

**Award Numbers:** W81XWH-15-1-0701

**Title:** Improving Acceptance, Integration, and Health Among LGBT Service Members

**Principal Investigators:** Carl Castro, PhD

**Contracting Organizations:** University of Southern California (USC)

**Report Date:** October 2017

**Type of Report:** Annual

**Prepared For:** U.S. Army Medical Research and Material Command  
Fort Detrick, Maryland 21702-5012

**Distribution Statement:** Approved for Public Release;  
Distribution Unlimited

The views, opinions and/or findings contained in this report are those of the authors and should not be construed as an official Department of the Army position, policy or decision unless so designated by other documentation.

| REPORT DOCUMENTATION PAGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                          | Form Approved<br>OMB No. 0704-0188                                 |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|--------------------------------------------------------------------|
| <small>Public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing this collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports (0704-0188), 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number. PLEASE DO NOT RETURN YOUR FORM TO THE ABOVE ADDRESS.</small> |                          |                                                                    |
| 1. REPORT DATE<br>October 2017                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 2. REPORT TYPE<br>Annual | 3. DATES COVERED<br>30 Sep 2016 - 29 Sep 2017                      |
| 4. TITLE AND SUBTITLE<br><br>Improving Acceptance, Integration, and Health Among LGBT Service Members                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                          | 5a. CONTRACT NUMBER                                                |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                          | 5b. GRANT NUMBER<br>W81XWH-15-1-0701                               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                          | 5c. PROGRAM ELEMENT NUMBER                                         |
| 6. AUTHOR(S)<br>Dr. Jeremy Goldbach; Dr. Ian Holloway; Dr. Carl Castro<br><br>cacastro@usc.edu                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                          | 5d. PROJECT NUMBER<br>0010708824; 0010708825-001;<br>0010708826-01 |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                          | 5e. TASK NUMBER                                                    |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                          | 5f. WORK UNIT NUMBER                                               |
| 7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES)<br>University of Southern California.<br>3720 S. Flower St. 3 <sup>rd</sup> Fl.<br>Los Angeles, CA 90039<br><br>University of California, Los Angeles<br>11000 Kinross Ave. Suite 102<br>Los Angeles, CA 90095                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                          | 8. PERFORMING ORGANIZATION REPORT<br>NUMBER                        |
| 9. SPONSORING / MONITORING AGENCY NAME(S) AND ADDRESS(ES)<br><br>U.S. Army Medical Research and Materiel Command<br>Fort Detrick, Maryland 21702-5012                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                          | 10. SPONSOR/MONITOR'S ACRONYM(S)                                   |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                          | 11. SPONSOR/MONITOR'S REPORT<br>NUMBER(S)                          |
| 12. DISTRIBUTION / AVAILABILITY STATEMENT<br><br>Approved for Public Release; Distribution Unlimited                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                          |                                                                    |
| 13. SUPPLEMENTARY NOTES                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                          |                                                                    |

**14. ABSTRACT**

The goal of this proposal is to (a) determine the extent to which lesbian, gay, bisexual and transgender (LGBT) service members report feelings of acceptance and integration into the military and their units post-Don't Ask, Don't Tell (DADT); (b) describe the composition and structure of LGBT service members' supportive social networks; (c) determine if there are differences in behavioral health patterns among LGBT service members compared to their heterosexual counterparts and across military branch; and (d) develop a set of actionable recommendations for the Department of Defense aimed at improving the integration of LGBT service members into the military and the current system of health care and support, if needed. This project has two phases. In Phase I we (a) convened an expert panel to advise the study and (b) interview a diverse set of military service members (n=42) using a semi-structured Life History Calendar approach to develop a set of culturally appropriate measures for use in Phase II. In Phase II, following completion of formative processes, we are recruiting a sample of LGBT (n=240) and heterosexual/cisgender (n=240) service-members for participation in a quantitative survey using respondent driven sampling (RDS). To date, 47 LGBT and 31 non-LGBT service members have completed the Phase II survey. we have convened our expert panel of advisors and have completed 38 interviews with LGBT military service members.

**15. SUBJECT TERMS**

Military, LGBT, health disparities, minority stress, social networks

**16. SECURITY CLASSIFICATION OF:****a. REPORT**

Unclassified

**b. ABSTRACT**

Unclassified

**c. THIS PAGE**

Unclassified

**17. LIMITATION  
OF ABSTRACT**

Unclassified

**18. NUMBER  
OF PAGES**

14

**19a. NAME OF RESPONSIBLE PERSON**  
USAMRMC**19b. TELEPHONE NUMBER** (include area  
code)

**Standard Form 298 (Rev. 8-98)**  
Prescribed by ANSI Std. Z39.18

## Table of Contents

|                                                          | <u>Page</u> |
|----------------------------------------------------------|-------------|
| 1. Introduction.....                                     | 5           |
| 2. Keywords.....                                         | 5           |
| 3. Accomplishments.....                                  | 5           |
| 4. Impact.....                                           | 6           |
| 5. Changes/Problems.....                                 | 7           |
| 6. Products.....                                         | 8           |
| 7. Participants & Other Collaborating Organizations..... | 9           |
| 8. Special Reporting Requirements.....                   | 11          |
| 9. Appendices.....                                       | 13          |

## **1. INTRODUCTION:**

Approximately 3% of military personnel across all service branches identify as lesbian, gay, bisexual, or transgender (LGBT). Despite some restrictions on LGBT individuals serving openly in the military having been lifted in recent years, it has not become significantly easier for most of these individuals to serve openly. A culture of non-acceptance – established prior to the easing of restrictions – remains alive and well, with some LGBT service members experiencing interpersonal and institutional discrimination, marginalization, and rejection. The cumulative effect of these stressors on LGBT service members is poorly understood, with very little data available on the unique physical and mental health needs of these communities. This project includes LGBT service members from all four services: Army, Air Force, Navy and Marine Corps, and has two phases. In Phase I we (a) convened an expert panel to advise the study and (b) interviewed a diverse set of military service members (n=42) using a semi-structured Life History Calendar approach to inform a set of culturally appropriate measures for use in Phase II. The quantitative survey measure was developed for implementation in Phase II, informed by findings from Phase I and input from expert advisory board members. Recruitment of LGBT (n=240) and heterosexual (n=240) service-members for survey participation is in process using respondent driven sampling (RDS).

2. **KEYWORDS:** military, LGBT, health disparities, minority stress, social networks

## **3. ACCOMPLISHMENTS:**

### **What were the major goals of the project?**

The major goals of the project are to (a) determine the extent to which LGBT service members report feelings of acceptance and integration into the military and their units post-Don't Ask, Don't Tell (DADT); (b) describe the composition and structure of LGBT service members' supportive social networks; (c) determine if there are differences in behavioral health patterns among LGBT service members compared to their heterosexual counterparts and across military branch; and (d) develop a set of actionable recommendations for the Department of Defense aimed at improving the integration of LGBT service members into the military and the current system of health care and support, if needed.

### **What was accomplished under these goals?**

Since the prior reporting period, we have developed and refined the quantitative survey measure for Phase II implementation, informed by findings from Phase I qualitative interviews (Major Task 2). Development included input from expert advisory board members and pilot testing with a sample of LGBT (n=5) and non-LGBT (n=5) current or former military

service members. Survey programming in Qualtrics was implemented and refined through multiple rounds of internal testing and quality assurance procedures.

Recruitment for the Phase II survey was initiated on August 25, 2017 (Major Task 3) using respondent-driven sampling (RDS), beginning with a set of “seeds” for both the LGBT and non-LGBT cohorts. Seeds were identified via referrals from expert advisory board members and military-affiliated study team members, and Phase I participants who volunteered to refer their peers. Seeds completed the survey themselves, and initiated referral chains by referring their peers to take the survey. As of the date of this report, a total of 47 LGBT and 31 non-LGBT service members have completed the Phase II survey.

**What opportunities for training and professional development has the project provided?**

This project involves several doctoral students at USC and UCLA. During Phase I, six doctoral students were trained as interviewers. This training included research interview skill building and culturally competent interviewing techniques.

**How were the results disseminated to communities of interest?**

We regularly update our expert advisory panel on the progress of our study. Dissemination of Phase I and Phase II findings is forthcoming.

**What do you plan to do during the next reporting period to accomplish the goals?**

During the next reporting period we plan to continue recruitment and enrollment for the Phase II survey, until our sample of 480 service members (240 LGBT and 240 non-LGBT) has been achieved. Following data collection, analyses of survey data will be conducted and findings will be prepared for dissemination.

**4. IMPACT:**

**What was the impact on the development of the principal discipline(s) of the project?**

While findings from Phase II are forthcoming, the data gleaned from this project will help to identify unique aspects of LGBT service members’ experiences, compared to those of their non-LGBT counterparts, and be utilized to inform programs and policies that impact all military service members.

**What was the impact on other disciplines?**

Related disciplines include public health, public policy, sociology, psychology, social welfare, and others. The findings from this project will provide critical

information on how to develop effective interventions to ensure the acceptance and integration of sexual minorities into traditional heterosexual work environments. Lessons learned related to our methodologies will provide insight into using respondent-driven sampling for military and/or sexual or gender minority populations. Further, the findings will address possible health disparities that might exist amongst LGBT individuals and heterosexual individuals and possible ways to overcome these disparities.

**What was the impact on technology transfer?**

Nothing to report.

**What was the impact on society beyond science and technology?**

This research will provide the first known documentation of the extent to which LGBT service members feel supported and accepted by the military and provide the Department of Defense with a clear set of actionable recommendations that can be used to inform the development of early interventions to promote health and well-being among LGBT service members and improve unit cohesion. The military has been a leader in understanding and implementing gender and racial integration into its workforce, this study will be another example of how acceptance and integration can be achieved, which might benefit other organizations and communities.

**5. CHANGES/PROBLEMS:**

**Changes in approach and reasons for change**

Nothing to report

**Actual or anticipated problems or delays and actions or plans to resolve them**

We experienced some delay in initiating Phase II recruitment, largely due to time dedicated to developing and refining the survey instrument. Despite this initial delay, our enrollment has been increasing over time and we do not expect any significant delays in completing Phase II recruitment. The study team is consistently monitoring recruitment and sample characteristics, and will employ additional recruitment strategies as needed to ensure timely recruitment of a representative sample.

**Changes that had a significant impact on expenditures**

A no-cost extension was granted to allow the project to continue into 2018.

**Significant changes in use or care of human subjects, vertebrate animals, biohazards, and/or select agents**

Nothing to report

**Significant changes in use or care of human subjects**

Nothing to report

**Significant changes in use or care of vertebrate animals.**

Nothing to report

**Significant changes in use of biohazards and/or select agents**

Nothing to report

**6. PRODUCTS:**

**Publications, conference papers, and presentations**

Goldbach, J.T. & Castro, C.A. (2016). Lesbian, gay, bisexual and transgender (LGBT) service members. *Current Psychiatry Reports*, 18, 1-7. DOI 10.1007/s11920-016-0695-0

Castro, C., Goldbach, J., & Holloway, I. W. (2017). LGBT in the Military. Oral presentation at the Annual Meeting of the American Psychiatric Association. Atlanta, GA.

Goldbach, J., Holloway, I.W., & Castro, C. (2017). Hazing, Harassment and Life for LGBT Members of the Military. Oral presentation at the Annual meeting of the American Psychological Association. Washington, DC.

Holloway I.W. & Herman J. (2017, August 7). "The War on Transgender Soldiers Flies in the Face of the Facts." Retrieved from: Take Care: Ensuring the President "shall take Care that the Laws be faithfully executed." Available at: <https://takecareblog.com/blog/the-war-on-transgender-soldiers-flies-in-the-face-of-the-facts>.

Castro, C. (2017, September 27). "Trump is Banning Trans Soldiers at the Worst Possible Time." *The Advocate*. Available at: <https://www.advocate.com/commentary/2017/9/27/trump-banning-trans-soldiers-worst-possible-time>.

**Website(s) or other Internet site(s)**

<http://cir.usc.edu/research/research-projects/military-acceptance-project-map>

**Technologies or techniques**

Nothing to report

**Inventions, patent applications, and/or licenses**

**Other Products**

Nothing to report

## 7. PARTICIPANTS & OTHER COLLABORATING ORGANIZATIONS

- What individuals have worked on the project?

|                                        |                           |
|----------------------------------------|---------------------------|
| Name:                                  | Carl Castro, PhD          |
| Project Role:                          | Co-Principal Investigator |
| Researcher Identifier (e.g. ORCID ID): |                           |
| Nearest person month worked:           | 2.0                       |
| Contribution to Project:               | No change                 |
| Funding Support:                       | No other support          |

|                                        |                            |
|----------------------------------------|----------------------------|
| Name:                                  | Jeremy Goldbach, PhD, LMSW |
| Project Role:                          | Co-Principal Investigator  |
| Researcher Identifier (e.g. ORCID ID): |                            |
| Nearest person month worked:           | 3.0                        |
| Contribution to Project:               | No change                  |
| Funding Support:                       | No other support           |

|                                        |                                                                    |
|----------------------------------------|--------------------------------------------------------------------|
| Name:                                  | Ian Holloway, PhD, MSW, MPH                                        |
| Project Role:                          | Co-Principal Investigator                                          |
| Researcher Identifier (e.g. ORCID ID): |                                                                    |
| Nearest person month worked:           | 3.0                                                                |
| Contribution to Project:               | No change                                                          |
| Funding Support:                       | 2.2 months supported by this project, 0.8 months supported by UCLA |

|                                        |                            |
|----------------------------------------|----------------------------|
| Name:                                  | Henry Fisher Raymond, DrPH |
| Project Role:                          | Co-Investigator            |
| Researcher Identifier (e.g. ORCID ID): |                            |
| Nearest person month worked:           | 1.0                        |
| Contribution to Project:               | No change                  |
| Funding Support:                       | No other support           |

|       |                          |
|-------|--------------------------|
| Name: | Sheree Schrager, PhD, MS |
|-------|--------------------------|

|                                        |                  |
|----------------------------------------|------------------|
| Project Role:                          | Co-Investigator  |
| Researcher Identifier (e.g. ORCID ID): |                  |
| Nearest person month worked:           | 2.0              |
| Contribution to Project:               | No change        |
| Funding Support:                       | No other support |

|                                        |                      |
|----------------------------------------|----------------------|
| Name:                                  | Ashley Schuyler, MPH |
| Project Role:                          | Project Coordinator  |
| Researcher Identifier (e.g. ORCID ID): |                      |
| Nearest person month worked:           | 7.0                  |
| Contribution to Project:               | No change            |
| Funding Support:                       | No other support     |

|                                        |                                      |
|----------------------------------------|--------------------------------------|
| Name:                                  | Elizabeth Wu, MPH                    |
| Project Role:                          | Research Assistant                   |
| Researcher Identifier (e.g. ORCID ID): |                                      |
| Nearest person month worked:           | 6.0                                  |
| Contribution to Project:               | Assistance with Phase II recruitment |
| Funding Support:                       | No other support                     |

|                                        |                                                 |
|----------------------------------------|-------------------------------------------------|
| Name:                                  | Mary Rose Mamey, PhD                            |
| Project Role:                          | Senior Biostatistician                          |
| Researcher Identifier (e.g. ORCID ID): |                                                 |
| Nearest person month worked:           | 8.0                                             |
| Contribution to Project:               | Management and analysis of Phase II survey data |
| Funding Support:                       | No other support                                |

|                                        |                                              |
|----------------------------------------|----------------------------------------------|
| Name:                                  | Elia Salazar, MPH                            |
| Project Role:                          | Research Lab Manager                         |
| Researcher Identifier (e.g. ORCID ID): |                                              |
| Nearest person month worked:           | 7.0                                          |
| Contribution to Project:               | Assistance with data management and analysis |

|                  |                  |
|------------------|------------------|
| Funding Support: | No other support |
|------------------|------------------|

|                                        |                                              |
|----------------------------------------|----------------------------------------------|
| Name:                                  | Julie Hernandez, BA                          |
| Project Role:                          | Clinical Research Assistant                  |
| Researcher Identifier (e.g. ORCID ID): |                                              |
| Nearest person month worked:           | 7.0                                          |
| Contribution to Project:               | Assistance with data management and analysis |
| Funding Support:                       | No other support                             |

|                                        |                                                |
|----------------------------------------|------------------------------------------------|
| Name:                                  | Josh Rusow, MSW                                |
| Project Role:                          | Research Assistant                             |
| Researcher Identifier (e.g. ORCID ID): |                                                |
| Nearest person month worked:           | 2.0                                            |
| Contribution to Project:               | Assistance with Phase II survey implementation |
| Funding Support:                       | Institutional (USC) doctoral student support   |

**Has there been a change in the active other support of the PD/PI(s) or senior/key personnel since the last reporting period?**

The original Research Assistant, Sean Beougher, was replaced by our new Research Assistant, Elizabeth Wu, effective 10/31/2016

- **What other organizations were involved as partners?**
  - N/A

**8. SPECIAL REPORTING REQUIREMENTS**

- **COLLABORATIVE AWARDS:**
  - Goldbach: PT140083, W81XWH-15-1-0699
  - Holloway: PT140083P1, W81XWH-15-1-0700
  - Castro: PT140083P2, W81XWH-15-1-0701

○ **QUAD CHART:**

## Improving Acceptance, Integration, and Health among LGBT Service Members



**PI:** Goldbach, Jeremy    **Org:** University of Southern California

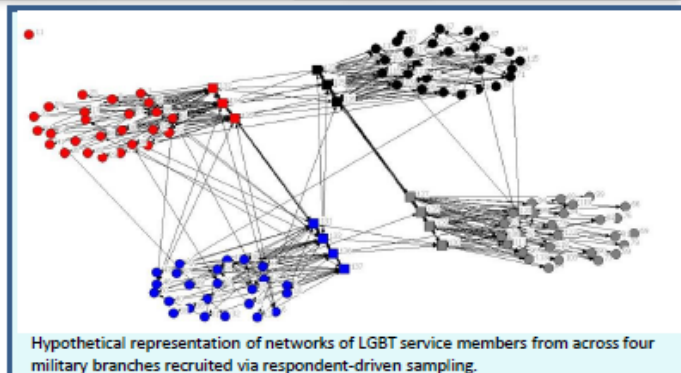
**Award Amount:** \$1,050,000

### Study/Product Aim(s)

- Aim 1. Determine the degree to which LGBT service members are accepted and integrated into the military. Determine key factors that facilitate/impece this process.
- Aim 2. Determine if there are health disparities (both physical and psychological) between LGBT and non-LGBT service members and determine key factors responsible for these health disparities.
- Aim 3. Develop actionable recommendations that can facilitate LGBT acceptance/integration, and reduce disparities.

### Approach

We will establish both a military and scientific advisory board to guide the entire project, conduct in-depth interviews with LGBT service-members to finalize survey instruments, and then recruit a matched cohort of heterosexual military personnel to examine factors that are associated with social acceptance and integration to develop actionable recommendations



### Timeline and Cost

| Activities                              | FY | 16                                                      | 17                                | 18                                | N/A |
|-----------------------------------------|----|---------------------------------------------------------|-----------------------------------|-----------------------------------|-----|
| Phase 1: Conduct informant interviews   |    | <div><div></div><div></div><div></div><div></div></div> |                                   |                                   |     |
| Phase 2: Conduct survey data collection |    |                                                         | <div><div></div><div></div></div> | <div><div></div></div>            |     |
| Complete data analysis                  |    |                                                         |                                   | <div><div></div><div></div></div> |     |
| Phase 3: Develop recommendations        |    |                                                         |                                   | <div><div></div></div>            |     |
| Produce Final Report                    |    |                                                         |                                   | <div><div></div></div>            |     |
| Estimated Budget (1,860k)               |    | \$910k                                                  | \$950k                            | N/A                               | N/A |

Updated: 24 Oct 2017

### Goals/Milestones

**FY16 Goal – Complete Phase 1 – Interviews, protocols, etc.**

- ☒ IRB and NIH Certificate of Confidentiality obtained
- ☒ Advisory Boards established
- ☒ Qualitative interview instrument finalized
- ☒ Recruitment and enrollment for qualitative interviews

**FY17 Goals – Complete Phase 2 (RDS) and Phase 3 (Produce Recommendations)**

- ☒ Qualitative interviews completed and analyzed
- ☒ Survey instruments finalized
- ☒ Begin RDS recruitment
- ☐ Complete RDS Study
- ☐ Complete social network analyses
- ☐ Develop final report with actionable recommendations

### Comments/Challenges/Issues/Concerns

- Protecting subject anonymity.

## 9. APPENDICES:

### a. **Phase II Survey Measures**

*\*measures ordered below as they appear on survey instrument*

*\*full survey instrument available upon request*

- Current branch of service
- Current service component
- Current rank/pay grade
- Sexual identity
  - \*using Williams Institute best practices for assessing sexual orientation*
- Gender identity
- Race/ethnicity
- Age
- Unit location
- Unit cohesion
- LGBT military minority stressors
  - \*items informed by Phase I interview findings; assessed for time frame since joining the military and [if yes], within last 30 days*
- Military minority stressors for all
  - \*items informed by Phase I interviews that also apply to non-LGBT service members*
- Minority acceptance
  - \*scale to indicate perceptions on acceptance of various minority populations within the military*
- Hazing
- Bullying
- Overall health
- Healthcare utilization
- Lost duty days
- Sick call visits
- Physical health symptoms
- Sexual/gender identity disclosure
- Depressive symptoms
- Suicidality
- PTSD symptoms
- Sexual assault
- Career intentions
- Military mentors
- Life satisfaction
- Morale
- Educational attainment

- Family structure
- Length of service
- Deployment and combat history
- Internalized homonegativity
- Stressful life events
- Anxiety
- Sexual harassment
- Stalking
- Cigarette/tobacco use
- Alcohol use
- Sexual attraction
  - \*using Williams Institute best practices for assessing sexual orientation*
- Sexual behavior
  - \*using Williams Institute best practices for assessing sexual orientation*
- Pre-Exposure Prophylaxis (PrEP)
- Motivation to serve
- Military identity
- Work relationships
- Population size estimation
- RDS questions
  - \*e.g., access to support organizations, other LGBT service members in network*
- Social network inventory (SNI)
  - \*SNI was developed and pilot tested during Phase I*
- Workplace LGBT acceptance