?" Ageist stereotypes, beliefs, and attitudes operate in a manner similar to heterosexism (Cronin & King, 2010). Such biases embedded in personal and cultural beliefs are reinforced through religious doctrine, education, and the media.

Unaddressed biases can manifest in the form of micro-aggressions, "generally characterized as brief, daily assaults on minority individuals, which can be social or environmental, as well as intentional or unintentional" (Balsam, Molina, Beadnell, Simoni, & Walters, 2011, p. 163). Regardless of intent, these everyday experiences of assaults, insults, and invalidations can have profound and deleterious effects on LGBT older adults' mental and physical health, the helping relationship itself, and whether or not services are accessed and utilized.

The NASW Code of Ethics states that "social workers should obtain education about and seek to understand the nature of social diversity and oppression with respect to race, ethnicity, national origin, color, sex, *sexual orientation, gender identity* or *expression, age*. . ." (NASW, 2008, p. 1.05(c), italics added). Values related to serving those in need are reflected in the Hippocratic Oath, and in nursing (American Nurses Association, 2001). One of the challenges in applying ethics in social and health services settings that serve marginalized populations is that different cultures and groups often hold conflicting values (Kastrup, 2010). For example, religion has a long history of prescribing traditional gender norms and beliefs about heterosexuality. Such religious prescription has often been used to justify legal sanctioning of sexual and gender minorities (Tuck, 2012).

The NASW professional Code of Ethics mandates that professional values supersede personal values. Yet, some practitioners and students are instructed that if their moral or religious beliefs prevent them from treating sexual minorities with the same dignity and respect as any other client, they "should refer the client to someone who can" (Segal, Gerdes, & Steiner,

2013, p. 18). Such an approach creates unequal application and tensions in the prioritization of professional responsibilities, and is inconsistent with existing ethical standards.

Students and practitioners in the social and health services, regardless of their sexual orientation (Mulé, 2006), gender identity, or age, need to systematically and regularly assess their own attitudes and beliefs, and understand how these impact their ability to effectively deliver competent and unbiased care. Evidence-based self-assessment tools to support attainment of this competency include the Multicultural Counseling Inventory (Green et al., 2005); Age Is More, an online, self-scoring tool to assess ageism (Age Is More, 2013); and the Implicit Association Test, a self-administered, web-based assessment of implicit attitudes toward different cultural groups by characteristics such as sexual orientation, skin color, age, gender, and ability (Project Implicit, 2011).

Two online tools, *Ethics Framework: Overview* (Frolic et al., 2010), and *IDEA: Ethical Decision-Making Framework* (Trillium Health Centre, n.d.) can support achievement of the knowledge and skills to work through ethical dilemmas. Both provide overviews, rationales, detailed guidelines, and worksheets for dealing with ethical dilemmas. The key competency described here aligns with EPAS: Apply critical thinking to inform and communicate professional judgments and engage social work ethical principles to guide professional practice; and with GSW: assess and address values and biases regarding aging.

2. Understand and Articulate the Ways That Larger Social and Cultural Contexts May Have Negatively Impacted LGBT Older Adults as a Historically Disadvantaged Population

In culturally competent practice with LGBT older adults, it is important to understand not only the current contexts of their everyday lives, but also the continuing influence of historical, social, and cultural forces throughout the courses of their lives (Elder, 1994, 1998). Today's LGBT older adults constitute three different cohorts, including the Baby Boom Generation (b. 1946–1964), the Silent Generation (b. 1925–1945), and the Greatest Generation (b. 1901–1924); each cohort came of age during distinct historical periods. For example, the Silent Generation (those born prior to 1946) came of age during the McCarthy Era, a time when same-sex behavior and identities were severely pathologized and criminalized. The American Psychiatric Association considered homosexuality to be a "sociopathic personality disorder" until its removal from the *Diagnostic and Statistical Manual of Mental Disorders* (DSM) in 1973, with some LGBT people involuntarily committed and subjected to brutal treatments, including castration and lobotomy, in attempts to "cure" (Silverstein, 2009). Gender variance is still, even today, stigmatized in the DSM-5 (American Psychiatric Association, 2013), with gender dysphoria identified as a psychological disorder if gender nonconformity

results in clinically significant distress. Given the historical circumstances of their lives, many LGBT older adults have spent years concealing their sexual orientation and gender identity from others, including health and human service providers.

Regardless of what point in the life course persons disclose their sexual orientation (e.g., adolescence, older adulthood), first awareness of same-sex sexual attraction often emerges in childhood, adolescence, or occasionally early adulthood, even if it is not acted upon (Floyd & Bakeman, 2006). Awareness of gender identity is evident even earlier, primarily during the preschool years (Halim, Ruble, & Amodio, 2011). That awareness is contextualized by the larger sociohistorical context, and is particularly salient during adolescence and early adulthood, when identity formation and individuation are critical. Hence, the consequences of a sexual or gender minority identity development during the McCarthy era may be quite different from today. For example, baby boomers, the current cohort of midlife adults, came of age during the civil rights and Stonewall gay liberation movements, and the beginning of the AIDS pandemic era, when same-sex behaviors and identities were becoming decriminalized. A gay male baby boomer who participated in the CAP project stated:

> I am trying to get my generation involved in the welfare and well-being of GLBT seniors. I was part of the first post-Stonewall generation that helped create gay communities and identities in the light of day, and feel it is extremely important for my generation to continue to create dialogue and programs for seniors—especially access to healthcare and affordable housing.

As they attend to LGBT people across the life course, health and human service providers must be cognizant of how different historical events, social structures, and cultural factors intersect with developmental trajectories to shape individual life experiences. Additionally, they must identify both the typical and unique normative experiences of LGBT people as they age, as well as distinct transitions over the life course, such as identity management (i.e., coming out or not), and how they influence service use. The growing body of literature on LGBT history and culture supports such knowledge development. Canaday (2009), and Knauer (2011) are two such examples. The documentary film *Gen Silent* is also an excellent resource that highlights the current and historical social and cultural contexts that have impacted older LGBT adults' lives; complimentary educational tools are also available (http://stumaddux.com/GEN_SILENT.html). This competency aligns with EPAS: Apply knowledge of human behavior and the social environment; and with GSW: Respect and promote older adult clients' right to dignity and self-determination.

3. Distinguish Similarities and Differences Within the Subgroups of LGBT Older Adults, as Well as Their Intersecting Identities (Such as Age, Gender, Race, and Health Status) to Develop Tailored and Responsive Health Strategies

Many LGBT older adults share a common history of discrimination, victimization, and marginalization, yet each of these subgroups (i.e., lesbians, gay men, bisexual, and transgender people) are increasingly being recognized as heterogeneous subgroups (Fredriksen-Goldsen, Kim, et al., 2011). For example, there are often important gender differences in health and service needs that require tailored responses. Despite having higher levels of education than their older heterosexual peers, older LGB adults do not have commensurate incomes (Fredriksen-Goldsen, Kim, Barkan, et al., 2013; Wallace et al., 2011); transgender older adults are at even greater risk of unemployment, underemployment, and poverty (Grant et al., 2011).

Just as LGBT people are silenced and marginalized in mainstream society, transgender and bisexual adults, regardless of age, are often obscured within the lesbian and gay communities, and older LGBT adults are often invisible within LGBT communities (Lyons, Pitts, Grierson, Thorpe, & Power, 2010). Bisexual and transgender older adults may feel a need to conceal their sexual orientation or gender identity in lesbian and gay communities (as well as in the larger society), which not only increases the risk of poor mental health outcomes, but may also preclude these groups from accessing important group and community level resources.

The ability to recognize the intersectional nature of social identities and oppression is a critical competency for health and human services providers. HIV-positive LGBT older adults, for example, experience at least three intersecting marginalized identities: being HIV positive, being older, and being a sexual and/or gender minority (Cahill & Valadéz, 2013). Their social networks may be constricted, compared to younger HIV-positive peers; HIV-positive older adults are significantly more likely to live alone and those of color may be even more socially isolated, impacting morbidity and mortality (Emlet, Fredriksen-Goldsen, & Kim, 2013).

Other LGBT individuals may experience additional obstacles due to other intersecting identities such as sexism, ableism, and socioeconomic bias. As a 76-year-old lesbian shared:

> I have been homeless, staying briefly on the streets, in car & [sic] in shelter . . . until my daughter began to help me. I am unable to get cataracts operated on as she cannot help me by paying for glasses and unable to get 2 [sic] hearing aides [sic] (medical pays for one).

The intersection of multiple identities along with the confluence of risk factors may mean that these older adults have unique and often unmet service needs.

The emerging literature on the distinct needs of subgroups of LGBT older adults, such as Addis, Davis, Greene, Macbride-Stewart, and Sheperd (2009), can support the attainment of this competency. Another learning resource is for practitioners to consult with specialists who have expertise in working with specific subgroups. Some states, such as Washington, require that mental health professionals obtain annual consultations with a certified specialist with expertise with certain designated special populations (e.g., LGBT, racial/ethnic minorities) to assure culturally competent services. The American Psychological Association provides a helpful overview of some of the important differences between lesbians, gay men, bisexual, and transgender individuals (DeAngelis, 2002). This competency aligns with EPAS: Engage diversity and difference in practice; and GSW: Respect diversity among older adult clients, families and professionals (e.g., class, race, ethnicity, gender and sexual orientation).

4. Apply Theories of Aging and Social and Health Perspectives and the Most Up-to-Date Knowledge Available to Engage in Culturally Competent Practice With LGBT Older Adults

Issues of aging are generally neglected in sexual and gender minority studies, just as sexual orientation and gender identity are largely absent in gerontological and health studies (Institute of Medicine, 2011). Health and human service providers must have knowledge of human behavior and the major theoretical approaches that facilitate an understanding of aging, sexual orientation, and gender identity. One unique aspect of the social work profession is its attention to the person-in-environment perspective (Segal et al., 2013), which maintains that the client-system (i.e., individual, family, group, community) can only be fully understood in the context of its environment. The life-course perspective posits that it is essential for providers to account for the historical eras in which lives are, and have been, linked and embedded (Elder, 1994, 1998). In addition to attention to intersectionality and the life-course perspective, the Institute of Medicine (2011) has suggested that the minority stress model (Meyer, 1995, 2003), and the social-ecological model (Centers for Disease Control and Prevention, 2009) are useful for understanding the complexities of LGBT lives.

The minority stress model explains the disparately high rates of psychological distress among LGBT populations relative to their heterosexual peers as being the result of stressors unique to sexual and gender minorities (Hendricks & Testa, 2012; Meyer, 1995, 2003). These stressors are in addition to general stressors (e.g., involuntary unemployment, bereavement). Minority stressors include external, objective discriminatory acts and conditions, and internal, subjective stressors, such as internalized heterosexism, concealment of minority identity, and expectations of rejection (Meyer, 2003).

The social-ecological model (Centers for Disease Control and Prevention, 2009) stresses the importance of attending to the dynamic interplay of factors at four levels across the life-span that place people at risk. The individual level attends to biological factors and personal histories, such as age, education, and minority status, that affect people's lives and outcomes. At the next level, relationships (e.g., partners/spouses, friends, family members) impact lived experiences and behaviors. At the community level, neighborhoods, employment, and other settings influence the dynamics of relationships. Finally, at the societal level are cultural and social standards, and social, health, and other policies that foster inequities and cultivate climates, which can either delimit or support human agency. An example of how these perspectives and theories could inform culturally competent practice with LGBT older adults is the selection of group work as a possible intervention. Although group work is often a useful intervention modality for older persons, LGBT older adults may not feel safe in groups that are composed primarily of heterosexual elders, which might harbor a climate hostile to sexual and gender minorities. A 71-year-old gay male CAP participant stated:

> Gay people do not choose to be gay. Could we try to make that common knowledge? Because all the bigotry (at least among adults) rests on the notion that we gays made the horrible choice to be attracted to people of the same sex or were somehow "recruited to the gay lifestyle." I believe we could try harder to dispel this myth.

Community-based organizations, such as the LGBT Aging Project of Boston (http://www.lgbtagingproject.org), National Resource Center on LGBT Aging (http://www.lgbtagingcenter.org/index.cfm), and Training to Serve in Minnesota (http://www.trainingtoserve.org) have successfully developed cultural competency trainings specific to LGBT aging. Such existing training models can be replicated or expanded to prepare health and human service providers to implement LGBT competent interventions. This competency aligns with EPAS: Apply knowledge of human behavior and the social environment; and with GSW: Relate social work perspectives and related theories to social work practice (e.g., cohorts, normal aging, and life course perspective).

5. When Conducting a Comprehensive Biopsychosocial Assessment, Attend to the Ways That the Larger Social Context and Structural and Environmental Risks and Resources May Impact LGBT Older Adults

Discrimination and victimization are chronic stressors that contribute to psychological distress. Lifetime experiences of discrimination and internalized heterosexism are significantly associated with poor mental health, physical

health, and disability among older LGB (Fredriksen-Goldsen, Emlet, et al., 2013) and transgender adults (Fredriksen-Goldsen, Cook-Daniels, et al., 2013). More than 80% of CAP participants have been victimized at least once in their lives because of their sexual orientation or gender identity; over 60% have been three or more times (Fredriksen-Goldsen, Kim, et al., 2011). It is striking that a recent community-needs assessment of LGBT older adults living in San Francisco, known as a gay-friendly city, found that nearly half had been discriminated against during the past year because of their sexual orientation or gender identity (Fredriksen-Goldsen, Kim, Hoy-Ellis, et al., 2013).

Alienation can also emanate from within one's community. Bisexuality is often viewed as a nonlegitimate sexual orientation in lesbian and gay communities (Ochs, 1996; Weiss, 2003), and gender identity may be considered as alien among some LGB people (Lombardi, 2009). LGBT people of color experience racism within LGBT communities (Balsam et al., 2011; Stirratt, Meyer, Ouellette, & Gara, 2008). And, LGBT older adults are generally invisible in LGBT communities (Lyons et al., 2010), which often value and equate youth with beauty—just as the larger society does (Goltz, 2009; Jones & Pugh, 2005). As one older, HIV-positive man stated, "Yeah, ageism; it's a far mightier sword than HIV" (Emlet, 2006, p. 785). As part of a biopsychosocial assessment, an essential skill is to identify resources such as whether the person is connected to their respective LGBT community.

It is also critical that health and human services providers recognize the various structures of LGBT families, as well as the importance of families of choice in providing instrumental, emotional, and social support (Muraco & Fredriksen-Goldsen, 2011). Like the general population, LGBT individuals belong to an array of family structures: They may have a partner or spouse who may or may not be legally recognized across differing jurisdictions; they may have parents, siblings, and children; they may have a family of choice that provides needed support; or they may not have any family at all. LGBT families of choice are unique in that they often include former partners who remain friends, as well as other friends (Barker, Herdt, & de Vries, 2006). A 67-year-old lesbian CAP participant shared:

> My partner has two major diagnoses and I am the driver to the doctors. My sister and her husband and daughter are friendly but not caring, and not happy with me being gay, and will not allow us to stay there overnight. I have no real help should she get ill.

LGBT families-of-choice that are not related by blood or law are often unrecognized by providers, even though they provide consistent care, support, refuge, and nurturance to their members (Chapman et al., 2012). Although one in four LGBT older adults do have children (Fredriksen-Goldsen, Kim,

et al., 2011) they are less likely to have children than their heterosexual peers (Fredriksen-Goldsen, Kim, Barkan, et al., 2013).

Among older adults in general, women provide the vast majority of informal care, primarily to legally or biologically related family members (Family Caregiver Alliance, 2003). However, in LGBT communities, men provide nearly as much care as women, with partners and friends primarily caring for one another (Fredriksen-Goldsen, Kim, et al., 2011). Although this social support provides essential resources, it also has its own set of challenges. As older LGBT adult peers reach older old ages, they may experience a diminished capacity to care for one another (Muraco & Fredriksen-Goldsen, 2011).

To effectively link clients to resources, providers should compile lists of both local and national resources relevant to the varying needs of LGBT older adults, their families, caregivers, and other supports. A good starting place is the National Resource Center on LGBT Aging (http://www.lgbtagingcenter.org/index.cfm), and Services and Advocacy for GLBT Elders (SAGE; http://www.sageusa.org/about/index.cfm). When providing such resources and referrals to LGBT older adults, it is important not to assume that what is salient to one group (e.g., lesbians) is salient to another (e.g., transgender). This competency aligns with EPAS: Engage, assess, intervene, and evaluate with individuals, families, groups, organizations and communities; and with GSW: Assess social functioning and social support of older clients.

6. When Using Empathy and Sensitive Interviewing Skills During Assessment and Intervention, Ensure the Use of Language Is Appropriate for Working With LGBT Older Adults to Establish and Build Rapport

Research indicates that individuals who hold negative attitudes, beliefs, and stereotypes regarding minority groups are likely to consciously or unconsciously convey those biases in their behavior (Shelton & Delgado-Romero, 2011), including their language. Those who work with LGBT older adults need to understand, and be comfortable with, the array of terms used to represent differing sexualities and gender identities. Sexual orientation and gender identity are distinct constructs, even though they are inextricably intertwined. *Sex* and *gender* are often used interchangeably, although the former relates to biology, and the latter refers to social constructions based on biology. Transgender identity refers an individual's innermost sense of self as female, male, or other sense of self that is incongruent with biological sex. Sexual orientation (i.e., lesbian, gay, bisexual, heterosexual) refers to an:

> enduring pattern of emotional, romantic, and/or sexual attractions to women, men, or both sexes and also refers to a person's sense of identity based on those attractions, related behaviors, and membership in a community of others who share those attractions. (American Psychological Association, 2010, p. 74)

It is also important to remain cognizant of ascribed versus claimed identities. For example, researchers may ascribe a sexual minority identity to study participants (i.e., lesbian, gay, bisexual) based on same-sex attraction or behavior, but the participants themselves might not claim that identity; instead, they may identify differently (i.e., heterosexual).

LGBT older adults are often characterized as a homogenous group and even though the umbrella term *LGBT* is most often used, it can be exclusionary. Other terms are also used, such as *queer, questioning, intersex*, and *two-spirit*. There are also critical differences by age in the terminology used. Although *H* for *homosexuality* is typically not used in the LGBT acronym, it may be the preferred term used by some older gay men; some lesbians prefer to identify as gay. Likewise, although many LGBT people have embraced the term *queer* to regain and reclaim power, it still has enormously negative connotations for many older LGBT adults. It is also important to be cognizant of related terms. For example, *coming out* refers to disclosing one's sexual orientation or gender identity, and *closeting* means to conceal said orientation or identity or to pass as heterosexual or nontransgender. Equally important is the ability of health and human service providers to be aware of the language used by LGBT older adults, themselves, as those are the terms that most likely represent their lives and identities. A 58-year-old transgender bisexual woman who participated in the CAP project remarked:

> Long-term health care for trans people is a big, dark unknown. How long do we take hormones? How do trans people who don't "pass" get decent treatment and respect? And "passing" is all but impossible in some medical contexts. Where do trans people who do *not* identify as LBG fit into the picture?"

To support attainment of this competency and the use of culturally competent and appropriate language, the sixth edition of the *Publication Manual of the American Psychological Association* provides excellent guidelines for using language to reduce bias (American Psychological Association, 2010). As good rules of thumb, these guidelines highlight the importance of vocabulary in conveying respect while avoiding language that marginalizes (for example, avoid using *sexual preference*, as it implies choice).

Additionally, students and practitioners need to hone active listening skills, because many LGBT older adults welcome the opportunity to communicate their preferred terms and vocabulary. If disclosure as LGBT to a service provider is met with a neutral response, that response may well be interpreted as hostile (Harding, Epiphaniou, & Chidgey-Clark, 2012). Usage of appropriate language is a powerful way to convey empathy, understanding, and respect, as well as to facilitate the establishment of rapport. This competency aligns with EPAS: Assess with individuals, families, groups, organizations and communities; and with GSW: Use empathy and sensitive interviewing skills to engage older clients in identifying their strengths and problems.

7. Understand and Articulate the Ways in Which Agency, Program, and Service Policies Do or Do Not Marginalize and Discriminate Against LGBT Older Adults

In addition to discrimination in the larger society, LGBT older adults experience both overt and covert discrimination in health and human service settings. Discrimination within healthcare systems is a significant predictor of poor mental and physical health (Fredriksen-Goldsen & Muraco, 2010). Thirteen percent of CAP participants have been denied healthcare or received inferior care because of their sexual orientation or gender identity. Invisibility of LGBT older adults is pervasive across healthcare settings, and is a subtle form of discrimination (Brotman, Ryan, & Cormier, 2003).

Many providers are unaware that LGBT older adults are utilizing their services (Hughes, Harold, & Boyer, 2011). This can be especially damaging for LGBT older adults in long-term care facilities, where many may opt to go back into the closet due to fear and lack of support (National Senior Citizens Law Center, 2011). This invisibility leads to exclusion and marginalization, exacerbating feelings of loneliness and social isolation (LGBT Movement Advancement Project & SAGE, 2010). Unfortunately, such situations support nondisclosure of a stigmatized identity, which is a risk factor for poor health outcomes (Durso & Meyer, 2013).

Many health and human services adopt a *sexuality-blind* norm through avoiding the topic of sexuality and treating patients as asexual, especially older adults (Cronin, Ward, Pugh, King, & Price, 2011). As few as one in five healthcare providers routinely take a sexual history as part of new client intakes (Gay and Lesbian Medical Association, 2002). Thus, the importance of careful and in-depth examination of discriminatory and exclusionary behaviors among health care and human service professionals cannot be overemphasized. Although some healthcare organizations are committed to providing LGBT-centered patient care, only half of such organizations in one study expressed interest in including patients' sexual orientation or gender identity in their medical records (Snowden, 2013). As many as one in

five LGBT older adults are concealing their sexual orientation or gender identity from their primary care physician (Fredriksen-Goldsen, Kim, et al., 2011). The American Medical Association (2009) has acknowledged that lack of attention to patients' sexual orientation can profoundly and negatively impact the delivery and quality of medical care. A 59-year-old transgender woman who participated in CAP commented, "The health care facility needs to revamp their policies on treatment of LGBT people. My partner and I are both [female] transsexuals but are treated as men when it comes to the services." It is imperative that health and human service organizations have explicit nondiscrimination policies in place, banning discrimination by sexual orientation and gender identity within the organization, as well as with agencies that provide contracted services.

To support the attainment of this competency, students and practitioners should begin with a review of all agency policies to determine if sexual orientation, sexual behavior, and gender identity are explicitly addressed. All assessment tools and standardized forms should be reviewed to ensure they are LGBT-inclusive. For example, clients should not have to select between inaccurate or inappropriate choices, such as between married or single. In addition, collection of patient-level data that includes sexual orientation and gender identity information can contribute to our understanding of LGBT older adults' health, social, and aging needs (Institute of Medicine, 2011).

A useful tool for assessing agency policies regarding LGBT clients is the Human Rights Campaign's Healthcare Equality Index (HEI; http://www.hrc.org/hei#.Um1UOoPn9LM). In addition to this annual online survey, available to healthcare organizations seeking to provide equitable, inclusive care to the LGBT community, it is also available to LGBT people looking for healthcare providers who have shown that they are proactive in providing culturally competent care (Snowden, 2013). In addition to being evaluated in four core areas with more than 30 best practices in LGBT culturally competent care, healthcare organizations that participate in the HEI are able to receive expert trainings for staff at no charge (http://www.hrc.org/hei/#.Uff51czn-po). This competency aligns with EPAS: Assess with individuals, families, groups, organizations and communities; and with GSW: Conduct a comprehensive geriatric assessment (bio-psychosocial evaluation).

8. Understand and Articulate the Ways That Local, State, and Federal Laws Negatively and Positively Impact LGBT Older Adults, to Advocate on Their Behalf

With the increasing acceptance of sexual and gender minorities in the United States, health and human service providers may assume that such discrimination is a thing of the past. However, discrimination based on sexual orientation is still legal in 29 states, and discrimination based on gender

identity is legal in 33 states (Human Rights Campaign, 2013a). This is despite evidence that LGBT people that live in states that have passed antidiscrimination legislation and other legal protections experience significant decreases in psychological distress (i.e., mood, anxiety disorders), yet the opposite is true for those living in states that have passed anti-LGBT legislation (Hatzenbuehler, Keyes, & Hasin, 2009; Riggle, Rostosky, & Horne, 2010; Rostosky, Riggle, Horne, & Miller, 2009). Because LGBT older adults rely primarily on each other for social, emotional, and instrumental support, laws and policies that do not recognize the relationships of families of choice may also marginalize LGBT older adults economically.

There is a popular myth that LGBT individuals are affluent. Although some certainly are, research indicates that, despite significantly higher levels of education, LGBT people often earn less than heterosexuals. Because lifetime earnings have a significant impact on retirement age, LGBT older adults are at a distinct disadvantage economically (Grant, 2010). Older lesbian and bisexual women and transgender older adults are at particular risk for living in poverty (Fredriksen-Goldsen, Cook-Daniels, et al., 2013; Wallace et al., 2011).

Advocacy for justice (Killian, 2010) and the passing of laws in favor of equality is undeniably important to support the health and well-being of LGBT older adults. A 56-year-old lesbian CAP participant impacted by the lack of legal protections stated, "I worry a lot about my future, as I really age—not so much now. And if anything happens to my partner, I'll be in big trouble; my medical insurance and household income come through her." Because policies related to aging generally assume heterosexuality, they have historically discriminated against LGBT older adults and their partners and families. For example, Social Security provides significant economic benefits to older Americans, including spousal and survivors' benefits, that until recently were not available to same-sex couples. In *Windsor v. United States*, the Supreme Court struck down Section 3 of the Defense of Marriage Act as unconstitutional. Although the ruling extends federal recognition to legal same-sex marriages and provides access to Social Security spousal and survivors' benefits to LGBT older adults in legal marriages, it also left Section 2 intact, which recognizes states' right to refuse to recognize same-sex marriages performed in states where they are legal (Human Rights Campaign, 2013b). Although a growing number of states recognize same-sex marriage, LGBT older adults who live in states without legal same-sex marriage will not be able to access federal benefits unless they are able to travel to and be married in a state that sanctions same-sex marriages.

Health and human services providers who are culturally competent in LGBT issues are uniquely positioned to advocate for policies and laws that foster the dignity and worth of LGBT older adults, and the importance of their relationships. Organizations such as the Human Rights Campaign (http://

www.hrc.org/) and Lambda Legal (http://www.lambdalegal.org/) offer comprehensive and up-to-date information on laws, policies, and initiatives that impact the LGBT community. The Diverse Elders Coalition (http://www.diverseelders.org/) provides similar information specific to older adults who are racial, ethnic, sexual, or gender minorities. These resources can help health and human services providers understand the impact of laws and policies in LGBT older adults' lives, as well as assist LGBT older adults and their families. This competency aligns with EPAS: Engage, assess intervene, and evaluate with individuals, families, groups, organizations, and communities; and with GSW: Assess social functioning and social support of older clients.

9. Provide Sensitive and Appropriate Outreach to LGBT Older Adults, Their Families, Caregivers and Other Supports to Identify and Address Service Gaps, Fragmentation, and Barriers That Impact LGBT Older Adults

Past experiences of discrimination may make vulnerable older adults less likely to seek services from the very agencies that have historically marginalized them. In addition, some agencies may resist outreach efforts to not offend private donors (Knochel, Quam, & Croghan, 2010). Many LGBT older adults feel unwelcome in aging programs and services (LGBT Movement Advancement Project & SAGE, 2010), and feel they must conceal their sexual orientation (National Senior Citizens Law Center, 2011). Concealment of one's LGBT identity or orientation is associated with intensified psychological distress (Meyer, 2003), which, in turn, increases the risk of premature illness and death (Russ et al., 2012). A 63-year-old lesbian CAP participant shared:

> I work with a number of LGBT clients in nursing home environments and find them to be extremely isolated and actually have become "reclos-eted" due to community living with elderly heterosexual populations. Lack of transportation and outreach prohibit them from access to the LGBT community.

Even when agency staffs are open and affirming, other clientele (i.e., older heterosexual adults) may display anti-LGBT attitudes and behaviors. Cultural competency trainings should prepare staff and residents with strategies to respond effectively to such incidents.

Lack of adequate training may be an unacknowledged barrier that can impact the provision of appropriate services to LGBT older adults. Professional programs in various disciplines devote limited time and content to LGBT health, including medicine (Obedin-Maliver et al., 2011), nursing

(Eliason, Dibble, & Dejoseph, 2010), and social work (Logie et al., 2007). Three out of four social service directors in skilled nursing facilities report receiving no training in LGBT cultural competency in the preceding 5 years (Bell, Bern-Klug, Kramer, & Saunders, 2010). Only one in four healthcare organizations participating in the recent Health Equality Index survey indicated that they had reviewed their clinical services to identify gaps in the provision of services to LGBT patients, although another 54% indicated that they were interested in doing so (Snowden, 2013).

Recruiting LGBT older adults to serve on community advisory boards and other volunteer venues in LGBT and mainstream agencies will help to ensure that their voices are a central part of the mission and delivery of services; this can also provide expert insider perspectives regarding fragmentation of and gaps in existing programs and services, as well as how existing programs and services may be discriminatory. Such recruitment is likely to be challenging, especially in light of current and historic discrimination. An initial, yet critical, first step in this process is to communicate to LGBT older adults that the agency or program seeking their input is LGBT-affirming.

A resource for agencies and programs to communicate to LGBT older adults that they are LGBT affirming is the Safe Zone Project. Originally developed and implemented in university settings, the Safe Zone Project is "an adjunctive training module—one that signifies the acceptance and affirmation of LGBT individuals, and a commitment to training, recruitment, and retention of LGBT and LGBT-sensitive [staff]" (Finkel, Storaasli, Bandele, & Schaefer, 2003, p. 555), is becoming increasingly common in business and health and human service settings. Some Safe Zone training materials can be accessed online.[1] Posting Safe Zone signs and having other visible cues (e.g., LGBT magazines, posters) signal that the agency, service, or program is LGBT sensitive and affirming. In addition, LGBT services and programs should also provide visual cues that they are affirming of older LGBT adults, and whenever possible, develop programming specific to their particular issues. This competency aligns with EPAS: Respond to contexts that shape practice; and with GSW: Identify and develop strategies to address service gaps, fragmentation, discrimination and barriers that impact older persons.

10. Enhance the Capacity of LGBT Older Adults and Their Families, Caregivers, and Other Supports to Navigate Aging, Social, and Health Services

As older adults age, they are likely to experience an increased need for social and health services. The provision of human services in the United States has been historically bound with the profession of social work. Because of its

[1] See for example: http://www2.webster.edu/shared/shared_selfstudyreport/documents/hlc1b1_safezone.pdf

complex and fragmented nature, navigating the system of social and health services can be daunting and frustrating at times.

Health and human service professionals can play a crucial role in helping LGBT older adults navigate the fragmented health and human services system, while advocating for the best possible solutions to the distinct challenges they face. As daunting as this system is, it is even more so for LGBT older adults because of discriminatory laws and policies, as well as agencies and programs failure to recognize and address the distinct needs of LGBT older adults. In addition, LGBT older adults may not have biologically or legally related family members to assist in navigating such systems, which older heterosexual adults often do (Brotman et al., 2003). Even when LGBT older adults do have friends or family-of-choice members to assist them, such assistance can be challenging not only because they, themselves, may also have aging- and health-related needs, but also because of confidentiality, legal decision-making authority, and other related issues (Muraco & Fredriksen-Goldsen, 2011).

It is also important to recognize that LGBT older adults have unique strengths that can be harnessed to empower them in navigating the complex array of social and health services. Some LGBT older adults continue to be socially and politically active, fighting for civil rights and social justice issues, which may enhance their resilience as they age (Ramirez-Valles, Kuhns, Campbell, & Diaz, 2010). Several studies have found that LGBT older adults are strengthened through "crisis competence," applying lessons learned from being a sexual minority to the aging process (Friend, 1991, p. 110). The biopsychosocial model for late life resilience (Smith & Hayslip, 2012) suggests that older adults can engage individual, interpersonal, and environmental resources to combat elements of risk and adversity. Professionals in the field need the knowledge, skills, and values to identify intrapersonal and interpersonal resources with older LGBT consumers, and to assist them in addressing their needs, those of their families, and other support systems. A 77-year-old gay male CAP participant affirmed:

> It makes sense to focus a lot of attention and work on educating mainstream senior service agencies and institutions to provide LGBT-sensitive and gay-friendly services. I know that there have been many advances already made in that direction, and I hope it continues. Educating mainstream services is also part of the larger movement toward integrating LGBT people of all ages and LGBT culture into the larger society.

In addition to educating LGBT older adults about available services and supports, asking for their expert knowledge can empower them to become advocates for themselves and others. The National Center on LGBT Aging also provides trainings free of charge that can help agencies and programs to be better able to enhance the capacity of LGBT older adults and their

families, caregivers, and other supports to navigate aging, social, and health services. Two of these trainings are for general aging services providers; two others are for LGBT organizations (http://www.lgbtagingcenter.org/about/training.cfm). This competency aligns with EPAS: Engage in policy practice to advance social and economic well-being and to deliver effective social work services; and with GSW: Advocate on behalf of clients with agencies and other professionals to help elders obtain quality services.

DISCUSSION

Students and practitioners in the social and health services have generally not been well prepared to practice in a culturally competent manner with LGBT populations (Camilleri & Ryan, 2006; Fredriksen-Goldsen, Woodford, et al., 2011; Logie et al., 2007; Obedin-Maliver et al., 2011; Swank & Raiz, 2010). It should not be incumbent upon LGBT older adults to educate providers, services, and programs about their unique challenges and needs; this responsibility lies squarely on the shoulders of providers, educations, and other stakeholders. The competencies outlined herein can serve both educational and evaluative purposes; implementing them into practice, policy, and research will improve the effectiveness of each as they relate to LGBT older adults. Health and human service providers who are culturally competent in LGBT issues are uniquely positioned to advocate for practice modalities and policies that foster the dignity and worth of LGBT older adults, and the importance of their relationships and families.

It is time to more fully envelop the notion of inclusion, that is "including" LGBT older adults, through the notion of "nothing about us without us" (Charlton, 2000). This perspective highlights the importance of meaningfully engaging of community members in the process of practice, program, and policy development. Furthermore, the identification of successful programs and policies at the local, state, and federal levels that address the health and aging needs of LGBT older adults can be used as models and adapted for use in diverse urban, suburban, and rural communities.

The recommended competencies outlined here cover a wide range of issues and challenges in developing culturally relevant and sensitive practice modalities, yet they are by no means exhaustive. Future work will undoubtedly point to the need for additional competencies and require the refinement of what has been presented here. In the CAP study, participants were contacted though mailing lists maintained by agencies so the results are not generalizable or necessarily representative of LGBT older adults, and those who remain most hard to reach are likely underrepresented. The agencies are primarily located in major metropolitan areas so the needs and concerns of LGBT older adults living in rural areas need further investigation.

Although practitioners and educators have ethical mandates to be knowledgeable and competent in working with diverse populations, content relevant to the lives of LGBT older adults is largely absent in training and educational programs. Implementing standardized and comprehensive competencies will enhance the ability of social and health service providers to address both the needs and challenges facing LGBT older adults and their families, and, at the same time, acknowledge and support the resilience and many resources that exist within these communities. A 63-year-old CAP participant shared, "The LGBT community has stepped up in the past to address coming out, AIDS, and civil rights. The next wave has to be aging."

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APPENDIX: COMPETENCY SCALE FOR WORKING WITH LGBT OLDER ADULTS

Please use the scale below to thoughtfully rate your current skill level:

0 = Not skilled at all (I have no experience with this skill)
1 = Beginning skill (I have to consciously work at this skill)
2 = Moderate skill (This skill is becoming more integrated into my practice)
3 = Advanced skill (This skill is done with confidence and is an integral part of my practice)
4 = Expert skill (I complete this skill with sufficient mastery to teach others)

Competency Scale for Working With LGBT Older Adults	Skill Level (0–4)
1. Critically analyze personal and professional attitudes toward sexual orientation, gender identity, and age, and understand how factors such as culture, religion, media, and health and human service systems influence attitudes and ethical decision-making.	
2. Understand and articulate the ways that larger social and cultural contexts may have negatively impacted LGBT older adults as a historically disadvantaged population.	
3. Distinguish similarities and differences within the subgroups of LGBT older adults, as well as their intersecting identities (such as age, gender, race, and health status) to develop tailored and responsive health strategies.	
4. Apply theories of aging and social and health perspectives and the most up-to-date knowledge available to engage in culturally competent practice with LGBT older adults.	
5. When conducting a comprehensive biopsychosocial assessment, attend to the ways that the larger social context and structural and environmental risks and resources may impact LGBT older adults.	
6. When using empathy and sensitive interviewing skills during assessment and intervention, ensure the use of language is appropriate for working with LGBT older adults in order to establish and build rapport.	
7. Understand and articulate the ways in which agency, program, and service policies do or do not marginalize and discriminate against LGBT older adults.	
8. Understand and articulate the ways that local, state, and federal laws negatively and positively impact LGBT older adults, in order to advocate on their behalf.	
9. Provide sensitive and appropriate outreach to LGBT older adults, their families, caregivers and other supports to identify and address service gaps, fragmentation, and barriers that impact LGBT older adults.	
10. Enhance the capacity of LGBT older adults and their families, caregivers and other supports to navigate aging, social, and health services.	

KAREN FREDRIKSEN GOLDSEN, PH.D.

Karen Fredriksen Goldsen, Ph.D., is Professor and Director of Healthy Generations Hartford Center of Excellence at the University of Washington. Dr. Fredriksen Goldsen is a nationally and internationally recognized scholar addressing equity and the intersections of health disparities, aging, and well-being in resilient at-risk communities. With over 20 years of consecutive external funding, Dr. Fredriksen Goldsen has led many landmark studies and was selected in PBS's Next Avenue's inaugural top 50 Influencers in Aging. Characterized as an international leader in aging and longevity research, she is Principal Investigator of multiple federally funded studies with LGBT older adults and their caregivers. *Aging with Pride: National Health, Aging, and Sexuality/Gender Study* (R01) is the first national longitudinal study of LGBT midlife and older adult health to identify modifiable factors that account for health trajectories in these communities. *Aging with Pride: IDEA (Innovations in Dementia Empowerment and Action)* (R01), is the first federally funded study to develop and test interventions for sexual and gender minority older adults with Alzheimer's disease and related dementias and their care partners. She is also Principal Investigator of *Sexual and Gender Minority Health Disparities,* a national population-based study of the health of sexual and gender minorities of all ages funded by the UW Population Health Initiative's Research Grant, and she serves as Investigator of *Rainbow Ageing: The 1st National Survey of the Health and Well-Being of LGBTI Older Australians*, investigating pathways for evidence-based policy and practice initiatives. Dr. Fredriksen Goldsen previously developed the first national study of health and aging of LGBT midlife and older adults, *Caring and Aging with Pride* (R01). She has also investigated health and well-being across other historically disadvantaged communities, including the impact of HIV on older adults and their caregivers in China and reducing cross-generational risk of cardiovascular disease in a Native American community.

Dr. Fredriksen Goldsen is the author of more than 100 publications in leading journals such as the *American Journal for Public Health, The Gerontologist,* and *Social Work,* as well as three books, including *Families and Work: New Directions in the Twenty-First Century* (Oxford University Press), the most comprehensive study to date of caregiving across the lifespan. Dr. Fredriksen Goldsen has provided invitational presentations at U.S. White House conferences, Institute of Medicine, Congressional Briefings, a United Nations conference, as well as numerous others. Her research has been cited by many leading news sources such as the New York Times, Washington Post, U.S. News & World Report, NBC News, and Forbes, as well as more than 50 international news outlets.

Dr. Fredriksen Goldsen has received many awards for her innovative work advancing aging and health research, practice, and education such as University of Washington Distinguished Teaching Award, Gerontological Society of America's Maxwell A. Pollack Award for Productive Aging, and the Association of Gerontology Education Career Achievement Award. She is a Fellow of the American Academy of Social Work and Social Welfare and the Gerontological Society of America, and a Hartford Scholar and Mentor. Locally, nationally, and internationally, she provides consultation and training on effectively serving older adults and their families in historically disadvantaged and marginalized communities. As a previous Associate Dean for Academic Affairs, she provided leadership, strategic direction, and administrative oversight for all academic degree programs, and developed a strategic evaluation and planning process to insure innovative programming and assessment. Dr. Fredriksen Goldsen serves on several editorial and community-based boards and recently completed her third term on the UW Faculty Senate. She served as a Commissioner on the national CSWE Commission for Economic Justice and Diversity and as past Co-Chair of the Council on Sexual Orientation and Gender Expression. Dr. Fredriksen Goldsen is the founder of Generations Aging with Pride, GSA Rainbow Research Group, and Shanti/Seattle. She received her Ph.D. in Social Welfare from the University of California at Berkeley.

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EDUCATION
Ph.D. Social Welfare, University of California, Berkeley, CA, 1993
M.S.W. Social Work, University of Washington, Seattle, WA, 1986
B.A. Society & Justice/Sociology, University of Washington, Seattle, WA, 1983

EMPLOYMENT
Professor (2011-present). School of Social Work, University of Washington, Seattle, WA. Director, Healthy Generations, Hartford Center of Excellence. Primary area of scholarship focuses on the intersection of health, aging and quality of life in marginalized communities. Principal Investigator of two R01 grants funded by the National Institutes of Health/National Institute on Aging: Aging with Pride: National Health, Aging and Sexuality/Gender Study (NHAS), the first and largest national longitudinal study investigating the aging, health and quality of life and health trajectories over time among lesbian, gay, bisexual, and transgender (LGBT) older adults and their caregivers, and Older Adults Living with Alzheimer's Disease and Their Caregivers: Testing an Evidence-Based Intervention for Underserved Populations (R01) is the first federally funded study to test interventions among LGBT older adults living with Alzheimer's and related dementias. Investigator with the Healthy Hearts Across Generations study, examining cross-generational risk of cardiovascular disease in the Tulalip Native community. Served as Investigator on HIV antiretroviral adherence project in China developing a caregiving component to support persons living with HIV and their families. Teaching experience at the doctoral, master, and undergraduate levels. Courses: Policy and Services: A Multigenerational Policy; Advanced Social Welfare Research and Evaluation; Empowerment Practice: Addressing Gender, Gender Identity and Sexual Orientation; and Advanced Research Methods.

Associate Professor (1999-2011). School of Social Work, University of Washington, Seattle, WA. Teaching experience at the doctoral, master, and undergraduate levels. Courses: Policy and Services: Multigenerational Practice; Social Welfare Research and Evaluation; Leadership in Program Planning and Development; Social Work and HIV/AIDS; Empowerment Practice: Addressing Gender, Gender Identity and Sexual Orientation; Advanced Research Methods; Policy and Services: A Multigenerational Perspective; Grant Writing; and Social Work and Professional Career Development. Research projects include caregiving across the lifespan; caregiving and aging in LGBT communities; caregiving and HIV/AIDS; nontraditional families; work and family; multigenerational practice; and LGBT content in social work education.

Associate Dean for Academic Affairs (2006-2008). School of Social Work, University of Washington, Seattle, WA. Oversaw all academic programs at the School of Social Work and developed a strategic plan for the School's academic degree programs. Provided oversight and monitored costs for instruction and academic programs. Monitored curriculum policies and insured the evaluation and quality assurance of new educational initiatives. Oversaw development and maintenance of School's databases related to instruction and academic programming. Insured compliance with standards to maintain accreditation status and Graduate School approval and oversight of the development of all accreditation documents. Supervised academic degree program directors and managed position searches. Assigned faculty teaching responsibilities and facilitated faculty development. Served as the Acting Dean, when necessary, and participated on the Health Sciences Associate Dean's Committee and other university-wide committees.

Assistant Professor (1993-1999). School of Social Work, University of Washington, Seattle, WA. Teaching experience at the graduate and undergraduate levels. Courses: Historical Approaches to Social Welfare, Managing Agencies for Service Effectiveness, Leadership in Program Development, Social Work and AIDS, and Grant Writing. Research projects include intergenerational caregiving, caregiving and HIV/AIDS, work and family, and diversity content in social work education.

Teaching/Research Assistant (1989-1993). School of Social Welfare, University of California, Berkeley, CA. Teaching experience at the graduate and undergraduate levels. Courses assisted: Introduction to Social Work Practice, Introduction to Research Methods, and Advanced Research Methods. Research responsibilities include development of questionnaires, data collection, management of analysis, supervision of research assistants, and writing reports and publications.

Research Assistant (1991). Department of Drugs and Alcohol, State of California, Sacramento, CA. Evaluated alcohol and drug programs, and monitored the implementation of programs utilizing federal set-aside funds for women's services.

Senior Care Coordinator (1986-1988). Ballard Community Hospital, Seattle, WA. Developed and administered innovative senior adult programs. Supervised program assistants and administered program budgets. Evaluated effectiveness of delivered services. Staffed Senior Services Advisory Group. Delivered presentations on services and geriatric health issues. Counseled senior adults and families.

Grant Project Coordinator (1986). Senior Services of Snohomish County, Everett, WA. Researched, developed, and wrote a $2 million HUD, Section 202 funded grant proposal for elderly and handicapped subsidized housing.

Co-Founder (1982-1985). Shanti/Seattle, Seattle, WA. Developed and administered program serving persons facing life-threatening illnesses and the bereaved. Developed and implemented internal policies. Administered annual budget and managed fund raising efforts. Supervised volunteers. Prepared and delivered in-service training to staff, volunteers, and outside agencies. Facilitated support groups and provided emotional support to clients.

HONORS AND AWARDS

Maxwell A. Pollack Award for Productive Aging, Gerontological Society of America, 2018.
Fellow, American Academy of Social Work and Social Welfare, 2017.
Fielding Creative Longevity and Wisdom Outstanding Scholar Practitioner Award, 2017.
Top 50 Influencer in Aging: PBS's Next Avenue, 2015.
Distinguished Teaching Award, University of Washington, 2014.
Career Achievement Award, Association of Gerontology Education in Social Work (AGESW), 2013.
University of Washington School of Social Work Doctoral Mentor Award, 2013.
University of Washington Distinguished Teaching Award Nominee, 2013.

National Research Mentor, Hartford Faculty Scholars, 2010.
Fellow, Gerontological Society of America, Outstanding Achievement in the Field of Gerontology, 2009.
Leadership Service Award, Co-Chair, CSWE, Council CSOGE, 2008.
University of Washington Distinguished Teaching Award Finalist, 2009.
Stanford Faculty Development, Scholar Teaching Institute, 2006.
Outstanding Rainbow Teaching Award, 2005, 2006.
Hartford Faculty Scholar, 2004.
Addressing Disability in Education Award, 2003.
Outstanding Research Award, Society for Social Work and Research, 2001.
First Award, National Institute of Mental Health, 1998.
Outstanding Graduate Teaching Award, 1993.
Chancellor's Dissertation Fellowship, 1992.
Distinction, Qualifying Exam for Advancement to Ph.D. Candidacy, 1991.
Regents Fellowship, 1991, 1989.
Newhouse Scholarship, 1990.
Mayoral Proclamation, City of Seattle, Outstanding Community Leadership and Service, 1988.
Jefferson Award Nominee, Outstanding Community Service, 1987.
Social Work Leadership Scholarship, 1985.
Cum Laude, 1983.

PUBLICATIONS

BOOKS

Fredriksen-Goldsen, K. I., Scharlach, A. E. (2001). *Families and work: New directions in the twenty-first century.* New York. Oxford University Press. Peer-reviewed.

Clunis, M., Fredriksen-Goldsen, K. I., Freeman, P., Nystrom, N. (2005). *Lives of lesbian elders: Looking back, looking forward*. Binghamton, NY: Haworth Press.

Fredriksen-Goldsen, K. I., Editor. (2007). *Caregiving with pride*. (Reprinted from *The Journal of Gay and Lesbian Social Services*, 18 (3/4)). Binghamton, NY: Haworth Press. Peer-reviewed.

JOURNAL SPECIAL ISSUES

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Fredriksen Goldsen, K. I., Hoy-Ellis, C. P., & Brown, M. (2015). Addressing Behavioral Cancer Risks from a LGBT Health Equity Perspective. In U. Boehmer & R. Elk (Eds.), *Cancer and the LGBT community: Unique perspectives from risk to survivorship* (pp. 37-62). New York, NY: Springer.

Fredriksen-Goldsen, K. I., Hoy-Ellis, C. P., Muraco, A., Goldsen, J., & Kim, H.-J. (2015). The health and well-being of LGBT older adults: Disparities, risks and resilience across the life course. In N. A. Orel & C. A. Fruhauf (Eds.), *The lives of LGBT older adults: Understanding challenges and resilience* (pp. 25-53). Washington, DC: American Psychological Association.

Fredriksen-Goldsen, K. I., & Bonifas, R. (2013). Long-term care: The global impact on women. In M. B. Goldman, R. Troisi, & K. M. Rexrode (Eds.), *Women and health, second edition* (pp. 1515-1526). Waltham, MA: Elsevier Inc.

Simoni, J. M., Smith, L., Lehavot, K., Fredriksen-Goldsen, K. I., & Walters, K. L. (2013). Lesbian and bisexual women's physical health. In C. J. Patterson & A. R. D'Augelli (Eds.), *Handbook of psychology and sexual orientation* (pp. 179-190). New York, NY: Oxford University Press.

Fredriksen-Goldsen, K. I., Kim, H.-J., Hoy-Ellis, C. P., Goldsen, J., Jensen, D., Adelman, M., Costa, M., & De Vries, B. (2013). *Addressing the Needs of LGBT Older Adults in San Francisco:*

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Fredriksen-Goldsen, K. I., Kim, H.-J., Goldsen, J., Hoy-Ellis, C. P., Emlet, C. A., Erosheva, E. A., & Muraco, A. (2013). *LGBT older adults in San Francisco: Health, risks, and resilience - Findings from Caring and Aging with Pride.* Seattle, WA: Institute for Multigenerational Health.
Fredriksen-Goldsen, K. I. (2012). Informal caregiving in the LGBT communities. In T. Witten & E. Eyler (Eds.), *Gay, lesbian, bisexual, and transgender aging: Challenges in research, practice, and policy* (pp. 59-83). Baltimore, MD: John Hopkins University Press. Peer-reviewed.
Fredriksen-Goldsen, K. I., Kim, H.-J., Emlet, C. A., Muraco, A., Erosheva, E. A., Hoy-Ellis, C. P., Goldsen, J., & Petry, H. (2011). *The Aging and Health Report: Disparities and resilience among lesbian, gay, bisexual, and transgender older adults*. Seattle, WA: Institute for Multigenerational Health.
Fredriksen-Goldsen, K. I., Kim, H.-J., & Goldsen, J. (2011). *The Aging and Health Report: Resilience and disparities among lesbian, gay, bisexual and transgender older adults - Preliminary findings.* Seattle, WA: Institute for Multigenerational Health.
Fredriksen-Goldsen, K. I. (2010). Older GLBT family and community life: Contemporary experiences, realities, and future directions. Reprinted in Fruhauf, C. A., & Mahoney, D. (Eds.), *Older GLBT family and community life* (pp. xiii-xiv). London, England: Routledge.
Fredriksen-Goldsen, K. I., Kim, H.-J., Barkan, S. E., & Mincer, S. L. (2008). *Health disparities: The lesbian, gay and bisexual community in Seattle & King County.* Seattle, WA: Office of Civil Rights.
Daniels, J., Zawaideh, N., & Fredriksen-Goldsen, K. I. (2006). *Lesbian, gay, bisexual, transgender and questioning (LGBTQ) Youth in Seattle: Report and policy recommendations.* Seattle, WA: Office of Civil Rights.
Longres, J., & Fredriksen, K. I. (2000). Issues in the work with gay and lesbian clients. In P. Allen-Meares & C. Garvin (Eds.), *Handbook of social work direct practice* (pp. 477-498). Thousand Oaks, CA: Sage Publications.
Erera, P. I., & Fredriksen, K. I. (2001). Lesbian stepfamilies: A unique family structure. Reprinted in J. M. Lehmann (Ed.), *The gay & lesbian marriage & family reader: Analyses of problems and prospects for the 21st century* (pp. 80-94). New York, NY: Gordian Knot Books.
Fredriksen, K. I. (1988). Women and aging. In J. Cochran, S. Langston, S., & Woodward (Eds.), *Changing our power: An introduction to women studies.* Iowa: Kendall/Hunt. Peer-reviewed.
Fredriksen, K. I. (1993). *The provision of informal adult care: The impact of family and employment responsibilities.* Dissertation. University of California, Berkeley, CA.

UNDER REVIEW MANUSCRIPTS - Selected

Fabbre, V., Jen, S., & Fredriksen Goldsen, K. The State of Theory in LGBTQ Aging: Implications for Gerontological Scholarship. Submitted to *Research on Aging*.
Williams, M. E., Fredriksen-Goldsen, K. I., Erosheva E., & Kim, H.-J. Exploring an innovative method to access LGBT older adults as a hard-to-reach population: Respondent driven sampling (RDS). Submitted to *Journal Psychology of Sexual Orientation and Gender Diversity*.
Fredriksen-Goldsen, K. I., Shiu, C., Chen, W. T., Simoni, J., Starks, H., Pearson, C., Zhao, H., & Zhang, F. "Our hearts are linked:" HIV family caregiving in China despite severe stigma and shame. Submitted to *AIDS Care*.
Fredriksen-Goldsen, K. I., Simoni, J. M., Chen, W. T., Nelson, K., Shiu, C. S., Mincer, S., Zhao, H., & Zhang, F. The "shadow of HIV" on older adults in China: Disruptions in family dynamics and their implications for practice and policy. Submitted to *Journal on International Aging*.

GRANTS FUNDED – Selected

Principal Investigator (Fredriksen Goldsen & Teri, MPI), Aging with Pride: IDEA (Innovations in Dementia Empowerment and Action. National Institutes of Health/National Institute on Aging, R01; 2017-2022.

Principal Investigator, Aging with Pride: National Health, Aging and Sexuality/Gender Study (NHAS). National Institutes of Health/National Institute on Aging, R01; 2013-2019.
Principal Investigator, Sexual and Gender Minority Health Disparities. University of Washington Population Health Initiative's Pilot Research Grant; 2018-2019.
Investigator, (Lyons, PI), Rainbow Ageing: The 1st National Survey of the Health and Well-Being of LGBTI Older Australians. Australian Research Council (ARC) Linkage Project; 2017-2020.
Principal Investigator, Social and Health Behaviors, and the Mediating Role of Treatment Engagement in Predicting Health Outcomes of Older Adults Living with HIV. National Institutes of Health/National Institute on Aging, R01 supplement; 2015-2016.
Principal Investigator, Older Adults in Vulnerable Communities: Health and Quality of Life Over Time - Supplemental Issue of *The Gerontologist*. National Institutes of Health/National Institute on Aging, R01 supplement; 2015-2016.
Investigator, (Harootyan & Morrow-Howell, MPI), Accelerating Translation of Knowledge to Community Practices for Older Adults. National Institute of Health, R13; 2015-2017.
Principal Investigator/Director, Healthy Generations, Hartford Center of Excellence in Geriatric Social Work. University of Washington, Hartford/GSA National Center on Gerontological Social Work Excellence; 2014-2016.
Investigator, (Walters, PI), Healthy Hearts 2. National Institutes of Health/National Institute on Minority Health and Health Disparities, Comprehensive Center of Excellence, P60; 2012-2017.
Investigator, (Erosheva, PI), Respondent-Driven Sampling for Hard-to-Reach Populations with Complex Network Clustering. National Institutes of Health /National Institute on Aging, R21; 2013-2015.
Principal Investigator, Caring and Aging with Pride Project. University of Washington, Provost Bridge Funding; 2012-2013.
Principal Investigator, Caring and Aging with Pride: San Francisco. The San Francisco LGBT Aging Task Force; 2012-2013.
Principal Investigator, Caring and Aging with Pride Project. National Institutes of Health/National Institute on Aging, R01; 2009-2012.
Co-Principal Investigator, (Walters, PI), Healthy Hearts Across Generations. National Institutes of Health/National Heart, Lung and Blood Institute; 2006-2011.
Investigator, (Simoni, PI), Developing an Antiretroviral Adherence Program in China. National Institutes of Health /AIDS Division, R03; 2005-2009.
Principal Investigator, Diversities in Health Disparities: The Impact of Sexual Orientation, Race, Ethnicity, Income, and Age. University of Washington Diversity Research Institute; 2006-2007.
Investigator, (Lamm, PI), Interdisciplinary Outreach to the Underserved Senior Adult Population in King County. University of Washington Diversity Research Institute; 2006-2007.
Principal Investigator, Caregiving within Historically Disadvantaged Communities. Hartford Foundation; 2004-2007.
Investigator, Huckabay Teaching Application, Doctoral Student Award; 2003.
Principal Investigator, GeroRich. Hartford Foundation; 2002-2005.
Principal Investigator, AIDS Caregiving: Role of Informal and Formal Supports. National Institute of Mental Health, R29; 1999-2004.
Investigator, National Research Service Award, Dissertation Research; 1997.
Co-Principal Investigator. Looking Back, Looking Forward: A Research Project on the Lives of Lesbians, 55 and Older. Pride Foundation; 1996-1998.
Principal Investigator. Snohomish County Senior Services. HUD, Section 202 Proposal for Elderly and Handicapped Subsidized Housing; 1986.

KEYNOTE/INVITATIONAL PRESENTATIONS – Selected

Fredriksen Goldsen, K. I. (2018, July*). Investigating Health Disparities: Reaching Hidden Populations.* Invitational presentation at National Institute on Minority Health and Health Disparities, Health Disparities Research Institute, Bethesda, MD.

Fredriksen Goldsen, K. I. (2018, June). *Aging With Pride and the Future of LGBTQ Health*. Invitational keynote presentation at Seattle Town Hall, Seattle, WA.

Fredriksen Goldsen, K. I. (2018, April). *Advancing Research on Sexual and Gender Minority Health across the Life Course.* Invitational presentation at the National Academy of Sciences, Engineering, and Medicine Committee on Population, Washington, DC.

Fredriksen Goldsen, K. I. (2018, April). *LGBTQ Age Friendly Seattle: Care Community Vision.* Invitational presentation at AARP & Pecha Kucha Seattle: Age-Friendly City, Seattle, WA.

Fredriksen Goldsen, K. I. (2018, March). *Setting the Stage: Defining Diverse Caregiver Communities.* Invitational presentation at the 2018 Diversity Summit – Inequality Matters: Focus on Diverse Caregiving Communities at the 2018 Annual Conference of the American Society on Aging, San Francisco, CA.

Fredriksen Goldsen, K. I. (2018, March). *LGBTQ Aging*. Invitational keynote presented at the LGBTQ Aging in Pierce County Town Hall, Tacoma, WA.

Fredriksen Goldsen, K. I. (2018, January). *Meet the Scientist*. Invitational presentation at the Society for Social Work and Research 22nd meeting, Washington, DC.

Fredriksen Goldsen, K. I. (2018, January). *Out in STEM*. Invitational presentation at the University of Washington, Seattle, WA.

Fredriksen-Goldsen, K. I. (2017, October). *Equity: A powerful force in the future of sexual and gender minority dementia caregiving.* Invitational presentation at National Research Summit on Dementia Care: Building Evidence for Services and Supports, National Institutes of Health, Bethesda, MD.

Fredriksen-Goldsen, K. I. (2017, October). *Equity: A powerful force for the future of LGBTQI aging*. Invitational address presented at 3rd National LGBTI Ageing and Aged Care Conference, Melbourne, Australia.

Fredriksen-Goldsen, K. I. (2017, September). *Ageing the LGBTQI way: Innovations in research, services and policies.* Invitational address presented at Australian Research Centre in Sex, Health and Society, La Trobe University, Melbourne, Australia.

Fredriksen-Goldsen, K. I. (2017, August). *Heroes & sheroes: Looking back, being here*. Invitational presentation at The Reunion Project, Seattle, WA.

Fredriksen-Goldsen, K. I. (2017, July). *LGBTQ caregiving: Lessons learned.* Invitational address in Jane Barrett (Chair), Jack Watters memorial symposium: Coming out as a caregiver. Symposium presented at the 21st International Association of Gerontology and Geriatrics World Congress, San Francisco, CA.

Fredriksen-Goldsen, K. I. (2017, June). *Equity: A force for the future of LGBTQ aging.* Invitational address presented at Aging the LGBTQ Way: A Forum on Equity, Respect & Inclusion, City of Seattle, Seattle, WA.

Fredriksen-Goldsen, K. I. (2017, May). *Equity: A force for the future of LGBTQ aging*. Invitational address presented at the Lifelong Equality International Workshop on LGBTQ Elderly Care, Roosevelt Institute for American Studies, Middelburg, the Netherlands.

Fredriksen-Goldsen, K. I. (2017, March). *Sustaining the strengths of the LGBT older adult community.* Invitational address presented at the National Forum on LGBT Aging at the 2017 Annual Conference of the American Society on Aging, Chicago, IL.

Fredriksen-Goldsen, K. I., & Emlet, C. E. (2017, February). *Advancing research on sexual and gender minority older adult health within a shifting context*. Invitational address presented at the Division of Behavioral and Social Research, NIA/NIH, Bethesda, MD.

Fredriksen-Goldsen, K. I. (2016, September). *Future of LGBT+ aging*. Invitational address presented at Briefing for American Society on Aging Members, New York, NY.

Fredriksen-Goldsen, K. I. (2016, September). *Equity: A powerful force for the future of aging.* Invitational address presented at Elder Friendly Futures Conference, Seattle, WA.

Fredriksen-Goldsen, K. I. (2016, June). *Improving health of LGBT midlife and older adults: Findings from Aging with Pride: National Health, Aging and Sexuality/Gender Study*. Invitational address

presented at Division of Gender, Sexuality, and Health, Columbia University Department of Psychiatry, New York, NY.

Fredriksen-Goldsen, K. I. (2016, April). *LGBTQ communities: Addressing dementia awareness and readiness to serve*. Invitational address presented at the 31st Annual Alzheimer's Regional Conference – Discovery 2016, Seattle, WA.

Fredriksen-Goldsen, K. I. (2016, February). *Innovations in aging emerging from the margins*. Invitational address presented at Amazon, Seattle, WA.

Fredriksen-Goldsen, K. I. (2016, February). *Perspectives from gender and sexual orientation health equity and aging of LGBT older adults.* Invitational address presented at Aging and Disability Services Advisory Council, Seattle, WA.

Fredriksen-Goldsen, K. I. (2015, December). *LGBT aging and health*. Invitational address presented at the National Institutes of Health (NIH) Academy, Bethesda, MD.

Fredriksen-Goldsen, K. I. (2015, November). *The state of LGBT older adults - Data, research, trends, and systems development*. Invitational address at: Evaluating and enhancing aging network outreach to LGBT older adults, presented by the Administration for Community Living and SAGE, Denver, CO.

Fredriksen-Goldsen, K. I. (2015, September). *Emerging from the margins: Risks and opportunities for LGBT older adults*. Invitational address presented at the Washington State Council on Aging, Tukwila, WA.

Fredriksen-Goldsen, K. I. (2015, September). *Service delivery for lesbian, gay, bisexual, and transgender people.* Invitational address presented at the Washington State Department of Social and Health Services ADSA Core Training Unit 2, Lynnwood, WA.

Fredriksen-Goldsen, K. I. (2015, May). *Aging the LGBTQ way*. Keynote addresses at Seattle Town Hall Meeting, Seattle, WA.

Fredriksen-Goldsen, K. I. (2015, April). *LGBT family caregiving experiences and supportive service needs.* Invitational keynote address presented at the Institute of Medicine (IOM) Committee on the Diverse World of Family Caregiving, Irvine, CA.

Fredriksen-Goldsen, K. I. (2015, March). *Perspectives from gender and sexual orientation health equity and aging of LGBT older adults.* Invitational keynote address presented at the American Society on Aging National Forum on Social and Health Disparities, Chicago, IL.

Fredriksen-Goldsen, K. I., Walters, K. L., & Emlet, C. A. (2015, February). *LGBT aging and health: Addressing priority needs.* Invitational address presented the National Institutes of Health, Bethesda, MD.

Fredriksen-Goldsen, K. I., Emlet, C. A., & Walters, K. L. (2015, February). *LGBT aging and health: Mechanisms of risk.* Invitational address presented the Sexual and Gender Minority Leadership Committee National Institutes of Health, Bethesda, MD.

Fredriksen-Goldsen, K. I. (2015, February). *Housing instability among LGBT older adults*. Invitational address presented at the National LGBT Elder Housing Summit, The White House, Washington, DC.

Fredriksen-Goldsen, K. I. (2015, February). *Health equity and aging of LGBT older adults: Addressing dementia awareness and priority needs.* Invitational keynote address presented at Preparing for the Changing Horizon: Dementia Awareness and Caregiving for LGBT Older Adults, Stanford University, CA.

Fredriksen-Goldsen, K. I. (2015, January). *Health equity, culture & longevity: The intersections of sexuality and gender.* Invitational address presented at the 19th Annual Meeting Society for Social Work Research, New Orleans, LA.

Fredriksen-Goldsen, K. I. & Lindau, S. T. (2014, December). *The role of HRS in promoting health and dignity of aging LGBT people.* Invitational keynote address presented at Health and Retirement Study (HRS) Data Monitoring Committee Meeting, Bethesda, MD.

Fredriksen-Goldsen, K. I. (2014, March). *LGBT older adults emerging from the margins: The National Health, Aging, and Sexuality Study.* Invitational address presented at Columbia University Department of Psychiatry, New York, NY.

Fredriksen-Goldsen, K. I. (2014, February). *Emerging from the margins: Resilience, aging, and health of LGBT older adults.* Invitational address presented at The Health Initiative, Atlanta, GA

Fredriksen-Goldsen, K. I., Kim, H.-J., & Hoy-Ellis, C. P. (2014, February). *Disparities and resilience among LGBT older adults.* University of Washington, School of Medicine, Seattle, WA.

Fredriksen-Goldsen, K. I. (2013, December). *Health equity: Risks and opportunities for LGBT older adults*. Invitational address presented at Social support and service provision to older adults: Marjorie Cantor's legacy to gerontology, Syracuse University Aging Studies Institute, New York, NY.

Fredriksen-Goldsen, K. I. (2013, October). *Health, aging and sexuality in marginalized communities: LGBT older adults emerging from the margins*. Invitational keynote address presented at the 7th Annual University of Chicago Workshop on Biomarkers in Population-Based Health and Aging Research (CCBAR), Chicago, IL.

Fredriksen-Goldsen, K. I. (2013, October). *The Aging and Health Report: Disparities and resilience among LGBT older adults.* Invitational address presented at Grantmakers in Health, Webinar.

Fredriksen-Goldsen, K. I. (2013, September). *Risk and resilience: LGBTQ older adults in Washington State.* Invitational keynote address presented at Over the Rainbow: The Washington State LGBTQ Aging & Long-term Care Summit, Seattle, WA.

Fredriksen-Goldsen, K. I. (2013, July). *Addressing the needs of LGBT older adults in San Francisco: Recommendations for the future.* Invitational address at Lesbian, Gay, Bisexual and Transgender Aging Policy Task Force, San Francisco, CA.

Fredriksen-Goldsen, K. I. (2013, April). *Health disparities in marginalized communities: LGBT older adults emerging from the margins.* Invitational address presented at George Warren Brown School of Social Work, Washington University, St. Louis, MO.

Fredriksen-Goldsen, K. I. (2013, January). *Risks and resilience: LGBT older adults in San Francisco.* Invitational address at Lesbian, Gay, Bisexual and Transgender Aging Policy Task Force, San Francisco, CA.

Fredriksen-Goldsen, K. I., (2012, October). *The Aging and Health Report: Disparities and resilience among LGBT older adults.* Invitational address presented at the LGBT Aging Research Symposium, Minneapolis, MN.

Fredriksen-Goldsen, K. I., (2012, October). *Emerging from the margins: Marriage equality and the changing lives of LGBT older adults.* Invitational address presented at the UW School of Social Work's Luminary Lectures on Social Innovation Series, Seattle, WA.

Fredriksen-Goldsen, K. I. (2012, May). *The Aging and Health Report: Disparities and resilience among lesbian, gay, bisexual, and transgender older adults*. Invitational address presented at the White House LGBT Conference on Aging, Miami, FL.

Fredriksen-Goldsen, K. I. (2012, May). *The Aging and Health Report: LGBT older adults living with HIV*. Invitational address presented at the White House LGBT Conference on Aging, Miami, FL.

Emlet, C. A. & Fredriksen-Goldsen, K. I. (2012, March). *An overview of resilience and disparities among LGBT older adults*. Presented at the LGBT Elders in a Changing World, Salem, MA.

Emlet, C. A. & Fredriksen-Goldsen, K. I. (2012, March). *Health findings of LGB older adults*. Presented at the LGBT Elders in a Changing World, Salem, MA.

Fredriksen-Goldsen, K. I. (2011, November). *The Aging and Health Report: Disparities and resilience among lesbian, gay, bisexual, and transgender older adults*. Invitational address presented at the Congressional LGBT Equality 'Equal Time' Briefing: Improving the Lives of LGBT Seniors. Congressional LGBT Equality Caucus, Washington, DC.

Fredriksen-Goldsen, K. I. (2010, October). *Enhancing and sustaining innovative services for LGBT elders.* Invitational keynote address presented at the 56th Annual Program Meeting of the Council on Social Work Education, GeroEd Track, Portland, OR.

Fredriksen-Goldsen, K. I. (2010, March). *Over the rainbow: The opportunities and constraints in LGBT health disparities research.* Invitational address presented at the University of Chicago, Chicago, IL.

Fredriksen-Goldsen, K. I., Kim, H.-J., & Mincer, S. L. (2009, March). *Health disparities: The lesbian, gay, and bisexual communities in King County*. Invitational address presented at the LGBT Community Health Forum, Seattle, WA.

Fredriksen-Goldsen, K. I., Simoni, J. M., Chen, W.-T., Nelson, K., Shiu, C. S., Mincer, S., Zhao, H., & Zhang, F. (2009, March). *The "shadow of HIV" on older women in China: Disruptions in family dynamics and their implications for practice and policy*. Invitational address presented at the United Nations. New York, NY.

Fredriksen-Goldsen, K. I., Shiu, C., Chen, W.-T., Simoni, J., Starks, H., Pearson, C., Zhao, H., & Zhang, F. (2008, November). *HIV caregiving in China: Older adults supporting medication adherence despite severe stigma.* Invitational paper presented at the Conference on the Impact of HIV/AIDS on Older Adults in Africa and Asia, Ann Arbor, MI.

CONFERENCE PRESENTATIONS – Selected

Fredriksen Goldsen, K. I. (2018, January). *The Cascading Effects of Marginalization, Resilience and Health over Time: Life Course Forces in the Future of LGBTQ Aging Research*, K. I. Fredriksen-Goldsen (Chair). Symposium presented at the Society for Social Work and Research 22nd Annual Conference, Washington, DC.

Fredriksen Goldsen, K. I. & Kim, H.-J. (2018, January). *The Cascading Effects of LGBTQ Aging: Promoting Equity in Health and Well-being over the Life Course*. Presented at the Society for Social Work and Research 22nd Annual Conference, Washington, DC.

Jen, S., Fredriksen Goldsen, K. I., and Clark, T. (2018, January). *Bisexuality and Aging: Experiences of Key Life Events Among Bisexual Older Adults*. Presented at the Society for Social Work and Research 22nd Annual Conference, Washington, DC.

Harner, V., Fredriksen Goldsen, K. I., Kim, H.-J., and Jung, H. (2018, January). *An Equity Perspective to Investigate Identity, Social Relationships and Work-related Life Events among Transgender Midlife and Older Adults*. Presented at the Society for Social Work and Research 22nd Annual Conference, Washington, DC.

Muraco, A., Emlet, C., & Fredriksen-Goldsen, K. I. (2017, August). *"Everything is falling apart": Perceptions of economic status by LGBT older adults.* Presented at the American Sociological Association 112TH annual meeting, Montreal, Canada.

Fredriksen-Goldsen, K. I. (2017, July). *Global ageing: Building framework for culturally informed sexuality, gender and LGBTQ health research*, K. I. Fredriksen-Goldsen (Chair). Preconference workshop presented at the 21st International Association of Gerontology and Geriatrics World Congress, San Francisco, CA.

Fredriksen-Goldsen, K. I. (2017, July). *Building framework - moving forward*. In K. I. Fredriksen-Goldsen (Chair), Global ageing: Building framework for culturally informed sexuality, gender and LGBTQ health research. Preconference workshop presented at the 21st International Association of Gerontology and Geriatrics World Congress, San Francisco, CA.

Fredriksen-Goldsen, K. I., & Jen, S. (2017, July). *Research on LGBTQ aging in review*. In Kathryn Almack (Chair), The impacts of lesbian, gay, bisexual and trans (LGBT) life courses and identities in later life. Symposium presented at the 21st International Association of Gerontology and Geriatrics World Congress, San Francisco, CA.

Hoy-Ellis, C. P., Shiu, C., Kim, H.-J., Sullivan, K., Sturges, A., & Fredriksen-Goldsen, K. I. (2017, July). *Transgender older adults—military service: Identity stigma and mental health changes over time.* In Janet Wilmoth (Chair), Military service and the life course. Paper presented at the 21st International Association of Gerontology and Geriatrics World Congress, San Francisco, CA.

Fredriksen-Goldsen, K. I., Kim, H.-J., & Jung, H. (2017, July). *Marginalization, resilience and health over time: Global forces in the future of LGBT aging research*. Poster presented at the 21st International Association of Gerontology and Geriatrics World Congress, San Francisco, CA.

Kim, H.-J., & Fredriksen-Goldsen, K. I. (2017, July). *A longitudinal study of social connectedness and health among sexual minority older adults*. Poster presented at the 21st International Association of Gerontology and Geriatrics World Congress, San Francisco, CA.

Fredriksen-Goldsen, K. I. (2017, July). *Unique home healthcare concerns for LGBT older adults*. In Jason Flatt (Chair), LGBT home healthcare. Panel discussion at Openhouse, San Francisco, CA.

Patel, S., Guess, A., Acey, K., & Fredriksen-Goldsen, K. (2017, January). *Promoting health and aging in LGBTQ communities: Mobilization and engagement.* Presented at Creating Change 2017 Conference, Philadelphia, PA.

Hoy-Ellis, C. P., Sullivan, K., Shiu, C-S., Kim, H-J., & Fredriksen-Goldsen, K. I. (2017, January). *Military service and mental health: Differences between older transgender women and men.* Poster presented at the 21st annual conference of the Society for Social Work and Research, New Orleans, LA.

Fredriksen-Goldsen, K. I. (2016, November). *Aging with Pride: National Health, Aging, Sexuality and Gender Study*. In K. I. Fredriksen-Goldsen (Chair), The development of evidence-based practices: Expanding the reach to lesbian, gay, bisexual and transgender (LGBT) older adults. Preconference workshop presented at the Gerontological Society of America 69th Annual Scientific Meeting, New Orleans, LA.

Fredriksen-Goldsen, K. I. (2016, November). *Best practices for developing and tailoring EBP for LGBT older adults.* In K. I. Fredriksen-Goldsen (Chair), The development of evidence-based practices: Expanding the reach to lesbian, gay, bisexual and transgender (LGBT) older adults. Preconference workshop presented at the Gerontological Society of America 69th Annual Scientific Meeting, New Orleans, LA.

Fredriksen-Goldsen, K. I., Bryan, A. E. B., Jen, S., Goldsen, J., Muraco, A., & Kim, H.-J. (2016, November). *The unfolding of LGBTQ lives: Key events associated with health and well-being in later life.* In K. I. Fredriksen-Goldsen (Chair), Intersectionality, life experiences, and well-being in later life: Creating an LGBT life course lens. Presented at the Gerontological Society of America 69th Annual Scientific Meeting, New Orleans, LA.

Kim, H.-J., Jen, S., & Fredriksen-Goldsen, K. I. (2016, November). *Race/ethnicity and health-related quality of life among LGBT older adults.* In K. I. Fredriksen-Goldsen (Chair), Intersectionality, life experiences, and well-being in later life: Creating an LGBT life course lens. Presented at the Gerontological Society of America 69th Annual Scientific Meeting, New Orleans, LA.

Goldsen, J., Bryan, A. E. B., Kim, H.-J., Muraco, A., Jen, S., & Fredriksen-Goldsen, K. I. (2016, November). *Who says I do: The changing context of marriage and health and quality of life for LGBT older adults*. In K. I. Fredriksen-Goldsen (Chair), Intersectionality, life experiences, and well-being in later life: Creating an LGBT life course lens. Presented at the Gerontological Society of America 69th Annual Scientific Meeting, New Orleans, LA.

Muraco, A., & Fredriksen-Goldsen, K. I. (2016, November). *Spirituality in the lives of LGBT adults age 50 and over.* In K. I. Fredriksen-Goldsen (Chair), Intersectionality, life experiences, and well-being in later life: Creating an LGBT life course lens. Presented at the Gerontological Society of America 69th Annual Scientific Meeting, New Orleans, LA.

Muraco, A., & Fredriksen-Goldsen, K. I. (2016, August). *Religion and spirituality in the lives of LGBT adults*. American Sociological Association, Seattle, WA.

Fredriksen-Goldsen, K. I. (2016, June). *Enhancing Cultural Sensitivity with the LGBT Community*. Presented at the Washington Association of Area Agencies on Aging (W4A), Leavenworth, WA.

Hoy-Ellis, C. P., & Fredriksen-Goldsen, K. I. (2016, January). *Depression among transgender older adults: Differential impact of minority and general stress*. Paper presentation at the 20th annual conference of the Society for Social Work and Research, Washington, DC.

Fredriksen-Goldsen, K. I. (2015, December). *"That's so gay!" Service delivery for lesbian, gay, bisexual and transgender people.* Washington State Department of Social and Health Services; Aging and Disability Services Administration. Unit 2: Cultural Humility & Diversity Issues in Service Delivery, Tumwater, WA.

Fredriksen-Goldsen, K. I., Bryan, A. E. B., Kim, H.-J., Hoy-Ellis, C. P., Goldsen, J., Shiu, C., & Emlet, C. A. (2015, November). *The cascading effects of marginalization and identity management: Pathways to health among LGBT older adults*. In The cascading effects of marginalization and

resilience over time: Pathways to health and well-being among LGBT older adults. Presented at the Gerontological Society of America 68th Annual Scientific Meeting, Orlando, FL.

Fredriksen-Goldsen, K. I., & Hoy-Ellis, C. P**.,** & (2015, November). *LGBT Baby Boomers and the Silent Generation's quality of life and health: The role of adverse experiences and identity management strategies over the life course*. Paper presentation to The Gerontological Society of America's 68th Annual Scientific Meeting, Orlando, FL.

Emlet, C. A., Shiu, C., Kim, H.-J., & Fredriksen-Goldsen, K. I. (2015, November). *"I consider myself a survivor": Resilience and mastery among older HIV-positive adults*. In The cascading effects of marginalization and resilience over time: Pathways to health and well-being among LGBT older adults. Presented at the Gerontological Society of America 68th Annual Scientific Meeting, Orlando, FL.

Kim, H.-J., Muraco, A., & Fredriksen-Goldsen, K. I. (2015, November). *Social network types of lesbian, gay, and bisexual midlife and older adults*. In The cascading effects of marginalization and resilience over time: Pathways to health and well-being among LGBT older adults. Presented at the Gerontological Society of America 68th Annual Scientific Meeting, Orlando, FL.

Muraco, A., Putney, J., Shiu, C., & Fredriksen-Goldsen, K. I. (2015, November). *"Life saving in every way": The role of pets in the lives of older lesbian, gay, bisexual, and transgender adults age 50 and over*. In The cascading effects of marginalization and resilience over time: Pathways to health and well-being among LGBT older adults. Presented at the Gerontological Society of America 68th Annual Scientific Meeting, Orlando, FL.

Shiu, C., & Fredriksen-Goldsen, K. I. (2015, November). *Disparities and limited access to services among LGBT older adults*. In Rainbow Research Group Interest Group Symposium: LGBT older adult experiences in accessing long term services and supports. Presented at the Gerontological Society of America 68th Annual Scientific Meeting, Orlando, FL.

Hoy-Ellis, C. P**.,** & Fredriksen-Goldsen, K. I. (2015, October). Non-conscious heterosexist and ageist biases and microaggressions in social work research, educational programming, and practice. In S. Fauntas (Chair), *Ethical Research across the LGBTQ life course: Informing social work practice and education.* Panel presentation at the Council on Social Work Education 61st Annual Program Meeting. Denver, CA.

Fredriksen-Goldsen, K. I. (2015, September). *"That's so gay!" Service delivery for lesbian, gay, bisexual and transgender people.* Washington State Department of Social and Health Services; Aging and Disability Services Administration. Unit 2: Cultural Humility & Diversity Issues in Service Delivery, Lynnwood, WA.

Griffin, M., Erosheva, E. A., Gile, K. J., Handcock, M. S., & Fredriksen-Goldsen, K. I. (2015, August). *Assessing respondent driven sampling feasibility: Estimation of characteristics of lesbian, gay and bisexual older populations.* Joint Statistical Meetings, Seattle, WA.

Lee, S., McClain, C., Fredriksen, K., Kim, H.-J., & Gurtekin, T. (2015, May). *Examining Sexual Orientation, Race/Ethnicity, and Interview Language as Correlates of Nonresponse Using Paradata*. Paper presented at the annual meeting of the American Association for Public Opinion Research, Hollywood, FL.

Hoy-Ellis, C. P., & Fredriksen-Goldsen, K. I. (2015, April). *Aging with pride*. Aegis Living on Madison & Jewish Family Services, Seattle, WA.

Hoy-Ellis, C. P., & Fredriksen-Goldsen, K. I. (2015, January). *LGBT older adults emerging from the margins: Addressing aging, health and long-term care service needs*. Seattle Long-Term Care Providers; Leading Age, Seattle, WA.

Fredriksen-Goldsen, K. I., & Astle-Raaen, A. (2014, November). *Healthy Generations: Responding to the changing nature of aging in society.* Presented at the Gerontological Society of America 67th Annual Scientific Meeting, Washington, DC.

Hoy-Ellis, C. P. & Fredriksen-Goldsen, K. I. (2014, November). *The mental health of transgender older adults: Mechanisms of risk.* Presented at the Gerontological Society of America 67th Annual Scientific Meeting, Washington, DC.

Fredriksen-Goldsen, K. I. (2014, November). *Social inequalities in the lives of LGBT older adults: Diversities within society's communities* (Chair). Presented at the Gerontological Society of America 67th Annual Scientific Meeting, Washington, DC.

Fredriksen-Goldsen, K. I., Shiu, C., Kim, H.-J., Emlet, C. A. (2014, November). *Healthy aging among LGBT midlife and older adults: Differing paths by age groups.* In K. I. Fredriksen-Goldsen (Chair), Social inequalities in the lives of LGBT older adults: Diversities within society's communities. Presented at the Gerontological Society of America 67th Annual Scientific Meeting, Washington, DC.

Kim, H.-J., & Fredriksen-Goldsen, K. I. (2014, November). *Gender differences in dimensions of health-related quality of life of LGBT older adults.* In K. I. Fredriksen-Goldsen (Chair), Social inequalities in the lives of LGBT older adults: Diversities within society's communities. Presented at the Gerontological Society of America 67th Annual Scientific Meeting, Washington, DC.

Shiu, C., & Fredriksen-Goldsen, K. I. (2014, November). *Mental health and disclosure of sexuality among bisexual older adults.* In K. I. Fredriksen-Goldsen (Chair), Social inequalities in the lives of LGBT older adults: Diversities within society's communities. Presented at the Gerontological Society of America 67th Annual Scientific Meeting, Washington, DC.

Muraco, A., Emlet, C. A., & Fredriksen-Goldsen, K. I. (2014, November). *Unequal lives: Health and social disparities among LGBT older adults.* In K. I. Fredriksen-Goldsen (Chair), Social inequalities in the lives of LGBT older adults: Diversities within society's communities. Presented at the Gerontological Society of America 67th Annual Scientific Meeting, Washington, DC.

Oost, K. M., Smith, L., Lehavot, K., Kutner, B. K., Fredriksen-Goldsen, K. & Simoni, J. M. (2014, November). *Substance use in sexual minority and heterosexual women: A systematic review of population-based studies.* Poster presented at the 142nd annual meeting for the American Public Health Association, New Orleans, LA.

Simoni, J. M., Smith, L., Oost, K. M., Lehavot, K., & Fredriksen-Goldsen, K. (2014, November). *Disparities in health conditions among lesbian and bisexual women: A systematic review of population-based studies.* Poster presented at the 142nd annual meeting for the American Public Health Association, New Orleans, LA.

Fredriksen-Goldsen, K. I., & Hoy-Ellis, C. P. (2014, October). *The social environment matters for LGBTQ people across the lifespan: Victimization and the health and well-being of LGBT midlife and older adults.* Panel Presentation at the Council of Social Work Education 60th Annual Program Meeting, Tampa, FL.

Hoy-Ellis, C. P., & Fredriksen-Goldsen, K. I. (2014, May). *Lavender ever after: LGBT aging*. Jewish Family Services, Seattle, WA.

Hoy-Ellis, C. P., & Fredriksen-Goldsen, K. I. (2014, March). *"That's so gay!" Issues in service delivery for lesbian, gay, bisexual and transgender people.* Washington State Department of Social and Health Services; Aging and Disability Services Administration. Unit 2: Cultural Humility & Diversity Issues in Service Delivery, Spokane, WA.

Williams, M. E., & Fredriksen-Goldsen K. I. (2014, January). *Marriage, health, and the social integration of LGB older adults.* Presented at the 18th Annual Conference of the Society for Social Work and Research, San Antonio, TX.

Hoy-Ellis, C. P., & Fredriksen-Goldsen, K. I. (2014, January). *Lesbian, gay, bisexual, and transgender elders: Aging and the intersection of diversity.* Invited presentation at the Alzheimer's Association, Seattle, WA.

Fredriksen-Goldsen, K. I. (2013, November). *National sexuality, aging, and health research: Optimal aging among LGBT older adults* (Chair). Presented at the Gerontological Society of America 66th Annual Scientific Meeting, New Orleans, LA.

Kim, H.-J., & Fredriksen-Goldsen, K. I. (2013, November). *Racial and ethnic differences on psychological well-being among lesbian, gay, bisexual and transgender older adults and the impacts of life stressors and social relations.* In K. I. Fredriksen-Goldsen (Chair), National

sexuality, aging, and health research: Optimal aging among LGBT older adults. Presented at the Gerontological Society of America 66th Annual Scientific Meeting, New Orleans, LA.

Emlet, C. A., Fredriksen-Goldsen, K. I., & Kim, H.-J. (2013, November). *The Impact of HIV on the Lives of LGBT Older Adults.* In K. I. Fredriksen-Goldsen (Chair), National sexuality, aging, and health research: Optimal aging among LGBT older adults. Presented at the Gerontological Society of America 66th Annual Scientific Meeting, New Orleans, LA.

Muraco, A., & Fredriksen-Goldsen, K. I. (2013, November). *Reflections of aging and other life experiences for lesbian, gay, and bisexual adults age 50 and older.* In K. I. Fredriksen-Goldsen (Chair), National sexuality, aging, and health research: Optimal aging among LGBT older adults. Presented at the Gerontological Society of America 66th Annual Scientific Meeting, New Orleans, LA.

Fredriksen-Goldsen, K. I., Kim, H.-J., Emlet, C. A., Muraco, A., & Hoy-Ellis, C. P. (2013, November). *Best practices for conducting gerontological research inclusive of LGBT older adults.* Preconference workshop presented at the Gerontological Society of America 66th Annual Scientific Meeting, New Orleans, LA.

Williams, M. E., & Fredriksen-Goldsen, K. I. (2013, November). *Same-sex partnerships and the health of older adults.* In Is optimal aging an option for us?: Research on lesbian, gay, bisexual, and transgender older adults. Presented at the Gerontological Society of America 66th Annual Scientific Meeting, New Orleans, LA.

Hoy-Ellis, C. P., & Fredriksen-Goldsen, K. I. (2013, October). *Lesbian, gay, bisexual, and transgender elders: Aging and the intersection of diversity*. Invited presentation at the Healthy Aging Partnership (HAP), Seattle, WA.

Fredriksen-Goldsen, K. I., Kim, H.-J., Emlet, C. A., Goldsen, J., & Hoy-Ellis, C. P. (2013, September). *Health disparities: LGBT older adults emerging from the margins.* Working Together for Elder Friendly Futures: A UW Gerontology Conference, Seattle, WA.

Erosheva, E. A., Kim, H.-J., Emlet, C. A., Fredriksen-Goldsen, K. I. (2013, August). *Using egocentric data to explore size and diversity of social networks among lesbian, gay, bisexual, and transgender (LGBT) older adults*. Joint Statistical Meetings, Montreal, CA.

Muraco, A., & Fredriksen-Goldsen, K. I. (2013, March). *Looking backward, looking forward: Reflections of aging and other life experiences for lesbian, gay, and bisexual adults age 50 and older.* Pacific Sociological Association, Reno, NV.

Muraco, A. & Fredriksen-Goldsen, K. I. (2013, February). *Turning points: The role of gender in life course transitions for lesbian, gay, and bisexual older adults*. Sociologists for Women in Society, Santa Ana Pueblo, NM.

Fredriksen-Goldsen, K. I., Kim, H.-J., Emlet, C. A., Muraco, A., Erosheva, E. A., Goldsen, J., & Hoy-Ellis, C. P. (2012, November). *National LGBT health and aging research: Forging new frontiers through partnerships in disadvantaged communities*. Presented at the 65th Annual Scientific Meeting of the Gerontological Society of America, San Diego, CA.

Kim, H.-J. & Fredriksen-Goldsen, K. I. (2012, November). *Living arrangement and heightened risk of perceived social isolation among LGB older adults.* Presented at the 65th Annual Scientific Meeting of the Gerontological Society of America, San Diego, CA.

Emlet, C. A., Fredriksen-Goldsen, K. I., & Kim, H.-J. (2012, November). *Correlates of sexual risk behavior in older adults living with HIV: Findings from Caring and Aging with Pride.* Presented at the 65th Annual Scientific Meeting of the Gerontological Society of America, San Diego, CA.

Muraco, A. & Fredriksen-Goldsen, K. I. (2012, November). *Transitions and relationships in the life course of lesbian, gay, and bisexual older adults.* Presented at the 65th Annual Scientific Meeting of the Gerontological Society of America, San Diego, CA.

Hoy-Ellis, C. P., Fredriksen-Goldsen, K. I., Kim, H.-J., Emlet, C. A., Muraco, A., Erosheva, E. A., & Goldsen, J. (2012, November). *Lesbian, gay, and bisexual (LGB) older adults' health.* Presented at the 58th Annual Program Meeting of the Council on Social Work Education, Washington, DC.

Fredriksen-Goldsen, K. I. (2012, September). *Supporting aging in place in the community.* Roundtable Facilitator at Creating Elder-Friendly Communities: A UW Gerontology Research Forum, Seattle, WA.

Fredriksen-Goldsen, K. I., Kim, H.-J., Emlet, C. A., Muraco, A., Erosheva, E. A., Goldsen, J., & Hoy-Ellis, C. P. (2012, September). *Health disparities and resilience among lesbian, gay, and bisexual older adults.* Poster presented at the Creating Elder-Friendly Communities: A UW Gerontology Research Forum, Seattle, WA.

Simoni, J. M., Chen, W.-T., Huh, D., Zhao, H., Fredriksen-Goldsen, K. I., Pearson, C., Shiu, C., & Zhang, F. (2012, July). *Promoting HIV adherence in China with nurse-delivered counseling.* Presented at The Frontier of HIV/AIDS Research in China: Biological and Behavioral Aspects, Washington, D.C.

Fredriksen-Goldsen, K. I., Cook-Daniels, L., Kim, H.-J., Emlet, C. A., Muraco, A., & Erosheva, E. A. (2012, March). *Aging and Health Report: Transgender health.* Presented at the 2012 Annual Conference of the American Society on Aging, Washington, DC.

Fredriksen-Goldsen, K. I., Kim, H.-J., Emlet, C. A., Muraco, A., & Erosheva, E. A. (2012, March). *Aging and Health Report: An overview of resilience and disparities among LGBT older adults.* Presented at the 2012 Annual Conference of the American Society on Aging, Washington, DC.

Muraco, A. & Fredriksen-Goldsen, K. I. (2012, March). *Turning points in the lives of lesbian, gay, bisexual, and transgender (LGBT) older adults.* Presented at the Annual Meeting of the Pacific Sociological Association, San Diego, CA.

Emlet, C. A., Fredriksen-Goldsen, K. I. & Kim, H-J. (2012, January). *Risk and protective factors associated with health-related quality of life in older adults living with HIV disease: Preliminary results from the Caring and Aging with Pride Study.* Presented at the 16th Annual Conference of the Society for Social Work and Research, Washington, D.C.

Fredriksen-Goldsen, K. I., Kim, H-J., & Hoy-Ellis, C. P. (2012, January). *Health disparities among lesbian, gay, and bisexual older adults: The results of a population based study*. Presented at the 16th Annual Conference of the Society for Social Work and Research, Washington, DC.

Kim, H.-J. & Fredriksen-Goldsen, K. I. (2012, January). *Life stressors and social relationship as predictors of psychological well-being among LGBT older adults*. Presented at the 16th Annual Conference of the Society for Social Work and Research, Washington, DC.

Williams, M. E., & Fredriksen-Goldsen, K. I. (2012, January). *Respondent-driven sampling with LGBT older adults.* Presented at the 16th Annual Conference of the Society for Social Work and Research, Washington, DC.

Young, L. & Fredriksen-Goldsen, K. I. (2012, January). *The Aging and Health Report: Disparities and resilience among LGBT older adults.* Presented at The National Conference on LGBT Equality: Creating Change, Baltimore, MD.

Fredriksen-Goldsen, K. I., & Kim, H.-J. (2011, November). *Health disparities among LGBT older adults: Prevalence and risk.* Presented at the 64th Annual Scientific Meeting of the Gerontological Society of America, Boston, MA.

Emlet, C. A., Fredriksen-Goldsen, K. I., & Kim, H.-J. (2011, November). *Risk and protective factors associated with health related quality of life in older adults living with HIV disease.* Presented at the 64th Annual Scientific Meeting of the Gerontological Society of America, Boston, MA.

Fredriksen-Goldsen, K. I., Kim, H.-J., & Hoy-Ellis, C. P. (2011, November). *Living arrangement and relationship status as predictors of health among older LGBT adults: The impact of social support.* Presented at the 64th Annual Scientific Meeting of the Gerontological Society of America, Boston, MA.

Emlet, C. A., Fredriksen-Goldsen, K. I., & Kim, H.-J. (2011, November). *Correlates of HIV risk behavior among older LGBT adults: Results from a national survey*. Presented at the 64th Annual Scientific Meeting of the Gerontological Society of America, Boston, MA.

Petry, H., Fredriksen-Goldsen, K. I., Kim, H.-J., & Muraco, A. (2011, November). *Leisure activities: Effects on health and quality of life in older LGBT adults.* Presented at the 64th Annual Scientific Meeting of the Gerontological Society of America, Boston, MA.

Williams, M. E., Fredriksen-Goldsen, K. I., Erosheva, E. A., & Kim, H.-J. (2011, November). *Respondent-driven sampling with LGBT older adults.* Presented at the 64th Annual Scientific Meeting of the Gerontological Society of America, Boston, MA.

Fredriksen-Goldsen, K. I. Kim, H.-J., & Hoy-Ellis, C. P. (2011, October) *The National Health Report: Resilience and disparities among LGBT older adults*. Presented at the 57th Annual Program Meeting of the Council on Social Work Education, Atlanta, GA.

Fredriksen-Goldsen, K. I. (2011, July). *Marginalization and human agency impacting the health of older lesbians and bisexual women: Findings from Caring and Aging with Pride*. Presented at the 2011 Regional OLOC Gathering, Tacoma, WA.

Fredriksen-Goldsen, K. I., Kim, H.-J., & Emlet, C. A. (2011, July). *The relationship between self-stigma, self-efficacy, social support and HIV risk behavior among vulnerable older adults: Implications for access to HIV prevention interventions*. Poster presented at the 6th International AIDS Society Conference on HIV Pathogenesis, Treatment and Prevention, Rome, Italy.

Muraco, A. & Fredriksen-Goldsen, K. I. (2011, July). *An ethic of care: Friends as caregivers for chronically ill lesbian, gay, and bisexual elders.* Presented at the International Association of Relationship Research, Gdansk, Poland.

Muraco, A. & Fredriksen-Goldsen, K. I. (2011, March). *The highs and lows of caregiving for chronically ill elder lesbian gay and bisexual adults.* Presented at the Annual Meeting of the Pacific Sociological Association, Seattle, WA.

Fredriksen-Goldsen, K. I., Kim, H-J., & Emlet, C. A. (2011, January). *Over the Rainbow: Addressing health disparities among LGBT older adults and their caregivers.* Presented at the 15th Annual Conference of the Society for Social Work and Research, Tampa, FL.

Muraco, A. & Fredriksen-Goldsen, K. I. (2010, November). "*That's what friends do": Caregiving for chronically-ill lesbian, gay, and bisexual elders*. Presented at the 63rd Annual Scientific Meeting of the Gerontological Society of America, New Orleans, LA.

Rao, D., Chen, W.-T., Pearson, C., Simoni, J. M., Fredriksen-Goldsen, K. I., Nelson, K., Zhao, H., & Zhang, F. (2010, March). *Social support mediates the relationship between HIV stigma and depression/quality of life among people living with HIV in Beijing, China*. Poster presented at the meeting of the Society for Behavioral Medicine, Seattle, WA.

Fredriksen-Goldsen, K. I., Kim, H.-J., Walters, K., & Balsam, K. (2010, January). *Conducting health disparities research in LGBTTS communities: Methodological constraints and opportunities*. Presented at the 14th Annual Conference "Social Work Research: A World of Possibilities", Society for Social Work and Research, San Francisco, CA.

Fredriksen-Goldsen, K. I., & Kim, H.-J. (2010, January). May I ask who is calling? Findings on health disparities and sexual orientation from the Washington State BRFSS, a population-based telephone survey. Presented at the 14th Annual Conference of the Society for Social Work and Research, San Francisco, CA.

Fredriksen-Goldsen, K. I. & Muraco, A. (2009, November). *Aging and sexual orientation across the life course: A 20-year review of the literature (1997-2007)*. Presented at the 61th Annual Scientific Meeting of the Gerontological Society of America, National Harbor, MD.

Fredriksen-Goldsen, K. I., Kim, H.-J., Mincer, S. L., & Beltran, R. (2009, November). *LGBTS health disparities research: Innovations for social work practice and education*. Presented at the 55th Annual Program Meeting, Council on Social Work Education, San Antonio, TX.

Gutiérrez, L. M., Fredriksen-Goldsen, K. I., Woodford, M. R., & Luke, K. P. (2009, November). *U.S. and Canadian faculty support for sexual orientation and gender identity content*. Poster presented at the 55th Annual Program Meeting of the Council on Social Work Education, San Antonio, TX.

Chen, W.-T., Shiu, C., Simoni, J. M., Fredriksen-Goldsen, K. I., Zhang, F., Starks, H., & Zhao, H. (2009, April). *Chinese HIV-positive individuals' attitudes toward HIV-related regimens*. Poster presented at the 4th NIMH/IAPAC International Conference on HIV Treatment Adherence, Miami, FL.

Chen, W.-T., Fredriksen-Goldsen, K. I., Shiu, C., Simoni, J. M., Zhao, H., & Zhang, F. (2009, April). *HIV*

family caregiving in China: Supporting medication adherence despite severe stigma and shame. Poster presented at the 4th NIMH/IAPAC International Conference on HIV Treatment Adherence, Miami, FL.

Muraco, A. & Fredriksen-Goldsen, K. I. (2009, March). *Caregiving in marginalized communities*. Presented at the Pacific Sociological Association. San Diego, CA.

Muraco, A., & Fredriksen-Goldsen, K. I. (2008, November). *She's more a family to me than my own.* Presented at the 61st Annual Scientific Meeting of the Gerontological Society of America, National Harbor, MD.

Fredriksen-Goldsen, K. I. (2008, October). *LGBT scholarship in the global arena*. CSOGE Series Session at the 54th Annual Program Meeting of the Council on Social Work Education, Philadelphia, PA.

Fredriksen-Goldsen, K. I., Shiu, C., Chen, W.-T., Simoni, J., Starks, H., Pearson, C., Zhao, H., & Zhang, F. (2008, October). *HIV/AIDS caregiving in China*. Presented at the 54th Annual Program Meeting of the Council on Social Work Education, Philadelphia, PA.

Fredriksen-Goldsen, K. I., Luke, K. P., Gutiérrez, L. M., & Woodford, M. R., (2008, October). *Addressing sexual orientation and gender identity in social work: Findings from a national survey*. Presented at the 54th Annual Program Meeting of the Council on Social Work Education, Philadelphia, PA.

Fredriksen-Goldsen, K. I. (2008, October). *Finding a job: Helpful hints for underrepresented and diverse job seekers*. Presented at the Career Center Panel Session at the 54th Annual Program Meeting of the Council on Social Work Education, Philadelphia, PA.

Fredriksen-Goldsen, K. I., Kim, H.-J., & Mincer, S. (2008, March). *How healthy are we?* Presented at the City-Wide LGBT Community Health Forum, Seattle, WA.

Pearson, C. R., Zhang, F., Fredriksen-Goldsen, K. I., Zhao, H., Chen, W.-T., Shiu, C., & Simoni, J. M. (2008, March). *Barriers associated with self-reported adherence to antiretroviral therapy in Beijing, China.* Presented at the 3rd NIMH/IAPAC International Conference on HIV Treatment Adherence, Jersey City, NJ.

Chen, W.-T., Shiu, C., Zhang, F., Fredriksen-Goldsen, K. I., Starks, H., Simoni, J., Pearson, C. R., & Zhao, H. (2008, March). *Attitudes toward HAART and complementary and alternative medicine (CAM) among Chinese PLWHA*. Poster presented at the 3rd NIMH/IAPAC International Conference on HIV Treatment Adherence, Jersey City, NJ.

Simoni, J. M., Chen, W.-T., Shiu, C., Zhou, H., Starks, H., Fredriksen-Goldsen, K. I., Pearson, C. R., & Zhang, F. (2008, January). *A nurse-delivered counseling program to promote antiretroviral adherence among persons living with HIV/AIDS in Beijing, China*. Presented at the 6th Annual National Nursing Centers Consortium Conference: Policy Solutions to Improving Access to Health Care for All, Auckland, New Zealand.

Fredriksen-Goldsen, K. I., (2007, May*). Multigenerational social work practice: An innovative approach*. Presented at the Annual Symposium, The American Geriatrics Society Annual Scientific Meeting, Seattle, WA.

Muraco, A. & Fredriksen-Goldsen, K. I. (2007, April). *We are family: Older LGBT adults and caregiving relationships.* Presented at Re-Imagining the Family: an Interdisciplinary Conference Sponsored by the Wismer Center, Seattle University, Seattle, WA.

Chen, W.-T., Shiu, C., Simoni J. M., Pearson, C. R., Zhou, H., Fredriksen-Goldsen, K. I., Starks, H., & Zhang, F. (2007, March). *Tailoring a nurse-delivered cognitive-behavioral intervention to promote antiretroviral adherence in Beijing, China: Considering family dynamics*. Presented at the 2nd NIMH/IAPAC International Conference on HIV Treatment Adherence, Jersey City, NJ.

Zhao, H., Huang, B., Lu, L., Starks, H., Pearson, C. R., Simoni, J., Fredriksen, K. I., & Zhang, F. (2007, March). *The effect of stigma on HIV treatment and HAART adherence in Beijing, China*. Poster presented at the 2nd NIMH/IAPAC International Conference on HIV Treatment Adherence, Jersey City, NJ.

Fredriksen-Goldsen, K. I. (2007, January). *HIV caregiving: The impact of the caring relationship*. Presented at the 11th Annual Conference of the Society for Social Work and Research, San Francisco, CA.

Muraco, A. & Fredriksen-Goldsen, K. I. (2006, November). *Caregiving in the margins: The impact of the caring relationship.* Presented at the 59th Annual Scientific Meeting of the Gerontological Society of America, Dallas, TX.

Fredriksen-Goldsen, K. I. & Muraco, A. (2006, November). *Caregiving in the margins.* Presented at the 59th Annual Scientific Meeting of the Gerontological Society of America, Dallas, TX.

Boddie, M. A., Fredriksen-Goldsen, K. I., Friedman, S., McMullen, K. J., Moreland, D., Reis, B., Steele, B., Stately, A., & Tang, G. (2006, September). *LGBTQ and aging: A community forum*. Presented at the City of Seattle Commission for Sexual Minorities, Seattle, WA.

Fredriksen-Goldsen, K. I. & Muraco A. (2006, August). *Gay and lesbian aging: A 25 year review of the literature.* Presented at the American Sociological Association Annual Meeting, Montreal, Quebec, Canada.

Fredriksen-Goldsen, K. I., Shiu, C. & Mincer, S. (2006, June). *Till death do us part: Caregiving in the margins*. Invitational Keynote Address presented at the Northwest Forum on LGBT Aging: A Community Collaboration, Seattle, WA.

Daniels, J., & Fredriksen-Goldsen, K. I. (2006, May). *Lesbian, gay, bisexual, transgender, and questioning (LGBTQ) youth in Seattle: Policy recommendations from the Queer Youth Forum*. Presented at the City of Seattle Commission for Sexual Minorities, Seattle, WA.

Bonifas, R. P. & Fredriksen-Goldsen, K. I. (2006, February). *Infusion of gerontological content: An evaluation.* Presented at the 52st Annual Program Meeting of the Council on Social Work Education, Chicago, IL.

Fredriksen-Goldsen, K. I. (2006, February). *Enlivening the life-span of a LGBT researcher: Enriching our research, our scholarship and our communities.* IASWR sponsored symposium. Presented at the 52st Annual Program Meeting of the Council on Social Work Education, Chicago, IL.

Fredriksen-Goldsen, K. I. (2006, January). *AIDS caregiving and resilience: A dyadic approach*. Presented at the 10th Annual Conference of the Society for Social Work Research, San Antonio, TX.

Starks, H., Simoni, J., Huang, B., Fredriksen-Goldsen, K. I., Pearson, C., Shiu, C., & McLoughlin, B. (2005, December). *Adherence research in China: Preliminary findings from patient and family interviews*. Presented at the Chinese Centers for Disease Control and Prevention, Beijing, China.

Fredriksen-Goldsen, K. I. (2005, November). *Caregiving for older adults with AIDS: Faith and stress-related growth.* Presented at the 58th Annual Scientific Meeting of the Gerontological Society of America, Orlando, FL.

Fredriksen-Goldsen, K. I. & Bonifas, R. P. (2005, November). *Multigenerational practice: Evaluation of an innovative infusion approach.* Presented at the 58th Annual Scientific Meeting of the Gerontological Society of America, Orlando, FL.

Huang, B., Simoni, J. M., Pearson, C. R., Fredriksen-Goldsen, K. I., & Starks, H. (2005, November). *Developing an antiretroviral adherence program in China*. Poster presented at Enhancing Adherence: A State of the Science Meeting on Intervention Research to Improve Anti-retroviral Adherence, New Haven, CT.

Fredriksen-Goldsen, K. I. (2005, June). *Caregiving and aging research: Opportunities and constraints in LGBT communities*. Invitational address, Institute for the Advancement of Social Work Research, Symposium, Enhancing the Health and well-being of LGBT individuals, families, and communities: Building a social work research agenda, Washington, D.C.

Fredriksen-Goldsen, K. I., & Bonifas, R. P. (2005, February/March). *Resilience and AIDS caregiving: Predictors of health and well-being.* Presented at the 51st Annual Program Meeting of the Council on Social Work Education, New York, NY.

Bonifas, R. P., & Fredriksen-Goldsen, K. I. (2005, February/March). *Preparing MSW students for gerontological social work practice: A survey analysis*. Presented at the 51st Annual Program Meeting of the Council on Social Work Education, New York, NY.

Fredriksen-Goldsen, K. I. (2005, February/March). *LGBTQ family caregiving: Time of hostility and hope*. Presented at the 51st Annual Program Meeting of the Council on Social Work Education, New York, NY.

Fredriksen-Goldsen, K. I., & Bonifas, R. P. (2005, February/March). *Preparing MSW students for changing demographics: Multigenerational curriculum infusion strategies*. Presented at the 3rd National Gerontological Social Work Conference, New York, NY.

Bonifas, R. P., & Fredriksen-Goldsen, K. I. (2005, January). *Gerontological social work: Research findings and next steps.* Presented at the Annual Conference for the Society for Social Work and Research, Miami, FL.

Diaz, R., Parks, C., Gorman, M., LaSala, M., Walters, K., Juliano-Bult, D., & Fredriksen-Goldsen, K. I. (2005, January). *LGBT research priorities: Opportunities and strategies to access federal funding.* IASWR Pre-Conference Institute**,** presented at the 9th Annual Conference of the Society for Social Work Research, Miami, FL.

Fredriksen-Goldsen, K. I. (2004, November). *AIDS caregiving and resilience among gay men 50 & older living with AIDS.* Presented at the 57th Annual Scientific Meeting of the Gerontological Society of America, Washington D.C.

Fredriksen-Goldsen, K. I., (2004, October). *Caregiving in historically disadvantaged communities.* Presented at the Hartford Faculty Scholars Program Meeting, Washington D.C.

Bonifas, R. P. & Fredriksen-Goldsen, K. I. (2004, April). *Multigenerational social work practice.* Symposium conducted at the Annual Conference of the Washington State Chapter of the National Association of Social Workers, Tukwila, WA.

Fredriksen-Goldsen, K. I., & Bonifas, R. P. (2004, April). *Social work education for multigenerational practice.* Program exchange conducted at the Joint Conference of the American Society on Aging and the National Council on the Aging, San Francisco, CA

Fredriksen-Goldsen, K. I., & Bonifas, R. P. (2004, February/March). *Enhancing MSW students' value of gerontological and multigenerational practice skills.* Presented at the Second National Gerontological Social Work Conference, Anaheim, CA.

Fredriksen-Goldsen, K. I., & Bonifas, R. P. (2004, February/March). *Multigenerational health, development and equality: An emerging practice model.* Presented at the 50th Annual Program Meeting of the Council on Social Work Education, Anaheim, CA.

Fredriksen-Goldsen, K. I. (2003, November). *Resiliency and AIDS caregiving: Predictors of well-being and distress*. In N. Hooyman, S. Kemp, M. Marcenko, K. I. Fredriksen-Goldsen, & K. Lincoln, Multigenerational health, development and equality. Symposium conducted at the 56th Annual Scientific Meeting of the Gerontological Society of America, San Diego, CA.

Fredriksen-Goldsen, K. I., & Bonifas, R. P. (2003, March). *The Gerontology Enrichment Project and the Institute for Multigenerational Health, Development, and Equality*. Symposium conducted at the Annual Conference of the Washington State Chapter of the National Association of Social Workers, Tukwila, WA.

Fredriksen-Goldsen, K. I. (2003, March). *Creating aging enriched education: The Institute for Multigenerational Health, Development and Equality.* Presentation at the 49th Annual Program Meeting of the Council on Social Work Education, Atlanta, GA.

Fredriksen-Goldsen, K. I. (2002, February). *The Gerontology Enrichment Project at the University of Washington School of Social Work*. Presentation at the Hartford Geriatric Enrichment Project in Social Work Education, Region Meeting, San Diego, CA.

Fredriksen-Goldsen, K. I. (2001, June). *Caregiving for gay men 50 and older living with AIDS.* Presented at the SAGE National Conference on LGBT Aging: Nothing to Fear? Nothing to Hide? New York, NY.

Fredriksen-Goldsen, K. I. (2000, October). *Gay, lesbian, bisexual, and transgender (GLBT) diversity training in educational settings*. Presentation and training at North Seattle Community College, Seattle, WA.

Fredriksen, K. I., Scharlach, A. (1999, March). *An interactive model of informal adult care and*

employment. Presented at the 45th Annual Meeting of the American Society on Aging, Orlando, FL.

Jones, T. C., Nystrom, N., Fredriksen, K. I., Clunis, D. M., & Freeman, P. (1999, March). *Looking Back, Looking Forward: Addressing the lives of lesbians 55 and older*. Paper presented at the 45th Annual Program Meeting of the Council on Social Work Education, San Francisco, CA.

Fredriksen, K. I. (1998). *Gay and lesbian aging: Where do we go from here?* Keynote address at the Gay and Lesbian Aging Forum, Seattle, WA.

Wolfe, P., & Fredriksen, K. I. (1998). *Lesbian Cancer Project's Needs Assessment: Community-based collaboration*. Paper presented at the 20th Annual National Lesbian and Gay Health Conference, San Francisco, CA.

Fredriksen, K. I., & Scharlach, A. E. (1997, March). *Caregiving and employment: The impact of workplace characteristics on role strain.* Paper presented at the 43rd Annual Meeting of the American Society on Aging, Nashville, TN.

Fredriksen, K. I. (1997, February). *Health and human service needs of lesbians, 55 and older*. Paper presented at the 1997 American Association for the Advancement of Science Annual Meeting, Seattle, WA.

Fredriksen, K. I. (1996, July). *Lesbian and gay caregiving*. Paper presented at the 18th Annual National Lesbian and Gay Health Conference, Seattle, WA, July, 1996.

Fredriksen, K. I. (1996, July). *Family care responsibilities among lesbians and gays*. Paper presented at the 18th Annual National Conference on Lesbian and Gay Health, Seattle, WA.

Fredriksen, K. I., & Freeman, P. (1996, July). *Looking Back, Looking Forward: A research project addressing the lives of lesbians 55 and older*. Paper presented at the 18th Annual National Lesbian and Gay Health Conference, Seattle, WA.

Terry, P., & Fredriksen, K. I. (1996, April). *Lesbians and aging*. Paper presented at the Washington State Regional Mental Health and Aging Conference, Bellevue, WA.

Fredriksen, K. I., & Scharlach, A. E. (1996, March). *Employee family care responsibilities*. Paper presented at the 42nd Annual Meeting of the American Society on Aging, Anaheim, CA.

Fredriksen, K. I., & Icard, L. (1996, March). *The Role of lesbian and gay scholars in social work programs.* Paper presented at the 42nd Annual Program Meeting of the Council on Social Work Education, Washington, D.C.

Fredriksen, K. I. (1995, March). *Gender differences in employment and the informal care of adults: Implications for social work education*. Paper presented at the 41st Annual Program Meeting of the Council on Social Work Education, San Diego, CA.

Fredriksen, K. I. (1995, March). *Caregiving and employment: The impact of job classification*. Paper presented at the 41st Annual Program Meeting of the American Society of Aging, Atlanta, GA.

Fredriksen, K. I. (1994, May). *Assisting gay and lesbian clients through practicum*. Presentation to Social Work Practicum Instructors, University of Washington, Seattle, Washington.

Fredriksen, K. I. (1994, March). *Gender differences among employed caregivers*. Paper presented at the 40th Annual Meeting of the American Society on Aging, San Francisco, CA.

Fredriksen, K. I. (1993, October). *The impact of family and work responsibilities among African American, Hispanic, Asian and White caregivers*. Paper presented at the 46th Annual Scientific Meeting of the Gerontological Society of America, New Orleans, LA.

Scharlach, A. E., & Fredriksen, K. I. (1993, October). *Elder care vs. adult care: Does care recipient age make a difference?* Paper presented at the 46th Annual Scientific Meeting of the Gerontological Society of America, New Orleans, LA.

Fredriksen, K. I. (1993, May). *Work and family: The provision of informal adult care*. Poster presented at the 70th Annual Meeting of American Orthopsychiatric Association, San Francisco, CA.

Fredriksen, K. I. (1985, March). *The informal care of persons living with AIDS*. Paper presented at the Northwest AIDS Conference, Seattle, WA.

Fredriksen, K. I., & Fosshage, S. (1984, May). *The impact of AIDS: Family and friends as caregivers*. Panel presentation at the Public Health AIDS Conference, Seattle, WA.

COMMUNITY SERVICE - Selected

Co-President, Board, Generations Aging with Pride, 2016-present.
Advisory Board Member, Harrington Park Press, 2014-present.
Invitee/Participant, October Launch of the Health Insurance Marketplace conference call with President Obama and Health and Human Services Secretary Kathleen Sebelius, 2013.
Invitee/Participant, The White House Office of Public Engagement Roundtable Meeting on Lesbian, Gay, Bisexual, Transgender, and Two Spirit Native Americans, 2013.
Invitee/Participant, Governor Jay Inslee's Aging Summit, 2013.
Academic/Professional Advisory Board Member, Harrington Park Press, New York, NY
Reviewer, National Institutes of Health, Special Emphasis Panel, HIV and Aging, 2012.
Reviewer, National Institutes of Health, Special Emphasis Panel, Resource Centers for Minority Aging Research, 2012.
Reviewer, Institute of Medicine (IOM), 2011-2012.
Faculty, The Fenway Institute: Center for Population Research in LGBT Health, 2011-present.
Advisory Board Member, SAGE Advisory Committee, SAGE Seattle, 2011-2013.
Advisory Board Member, Making End-of-Life Decisions for our Partners, 2011-present.
Program Scientist and Faculty Member, Center for Population Research in LGBT Health, The Fenway Institute, 2011-present.
Editorial Board Member, International LGBT Health Research, 2011-present.
Commissioner, Council for Social Work Education (CSWE), Commission for Diversity and Economic Justice, 2007-present.
Commissioner, CSWE National Council on Sexual Orientation & Gender Expression, 2004-2010; 2006-2008, Co-Chair.
Member/Founder, Rainbow Scholars Research Group, Gerontological Society of America, 2004-present. Convener, 2004-2008.
Member, Planning Committee, LGBT Aging Conference, 2005-2008.
Member, Planning Committee LGBT Aging Summit, 2009-2010.
Commissioner, City of Seattle, Commission for Sexual Minorities, 2005-2007.
Program Committee Member, Gerontological Society of America, Social Research, Policy and Practice Section, 2006.
Advisory Board Member (CQI), Rosehedge, AIDS Housing and Health Care, 2003-2009.
Caucus Member, CSWE, Commission on Sexual Orientation and Gender Identity, 2000-present.
Manuscript Reviewer: American Journal of Public Health, 2009-present; The Gerontologist, 1996-present; Journal of Social Work Education, 1994-present; Journal of Gay and Lesbian Social Services, 2004-present; Journal of Interpersonal Violence, 1995-present; Journal of Workplace Behavioral Health, 2005-present; Journal of Community, Work and Family, 2004-present; Signs, 1998-present.
Reviewer for Conference Proposals: Gerontological Society of America; Council for Social Work Education; Society for Social Work Research, American Society on Aging, 1998-present.
Book Reviewer: Oxford University Press, 2000-present; Temple University Press, 1994-present; Columbia University Press, 1997-present.
External Evaluator for Tenure and Promotion, 2005-present.
Board Member, Pride Foundation, 1996-2000.
Planning Committee, Committee on Gay/Lesbian Aging, 1995-1997.
Chair, AIDS Funding Coalition, 1988-1992.
Co-Chair, City of Seattle, Mayor's Task Force on Sexual Minorities, 1987-1988; Member, 1986-1987.

UNIVERSITY OF WASHINGTON SERVICE - Selected

Faculty Senate, 1998-2000; 2003-2005; 2013-2017.

Affiliate, Center for Studies in Demography and Ecology (CSDE), 2015-present.
Director, Healthy Generations Hartford Center of Excellence Geriatric Social Work, 2014-present.
Director, Institute for Multigenerational Health, 2002-present.
Reviewer, UW Royalty Research Fund, 1996-present.
Doctoral Admissions Committee, 1996-present.
Inaugural Board Member, Sexuality and Gender Studies Program, 2010-present.
MSW Program Committee, 2010-2011.
EDP Planning Concentration Chair, 2008-2010.
Executive Committee, 1995-1997; 1998-1999; 2004-2006.
Board Member, Q-Center, 2004-2005.
Director, GeroRich Project, 2002-2004.
Strategic Options Planning Group, Co-Chair, 2002-2003.
Curriculum Committee, 1999-2000.
Human Subjects Review Committee, 1999-2000.
Admissions Committee, 1998- 2000.
Administration Concentration Committee, 1994-1998.
Administration Concentration Chair, 1999-2000.
Faculty Liaison, Gay/Lesbian Student Association, 1993-2010.
Diversity Committee, 1997-1998; 1999-2000.
Chair, Task Force on Service, 1997.
Chair, Task Force on Academic Excellence, 1996.
Practicum Advisory Council, 1994-1996.
Scholarship Committee, 1993-1994.
Undergraduate Program Committee, 1993-1994.
Search Committee, Director of Institute on Aging, 1993-1994.

ASSOCIATION MEMBERSHIPS

Gerontological Society of America
American Society on Aging
American Public Health Association
American Psychological Association
Society for Social Work and Research
Council on Social Work Education
National Association of Social Workers
Association for Gerontology Education in Social Work
National Danish Historical Society

Health Disparities Among Lesbian, Gay, and Bisexual Older Adults: Results From a Population-Based Study

Karen I. Fredriksen-Goldsen, PhD, Hyun-Jun Kim, PhD, Susan E. Barkan, PhD, Anna Muraco, PhD, and Charles P. Hoy-Ellis, MSW

Objectives. We investigated health disparities among lesbian, gay, and bisexual (LGB) adults aged 50 years and older.

Methods. We analyzed data from the 2003–2010 Washington State Behavioral Risk Factor Surveillance System (n = 96 992) on health outcomes, chronic conditions, access to care, behaviors, and screening by gender and sexual orientation with adjusted logistic regressions.

Results. LGB older adults had higher risk of disability, poor mental health, smoking, and excessive drinking than did heterosexuals. Lesbians and bisexual women had higher risk of cardiovascular disease and obesity, and gay and bisexual men had higher risk of poor physical health and living alone than did heterosexuals. Lesbians reported a higher rate of excessive drinking than did bisexual women; bisexual men reported a higher rate of diabetes and a lower rate of being tested for HIV than did gay men.

Conclusions. Tailored interventions are needed to address the health disparities and unique health needs of LGB older adults. Research across the life course is needed to better understand health disparities by sexual orientation and age, and to assess subgroup differences within these communities. (*Am J Public Health*. Published online ahead of print June 13, 2013: e1–e8. doi:10.2105/AJPH.2012.301110)

Changing demographics will make population aging a defining feature of the 21st century. Not only is the population older, it is becoming increasingly diverse.[1] Existing research illustrates that older adults from socially and economically disadvantaged populations are at high risk of poor health and premature death.[2] A commitment of the National Institutes of Health is to reduce and eliminate health disparities,[3] which have been defined as differences in health outcomes for communities that have encountered systematic obstacles to health as a result of social, economic, and environmental disadvantage.[4]

Social determinants of health disparities among older adults include age, race/ethnicity, and socioeconomic status.[5] Centers for Disease Control and Prevention (CDC) and *Healthy People 2020* identify health disparities related to sexual orientation as one of the main gaps in current health research.[6] The Institute of Medicine identifies lesbian, gay, and bisexual (LGB) older adults as a population whose health needs are understudied.[7] The institute has called for population-based studies to better assess the impact of background characteristics such as age on health outcomes among LGB adults. A review of 25 years of literature on LGB aging found that health research is glaringly sparse for this population and that most aging-related studies have used small, non-population-based samples.[8]

Several important studies have begun to document health disparities by sexual orientation in population-based data and have revealed important differences in health between LGB adults and their heterosexual counterparts, including higher risks of poor mental health, smoking, and limitations in activities.[9,10] Studies have found higher rates of excessive drinking among lesbians and bisexual women[9,10] and higher rates of obesity among lesbians[10,11] than among heterosexual women; bisexual men and women are at higher risk of limited health care access than are heterosexuals. In addition, important subgroup differences in health are beginning to be documented among LGB adults. For example, bisexual women are at higher risk than lesbians for mental distress and poor general health.[12] A primary limitation of most existing population-based research is a failure to identify the specific health needs of LGB older adults. Most studies to date address the health needs of LGB adults aged 18 years and older[9] or those younger than 65 years.[10] This lack of attention to older adult health leaves unclear whether disparities diminish or persist or even become more pronounced in later life.

A few studies have begun to examine health disparities among LGB adults aged 50 years and older.[13,14] Wallace et al. analyzed data from the California Health Interview Survey and found that LGB adults aged 50 to 70 years report higher rates of mental distress, physical limitations, and poor general health than do their heterosexual counterparts. The researchers also found that older gay and bisexual men report higher rates of hypertension and diabetes than do heterosexual men.[14] To better address the needs of an increasingly diverse older adult population and to develop responsive interventions and public health policies, health disparities research is needed for this at-risk group.

Examining to what extent sexual orientation is related to health disparities among LGB older adults is a first step toward developing a more comprehensive understanding of their health and aging needs. We analyzed population-based data from the Washington State Behavioral Risk Factor Surveillance System (WA-BRFSS) to compare lesbians and bisexual women and gay and bisexual men with their heterosexual counterparts aged 50 years and older on key health indicators: outcomes, chronic conditions, access to care, behaviors, and screening. We also compared subgroups to identify differences in health disparities by sexual orientation among LGB older adults.

METHODS

The BRFSS is an annual random-digit-dialed telephone survey of noninstitutionalized adults

conducted by each US state. Each year, disproportionate stratified random sampling is used to select eligible households, and from each selected household 1 adult is randomly selected as the respondent.[15] Washington State began including a measure of sexual orientation in 2003. We aggregated the WA-BRFSS data collected from 2003 to 2010 for respondents aged 50 years and older (n = 96 992) and stratified by gender for further analyses. We selected 50 years as the lower age limit to be consistent with previous health studies focusing on sexual minority older adults,[13,14] as well as research addressing specific chronic health conditions[16,17] and older adult health and well-being, such as the Health and Retirement Study and other population-based studies.[18–20] Annual response rates to the WA-BRFSS range from 43% to 50%, calculated according to Council of American Survey and Research Organizations methods.[21] To adjust for unequal probabilities of selection resulting from nonresponse, sample design, and households without telephones, we applied sample weights provided by the WA-BRFSS.

According to weighted estimation, among women aged 50 years and older (n = 58 319), 1.03% (n = 562) identified as lesbian and 0.54% (n = 291) as bisexual; among men aged 50 years and older (n = 37 820), 1.28% (n = 463) identified as gay and 0.51% (n = 215) as bisexual. The age range in the sample for LGB older adults was 50 to 98 years (50–94 years for women and 50–98 years for men).

Measures

To measure sexual orientation, survey respondents were asked to select 1 of the following: heterosexual or straight, homosexual (gay or lesbian), bisexual, or something else. About 0.2% (n = 266) of the sample selected something else, and we excluded them from our analyses.

The background characteristics in this study were as follows: age, household income (≤ 200% vs > 200% of the federal poverty level), education (≤ high school vs ≥ some college), employment (part time or full time vs other), race/ethnicity (non-Hispanic White vs other), living arrangement (living alone vs other), and number of children in household. We categorized relationship status as married versus partnered (a member of an unmarried couple) versus other (divorced, widowed, separated, or never married).

Health outcomes (recommended and validated by CDC) in our study were poor physical health, disability, and poor mental health.[22] We defined poor physical health as 14 or more days of poor physical health during the previous 30 days and poor mental health as 14 or more days of poor mental health during the previous 30 days.[22] We defined disability as limitations in any activities because of physical, mental, or emotional problems or any health problem that required the use of special equipment, as recommended by *Healthy People 2020*.[4]

The BRFSS asked respondents whether they had ever been told by a health professional they had arthritis, asthma, diabetes (not included if prediabetes or gestational diabetes alone), high blood pressure (not included if borderline or during pregnancy alone), or high cholesterol. As recommended by other health studies, we designated cardiovascular disease (CVD) as diagnosis by a physician of a heart attack, angina, or stroke.[23,24] We defined obesity as a body mass index score (defined as weight in kilograms divided by height in meters squared) of 30 or higher, as recommended by CDC.[25] The BRFSS measured health care access by asking whether respondents had insurance coverage, a personal doctor or provider, or a financial barrier to seeing a doctor in the past 12 months.

Health behaviors were (1) current smoking (defined, as suggested by CDC, as having ever smoked ≥ 100 cigarettes and currently smoking every day or some days[26]), (2) excessive drinking (defined, as suggested by National Institute of Alcohol Abuse and Alcoholism, as women having ≥ 4 and men having ≥ 5 drinks on 1 occasion during the past month[27]), and (3) physical activity (defined, as suggested by the US Department of Health and Human Services, as ≥ 30 minutes of moderate-intensity activity ≥ 5 days/week or ≥ 20 minutes of vigorous-intensity activity ≥ 3 days/week[28]). The BRFSS measured health screening, according to public health guidelines for older adults, by whether respondents received a flu shot in the past year,[29] an HIV test ever, a mammogram (for women) in the past 2 years,[30] and a prostate-specific antigen test (for men) in the past year.[31]

Statistical Analysis

We conducted analyses separately by gender. First, we described the weighted distribution of background characteristics by sexual orientation, comparing lesbians and bisexual women with heterosexual women aged 50 years and older and gay and bisexual men with heterosexual men aged 50 years and older, applying t tests or χ^2 tests as appropriate. We also tested statistical significance of differences in background characteristics between lesbians and bisexual women and between gay and bisexual men.

We then estimated weighted prevalence rates of health indicators, which were health outcomes, chronic conditions, access to care, behaviors, and screening, by sexual orientation (lesbian and bisexual vs heterosexual women; gay and bisexual vs heterosexual men). We conducted a series of adjusted logistic regressions, with control for sociodemographic characteristics (age, income, and education), to test associations between health-related indicators and sexual orientation. We also conducted adjusted logistic regression analyses to examine health disparities between lesbian and bisexual women and between gay and bisexual men. We used Stata version 11 (StataCorp LP, College Station, TX) for data analyses.

RESULTS

Table 1 illustrates the weighted prevalence of background characteristics by sexual orientation among older adults. Lesbians and bisexual women were younger, had more education, and had higher rates of employment than did heterosexual women; income levels were similar. Lesbians and bisexual women were less likely to be married and more likely to be partnered than were their heterosexual counterparts, but the average number of children in the household and the likelihood of living alone were similar. Lesbians were more likely than bisexual women to be employed ($P = .019$) and less likely to be married, but more likely to be partnered ($P < .001$). We found no differences in other background characteristics.

Gay and bisexual men were significantly younger and more highly educated than were heterosexual men; income levels and employment rates were similar. Gay and bisexual men were less likely than heterosexual men to be married

TABLE 1—Background Characteristics of Respondents Aged 50 Years and Older, by Sexual Orientation: Washington State Behavioral Risk Factor Surveillance System, 2003–2010

Characteristic	Women				Men			
		Lesbian and Bisexual				Gay and Bisexual		
	Heterosexual, % or Mean (SD)	Total, % or Mean (SD)	Lesbian, % or Mean (SD)	Bisexual, % or Mean (SD)	Heterosexual, % or Mean (SD)	Total, % or Mean (SD)	Gay, % or Mean (SD)	Bisexual, % or Mean (SD)
Age, y	63.82 (0.06)	58.63*** (0.37)	58.09 (0.40)	59.67 (0.78)	62.35 (0.07)	59.54*** (0.39)	59.26 (0.45)	60.22 (0.75)
≤ 200% poverty level	27.38	27.12	26.47	28.43	20.85	24.79	25.45	23.18
≤ high school	30.18	13.44***	13.83	12.69	24.96	14.57***	12.34	20.09
Employed	39.97	59.31***	63.07	52.08	51.17	55.30	55.25	55.43
Non-Hispanic White	91.79	90.31	89.86	91.23	90.40	93.22*	92.85	94.18
Relationship status								
Married	61.67	20.15***	9.57	40.44	77.60	20.83***	8.16	52.07
Partnered	1.59	27.83	36.96	10.31	1.50	20.27	27.30	2.96
Other	36.74	52.02	53.47	49.25	20.90	58.90	64.55	44.97
Children in household, no.	0.15 (0.00)	0.20 (0.04)	0.18 (0.05)	0.24 (0.06)	0.22 (0.00)	0.07*** (0.02)	0.03 (0.01)	0.15 (0.05)
Living alone	26.24	29.43	29.65	28.99	15.15	38.34***	40.66	32.59

Note. Estimates were weighted; significance tests were conducted to examine the association between background characteristics and sexual orientation (lesbians and bisexual women vs heterosexual women; gay and bisexual men vs heterosexual men).
*$P < .05$; ***$P < .001$.

but more likely to be partnered; they also had fewer children in the household, were more likely to live alone, and were more likely to be non-Hispanic Whites. Gay men had more education ($P = .037$), were less likely to be married and more likely to be partnered ($P < .001$), and had fewer children in the household ($P = .017$) than did bisexual men.

Health Outcomes

Lesbians and bisexual women had higher odds than heterosexual women for disability (adjusted odds ratio [AOR] = 1.47) and poor mental health (AOR = 1.40), but not for poor physical health, after adjustment for age, income, and education (Table 2). Lesbians and bisexual women had similar rates of poor physical health, disability, and poor mental health.

In adjusted analyses, gay and bisexual men were more likely than heterosexual men to have poor physical health (AOR = 1.38), disability (AOR = 1.26), and poor mental health (AOR = 1.77). Although the unadjusted prevalence rates of disability were similar between sexual minority and heterosexual men, the analyses with adjustment for sociodemographic characteristics showed that gay and bisexual men were more likely than their heterosexual counterparts to have a disability. We did not observe differences in health outcomes between gay and bisexual men.

Chronic Conditions

Lesbians and bisexual women had greater adjusted odds of obesity (AOR = 1.42) relative to heterosexual women. Unadjusted odds of CVD were similar for sexual minority and heterosexual women, but after adjustment for sociodemographic characteristics, lesbians and bisexual women had significantly greater risk (AOR = 1.37). The unadjusted odds of asthma for lesbians and bisexual women were significantly higher than for heterosexual women, but the difference did not remain significant when the analyses adjusted for sociodemographic differences. We observed no significant differences in chronic conditions between lesbians and bisexual women in the adjusted analyses.

Gay and bisexual men had significantly lower odds of obesity than did heterosexual men (AOR = 0.72), after adjustment for sociodemographic factors. The unadjusted odds of asthma for gay and bisexual men were higher than for

TABLE 2—Weighted Prevalence Rates and Regression Analyses of Health Outcomes and Chronic Conditions Among Respondents Aged 50 Years and Older: Washington State Behavioral Risk Factor Surveillance System, 2003–2010

	Women				Men			
		Lesbian and Bisexual				Gay and Bisexual		
Health Outcomes/Conditions	Heterosexual, %	%	OR (95% CI)	AOR (95% CI)	Heterosexual, %	%	OR (95% CI)	AOR (95% CI)
Frequent poor physical health	15.47	15.79	1.02 (0.81, 1.30)	1.02 (0.80, 1.30)	12.88	16.79	1.36* (1.05, 1.78)	1.38* (1.04, 1.83)
Disability	36.87	44.27	1.36** (1.14, 1.62)	1.47*** (1.22, 1.77)	33.96	38.27	1.21 (0.98, 1.48)	1.26* (1.02, 1.56)
Frequent poor mental health	9.36	15.92	1.83*** (1.42, 2.37)	1.40* (1.07, 1.81)	6.88	13.09	2.04*** (1.51, 2.76)	1.77** (1.28, 2.45)
Obesity	25.93	36.27	1.63*** (1.36, 1.95)	1.42*** (1.18, 1.71)	27.07	22.57	0.79* (0.62, 0.99)	0.72* (0.56, 0.93)
Arthritis[a]	52.24	53.70	1.06 (0.83, 1.36)	1.29 (0.99, 1.67)	39.25	41.85	1.11 (0.84, 1.48)	1.19 (0.89, 1.60)
Asthma	15.89	20.57	1.37** (1.10, 1.70)	1.20 (0.96, 1.49)	11.56	15.52	1.41* (1.07, 1.85)	1.28 (0.95, 1.71)
Diabetes	11.87	13.59	1.17 (0.91, 1.51)	1.25 (0.96, 1.64)	13.96	12.44	0.88 (0.66, 1.17)	0.92 (0.67, 1.25)
High blood pressure[b]	43.33	36.02	0.74 (0.54, 1.00)	0.86 (0.62, 1.20)	44.35	40.59	0.86 (0.61, 1.21)	0.88 (0.61, 1.26)
High cholesterol[a]	47.13	44.10	0.88 (0.69, 1.14)	1.00 (0.77, 1.30)	50.21	51.66	1.06 (0.79, 1.42)	1.08 (0.80, 1.46)
Cardiovascular disease[c]	10.71	10.51	0.98 (0.73, 1.31)	1.37* (1.00, 1.86)	16.49	14.11	0.83 (0.62, 1.12)	1.04 (0.76, 1.43)

Note. AOR = adjusted odds ratio; CI = confidence interval; OR = odds ratio. Adjusted logistic regression models controlled for age, income, and education; heterosexuals were coded as the reference group.
[a]Questions were asked in 2003, 2005, 2007, and 2009.
[b]Question was asked in 2003, 2005, and 2009.
[c]Questions were asked in 2004 through 2010.
*$P < .05$; **$P < .01$; ***$P < .001$.

heterosexual men (OR = 1.41), but the difference did not remain significant after adjustment. The adjusted odds of diabetes were significantly higher for bisexual men (19.74%) than for gay men (9.50%; AOR = 2.33; $P < .01$). We detected no other significant differences in chronic conditions between gay and bisexual men.

Access to Care

As shown in Table 3, although we found no significant difference in the prevalence of having a health care provider, lesbians and bisexual women were less likely than heterosexual women to have health insurance coverage and more likely to experience financial barriers to health care. These differences, however, did not remain significant after adjustment for sociodemographic characteristics. We detected no significant differences in health care access indicators between lesbians and bisexual women.

In the unadjusted analyses, gay and bisexual men were less likely than heterosexual men to have health insurance coverage, but the difference did not remain significant after adjustment. No significant differences appeared in the indicators of health care access between gay and bisexual men.

Health Behaviors

Prevalence rates of physical activity were similar among all female respondents, but lesbians and bisexual women were more likely than heterosexual women to smoke (AOR = 1.57) and to drink excessively (AOR = 1.43; Table 3). Lesbians (9.95%) were significantly more likely than bisexual women (3.90%; AOR = 0.40) to drink excessively ($P < .05$).

Gay and bisexual men had higher adjusted odds of smoking (AOR = 1.52) and excessive drinking (AOR = 1.47) than did heterosexual men; prevalence rates of physical activities were similar. We observed no differences in health behaviors between gay and bisexual men.

Health Screening

Sexual minority women were significantly less likely than heterosexual women to have had a mammogram (AOR = 0.71), more likely to have been tested for HIV (AOR = 1.80), and equally likely to have received a flu shot. We observed no significant differences in health screenings between older lesbians and bisexual women.

The adjusted analyses indicated that gay and bisexual men were more likely than heterosexual men to have received a flu shot (AOR = 1.47) and an HIV test (AOR = 7.91). In the initial analyses, sexual minority men were significantly less likely than heterosexual men to receive a prostate-specific antigen test, but the difference was not significant after adjustment for sociodemographic characteristics. Although we found no significant differences between gay and bisexual men in the prevalence of receiving a flu shot or a prostate-specific antigen test, bisexual men (60.33%) were less likely than gay men (82.59%) to have been tested for HIV (AOR = 0.31; $P < .001$).

DISCUSSION

We conducted one of the first studies to comprehensively examine leading CDC-defined health indicators among LGB older adults in population-based data. Contrary to the myth that older adults will not reveal their sexual orientation in public health surveys, in this population-based survey we found that approximately 2% of adults aged 50 years and older self-identified as lesbian, gay, or bisexual. The findings reveal significant health disparities among LGB older adults, with both strengths and gaps across the continuum of health indicators examined. Our results suggest that some health disparity patterns that have been found in LGB adults at younger ages[9,10]

TABLE 3—Weighted Prevalence Rates and Regression Analyses of Health Indicators Among Respondents Aged 50 Years and Older: Washington State Behavioral Risk Factor Surveillance System, 2003–2010

	Women				Men			
		Lesbian and Bisexual				Gay and Bisexual		
Health Indicator	Heterosexual, %	%	OR (95% CI)	AOR (95% CI)	Heterosexual, %	%	OR (95% CI)	AOR (95% CI)
Access to care								
Insurance	94.56	91.24	0.60** (0.44, 0.82)	0.79 (0.55, 1.13)	93.36	89.42	0.60** (0.43, 0.84)	0.71 (0.48, 1.04)
Financial barrier	8.26	13.05	1.67*** (1.29, 2.16)	1.25 (0.97, 1.62)	6.81	8.43	1.26 (0.86, 1.84)	0.97 (0.63, 1.50)
Personal provider	92.41	93.09	1.11 (0.76, 1.60)	1.43 (0.97, 2.11)	88.57	88.41	0.98 (0.73, 1.33)	1.16 (0.84, 1.60)
Behavior								
Smoking	11.61	18.33	1.71*** (1.36, 2.15)	1.57*** (1.22, 2.00)	13.15	20.04	1.66*** (1.30, 2.11)	1.52** (1.18, 1.96)
Excessive drinking	4.61	7.88	1.77** (1.27, 2.47)	1.43* (1.02, 2.00)	11.12	17.13	1.65** (1.24, 2.20)	1.47* (1.09, 1.98)
Physical activity[a]	49.02	51.92	1.12 (0.88, 1.01)	1.01 (0.78, 1.31)	51.23	53.04	1.08 (0.81, 1.43)	1.04 (0.78, 1.40)
Screening								
Flu shot	55.07	52.99	0.92 (0.77, 1.10)	1.20 (1.00, 1.44)	50.40	54.87	1.20 (0.98, 1.46)	1.47*** (1.18, 1.82)
Mammogram[b]	79.77	74.16	0.73* (0.54, 0.98)	0.71* (0.52, 0.97)	. . .	. . .	. . .	. . .
PSA test[b]	. . .	. . .	. . .	. . .	49.85	40.67	0.69* (0.51, 0.93)	0.81 (0.59, 1.10)
HIV test[c]	23.89	40.80	2.20*** (1.79, 2.70)	1.80*** (1.46, 2.23)	28.31	76.47	8.23*** (6.22, 10.88)	7.91*** (5.94, 10.54)

Note. AOR = adjusted odds ratio; CI = confidence interval; OR = odds ratio; PSA = prostate-specific antigen. Adjusted logistic regression models controlled for age, income, and education; heterosexuals were coded as the reference group.
[a]Questions were asked in 2003, 2005, 2007, and 2009.
[b]Questions were asked in 2004, 2006, and 2008.
[c]Question was asked only of those younger than 65 years.
*$P < .05$; **$P < .01$; ***$P < .001$.

persist in later life, including higher likelihoods of disability, poor mental health, and smoking, and, among lesbians and bisexual women, excessive drinking and obesity. We also found some health disparities—heightened risks of CVD among lesbian and bisexual women and of poor physical health and excessive drinking among gay and bisexual men—that may emerge later in the life course. Such health disparities likely have detrimental consequences for the quality of life of these LGB older adults.[14,32,33]

According to the life course perspective, social context, cultural meaning, and structural location (in addition to time, period, and cohort) affect aging processes, including health.[34,35] Situating LGB older adults within the historical and social context of their lives may help us to better understand the health issues they face as they age.[36] LGB older adults came of age during a time when same-sex relationships were criminalized and severely stigmatized and same-sex identities were socially invisible.

Elevated risks of disability and poor mental health among LGB older adults may be linked with experiences of stigmization[37–39] and victimization,[39–41] especially in light of the profound impact that events at a given stage of life can have on subsequent stages.[42] The social contexts in which they have lived may have exposed LGB older adults to multiple types of victimization and discrimination related to sexual orientation, disability, age, gender, and race/ethnicity.[41] D'Augelli and Grossman, for example, argue that lifetime experiences of victimization among sexual minority older adults because of their sexual orientation affects mental health in later life.[40] The evidence of physiological impact of chronic stressors on health[43] suggests that lifetime experiences of victimization may partially account for higher rates of disability among LGB older adults. Although our study was designed to identify health disparities among LGB older adults, further research is needed to compare LGB age cohorts and health changes over time.

Heightened risks of disability and poor physical and mental health among older gay and bisexual men may also be related to HIV.[44] Lacking information on HIV status in our data set, we could not explore this issue, but the disparity may be related to the prevalence of HIV among gay and bisexual men. With the advances in antiretroviral therapies, more adults with HIV are living into old age,[45,46] and older adults living with HIV have been found to be at increased risk of disability and poor physical and mental health.

Elevated risks of smoking and excessive drinking are of major concern among LGB older adults. Although smoking and excessive drinking are leading causes of preventable morbidity and mortality,[47] most prevention campaigns target only younger populations.[48,49] Intervention strategies that both identify and address distinctive cultural factors that may promote smoking and drinking among LGB older adults are desperately needed. Previous research has found that LGB adults smoke at much higher rates than their heterosexual counterparts,[9,10,50] and our findings illustrate that such disparities persist among LGB older adults. We also found that older sexual minority women were more likely than older heterosexual women to drink excessively, which has also been documented in studies of younger sexual minority women.[9,10,50]

Existing research documents that drinking rates decline with age among older adults in general.[51] Although the prevalence rates of excessive drinking among younger gay, bisexual, and heterosexual adult men were similar in other population-based studies, we found higher rates among older gay and bisexual than heterosexual men. It may be that the rate of decline in drinking among older gay and bisexual men is slower than among older heterosexual men.[52] In addition, we found that older lesbians had higher rates of excessive drinking than did older bisexual women, which is also inconsistent with reports from population-based studies of younger lesbian and bisexual women.[10,50] A longitudinal study is warranted to better understand such changes in drinking behavior patterns among sexual minorities, and it will be important to examine how earlier experiences, such as frequent attendance at bars, clubs, and private house parties,[53] combined with minority stressors such as discrimination and victimization,[54] influence changes in drinking patterns over time among LGB older adults.

Older lesbians and bisexual women were more likely than their heterosexual counterparts to be obese and to have CVD; older gay and bisexual men were less likely than heterosexuals to be obese. The higher prevalence of obesity among lesbians and bisexual women than heterosexual women is well documented,[55] but increased risk of CVD has rarely been reported.[56] According to Conron et al., lesbian and bisexual adults may have a higher risk of CVD, possibly attributable to higher prevalence of obesity and smoking.[10] It is likely that disparities in obesity and smoking in early life influence disparities in CVD in later life among lesbians and bisexual women.[57,58]

Our subgroup analyses revealed that diabetes was more common in older bisexual than gay men, even though the obesity rates for the 2 groups were similar. The association between type 2 diabetes and obesity is well known.[59] Although previous studies found that among young adults, gay men were less likely to be obese than were heterosexual men, bisexual men were not.[10] Additional research is needed to investigate whether it is the duration of obesity among older bisexual men that increases their risk of diabetes,[60] as well as to further explore weight change and its impact on older gay men.

We observed some positive trends in preventive screenings, such as the higher likelihood of receiving a flu shot and an HIV test for gay and bisexual than for heterosexual men. Lesbians and bisexual women were more likely than their heterosexual peers to receive an HIV test. Yet we also found evidence of gaps and missed opportunities for prevention. For example, among sexual minority older men, bisexual men were less likely than gay men to obtain an HIV test. Older lesbians and bisexual women were less likely than heterosexual women to report having had a mammogram. Efforts to promote mammography screening among older lesbians and bisexual women is particularly important, because higher risks of breast cancer have been documented among sexual minority women, attributable to elevated prevalence of obesity, substance use, and nulliparity.[61–63] Hart and Bowen suggest that lack of knowledge regarding breast cancer and the benefits of mammography combined with reluctance to use health services because of stigma likely prevent lesbians and bisexual women from receiving mammography in a timely manner.[64]

We observed several important differences in background characteristics by sexual orientation. Contrary to existing stereotypes, despite higher levels of education among LGB older adults, and the higher likelihood of employment among lesbians and bisexual women, LGB older adults do not have higher incomes than do heterosexuals, as observed in other population-based data.[65] In addition, LGB older adults are less likely than heterosexuals to be married but more likely to be partnered, which may have implications for health care advocacy, caregiving, and the availability of financial resources as they age. A recent study found that for gay men, being legally married is associated with mental health benefits.[38] Older gay and bisexual men have significantly fewer children in the household than do heterosexuals and are more likely to live alone, which corroborates findings in other population-based studies.[14] Higher rates of living alone may be related to the increased likelihood of the loss of a partner to AIDS.[66] It is also possible that structural factors do not support committed relationships or legal marriage among same-sex partners. LGB older adults who live alone are likely at risk for social isolation, which has been linked to poor mental and physical health, cognitive impairment, and premature morbidity and mortality in the general elderly population.[67]

Limitations

The cross-sectional nature of BRFSS data limits the ability to disentangle the temporal relationships between variables of interest. Although the purpose of the BRFSS is monitoring overall prevalence of health status, chronic conditions, and behaviors in the United States, and the measures are based on self-report, objective information such as symptoms and severity of health conditions is not available. We analyzed BRFSS data from only 1 state, limiting applicability to other state populations.

Our findings were limited with respect to the response rate of the BRFSS[68,69] and the self-identification of sexual orientation. The proportion of the older population that self-identified as sexual minorities in our data (~2%) was less than the 3.5% of adults aged 18 years and older who self-identified as LGB in most other population-based studies.[70] This may reflect the historical context in which today's LGB older adults came of age; these cohorts may be less likely than younger age groups to identify themselves as a sexual minority in a telephone-based survey.

Conclusions

More research with a life-course perspective is needed to examine how age and cohort effects may differentiate the experiences of younger and older LGB adults. Studies that examine the interplay between resilience and the stressors associated with aging and living as a sexual minority would likely help us better understand the mechanisms through which social contexts directly and indirectly affect the health of LGB older adults. Further research, especially a longitudinal study of health among LGB older adults that directly tests the relationships between transitions and trajectories through the life course and investigates the role of human agency in adapting to structural and legal constraints, would provide a greater understanding of how life experiences and shifting social contexts affect health outcomes in later life. Because LGB older adults may rely less on partners, spouses, and children, future

research needs to investigate how differing types of social networks, support, and family structures influence health and aging experiences.[71] Although the sample size in our data did not allow for direct comparisons across different birth cohorts of LGB older adults, they are needed. The oldest-old LGB population, for example, may have experienced greater challenges in disclosing their sexual orientation; they may also have faced more barriers to social resources affecting health outcomes.

Our findings document population-based health disparities among LGB older adults. Early detection and identification of factors associated with such at-risk groups will enable public health initiatives to expand the reach of strategies and interventions to promote healthy communities. It is imperative that we understand the health needs of older sexual minorities in general as well as those specific to subgroups in this population to develop effective preventive interventions and services tailored to their unique needs. It is imperative that we begin to address healthy aging in our increasingly diverse society. ■

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Contributors

K. I. Fredriksen-Goldsen originated the study, synthesized the conceptualization and analyses, and led article preparation. H.-J. Kim contributed to the data analyses, conceptualization, and interpretation. S. E. Barkan assisted in the interpretation and synthesis of the findings and discussion. A. Muraco participated in the development and writing of the article. C. P. Hoy-Ellis conducted the literature review and participated in the development of the article. All authors participated in conceptualization and interpretation of findings and in the writing and editing of the article.

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Human Participant Protection

The institutional review board of the University of Washington approved this study.

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Physical and Mental Health of Transgender Older Adults: An At-Risk and Underserved Population

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Purpose: This study is one of the first to examine the physical and mental health of transgender older adults and to identify modifiable factors that account for health risks in this underserved population. ***Design and Methods:*** Utilizing data from a cross-sectional survey of lesbian, gay, bisexual, and transgender older adults aged 50 and older ($N = 2,560$), we assessed direct and indirect effects of gender identity on 4 health outcomes (physical health, disability, depressive symptomatology, and perceived stress) based on a resilience conceptual framework. ***Results:*** Transgender older adults were at significantly higher risk of poor physical health, disability, depressive symptomatology, and perceived stress compared with nontransgender participants. We found significant indirect effects of gender identity on the health outcomes via fear of accessing health services, lack of physical activity, internalized stigma, victimization, and lack of social support; other mediators included obesity for physical health and disability, identity concealment for perceived stress, and community belonging for depressive symptomatology and perceived stress. Further analyses revealed that risk factors (victimization and stigma) explained the highest proportion of the total effect of gender identity on health outcomes. ***Implications:*** The study identifies important modifiable factors (stigma, victimization, health-related behaviors, and social support) associated with health among transgender older adults. Reducing stigma and victimization and including gender identity in nondiscrimination and hate crime statutes are important steps to reduce health risks. Attention to bolstering individual and community-level social support must be considered when developing tailored interventions to address transgender older adults' distinct health and aging needs.

Key Words: Gender identity, LGBT, Minority health, Resilience

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The Institute of Medicine (2011) recently identified transgender adults as an understudied population in critical need of health research. Although few population estimates exist, recent data suggest that 0.3%–0.5% of the adult population identify as transgender (Gates, 2011). Based on prior studies, Witten and Eyler (2012) estimate that the transgender population aged 65 and older number at least 700,000. Because more

than 130 million Americans are projected to be aged 50 and older by 2050 (U.S. Census Bureau, 2012), the number of transgender older adults is expected to steadily increase.

The term "transgender" is used inclusively to describe individuals who have "gender identities, expressions, or behaviors not traditionally associated with their birth sex" (Mayer et al., 2008, p. 990). Although gender is assigned at birth according to visible sex characteristics, gender identity is an individual's psychological sense of self as male or female; gender expression is how a person expresses gender and how others perceive gender through clothing, grooming, speech, body language, social interactions, and other behaviors (FORGE, 2007). Although gender is most often dichotomized along a single dimension (Clarkson-Freeman, 2004), gender identity and expression are multidimensional constructs (Alegria, 2011; Grant et al., 2011; Persson, 2009).

Transgender adults are diverse in terms of their gender identities, gender expressions, sexual orientations, and sociodemographic characteristics. Generally subsumed under the broad umbrella of lesbian, gay, bisexual, and transgender (LGBT), there has been an inadequate analysis of how transgender adults differ from nontransgender lesbian, gay, and bisexual (LGB) adults or how transgender older adults differ from younger and middle-aged transgender adults. Some existing descriptive studies have explored the sociodemographic characteristics, health care access, health-related behaviors, rates of victimization, and levels of social support experienced by transgender adults of all ages, with limited attention to how such factors are associated with specific health outcomes.

Transgender adults earn less household income (Conron, Scott, Stowell, & Landers, 2012; Rosser, Oakes, Bockting, & Miner, 2007) and are more likely to be unemployed (Conron et al., 2012) than nontransgender adults. Findings regarding educational levels are mixed. Some findings suggest that transgender adults are more educated than the general population (Grant et al., 2011; Rosser et al., 2007). Others find that they do not differ significantly in their levels of education (Conron et al., 2012).

Although relatively little is known about the physical health of transgender adults (Witten & Eyler, 2012), much of the research that does exist focuses on primary and secondary effects of hormone use (Berreth, 2003; Cook-Daniels, 1997). Research has found that transgender adults are at elevated risk of depression (Clements-Nolle, Marx, Guzman, & Katz, 2001) and attempted suicide although the risk of suicide decreases with age (Grant et al., 2011). Health behaviors that likely affect transgender health include higher rates of smoking (Conron et al., 2012; Grant et al., 2011), but little is known about other key health-related behaviors, such as excessive drinking, lack of physical activities, and obesity, which are known to heighten the risk of multiple diseases and poor health (Chipperfield, 2008; Ford, Moriarty, Zack, Mokdad, & Chapman, 2001; Sacco, Bucholz, & Spitznagel, 2009). Although lower rates of obesity (Conron et al., 2012) have been documented, the data are limited to young and middle-aged adults.

The larger social context may increase the risk of health problems as transgender adults experience a relatively high degree of violence and abuse and often are victims of hate crimes (Grant et al., 2011; Witten & Eyler, 2012); these often go unreported due to the fear that transgender victims will be mistreated by law enforcement officers (Xavier & Simmons, 2000). Transgender adults also risk discrimination, harassment, and victimization in health care settings (Grant et al., 2011). More than a quarter of transgender adults have experienced discrimination by a physician or have been denied enrollment in a health insurance due to their gender identity (Bradford, Reisner, Honnold, & Xavier, 2012). Other studies found that they are less likely than the general population to have health insurance (One Colorado Education Fund, 2011), and for those with insurance, many transgender-related medical needs are not covered (American Medical Association, 2008).

Research examining the social resources available to transgender adults is relatively mixed. Some studies have found that transgender adults have limited social support (Fredriksen-Goldsen et al., 2011; SAGE & National Center for Transgender Equality, 2012; Witten, 2003) and do not feel supported by the LGB community (Factor & Rothblum, 2008; Fredriksen-Goldsen et al., 2011). Despite the adversities that transgender adults face, a few studies have found that they have relatively large and diverse social networks (Lombardi, 1999), and they participate in spiritual and religious activities at levels comparable to their biological siblings (Factor & Rothblum, 2007).

To date, there is limited information on social determinants that predict transgender older adult

physical and mental health, which limits the ability to identify modifiable risk factors that can be incorporated into intervention efforts to improve health in this community. Based on a resilience conceptual framework (Yates & Masten, 2004), in this article, we examine the interplay between key health indicators and risk and protective factors and identify modifiable factors that affect the physical and mental health of transgender older adults. We assess the effects of gender identity on physical and mental health outcomes and explore the mediating role of key health indicators, and risk and protective factors.

The resilience conceptual framework has four primary components: (a) key health indicators, including access to health services and health-related behaviors; (b) risk factors related to marginalization, including internalized stigma, victimization, and identity concealment; (c) protective factors, including social support, social network size, participation in religious and spiritual activities, and community belonging; and (d) health outcomes, including general health, disability, depressive symptomatology, and stress. Our research questions explore whether and how transgender older adults differ from nontransgender LGB older adults on key health indicators, risk and protective factors, and health outcomes, controlling for background characteristics (age, income, gender, and race/ethnicity). In addition, we investigate the extent to which these factors account for the relationship between gender identity and physical and mental health outcomes.

The specific research questions to be tested in this study are as follows:

1. To what extent do transgender older adults experience higher rates of adverse key health indicators and risk factors and lower rates of protective factors, compared with nontransgender LGB older adults, after controlling for covariates, including age, income, gender, and race/ethnicity?
2. Do transgender older adults experience elevated rates of poor general health, disability, depressive symptomatology, and stress than do nontransgender LGB older adults, after controlling for covariates?
3. What are the risk and protective factors and key health indicators that mediate the relationship between gender identity and health outcomes, after controlling for covariates?

A better understanding of the key health indicators and risk and protective factors influencing transgender health has important implications for developing and testing interventions to improve the health of this underserved population.

Methods

Sample

Utilizing a cross-sectional survey design, the Caring and Aging with Pride research project was conducted through collaboration with 11 community-based agencies across the United States serving LGBT older adults, to better understand the risk and protective factors affecting the health of these older adults (Fredriksen-Goldsen et al., 2011). Each participating agency distributed surveys via their agency contact lists to adults aged 50 and older. Data were gathered over a 6-month period, from June 2010 to November 2010. Surveys with an invitation letter were distributed; two reminder letters were sent as follow-ups in subsequent 2-week periods. The total *N* for the survey was 2,560, which represents the largest sample to date of LGBT older adults. Sixty-three percent (n = 2,201) of the printed surveys were returned that met the eligibility criteria (self-identified as LGBT and aged 50 or older). For agencies that used only electronic mailing lists, a similar internet web–based survey was used following the same survey distribution protocol; 359 electronic surveys were returned that met the eligibility criteria. In the total sample of LGBT older adults, 7%, or 174 persons, self-identified as transgender. Transgender identity was assessed with an affirmative response to any one of the two questions: (a) Are you transgender? and (b) How old were you when you first considered yourself transgender? The second question was used to identify and include participants (n = 13) because some noted that although they were a different sex than ascribed at birth, they had completed the transition process and no longer considered themselves transgender. All study procedures were reviewed and approved by the University of Washington Institutional Review Board.

Measures

Detailed information about measures is given in Table 1. In this study, we utilized standardized measures whenever possible. Health outcomes were physical health, disability, depressive symptomatology, and perceived stress; key health indicators

Table 1. Description of Measures

Variables	Descriptions
Health outcomes	
Physical health	Measured using four items from the SF-8 Health Survey (Ware, Kosinski, Dewey, & Gandek, 2001). Participants were asked to rate their health over the previous 4-week period on physical functioning, role limitation due to physical problems, bodily pain, and general health. The summary score range was 0–100, with higher scores indicating better perceived physical health (Cronbach's α = 0.89)
Disability	Measured by asking whether they (1) were limited in any way, in any activities because of physical, mental, or emotional problems and (2) had any health problem that requires the use of special equipment, such as a cane, a wheelchair, a special bed, or a special telephone (Centers for Disease Control and Prevention [CDC], 2012). Those who answered affirmatively to either of the two items were categorized as having a disability, as defined in Healthy People 2010 (U.S. Department of Health and Human Services, 2000)
Depressive symptomatology	Assessed via the 10-item short form of the Center for Epidemiological Studies Depression Scale (Radloff, 1977), which has been validated for older adults (Andresen, Malmgren, Carter, & Patrick, 1994). The range of the summed score was 0–30, with higher scores indicating higher levels of depressive symptomatology (Cronbach's α = 0.87)
Perceived stress	Measured using the four-item Perceived Stress Scale (Cohen, Kamarck, & Mermelstein, 1983), which assesses the degree to which participants appraise life situations as being stressful during the past month. The summary score ranged from 0 to 4, with higher scores indicating greater levels of perceived stress (Cronbach's α = 0.78)
Health indicators	
Financial barriers to health care	Assessed by asking participants whether they needed to see a physician in the past year but could not because of cost (CDC, 2012)
Fear of accessing health service	Assessed by asking participants whether they feared accessing health services outside the lesbian, gay, bisexual, or transgender community
Smoking	Defined as having ever smoked 100 or more cigarettes and currently smoking every day or some days (CDC, 2012)
Lack of physical activities	Defined as not being engaged, on a weekly basis, in at least moderate activities that cause some increase in breathing or heart rate (CDC, 2011)
Obesity	Measured by self-reported weight and height. Body mass index of 30 kg/m^2 or higher was categorized as obese (CDC, 2010)
Risk factors	
Internalized stigma	Measured using a modified Homosexual Stigma Scale (Liu, Feng, Rhodes, & Liu, 2009). Participants were asked to rate their agreement (1 = strongly disagree to 4 = strongly agree) with five statements such as, "If someone offered me the chance to be completely heterosexual or not transgender, I would accept the chance; I feel that being lesbian, gay, bisexual, or transgender is a personal shortcoming for me" (Cronbach's α = .78). The summary score ranged from 1 to 4, with higher scores indicating higher levels of internalized stigma
Lifetime victimization	Assessed with a modified version of the 16-item Lifetime Victimization Scale (D'Augelli & Grossman, 2001) and the Lifetime Discrimination Scale (Inter-University Consortium for Political and Social Research, 2010). Participants were asked how often in their lives they had experienced different types of victimization (including physical, verbal or sexual threat or assault, threat of being outed, property damage, being hassled by police, being ignored by police when assistance was needed, job-related discrimination, being denied or receiving inferior health care, and being prevented from living in a chosen neighborhood), because of their actual or perceived sexual orientation and/or gender identity. A four-point Likert rating scale was used, with summed score ranging from 0 to 46 (Cronbach's α = .86)
Sexual/minority identity concealment	Measured through a modified version of the Outness Inventory scale (Mohr & Fassinger, 2000) that asks whether particular family members (i.e., mother, father, brothers, sisters, and children) or best friends "definitely do not know" participants' gender or sexual identity
Protective factors	
Social support	The four-item abbreviated Social Support Instrument (Sherbourne & Stewart, 1991) was adapted to measure the degree of instrumental and emotional support received (Cronbach's α = .85). The summary score ranged from 1 to 4, with higher scores indicating greater social support
Social network size	Assessed by asking participants how many people (e.g., friends, family members, colleagues, and neighbors) they have interacted within a typical month. We recoded the total size by quartiles with one indicating the lowest 25% (small) and four indicating the highest 25% (large)

(Table continues on next page)

Table 1. *(Continued)*

Variables	Descriptions
Religious and spiritual activities	Measured how often during the past 30 days participants had attended spiritual or religious services or activities. The frequency ranged from 0 to 30
Community belonging	Positive feeling of community belonging was measured by asking to what extent participants agreed with the following statement, "I feel good about belonging to the LGBT community" and "I'm glad I belong to the lesbian, gay, bisexual, or transgender community." The summary score ranged from 1 (strongly disagree) to 4 (strongly agree)
Background characteristics	Included age (years), gender (current gender; men vs. women), race/ethnicity (non-Hispanic white vs. other), household income (≤200% of federal poverty level [FPL] vs. >200% FPL), education (high school or less vs. some college or more), relationship status (married/partnered vs. other), having children, living arrangement (living alone vs. living with other), service in the military, current LGBT aging services use, and having a will and/or power of attorney for health care

included financial barriers to health care, fear of accessing health services, smoking, lack of physical activities, and obesity; risk factors included lifetime internalized stigma, victimization, and sexual minority concealment; and protective factors included social support, social network size, positive feelings of LGBT community belonging, and religious and spiritual activities.

Statistical Analysis

Analyses were performed using STATA/IC for Windows (Version 11.2). Welch approximate *t* tests, due to unequal sample sizes among gender identity samples, and Pearson's chi-squared test or Fisher exact test were used to examine the associations of gender identity with background characteristics (Table 2). Distributions of primary study variables including health care access, health-related behaviors, risk and protective factors, and health outcomes were examined by gender identity. Logistic or linear regression analyses controlling for key background characteristics including age, income, gender, and race/ethnicity were applied to test the gender identity effects on the primary variables (Table 3). Next, prior to testing the mediation roles of health care access, health-related behaviors, risk factors, and protective factors in the relationship between gender identity and health outcomes, we also examined the associations between mediators and dependent variables (health outcomes) as suggested by Baron and Kenny (1986) (Table 4). We applied linear regression or logistic regression analyses, as appropriate, to examine whether mediators were significantly associated with dependent variables, after controlling for key background characteristics.

Finally, we calculated the direct and indirect effects of gender identity (transgender and nontransgender) on health outcomes (physical health, disability, depressive symptomatology, and perceived stress) through (a) health care access, (b) health-related behaviors, (c) risk factors, and (d) protective factors (Table 5). This provided direct effects of gender identity on health outcomes with and without mediators, as well as indirect effects of gender identity on health outcomes via each mediator, by calculating the product of path coefficients from gender identity to the mediator and from the mediator to the health outcome. Figure 1 demonstrates graphically one of the mediation models we

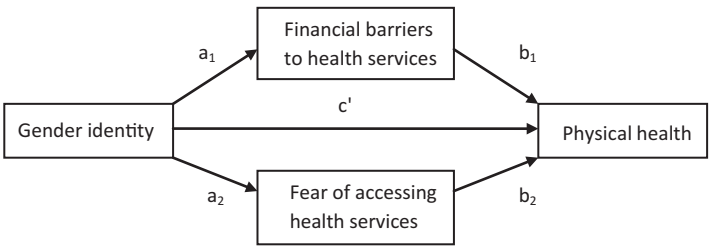

Figure 1. The mediation model where gender identity is associated with physical health through limited health care access. c′ indicates the direct effect in the model with mediators. The indirect path coefficients via financial barriers to health services and fear of accessing health services are $a_1 \times b_1$ and $a_2 \times b_2$, respectively. The proportion of the total effect mediated is computed with dividing the total indirect effect $[(a_1 \times b_1) + (a_2 \times b_2)]$ by the total effect $[c' + (a_1 \times b_1) + (a_2 \times b_2)]$.

tested. Bootstrapping with 500 replications was used to conduct significance tests of direct and indirect effects (Preacher & Hayes, 2008). The proportion of the total effect that is mediated (the indirect effect divided by the total effect) was also calculated to assess what proportion of the total effect of gender identity on a health outcome is due to its indirect effect through each of the mediator components (MacKinnon, Warsi, & Dwyer, 1995).

Results

Background Characteristics

Table 2 presents the background characteristics of the transgender older adult participants compared with nontransgender LGB older adults in the study. Compared with the nontransgender older adults, the transgender older adults were less likely to be non-Hispanic white and more likely to be younger and have lower household incomes. Transgender older adults were more likely to have children, less likely to live alone, and more likely to have served in the military compared with the nontransgender older participants; the rates of being married or partnered were similar between the two groups.

Gender Identity and Key Health Indicators and Outcomes

As given in Table 3, the associations of gender identity with key health indicators and risk and protective factors were examined after controlling for age, income, gender, and race/ethnicity. In terms of health care access, 22% of transgender older adult participants indicated having experienced financial barriers to health services, and 40% reported that they feared accessing health services outside the LGBT community. These proportions were significantly higher than those for nontransgender LGB older adult participants. In terms of health-related behaviors, the rates of obesity (40%) and lack of physical activity (23%) among transgender older adults were significantly higher than those for nontransgender LGB older adults although no significant difference on smoking was observed.

Transgender older adult participants reported higher rates of lifetime victimization and internalized stigma and were more likely to conceal their gender identity than nontransgender LGB older adult participants. On average, transgender older adults reported 11 incidents of lifetime

Table 2. Background Characteristics by Gender Identity

	Total (N = 2,546)	Transgender (n = 174)	Nontransgender (n = 2,372)	Gender identity difference
Age, mean (±*SD*)	66.47 (±9.08)	60.97 (±7.96)	66.87 (±9.03)	$t = 9.35^{***}$
Gender, men	1,592 (62.78)	61 (36.97)	1,531 (64.57)	$\chi^2 = 50.30^{***}$
Race/ethnicity				
Non-Hispanic white	2,187 (86.48)	136 (79.07)	2,051 (87.02)	$\chi^2 = 34.28^{***}$
African American	89 (3.52)	8 (4.65)	81 (3.44)	
Hispanic	112 (4.43)	6 (3.49)	106 (4.50)	
Asian/Pacific Islander	41 (1.62)	3 (1.74)	38 (1.61)	
Native American	48 (1.90)	12 (6.98)	36 (1.53)	
Multiracial	18 (0.71)	4 (2.33)	14 (0.59)	
Other	34 (1.34)	3 (1.74)	31 (1.32)	
Household income, ≤200% federal poverty level	734 (30.72)	78 (47.56)	656 (29.48)	$\chi^2 = 23.45^{***}$
Education, ≤high school	201 (7.96)	20 (11.63)	181 (7.70)	$\chi^2 = 3.38$
Married/partnered	1,121 (44.27)	74 (42.53)	1,047 (44.40)	$\chi^2 = 0.23$
Children	622 (24.58)	103 (59.20)	519 (22.02)	$\chi^2 = 120.82^{***}$
Living alone	1,394 (55.16)	76 (44.19)	1,318 (55.97)	$\chi^2 = 8.99^{**}$
Veterans	642 (25.56)	70 (40.94)	572 (24.43)	$\chi^2 = 22.81^{***}$
Service use	709 (28.46)	26 (15.20)	683 (29.44)	$\chi^2 = 15.85^{***}$
Legal planning				
Power of attorney for health care	1,580 (63.58)	61 (36.53)	1,519 (65.53)	$\chi^2 = 56.59^{***}$
Will	1,738 (69.80)	84 (49.41)	1,654 (71.29)	$\chi^2 = 35.98^{***}$

Notes: Chi-squared or Fisher exact tests or Welch approximate t tests were conducted to examine differences by gender identity; numbers with percentages in parentheses for categorical variables and means with standard deviations in parentheses for continuous variables are reported.

$^{**}p < .01$. $^{***}p < .001$.

Table 3. Associations Between Gender Identity and Key Health Indicators, Risk and Protective Factors, and Health Outcomes

	Total	Transgender	Nontransgender	Gender identity effect
Health care access				
Financial barrier to health service, %	7.46	21.84	6.41	OR = 1.80*
Fear of accessing health services, %	14.87	39.53	13.01	OR = 3.96***
Health-related behaviors				
Current smoking, %	9.16	14.97	8.74	OR = 1.25
Lack of physical activity, %	15.13	22.67	14.58	OR = 2.00**
Obesity, %	25.59	39.52	24.59	OR = 1.56*
Risk factors				
Internalized stigma, *M* (±*SD*)	1.47 (±0.57)	1.78 (±0.65)	1.45 (±0.55)	*b* = .42***
Victimization, *M* (±*SD*)	6.51 (±7.33)	10.99 (±10.05)	6.19 (±6.98)	*b* = 3.60***
Identity concealment, %	17.42	31.98	16.34	OR = 4.00***
Protective factors				
Social support, *M* (±*SD*)	3.09 (±.79)	2.88 (±.82)	3.11 (±.79)	*b* = –.24***
Social network size, *M* (±*SD*)	2.51 (±1.11)	2.86 (±1.09)	2.48 (±1.11)	*b* = .40***
Religious and spiritual activities, *M* (±*SD*)	2.03 (±4.65)	3.02 (±6.29)	1.96 (±4.49)	*b* = .71
Community belonging, *M* (±*SD*)	3.42 (±.76)	3.30 (±.87)	3.42 (±.75)	*b* = –.22**
Health outcomes				
Physical health, *M* (±*SD*)	69.68 (±22.41)	62.07 (±23.40)	70.24 (±22.24)	*b* = –5.54***
Disability, %	46.81	61.76	45.73	OR = 1.55*
Depressive symptomatology, *M* (±*SD*)	7.41 (±6.36)	10.34 (±7.29)	7.20 (±6.23)	*b* = 2.19***
Perceived stress, *M* (±*SD*)	1.25 (±.81)	1.56 (±.88)	1.22 (±.79)	*b* = .22**

Notes: OR = odds ratio; logistic or linear regression analyses were applied to examine the gender identity effect on key health indicators, risk and protective factors, and health outcomes, controlling for age, income, gender, and race/ethnicity.
*$p < .05$. **$p < .01$. ***$p < .001$.

discrimination and victimization, compared with an average of 6 for nontransgender LGB older adult participants. Additional analyses revealed that the most common types of discrimination and victimization experienced by transgender older adult participants were verbal insults (76%), being threatened with physical violence (54%), not being hired for job (46%), being denied or provided inferior health care (40%), being denied a promotion (39%), and being hassled by the police (37%). We also observed some important differences in protective factors for transgender older adults: they reported lower levels of social support and community belonging than nontransgender LGB older adults although their social network sizes were larger. We observed no significant difference in the levels of participation in spiritual and religious activities by gender identity.

Table 3 demonstrates that gender identity was significantly associated with health outcomes after controlling for key demographic characteristics. Transgender older adults reported significantly poorer physical health and a higher likelihood of having a disability than nontransgender participants. In addition, the levels of clinically significant depressive symptomatology and perceived stress for transgender older adult participants were significantly higher than those for nontransgender LGB older adult participants.

Key Health Indicators and Health Outcomes

As a preliminary step for mediation analyses, we tested whether the key health indicators and risk and protective factors were associated with health outcomes, controlling for age, income, gender, and race/ethnicity. Smoking, spiritual, and religious activities and social network size were not included in the further analyses because they were not associated with poor health outcomes. Table 4 demonstrates that financial barriers to health services, fear of accessing health services, obesity, lack of physical activity, and higher degrees of internalized stigma and victimization were significantly associated with poorer physical health, higher likelihood of disability, and higher degrees of depressive symptomatology and perceived stress. Concealment of gender identity was also significantly associated with higher degrees of depressive symptomatology and perceived stress. Social support and positive feelings of LGBT community belonging were significantly associated with better

Table 4. Associations of Health Care Access, Health-Related Behaviors, and Risk Factors and Protective Factors With Health Outcomes: The Results of Adjusted Linear Regression and Logistic Regression Analyses

	Physical health	Disability	Depressive symptomatology	Perceived stress
	b	OR	*B*	*B*
Health care access				
Financial barriers	−11.45***	2.39***	4.46***	0.56***
Fear of access	−3.82**	1.64***	2.32***	0.34***
Health-related behaviors				
Lack of physical activity	−12.60***	2.38***	3.05***	0.38***
Obesity	−12.00***	2.38***	1.20***	0.10**
Risk factors				
Internalized stigma	−3.62***	1.37***	2.20***	0.28***
Victimization	−0.60***	1.04***	0.16***	0.02***
Identity concealment	0.93	1.10	0.99**	0.14**
Protective factors				
Social support	3.81***	0.71***	−2.96***	−0.35***
Community belonging	1.97**	0.87*	−1.29***	−0.16***

Note: OR = odds ratio; the analyses controlled for age, income, gender, and race/ethnicity.
*$p < .05$. **$p < .01$. ***$p < .001$.

physical health, lower likelihood of disability, and lower levels of depressive symptomatology and perceived stress.

Factors That Explain the Adverse Health of Transgender Older Adults

First, as given in Table 5, we tested four sets of mediation models, with health care access (financial barriers to health services and fear of accessing health services) mediating the relationship between gender identity and each of the health outcomes, controlling for age, income, gender, and race/ethnicity. In the mediation models, the direct effects of gender identity on all of the health outcomes were not significant. The proportions of total effects of gender identity on health outcomes mediated through health care access were 30% for physical health, 39% for disability, 43% for depressive symptomatology, and 56% for perceived stress. According to the results of significance tests of indirect effects, fear of accessing health services was a significant mediator in the relationship between gender identity and the four health outcomes, but financial barrier to health services was not.

Second, in the models where health-related behaviors (lack of physical activities and obesity) mediate the relationship between gender identity and health outcomes, the direct effects of gender identity on physical health and disability were not significant. The direct effects on depressive symptomatology and perceived stress remained significant, but both the levels of significance and the sizes of path coefficients were reduced. Nearly 51% of the total effect of gender identity on physical health, 42% on disability, 28% on depressive symptomatology, and 27% on perceived stress were due to indirect effects through health-related behaviors. The indirect effects of gender identity on physical health and disability through lack of physical activity and obesity were statistically significant. The indirect effects of gender identity on depressive symptomatology and perceived stress through lack of physical activity were statistically significant, but the indirect effects through obesity were not.

The next set of analyses tested the mediating role of risk factors as listed in Table 5 in the relationships between gender identity and health outcomes. In the mediation models, the direct effects of gender identity on health outcomes were not significant. The proportions of total effects of gender identity that were mediated through risk factors were substantial; they accounted for 63% of physical health, 72% of disability, 89% of depressive symptomatology, and 94% of perceived stress. The indirect effects of gender identity on all the health outcomes through internalized stigma and victimization were statistically significant. The indirect effect on perceived stress through concealment of sexual minority identity was also statistically significant.

Table 5. Mediation Models Examining the Effect of Gender Identity on Health Outcomes by Health Care Access, Health-Related Behaviors, Risk Factors, and Protective Factors

	Dependent variables			
	Physical health	Disability	Depressive symptomatology	Perceived stress
	Path coefficient	Path coefficient	Path coefficient	Path coefficient
Health care access as mediators				
Direct effect	−0.041	0.036	0.041	0.028
Indirect effect: financial barriers	−0.010	0.009	0.012	0.012
Indirect effect: fear of access	−0.008*	0.015**	0.019***	0.023***
Proportion of total effect mediated	0.300	0.394	0.434	0.557
Health-related behaviors as mediators				
Direct effect	−0.030	0.037	0.055*	0.050*
Indirect effect: lack of physical activity	−0.017**	0.014**	0.017**	0.016**
Indirect effect: obesity	−0.013*	0.012*	0.004	0.002
Proportion of total effect mediated	0.507	0.417	0.278	0.274
Risk factors as mediators				
Direct effect	−0.021	0.017	0.008	0.004
Indirect effect: internalized stigma	−0.015**	0.017**	0.034***	0.035***
Indirect effect: victimization	−0.023***	0.022***	0.023***	0.017***
Indirect effect: identity concealment	0.003	0.005	0.008	0.009*
Proportion of total effect mediated	0.631	0.724	0.888	0.943
Protective factors as mediators				
Direct effect	−0.047*	0.047	0.040	0.033
Indirect effect: social support	−0.008**	0.010**	0.026**	0.024**
Indirect effect: community belonging	−0.002	0.002	0.006*	0.006*
Proportion of total effect mediated	0.180	0.202	0.446	0.474

Note: The regression analyses controlled for age, income, gender, and race/ethnicity.
*$p < .05$. **$p < .01$. ***$p < .001$.

Finally, we tested whether the protective factors listed in Table 5 mediate the associations of gender identity and health outcomes. In the mediation models, the direct effect of gender identity on physical health was significant, but both the levels of significance and the sizes of path coefficients were reduced. The direct effects of gender identity on disability, depressive symptomatology, and perceived stress were not significant. Although only 18% of total effect on physical health and 20% on disability were due to indirect effects through protective factors, the proportions of total effect mediated for depressive symptomatology and perceived stress were 45% and 47%, respectively. The indirect effects of gender identity through social support on all the health outcomes were statistically significant. Although the indirect effects of gender identity through positive feeling of community belonging on physical health and disability were not significant, the respective indirect effects on depressive symptomatology and perceived stress were statistically significant.

Discussion

Transgender older adults have been largely invisible in existing aging and health research (Institute of Medicine, 2011; Persson, 2009). Although most previous studies combine LGBT older adults into a single group, this study demonstrates the importance of identifying the distinct health concerns and strengths of transgender older adults. In this study, we found that the transgender older adult participants had significantly poorer health in terms of physical health, disability, depressive symptomatology, and perceived stress than the nontransgender LGB older adult participants, controlling for key background characteristics. These findings suggest that the patterns of adverse health identified among transgender adults in early and middle adulthood (Conron et al., 2012; Grant et al., 2011) persist into later life.

The findings reveal significant but modifiable mediators that explain heightened risks in physical and mental health for transgender older adults. Of these, risk factors (especially internalized stigma

and victimization) are notably strong mediators in the relationship between gender identity and all the health outcomes. Internalized stigma in other minority populations has been found to be associated with increased risk of poor health, morbidity, and mortality (Ahmed, Mohammed, & Williams, 2007). Transgender older adults are a highly marginalized population in our society, which can exacerbate the impact of stigma. Link and Phelan (2006) posit that being stigmatized is, in itself, a source of chronic stress that negatively affects both physical and mental health. We know from the HIV literature that experiences of, and fear of, stigma are associated with decreased access to care and treatment (Nyblade, Stangl, Weiss, & Ashburn, 2009). Considering that 40% of the transgender older adults in this study feared accessing health services, both discrimination from health care providers and internalized stigma can exacerbate chronic stress and act as further impediments to accessing needed health care. Stigma reduction strategies for health care professionals and improved education about gender identity and aging are essential to reduce stigma and discrimination in health care settings for transgender older adults.

Many transgender older adults in this study are at risk of victimization, including verbal insult, threatened physical assault, harassment by police and others, and employment discrimination. The transgender older adult participants experienced a higher prevalence of lifetime victimization compared with their nontransgender counterparts. A comprehensive meta-analytic review provides strong evidence that when individuals perceive that they are being discriminated against, both their physical and mental health suffer (Pascoe & Smart Richman, 2009). Individuals who experience victimization are at increased risk for developing subsequent serious psychiatric disorders, including depression (Cramer, McNiel, Holley, Shumway, & Boccellari, 2012).

Interestingly, the transgender older adult participants in the study were significantly more likely than nontransgender participants to have served in the military. Both the heightened likelihood of victimization and potential combat exposure place the transgender older adults at elevated risk of trauma-related conditions, such as post-traumatic stress disorder. Yet, transgender older adult veterans remain largely invisible and their contributions to this country are overlooked. The Department of Veterans Affairs and Veterans Health Administration (2011) recently issued a directive declaring that "eligible" transgender veterans have the same rights to health and medical care as nontransgender veterans. Unfortunately, even with the repeal of "Don't Ask, Don't Tell," transgender Americans still cannot serve openly in the military as gender identity disorder constitutes a designation that categorically bars entrance into or mandates separation from the military (Servicemembers Legal Defense Network & National Center for Transgender Equality, 2010).

Although the mediating effects of identity concealment were not as strong as internalized stigma and victimization, it still contributed to explaining the effect of gender identity on perceived stress, with concealment significantly related to higher levels of stress. Hypervigilance due to the risk of exposure and the fear of rejection by important others can result from concealing a stigmatized identity (Meyer, 2003). Still, transgender adults who have revealed their gender identities to their families report improvement in these relationships over time, with strong family relationships related to more positive health outcomes (Grant et al., 2011). Thus, creating environments whereby transgender older adults do not possess stigmatized identities and do not feel the need to conceal their gender identity is critically important.

In terms of health care access, transgender older adults' fear of accessing services was a significant mediator across the physical and mental health outcomes in this study. Transgender older adults are hesitant to seek medical attention, due to both negative experiences with and fear of judgments by health care providers (Cahill, South, & Spade, 2000; Cook-Daniels, 1997; Witten & Eyler, 2012). To date, many health care providers are inadequately prepared to address the needs of transgender older adults, a growing and underserved population (Cook-Daniels, 1997; Witten & Eyler, 2012). It has been suggested that those who disclose their gender identity are more likely to experience discrimination in medical settings (Grant et al., 2011). Most providers lack knowledge concerning transgender health issues both in their training and in the lack of frequency in which they encounter openly transgender individuals (Fallas, Landers, Lawrence, & Sperber, 2000; Grant et al., 2011). As a result, transgender individuals incur great time and travel costs necessary to reach trained and affirming providers (One Colorado Education Fund, 2011). Transgender adults' reluctance to access health care and to

disclose their gender identity, combined with the failure of health care providers to deliver culturally competent care, are likely to create barriers to care and subsequently lead to diminished health (American Medical Student Association, 2012).

Transgender older adult participants were less likely to be engaged in regular physical activity than the nontransgender older adult participants. The lowered levels of physical activities were linked with poor physical and mental health among transgender older adults. Reduced physical activity levels may be related to higher disability rates (Tak, Kuiper, Chorus, & Hopman-Rock, 2013). In addition, adults who have a history of discrimination are less likely to engage in protective health-related behaviors such as physical activity (Pascoe & Smart Richman, 2009). In this study, obesity mediated the effect of gender identity on physical health and disability. Although Conron and colleagues (2012) found no differences in obesity by gender identity, obesity becomes a more pronounced concern as age increases among transgender adults, particularly because obesity is associated with low levels of physical activity and increases the risk of other negative health outcomes, such as diabetes, coronary heart disease, and osteoarthritis (CDC, 2010).

In the general older adult population, the prevalence of obesity increases with age (Han, Tajar & Lean, 2011) and is associated with comorbidities and mobility limitations that affect physical activity (Corona et al., 2013) and quality of life (Han et al., 2011). Han and colleagues (2011) suggest that weight loss management programs be tailored according to individual needs. Considering the distrust and fear of accessing health services by the transgender older adults in this study, more research is needed to develop and test interventions that promote health and access to care for this population.

It is important to recognize that the transgender older adults in this study evidence resources that may be tapped in intervention development to bolster health. Compared with the nontransgender older adults in the study, the transgender older adults were significantly more likely to have children, have larger social networks, and were significantly less likely to live alone. Previous research suggests that transgender adults have slightly larger social networks than the general population although they are less likely to comprise family members (Lombardi, 1999). Despite the availability of these potentially protective resources, they did not necessarily translate into more support for the transgender older adults. Lower levels of social support and community belonging among transgender older adults accounted for markedly poorer mental health compared with their nontransgender LGB counterparts. Social support can be a resilience factor against the deleterious effects of victimization and is associated with positive health outcomes among sexual minorities (Fredriksen-Goldsen et al., in press). It will be important to examine (a) how other characteristics of social networks, such as density, reciprocity, and homogeneity (El-Bassel, Chen, & Cooper, 1998), are reflected in the quality of social resources and (b) their interplay with the prejudice that transgender older adults experience in the larger society and in sexual minority communities (Weiss, 2004). As health-related interventions are developed, it will be critical to explore what is needed to ensure that the social resources evidenced by transgender older adults translate into greater levels of social and community support.

Although this study highlights important findings regarding the health and aging of transgender older adults, several limitations must be considered. Because the participants were recruited via mailing lists from agencies, service users are likely to be overrepresented among the study participants. In the general older adult population, service users are likely to have more aging and health needs than nonservice users. Yet, it remains unclear if transgender older adults connected to service agencies have greater or fewer needs compared with nonservice users.

Although the sample is geographically and demographically diverse, it is a nonprobability sample, and the findings do not generalize to transgender older adults in general. In addition, because the agencies are primarily located in large urban areas, transgender older adults residing in rural areas are likely to be underrepresented among the study participants. It is important to note that typically, transgender adults connected to LGBT organizations are those who have taken action concerning their gender identity and have become activists (Lombardi, 1999). An unknown but likely large portion of transgender older adults blend into the mainstream society and no longer identify as transgender (Witten & Eyler, 2012). In the past transgender, older adults were typically urged by health care professionals to remain silent about a gender transition, and hence are likely difficult to identify for studies such as this. Although this cross-sectional analysis provides an important snapshot

at one point in time of the health of an understudied population, it does not allow for the examination of health trends over time. Longitudinal studies are needed in order to better understand the health trajectories of transgender older adults over time.

Conclusions

This study represents one of the first to address transgender older adults' physical and mental health and to identify modifiable risk factors that mediate their health. In order to develop effective interventions for this population, it will be important to address both the common health risks faced by older adults in general (such as lack of physical activity and social support) and the unique risk factors influencing transgender older adult health (including fear of accessing health services, internalized stigma, and victimization). As interventions and services are developed the identification of resources aimed at bolstering social support and a sense of community of belonging is also needed. Addressing the heterogeneity within diverse communities is necessary to reduce health disparities among older adults.

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The Physical and Mental Health of Lesbian, Gay Male, and Bisexual (LGB) Older Adults: The Role of Key Health Indicators and Risk and Protective Factors

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Purpose: Based on resilience theory, this paper investigates the influence of key health indicators and risk and protective factors on health outcomes (including general health, disability, and depression) among lesbian, gay male, and bisexual (LGB) older adults. ***Design and Methods:*** A cross-sectional survey was conducted with LGB older adults, aged 50 and older (N = 2,439). Logistic regressions were conducted to examine the contributions of key health indicators (access to health care and health behaviors), risk factors (lifetime victimization, internalized stigma, and sexual identity concealment), and protective factors (social support and social network size) to health outcomes, when controlling for background characteristics. ***Results:*** The findings revealed that lifetime victimization, financial barriers to health care, obesity, and limited physical activity independently and significantly accounted for poor general health, disability, and depression among LGB older adults. Internalized stigma was also a significant predictor of disability and depression. Social support and social network size served as protective factors, decreasing the odds of poor general health, disability, and depression. Some distinct differences by gender and sexual orientation were also observed. ***Implications:*** High levels of poor general health, disability, and depression among LGB older adults are of major concern. These findings highlight the important role of key risk and protective factors, which significantly influences health outcomes among LGB older adults. Tailored interventions must be developed to address the distinct health issues facing this historically disadvantaged population.

Key Words: Minority health, LGB, Resilience, Disability, Depression

As the U.S. population is becoming older, it is increasingly diverse (Vincent & Velkoff, 2010). There are currently more than 2 million older adults in the United States that identify as lesbian, gay, or bisexual (LGB; Cahill, South, & Spade, 2000). Given the tremendous proportional growth of the age 50 and older population in the next two decades, the number of LGB older adults will more than double and likely exceed 6 million by 2030 (Cahill et al., 2000; Fredriksen-Goldsen, 2007a). Despite this tremendous growth, there is a paucity

of research addressing the health and aging needs of LGB older adults. The Institute of Medicine (IOM, 2011) identifies LGB older adults as an at-risk and under-served population.

Older adults from socially and economically disadvantaged populations are at risk of poor physical and mental health (Centers for Disease Control and Prevention [CDC] & Merck Company Foundation, 2007). Health disparities have been defined as differences in health resulting from systematic social, economic, and environmental disadvantage (U.S. Department of Health and Human Services, 2011). Health disparities related to sexual orientation have been identified as one of the most pronounced gaps in health research (CDC, 2011), with health research of LGB older adults largely absent (Fredriksen-Goldsen & Muraco, 2010).

In one of the first studies utilizing population-based data to examine the health of LGB older adults, findings reveal that common health disparity patterns exist (Fredriksen-Goldsen et al., 2011). Compared to their heterosexual counterparts, LGB older adults face an elevated risk of disability and mental distress, are more likely to smoke and engage in excessive drinking, and are less likely to be partnered or married. Important differences by gender are also evident among LGB older adults (Fredriksen-Goldsen et al., 2011). Older lesbian and bisexual women have an elevated risk of cardiovascular disease and obesity, whereas older gay and bisexual men are at higher risk of poor physical health and living alone. Data from the California Health Interview Survey indicate that, as compared to their heterosexual counterparts, LGB adults aged 50–70 years have higher rates of diabetes, high blood pressure, physical limitations, and self-reported poor health (Wallace, Cochran, Durazo, & Ford, 2011). These emerging studies identify LGB older adults as a health-disparate population with heightened risks of poor health outcomes, yet critical gaps persist in our understanding of the social determinants affecting health in these communities.

Conceptual Framework

To better understand how key health indicators and risk and protective factors affect the health of LGB older adults, we utilized a resilience conceptual framework. Resilience is defined as the beneficial behavioral patterns, functional competence, and cultural capacities that individuals, families, and communities utilize under adverse circumstances (Fredriksen-Goldsen, 2007b). Emerging from the field of positive psychology, resilience theory posits that individuals can exemplify characteristics that reflect the "process of, capacity for, or outcomes of successful adaptation, despite challenging or threatening circumstances" (Masten, Best, & Norman, 1990, p. 426).

The underpinnings of resilience theory are based on the understanding that resilience is a dynamic process involving the interplay of risk and protective factors (Yates & Masten, 2004). Resilience theory is well suited to inform our understanding of the life experiences of older adults in general and LGB older adults in particular. This conceptual framework places life experiences in the context of opposing influences, including competence and adversity as well as assets and risks (Yates & Masten, 2004). Competence is conceptualized as the adaptive use of resources; adversity is considered the negative experience that can disrupt adaptive functioning.

The resilience conceptual framework used in this study has five components: (1) background characteristics (including sexual orientation, gender, age, income, education, and race/ethnicity); (2) key health indicators (including access to health care and health behaviors); (3) risk factors (including lifetime victimization, internalized stigma, and sexual identity concealment); (4) protective factors (including social support and social network size); and (5) health outcomes (general health, disability, and depression). Based on resilience theory, we will examine the relationship between background characteristics, key health indicators, and risk and protective factors as they predict health outcomes of LGB older adults. In this study, we are focusing on three health outcomes because existing evidence suggests that risk and protective factors may influence health outcomes differently and with differing intensities (Hughes & Waite, 2002). A resilience framework allows us not only to examine risk and protective factors as they affect LGB older adult health but also, equally important, to assess how risk and protective factors may exist differentially among subgroups of LGB older adults.

The resilience framework parallels the life experiences of many LGB older adults. Although many LGB individuals have developed a strong sense of community and mutual support and have rallied together to create supportive environments during trying times, such as the AIDS crisis of the 1980s and 1990s, they continue to experience relatively

high levels of discrimination and victimization (Fredriksen-Goldsen et al., 2011). Such adverse experiences may lead to internalized stigma and negative health consequences. According to Herek and colleagues (2009), sexual minorities are at risk of accepting and integrating negative societal values and attitudes; in turn, such internalized stigma may lead to concealment of one's sexual orientation, resulting in social isolation.

The impact of victimization, internalized stigma, and sexual identity concealment on mental health among LGB adolescents and adults in young and middle adulthood is well documented (Hatzenbuehler, 2009; Meyer, 2003). Although the prevalence of depression decreases with older age in the general population (Kessler, Birnbaum, Bromet, Hwang, Sampson, & Shahly, 2010), LGB older adults continue to face risks that may increase their vulnerability to mental health problems. Among LGB older adults, victimization related to sexual orientation is an important determinant of poor mental health (Grossman, D'Augelli, & O'Connell, 2001). Concealment of their sexual identity, likely influenced by both internalized stigma and victimization, can also prevent LGB individuals from opportunities to strengthen social relationships and interaction with other LGB adults. Such risks may also impede access to health care (Conron, Mimiaga, & Landers, 2010; Dilley, Simmons, Boysun, Pizacani, & Stark, 2010) and result in adverse health behaviors (Hatzenbuehler, 2009), likely increasing the risk of poor physical health among LGB older adults.

Increased social contacts, social network size, and social support are associated with better health among adults in the general population (Zaninotto, Falaschetti, & Sacker, 2009), and such social resources play a protective factor in the relationship between victimization and physical and mental health among older adults (Luo, Xu, Granberg, & Wentworth, 2011). The social relationships of LGB older adults differ from the general older adult population in part because many LGB older adults do not have children or legally recognized family members to help them (Fredriksen-Goldsen et al., 2011). LGB older adults report heavy reliance on unmarried partners and friends of similar age to provide help and caregiving assistance as they age (Beeler, Rawls, Herdt, & Cohler, 1999; Fredriksen-Goldsen, 2007a). Further investigation is needed regarding the role of such social resources as potentially protective factors influencing the health of LGB older adults.

A better understanding of the key health indicators and risk and protective factors affecting health outcomes of LGB older adults has important implications for developing and testing interventions to improve the health of our increasingly older and diverse population. The research hypotheses tested in this study include the following:

Key health indicators (access to health care and health behaviors) will be significant predictors of LGB older adults' poor general health, disability, and depression, after controlling for covariates. Risk factors (lifetime victimization, internalized stigma, and sexual identity concealment) will be significant predictors of LGB older adults' poor general health, disability, and depression, after controlling for covariates. Protective factors (social support and social network size) will reduce the likelihood of LGB older adults' poor general health, disability, and depression, after controlling for covariates.

Design and Methods

Sample

The Caring and Aging with Pride study was conducted through a collaboration with 11 agencies across the United States to better understand the physical and mental health of lesbian, gay, bisexual, and transgender (LGBT) older adults (see Fredriksen-Goldsen et al., 2011). Participating agencies distributed survey questionnaires with an invitation letter via agency contact lists to older adults, defined as aged 50 years and older, over a 6-month period from June to November 2010. Two reminder letters were sent as follow ups in subsequent 2-week intervals. The total *N* for the survey was 2,560, which includes both mail and electronic surveys, and represents the largest sample to date of LGBT older adults. A total of 2,201 mail surveys were returned for a response rate of 63%. For the agencies with electronic mailing lists, a similar internet-based survey was used following the same survey distribution protocol, with 359 electronic surveys returned.

For this analysis, we selected the LGB older adults for a sample size of 2,349, including 829 lesbian and bisexual older women and 1,520 gay and bisexual older men. Transgender participants were not included in this analysis because sexual orientation and gender identity are not mutually exclusive categories. The results based on transgender older adults are detailed in separate publications. All study procedures were reviewed and approved by the University of Washington Institutional Review Board.

Table 1. Description of Measures

Variables	Descriptions
Health outcomes	
Poor general health	Measured by a single item from the SF-8 (Ware, Kosinski, Dewey, & Gandek, 2001), "Overall, how would you rate your health during the past 4 weeks?" Responses were dichotomized: "fair, poor, or very poor" (= 1) and "excellent, very good, or good" (= 0).
Disability	Based on the definition from Healthy People 2010 (U.S. Department of Health and Human Services, 2000); participants were categorized as having a disability if they responded affirmatively to either of the following: (a) limited in activities because of physical, mental, or emotional problems or conditions; or (b) any health problems that require the use of special equipment, such as a cane, wheelchair, special bed, or special telephone (CDC, 2012).
Depression	The Center for Epidemiological Studies Depression Scale (CES-D), 10-item short form, was used to measure current depressive symptomology (Radloff, 1977). Summed scores were dichotomized with the standard cutoff score of 10 or higher (Andresen, Malmgren, Carter, & Patrick, 1994).
Health indicators	
Routine checkup	Assessed by asking participants whether or not they had a routine checkup within the past year (CDC, 2012).
Financial barriers to health care	Measured by asking participants whether or not they needed to see a doctor in the past year but could not because of cost (CDC, 2012).
Obesity	Body mass index (BMI) based on self-reported weight and height was calculated. BMI of 30 kg/m^2 or higher was considered obese (CDC, 2010).
Smoking	Assessed by asking participants whether they had ever smoked 100 or more cigarettes and currently smoke every day or some days (CDC, 1994).
Excessive drinking	Measured by asking participants whether they had five or more drinks on one occasion during the past 30 days (Substance Abuse and Mental Health Services Administration, 2006).
Physical activities	Assessed by whether or not participants engaged in moderate activities for at least 10 minutes at a time, such as brisk walking, bicycling, vacuuming, gardening, or anything else that causes some increase in breathing or heart rate in a usual week (CDC, 2012).
Risk factors	
Lifetime victimization	Assessed with a 16-item measure based on the Lifetime Victimization Scale (D'Augelli & Grossman, 2001) and Discrimination Scale (Inter-University Consortium for Political and Social Research, 2010). Participants were asked how many times in their lives, due to their actual or perceived sexual orientation, they had experienced differing types of victimization including physical, verbal or sexual assault or threat; threat of outing; property damage; being hassled or ignored by police; job-related discrimination; denial of or inferior health care; and prevented from living in a neighborhood. A four-point Likert scale was used, with summed score ranging from 0 to 48 (Cronbach's α = .86).
Internalized stigma	Assessed by a five-item scale based on the Homosexual Stigma Scale (Liu, Feng, & Rhodes, 2009). Summary scores range from 1 to 4, with higher scores indicating higher levels of internalized stigma (Cronbach's α = .78).
Sexual identity concealment	Utilizing items from the Outness Inventory Scale (Mohr & Fassinger, 2000), sexual identity concealment was determined if any family member (mother, father, brothers, sisters, children) or best friend did not know of the participants' sexual orientation.
Protective factors	
Social support	The four-item Social Support Scale (Sherbourne & Stewart, 1991) was used to measure the degree of perceived social support, with a range of 1 to 4, with higher scores indicating greater social support (Cronbach's α = .85).
Social network size	Assessed by asking participants how many friends, family members, colleagues, and neighbors they interact with in a typical month. The total size of social network was calculated and summarized by quartiles, with 1 indicating small social network (bottom 25%) and 4 indicating large social network (top 25%).
Background characteristics	Standardized measures were used to assess background characteristics, including gender (0 = men, 1 = women), sexual orientation (0 = bisexual, 1 = gay or lesbian), age (in years), race/ethnicity (0 = African Americans, Hispanics, Asian or Pacific Islanders and others, 1 = non-Hispanic White), income (0 = above 200% of the federal poverty level [FPL], 1 = at or below 200% FPL), education (0 = some college or more, 1 = high school or less), and relationships status (0 = married or partnered, 1 = other). Participants were asked whether they had ever been told by a doctor that they had the following conditions: high blood pressure, high cholesterol, heart attack, angina, stroke, cancer, arthritis, diabetes, asthma, or HIV/AIDS. The number of chronic health conditions was summed, with a range of 0 to 10.

Measures

In this study, we utilized standardized measures whenever possible, including measures of health outcomes, key health indicators, risk and protective factors, and background characteristics. Health outcomes were poor general health, disability, depression; key health indicators include a routine checkup, financial barriers to health care, obesity, smoking, excessive drinking, and physical activities; risk factors include lifetime victimization, internalized stigma, and sexual identity concealment; and protective factors include social support and social network size. Detailed information about measures is shown in Table 1.

Analysis

Analyses were performed using STATA/IC for Windows (version 11.2). First, we described the distributions of background characteristics and examined the associations of background characteristics with gender and sexual orientation by applying chi-square tests for categorical variables and *t* tests for continuous variables. Gender and sexual orientation effects on key health indicators, risk and protective factors, and health outcomes were examined using logistic or linear regression, after adjusting for age, income, education, and race/ethnicity. Next, we conducted separate logistic regressions (Agresti, 2002) to assess the contributions of key health indicators and risk and protective factors as they predict each health outcome. With each outcome variable, we utilized three logistic regression models. All models included background characteristics (sexual orientation, gender, age, income, education, race/ethnicity, and number of chronic conditions) as control covariates. Model 1 included key health indicators; Model 2 included key health indicators and risk factors; and Model 3 included key health indicators, risk factors, and protective factors. No multicollinearity issues were detected when tested prior to conducting the multivariate logistic regression models.

Results

Sample Characteristics

The background characteristics of the LGB older adults in the sample are illustrated in Table 2. The average age was 67 years. Eighty-seven percent was non-Hispanic White. Nearly one third of the LGB older adults had household income at or below 200% of the federal poverty level (FPL). Bisexual older women and men were more likely to be at or below 200% of the FPL than older lesbians and gay men.

When controlling for age, income, education, and race/ethnicity, lesbian and bisexual older women were less likely to have an annual routine checkup and more likely to be obese than gay and bisexual older men. On the other hand, gay and bisexual older men, as compared to lesbian and bisexual older women, reported higher rates of smoking and excessive drinking, higher rates of lifetime victimization and more internalized stigma, and less social support and smaller social networks. When comparing by sexual orientation, bisexual older women and men reported a higher degree of internalized stigma and a higher likelihood of sexual identity concealment than older lesbians and gay men, when controlling for background characteristics. Bisexual older women also reported lower rates of physical activity and less social support than older lesbians. However, older lesbians showed a higher degree of lifetime victimization than bisexual older women.

Nearly one quarter (22%) of the LGB older adult participants reported poor general health, 45% had a disability, and 29% experienced depressive symptomology. Adjusting for age, income, education, and race/ethnicity, the rates of poor general health and depression were similar by gender and sexual orientation, except that lesbian and bisexual older women had higher rates of disability than gay and bisexual older men.

Predictors of Health Outcomes

Poor General Health.—Next, we conducted logistic regression analyses to assess the contributions of key health indicators, risk factors, and protective factors in succession as they predicted poor general health, disability, and depression when controlling for background characteristics, including sexual orientation, gender, age, income, education, race/ethnicity, and the number of chronic conditions. The results for poor general health are illustrated in Table 3. All three models indicate that financial barriers to health care, smoking, and obesity increased the odds of poor general health for LGB older adults, whereas having an annual routine checkup and engaging in physical activities decreased the odds. The results of Model 2 indicate that, from among the risk factors, lifetime victimization and internalized

Table 2. Sample Characteristics by Sexual Orientation and Gender

	Total (n = 2,349)	Men (n = 1,520)			Women (n = 829)			Gender difference
		Total	Gay (n = 1,453)	Bisexual (n = 67)	Total	Lesbian (n = 770)	Bisexual (n = 59)	
Background characteristics								
Age, years, M (SD)	66.88 (9.04)	68.04 (9.17)	67.97 (9.11)	69.63 (10.44)	64.74 (8.39)	64.76 (8.40)	64.51 (8.28)	t = 8.59***
Income, ≤200% FPL, %	29.21	29.25	28.46	46.77**	29.12	27.59	48.28**	χ^2 = 0.00
Education, high school or below, %	7.68	8.55	8.46	10.45	6.08	5.76	10.34	χ^2 = 4.56*
Non-Hispanic White, %	87.12	87.37	87.28	89.39	86.67	86.81	84.75	χ^2 = 0.23
No. of chronic conditions, M (SD)	1.93 (1.43)	2.01 (1.45)	2.00 (1.46)	2.28 (1.41)	1.79 (1.37)	1.80 (1.38)	1.73 (1.31)	t = 3.57***
Health indicators								
Annual routine checkup, %	83.16	85.94	86.06	83.33	78.04	78.44	72.88	AOR = 0.63***
Financial barriers, %	6.34	5.79	5.64	8.96	7.36	7.01	11.86	AOR = 1.09
Smoking, %	8.69	9.16	9.23	7.69	7.84	7.25	15.25	AOR = 0.71*
Obesity, %	24.58	19.26	19.37	16.92	34.32	34.30	34.48	AOR = 2.15***
Excessive drinking, %	8.12	10.51	10.57	9.23	3.79	3.69	5.08	AOR = 0.28***
Physical activities, %	82.41	82.35	82.37	81.82	82.54	83.55	69.49**	AOR = 0.98
Risk factors								
Lifetime victimization, M (SD)	6.20 (6.99)	7.06 (7.35)	7.05 (7.31)	7.29 (8.16)	4.62 (5.99)	4.75 (6.07)	2.93 (4.42)**	b = −2.94***
Internalized Stigma, M (SD)	1.45 (.55)	1.52 (.58)	1.50 (.57)	1.89 (.73)***	1.32 (.47)	1.30 (.46)	1.54 (.57)***	b = −0.20***
Concealment, %	16.31	17.97	17.46	29.23*	13.28	12.45	24.14**	AOR = 0.88
Protective factors								
Social support, M (SD)	3.11 (.78)	3.02 (.81)	3.03 (.81)	2.81 (.84)	3.28 (.70)	3.30 (.68)	2.98 (.82)*	b = 0.25***
Social network-size, M (SD)	2.49 (1.11)	2.42 (1.12)	2.41 (1.11)	2.54 (1.25)	2.62 (1.09)	2.63 (1.09)	2.43 (1.17)	b = 0.18**
Health outcomes								
Poor general health, %	22.13	21.93	21.63	28.36	22.49	22.53	22.03	AOR = 1.01
Disability, %	45.49	41.69	41.17	53.03	52.44	52.57	50.85	AOR = 1.70***
Depression, %	29.00	29.64	29.40	34.92	27.82	27.26	35.09	AOR = 0.89

Note: AOR = adjusted odds ratio; b = unstandardized coefficient. Comparisons of background characteristics are unadjusted, and comparisons for health outcomes, key health indicators, risk factors, and protective factors are adjusted for socio-demographic variables (age, income, education, and race/ethnicity). Significant findings for comparisons by sexual orientation are indicated in the columns of bisexuals with asterisks; test statistics and their significance for comparisons by gender are shown in the right-most column.

*p < .05. **p < .01. ***p < .001.

Table 3. Logistic Regression Analysis of Poor General Health among LGB Older Adults

Variables	Model 1 AOR	Model 2 AOR	Model 3 AOR
Health indicators			
Annual routine checkup	0.66*	0.67*	0.69*
Financial barriers	2.16**	1.86**	1.65*
Smoking	1.86**	1.87**	1.69*
Excessive drinking	0.84	0.80	0.84
Obesity	1.60**	1.58**	1.64**
Physical activities	0.58***	0.58***	0.62**
Risk factors			
Lifetime victimization	—	1.02*	1.02*
Internalized stigma	—	1.33*	1.17
Concealment	—	0.89	0.85
Protective factors			
Social support	—	—	0.75**
Social network size	—	—	0.86*

Note: AOR = adjusted odds ratio; all the tested models controlled for gender, sexual orientation, age, income, education, race/ethnicity, and the number of chronic conditions.

*$p < .05$. **$p < .01$. ***$p < .001$.

Table 4. Logistic Regression Analysis of Disability among LGB Older Adults

Variables	Model 1 AOR	Model 2 AOR	Model 3 AOR
Health indicators			
Annual routine checkup	0.98	1.00	1.01
Financial barriers	2.63***	2.08**	1.96**
Smoking	1.82**	1.81**	1.70**
Excessive drinking	1.01	0.93	0.95
Obesity	1.81***	1.82***	1.86***
Physical activities	0.59***	0.59***	0.62**
Risk factors			
Lifetime victimization	—	1.04***	1.04***
Internalized stigma	—	1.41**	1.30*
Concealment	—	1.33	1.29
Protective factors			
Social support	—	—	0.85*
Social network size	—	—	0.89*

Note: AOR = adjusted odds ratio; all the tested models controlled for gender, sexual orientation, age, income, education, race/ethnicity, and the number of chronic conditions.

*$p < .05$. **$p < .01$. ***$p < .001$.

stigma were significantly associated with increased odds of poor general health. According to Model 3, protective factors additionally accounted for variance in poor general health. As the degrees of social support and social network size increased, the odds of poor general health decreased. After adding protective factors to the model, lifetime victimization remained significantly associated with poor general health, but internalized stigma did not.

Disability.—The results of logistic regression analyses to assess predictors of disability are shown in Table 4. All three models indicate that older lesbian and bisexual women were more likely to be disabled than gay and bisexual men; financial barriers to health care, smoking, and obesity increased the odds of disability although engaging in physical activities decreased the odds. In Model 2, lifetime victimization and internalized stigma additionally accounted for variance

in disability. As the extent of lifetime victimization and internalized stigma increased, the odds of disability also increased. In Model 3, although the addition of protective factors had little effect on the results of Model 2, both higher degrees of social support and social network size decreased the odds of disability.

Depression.—The results for depression are depicted in Table 5. In Model 1, financial barriers to health care and smoking increased the odds of depressive symptomology, whereas being engaged in physical activities decreased the odds. In Model 2, we assessed whether risk factors additionally accounted for the variance in depressive symptomology. As the extent of lifetime victimization and internalized stigma increased, the odds of depressive symptomology increased; lifetime victimization and internalized stigma remained significantly associated with depression, even after protective factors were added to the model (Model 3). Model 3 illustrates the additional contribution of protective factors in relation to depression. Higher degrees of social support and increased social network size decreased the odds of depressive symptomology. The effect of smoking was no longer significant after risks and protective factors were jointly added to the model. Obesity was not associated with depression in Models 1 and 2. When protective factors were added to Model 2, however, obesity increased the odds of depression, with the protective factors potentially having a suppression effect.

Discussion

The IOM (2011) recognized a critical need to better understand the health of LGB adults in later life. Based on resilience theory, the purpose of this study was to examine how key health indicators and risk and protective factors contribute to physical and mental health among LGB older adults. The high levels of poor general health, disability, and depression among the LGB older adult participants in the study are of major concern. These findings mirror those reported in population-based studies, documenting significant health disparities among LGB older adults compared to heterosexuals of similar age (Fredriksen-Goldsen et al., 2011; Wallace et al., 2011). The findings reveal that lifetime victimization, financial barriers to health care, obesity, and lack of physical activity among LGB older adults are significant predictors across the health outcomes, even after adjusting for background characteristics and other covariates. Internalized stigma was also a predictor of disability and depression. Social support and social network size emerged as significant protective factors, decreasing the odds of poor health outcomes.

We hypothesized that key heath indicators, including the lack of access to health care and adverse health behaviors, would significantly predict LGB older adult health outcomes. As expected, reducing financial barriers to health care had a positive impact across the three health outcomes. Although smoking was a significant predictor of

Table 5. Logistic Regression Analysis of Depression among LGB Older Adults

	Model 1	Model 2	Model 3
Variables	AOR	AOR	AOR
Health indicators			
Annual routine checkup	0.77	0.78	0.86
Financial barriers	3.38***	2.70***	2.30***
Smoking	1.65**	1.66*	1.32
Excessive drinking	1.21	1.12	1.21
Obesity	1.28	1.28	1.32*
Physical activities	0.52***	0.53***	0.59**
Risk factors			
Lifetime victimization	—	1.03***	1.03**
Internalized stigma	—	1.77***	1.35**
Concealment	—	1.21	1.08
Protective factors			
Social support	—	—	0.45***
Social network size	—	—	0.82**

Note: AOR = adjusted odds ratio; all the tested models controlled for gender, sexual orientation, age, income, education, race/ethnicity, and the number of chronic conditions.

*$p < .05$. **$p < .01$. ***$p < .001$.

poor general health and disability as hypothesized, the relationship between smoking and depression did not remain significant once protective factors were added in the model. The association between smoking and depression is well documented (Pasco et al., 2008), with a recent longitudinal study establishing a causal link between smoking and health (Boden, Fergusson, & Horwood, 2010). Our findings suggest that social support and social network size mediate the relationship between smoking and depression among LGB older adults.

Contrary to the hypothesis, excessive drinking was not a significant indicator of health outcomes in this study. Because we operationalized excessive drinking as five or more drinks per sitting as suggested by Substance Abuse and Mental Health Services Administration (2006), we may not have captured more episodic and less consistent drinking patterns among older adults that may be reflective of alcohol consumption among LGB older adults. Another interesting finding is that social support and social network size seem to suppress the relationship between obesity and depression among LGB older adults in the study. The results of the multivariate logistic regression indicate that the negative impact of obesity on depression was significant when controlling for social network size. In fact, the bivariate analyses indicate that obese LGB older adults in the sample had larger social networks than those who were not obese (data not shown). Evidence suggests that obesity may spread across social networks (Christakis & Fowler, 2007). Further research examining these relationships among LGB older adults is desperately needed, with particular attention to the elevated rates of obesity among lesbian and bisexual older women.

We also hypothesized that risk factors, including lifetime victimization, internalized stigma, and sexual identity concealment, would additionally account for poor general health, disability, and depression among LGB older adults, after controlling for covariates. Lifetime victimization was associated with poor health across the three outcomes, with the LGB older adult participants experiencing victimization on average about six times in their lives. Lesbians, gay men, and bisexual women and men are more likely than heterosexuals to report discrimination, and the odds of having mental health problems are significantly increased for those with high levels of discrimination (Mays & Cochran, 2001). Emerging evidence suggests that the chronic strains associated with multiple forms of victimization among racial and ethnic minorities may lead to cumulative physical and mental health symptoms (Williams & Mohammed, 2009). The findings presented here suggest that lifetime victimization continues to have deleterious and lasting effects on the lives of LGB older adults.

Clearly, overt risks emanating from the larger social context, such as victimization, have negative health consequences, but the findings related to internalized risks are less clear. Internalized stigma was associated with increased disability and depression, but not poor general health, among the LGB older adults in this study. We know from HIV literature that stigma has been significantly associated with poor mental health (Logie & Gadalla, 2009), depression (Vanable, Carey, Blair, & Littlewood, 2006), and negative self-image (Emlet, 2007). In this study, internalized stigma was also found to be associated with increased disability. However, the directionality of this relationship is less clear, which may require further examination in future research. Because we cannot ascertain causal or temporal linkages in this study, it may be that increased disability affects self-image, resulting in greater experiences of internalized stigma. It is also important to note that internalized stigma was not associated with poor general health in the final model. Although it was found to be significant in the first two models, the relationship was mitigated by social support and social network size.

Sexual identity concealment was not found to be associated with the health outcomes in this study. Serovich (2001) suggests that disclosure is weighed by examining what one anticipates resulting from the disclosure—which may be either positive or negative consequences. It was possible that for many of LGB older adult participants in the study it may have been more beneficial to openly identify their sexual identity and risk the potential outcomes of that disclosure. For those concealing their sexual identities, it too may reflect a risk-and-benefit analysis, with a reduction in risk given the reasons supporting nondisclosure rather than open self-identification.

We also predicted that protective factors, including social support and social network size, would reduce the likelihood of LGB older adults' poor general health, disability, and depression. Social support has been shown to have positive influences on the health of older adults in the general population (Berkman, Glass, Brissette, & Seeman, 2000; Hsu & Jones, 2012), and such support may be especially important for LGB adults as they age, as they are more likely to rely upon partners and

friends to provide informal caregiving (Fredriksen-Goldsen, 2007a; Metlife Mature Market Institute & American Society on Aging, 2010). In addition to social support, social network size also serves as a protective factor in relation to poor physical health, disability, and depression. As Stephens and colleagues (2011) point out, social networks are the social structure that provides the often-needed support. Social networks are an important consideration in LGB aging as we know from previous research that older LGB adults are less likely to have children and less likely to be living with life partners than are older heterosexuals (Butler, 2006; Fredriksen-Goldsen et al., 2011). Although prior research suggests that LGB older adults who rely upon friends to provide informal care may find themselves without adequate care when their need becomes too great (Muraco & Fredriksen-Goldsen, 2011), some have suggested that LGB older adults may have a social advantage due to well-developed social networks (Butler, 2006).

In this study, some significant subgroup differences were revealed by both gender and sexual orientation, demonstrating unique patterns of risk that warrant additional attention. The elevated risks of disability, obesity, and lack of routine checkup among lesbians and bisexual women found in previous studies (Brault, 2008; Reynolds, Saito, & Crimmins, 2005; Okoro, Strine, Young, Balluz, & Mokdad, 2005) were also observed among the lesbian and bisexual older women in this study. On the other hand, gay and bisexual older men in this study, as compared to lesbian and bisexual older women, experience other elevated risks, including higher rates of smoking and excessive drinking, increased levels of lifetime victimization and internalized stigma, less social support, and smaller social networks. In the gerontological literature, older women generally have increased social support as compared to older men (Stephens et al., 2011), and this pattern persists among the LGB older adults in this study. Yet, in the general population, older women are much more likely to live alone than older men; however, among LGB older adults, older gay and bisexual men are significantly more likely to live alone than are lesbian and bisexual older women (Fredriksen-Goldsen et al., 2011). Further research is needed to examine how such gender disparities in health indicators and risk and protective factors affect health outcomes, such as disability, over time.

Important differences by sexual orientation are also evident, with older bisexual women and men experiencing significantly higher levels of internalized stigma and sexual identity concealment, and lower levels of social support than lesbian and gay older adults. Although social support emerged as a protective factor against depression and poor physical health, such resources appear to be less available for bisexual older adults, who may not experience a sense of community and group identity. It may also be that bisexual older adults do not disclose their identity unless they are in a same-sex relationship. Pinel (1999) suggests that stigma consciousness can be linked to a lower sense of group identity and how one perceives oneself as being similar to other group members. Bisexuals may also experience a lack of community support due to negative perceptions of bisexuality in lesbian and gay communities (Lang, 2008). These disparate findings by both gender and sexual orientation reinforce the notion that LGB older adults comprise heterogeneous populations and it is important to guard against making generalizations that mask between group differences.

Although this study highlights important findings regarding the health of LGB older adults, several limitations must be considered. Because the participants were recruited via agency lists, service users are likely over-represented. It is possible that older LGB adults who are not connected with agencies have different experiences and may, in fact, be more or less socially isolated than the participants in the study. This research addresses the health of sexual minorities who self-identify as lesbian, gay, or bisexual, and may not include those who do not self-identify but may engage in sexual behavior with same or both sexes. Although the sample is large and geographically and demographically diverse, it is a nonrepresentative sample and the findings are not generalizable to the broader population of LGB older adults. Because the agencies are primarily located in large urban areas, LGB older adults residing in rural areas are likely under-represented. The cross-sectional aspect of the study also limits the understanding of the health and aging of LGB adults. Our results reflect data collected at one point in time, and future studies would benefit by collecting longitudinal data that can trace aging and health trajectories over time.

Conclusion

Resilience theory provides a lens through which to examine the health of LGB older adults as a

health-disparate population. This study identifies key health indicators and risk and protective factors that significantly predict LGB older adults' general health, disability, and depression. In order to develop effective interventions for this population, it will be important to address both the common health risks faced by older adults in general as well as the unique risk and protective factors affecting LGB older adults in particular, including elevated rates of lifetime victimization, increased stigma, and distinct social support networks. Recognizing the increasing diversity of our society is a first step to promote health equity and improve health for all older adults.

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