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**Examining Public Library Service to LGBTQ Communities for Health-related Information**

In this Early Career Development project, Dr. Vanessa Kitzie at the University of South Carolina (USC), School of Library and Information Science (SLIS) requests \$298,237 from the Laura Bush 21st Century Library Program for a three-year empirical and practice-based investigation into the health-related information practices of LGBTQ+ communities. The project will answer the following research questions: (1) How do LGBTQ+ communities create, seek, share, and use health information?, (2) What are the social and structural factors affecting these health-related information practices?, and (3) How can public libraries leverage the expertise of LGBTQ+ communities to facilitate information practices that promote community health? By answering these questions, the proposed project contributes to theoretical and practical knowledge of what information practices lead to health promotion across several diverse LGBTQ+ communities. Research outcomes will develop understanding among Library and Information Science (LIS) researchers and practitioners to help address a vital community need (i.e., health promotion) and engender community engagement between diverse LGBTQ+ populations and public librarians.

The principal investigator (PI) Kitzie, with the assistance of a doctoral research assistant (RA), will collect semi-structured interview data that elicit the information practices (creating, seeking, sharing, using) of a diverse variety of LGBTQ+ communities in South Carolina (SC), as well as the social and structural factors shaping these practices. These data will be verified in three nationally representative public forums. Forums will facilitate dialog between LGBTQ+ community leaders and public librarians about how public libraries can leverage the skills and abilities of LGBTQ+ communities, as well as relevant social and structural factors, to provide relevant and inclusive health information services. The iterative qualitative research design elicits the feedback of all relevant stakeholders, including LGBTQ+ community members, public librarians, and project team experts, at each phase of data collection and analysis, ensuring broad representativeness and contextual salience of results. Research findings contribute to the development of an emergent theoretical approach within LIS (information practices) and the field's understanding of an underrepresented population (LGBTQ+ people). Findings also have practical implications, as community forums seek to reposition public libraries from irrelevant, mistrusted institutions in the minds of many LGBTQ+ people to relevant, trustworthy community anchors that promote LGBTQ+ health.

Project deliverables include scholarly and practitioner papers and presentations, as well as an open access guidance document and project website that will be maintained by USC's College of Information and Communications (CIC, of which SLIS is part). The guidance document will include information for public librarians to understand and leverage the health-related information practices of their LGBTQ+ communities at a variety of resource levels, including instructions for how to conduct community forums. The website will summarize project information and also include strategies for LGBTQ+ people to facilitate their health-related information practices. This last resource reaches people who might not have access to inclusive public libraries. Expert mentors, advisory board members, and library project partners will provide feedback and a dissemination plan for these deliverables. In addition to LGBTQ+ communities, LIS researchers, and public librarians, who can benefit from project findings, other groups can also benefit, including: librarians from different settings including school, academic, and special (e.g., medical librarians), who can use findings to inform services to LGBTQ+ communities and can use the research methods to assess community practices within their professional contexts; health researchers and practitioners, who can use empirical findings on LGBTQ+ health-related information practices to inform more holistic research, services to these populations, and training of medical professionals; policy makers, interested in revising structural regulations that may impair LGBTQ+ health-related information practices (e.g., web filtering); and librarians in training to learn about methods to engage and work with underserved communities.

## **Examining Public Library Service to LGBTQ+ Communities for Health Information**

In this Early Career Development project, Dr. Vanessa Kitzie at the School of Library and Information Science (SLIS), University of South Carolina (USC) requests \$298,237 from the Laura Bush 21st Century Library program for a three-year empirical study of how public libraries can promote the health of their LGBTQ+ communities. This study adopts an information practices approach to understand the role of health information in the everyday lives of LGBTQ+ people. Appreciating this context is vital due to significant evidence that LGBTQ+ individuals do not create, seek, share, or use health information in ways currently supported by cultural institutions.<sup>1</sup> This project positions public libraries as community anchors that can understand the health-related information practices of local LGBTQ+ communities and leverage their specialized knowledge to develop inclusive services, spaces, and collections. The South Carolina (SC) State and Richland Libraries will serve as project partners. The project addresses the following research questions: 1) How do LGBTQ+ communities create, seek, share, and use health information?, 2) What are the social and structural factors affecting these health-related information practices?, and 3) How can public libraries leverage the expertise of LGBTQ+ communities to facilitate information practices that promote community health? By answering these questions, the proposed project will contribute to theoretical and practical knowledge about information practices that lead to health promotion across several LGBTQ+ communities. Research outcomes will develop knowledge to help address an essential community need (i.e., health promotion) and build community engagement among diverse LGBTQ+ populations and public librarians.

### **Statement of Broad Need**

People who identify as lesbian, gay, bisexual, transgender and queer (LGBTQ+)\* face significant health disparities compared to their heterosexual and cisgender peers. Prior research has demonstrated the role of social and structural factors, namely stigma and discrimination, in producing stressors that increase the risk of this population facing health and mental health issues. Disparities can be specific to sub-groups under the broader LGBTQ+ umbrella and vary across other social identities like race, gender, and age.<sup>2-4</sup> These disparities illustrate the importance of access to adequate health and mental health services for LGBTQ+ people. However, a variety of individual and systemic barriers exist. One significant barrier is informational, as LGBTQ+ people find it challenging to learn about their healthcare needs, navigate the healthcare system, and overcome barriers to care.<sup>5</sup> This proposed research will address this barrier by 1) investigating the socially and structurally embedded information practices of LGBTQ+ people as related to their health, and 2) developing new models for public libraries to facilitate information practices that promote LGBTQ+ health within their communities. The proposed research benefits LGBTQ+ people by incorporating their voices into the research process and providing them with affirmative, culturally competent venues to create, seek, share, and use health-related information. Significant findings could also prompt greater research contributions in Library and Information Science (LIS) research areas such as Human Information Behavior (HIB) and health informatics. Librarians can also benefit by developing an enhanced skillset for engaging and serving their LGBTQ+ communities, challenging the current irrelevance and mistrust these communities often append to libraries and librarians.<sup>6-9</sup>

This proposed research contributes to the health sciences literature by exploring the role of information in promoting LGBTQ+ health. Information has various uses including reducing uncertainty and helping with decision-making. Within a health context, information can empower LGBTQ+ communities to define their own health needs, meanings, and values, rather than having these needs imposed on them by others.<sup>10</sup> Currently, the role of information in LGBTQ+ health contexts is understudied, with the majority of the research focusing on the efficacy of planned, formal interventions.<sup>11</sup> A small, but critical body of research examines LGBTQ+ health from an information perspective, focusing on seeking and literacy, and the critical role of social and structural factors in shaping these practices. As a result of the historical and current impact of homophobia and transphobia, LGBTQ+ people experience a reduced amount of high quality, affirmative, and relevant health information.<sup>5</sup> They may choose not to disclose their LGBTQ+ identities to medical practitioners to avoid stigma, further limiting the information

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\* No dominant umbrella term exists to describe the various identity labels adopted by sexual and gender minorities. I have chosen to use LGBT (lesbian, gay, bisexual, transgender) to represent the most dominant identity labels applied within health contexts to these populations, Q to represent people's increasing adoption of fluid genders and sexualities, and + to denote the inability of these labels to capture all identity expressions.

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available to them.<sup>12,13</sup> As a result, their information seeking occurs in informal contexts, such as among social networks of other LGBTQ+ people (including online).<sup>14</sup> While these forms of information seeking represent creative strategies of community resilience, it is also important to note that the quality of information exchanged is challenging to regulate, leaving these individuals susceptible to misinformation and risks to personal safety.<sup>15-18</sup>

The proposed research adds to this literature by situating the topic of health information within an information practices approach. This social constructionist approach is advantageous to studying health information because it focuses on the dialectical relationship between individuals and their sociocultural context in everyday life settings.<sup>19,20</sup> As evidenced in the health literature, such context is critical in shaping the health information seeking and literacies of LGBTQ+ people. A practices approach extends prior research findings by not limiting people's information-related activities and skills (i.e., practices) to seeking and literacy. Information practices can be classified into three main groups – seeking (including source identification, acquisition, and avoidance), sharing (with others), and use (including assessment, meaning-making, and applying information to action).<sup>20,21</sup> My dissertation work on the information practices of LGBTQ+ populations identified creation as a fourth, key information practice.<sup>7</sup> Creation is an emergent practice, particularly within Web 2.0 environments,<sup>22</sup> and, therefore, complements prior research identifying increasing internet use among specific LGBTQ+ populations when engaging in health-related information practices.<sup>14,17</sup>

The proposed research also contributes to LIS research and practice. From a research perspective, there exists a dearth of empirical literature related to LGBTQ+ populations<sup>7,23,24</sup> and their health-related information practices.<sup>25</sup> Existing research demonstrates that LGBTQ+ populations often find libraries to be irrelevant to their everyday life concerns and mistrust them.<sup>6-9</sup> Pervasive stigma and discrimination reflected in everyday library practices and policies, such as what collections are visible<sup>26</sup> and how they are labeled,<sup>27</sup> influence these perceptions. These practices reflect a more significant issue, which is a lack of LIS empirical research demonstrating what LGBTQ+ people do with information. Without this knowledge, librarians cannot develop informed, relevant, and inclusive services for these populations. The proposed research contributes to LIS practice by applying empirical research evidence to reframe public libraries as strong anchors that promote the health of their LGBTQ+ communities. Public libraries have a unique opportunity to adopt this community anchor role for several reasons. LGBTQ+ people lack health-related support from other community institutions, such as at school,<sup>28,29</sup> from their families,<sup>14,30</sup> and within medical contexts.<sup>31</sup> Geography exacerbates this lack of support, with inclusive LGBTQ+ community health centers concentrated in urban hubs and coastal states.<sup>32</sup> Also, LGBTQ+ populations in rural and socioeconomically disadvantaged areas may lack physical access to the internet,<sup>33</sup> a burgeoning source for health information.<sup>14</sup> Public libraries have a history of inclusive access points to reliable health information and support.<sup>34,35</sup> For instance, Richland Library (a project partner) engaged in an interdisciplinary, community-based effort to promote awareness and understanding of the Affordable Care Act. The success of their efforts illustrates the potential of public libraries to serve as community hubs for health information.<sup>36</sup> Further, the widespread availability of public libraries<sup>37</sup> renders them as a potential source for LGBTQ+ health information that may not be available in other venues.

To overcome LGBTQ+ people's mistrust of public libraries, it is crucial that the LIS field incorporate the voices of LGBTQ+ people into research and practice. This incorporation can lead to a shift in how resultant research and practice is framed and interpreted by LGBTQ+ communities. Such a shift has occurred in the health literature, which has moved from a deficit to strengths-based approach when studying LGBTQ+ health. A strengths-based approach provides a more comprehensive understanding of LGBTQ+ health by understanding the lived experiences of LGBTQ+ people and focusing on the social and structural determinants that affect their health outcomes.<sup>10</sup> This approach leverages the knowledge of LGBTQ+ communities to define their needs and assist in designing solutions that address them. LIS research has employed a similar deficit-based model when examining what people do with information – portraying them as “needy individuals” rather than competent information creators and experts in their everyday lives.<sup>38</sup> An information practices approach refutes this deficit framing, instead focusing on context and individual agency, much like the strengths-based model. This approach also informs the proposed research design, which engages LGBTQ+ populations throughout the research course. Giving LGBTQ+ people a voice in the research process ensures that resultant services are inclusive, meaningful, and relevant to them.

The proposed research builds on my scholarship on the information practices of LGBTQ+ people in online and offline environments.<sup>7,39</sup> The proposed research would extend the conceptual framework and qualitative

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research design employed in my prior work to focus on a specific type of information (i.e., health) and connect research to practice by creating engagement strategies for public libraries to promote the health of LGBTQ+ communities.

### **Project Design**

This project employs a qualitative research design. Qualitative research does not depend on a priori hypotheses and instead elicits information from the individuals under study. Such a design is beneficial for garnering unanticipated results from groups underrepresented in empirical research, such as LGBTQ+ communities.<sup>40</sup> This project employs contextually-situated qualitative research techniques including individual interviews, community forums, focus groups, and emic/etic content analysis to generate empirical data about the health-related information practices of LGBTQ+ communities and uses this data to inform public library services. The research design is iterative and will incorporate the feedback of LGBTQ+ and LIS communities at each project stage. In the first two years of the project, I will collect state-level data within SC. In the final, third year of the project, I will test and verify the project design at a national level at three representative sites. The primary research product will be a guidance document that describes the health-related information practices of the LGBTQ+ communities studied and provides strategies for public libraries to elicit these practices from their communities and develop inclusive services, collections, and spaces that facilitate those practices promoting LGBTQ+ health.

In Year 1 of the project, I will recruit 20-30 LGBTQ+ community leaders across the state of SC. These individuals represent vital stakeholders and spokespeople for their specific communities. Achieving broad representation of LGBTQ+ communities throughout the state is critical; otherwise, research findings risk only being inclusive of the most visible LGBTQ+ communities. Therefore, I will engage in a few different strategies to identify and recruit a diverse sample of leaders of varying races and ethnicities, ages, socio-economic statuses, dis/abilities, and other social locations. Strategies include leveraging the social networks of research mentors and advisory board members who are actively engaged in SC LGBTQ+ communities, performing web outreach, and using snowball sampling, which is an effective way to recruit marginalized or “hidden” populations.<sup>10</sup> Semi-structured individual interviews with these community leaders will cover three main topics – the health-related information practices of the leader’s LGBTQ+ community, the social and structural factors affecting these practices, and the public library’s role, if any, in shaping these practices. To improve accuracy of data recall, I will triangulate interview data using three elicitation methods: 1) open-ended questions probing the four main groups of information practices established in prior literature (i.e., creating, seeking, sharing, and using);<sup>7,20</sup> 2) the critical incident technique (CIT) to elicit specific examples of community-wide health-related information practices;<sup>41</sup> and 3) a method developed and tested by a project advisory board member, information worlds mapping,<sup>42</sup> to capture social and structural factors affecting these practices. Related research examining the information practices of young parents has successfully used this approach to triangulation.<sup>21</sup> The proposed research will extend the applicability of this approach from the individual to community level of analysis. Interviews will take place in a setting of the community leader’s choosing. Settings could include local LGBTQ+ centers (which would be rented out for interviews, if needed) and my office on the USC campus. I will also conduct interviews on Skype and via telephone to accommodate SC community leaders outside of Columbia, SC. The estimated duration for individual interviews is between 60-90 minutes. Participants will receive a \$50 honorarium for their participation. Research questions addressed at this project stage include:

- How and where do LGBTQ+ communities look for information when they have health questions? How and where do LGBTQ+ communities receive health information for which they are not necessarily looking?
- With whom do LGBTQ+ communities share information? How and why do they share it?
- What are sources for health information LGBTQ+ communities want? Why these sources? How do they help LGBTQ+ communities understand or use health information? How about sources that they do not want? Why not these sources?
- How and where do LGBTQ+ communities create health-related information? What kinds of information do they create? Why?
- What helps LGBTQ+ communities engage in creating, seeking, sharing, and using health information? What hinders them?

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- What ways, if any, do LGBTQ+ communities use public libraries to create, seek, share, and use health information? If communities do not use public libraries for this purpose, why not?

Findings from community leader interviews will inform the next project stage, to occur at the beginning of Year Two – a half-day community forum between the leaders interviewed in Year 1 and public librarians. I will complete librarian recruitment with the assistance of Richland Library, a library system in SC's state capitol with a very large population service size,<sup>43</sup> and the SC State Library. I will recruit between 20-30 public librarians throughout the state, with 5 coming from Richland Library. To offset any burden placed on participants for travel and food costs, I will provide up to \$100 in travel stipends for up to 20 community forum participants and will provide a meal (breakfast or lunch) during the forum. The community forum will employ the World Café concept for facilitating large group dialog.<sup>44</sup> This concept has been successfully applied in strengths-based health research to research the healthcare needs of LGBTQ+ communities.<sup>45</sup> I will facilitate the forum with the assistance of a doctoral research assistant (RA). First, we will make a brief presentation of findings from community forums. The presentation will inform subsequent table discussions by allowing public librarians to begin identifying ways their libraries can facilitate health-related information practices they may not have known local LGBTQ+ communities adopt and for LGBTQ+ community leaders to gain a more holistic sense of their communities' health-related information practices. We will divide participants into tables of 6-8 people each. Each table will have a trained host. These table hosts will be community leaders, public librarians, and research team members (if needed) who volunteer; they will facilitate conversation at their tables and take notes. Hosts will receive 30 minutes of training before the forum. Discussion questions based on findings from community leader interviews in Year 1 will guide table conversation. Questions will identify critical health-related information practices, as well as their helps and hindrances, which will help participants identify existing or possible public library services, spaces, and collections that could leverage these practices. I will rotate between tables, along with the RA. The two of us will take detailed notes based on our observations of the forums. These fieldnotes, along with table host notes and interview transcripts, will be used to inform a guidance document developed in partnership with the SC State Library. This document will 1) overview research findings of the health-related information practices of the participating LGBTQ+ communities, 2) suggest how public libraries can promote LGBTQ+ health informed by these findings, and 3) overview how other public libraries can conduct similar community forums. Community forum participants will receive a \$75 honorarium each, while table hosts will receive a \$100 honorarium each.

Due to the estimated forum size of approximately 40-60 individuals, the main branch of Richland Library will serve as the setting for community forums. Based on prior research findings, including my own, I acknowledge that the library may not be the most comfortable setting for LGBTQ+ people. However, the research design offsets this discomfort in several ways. First, forums elicit participation between community leaders and librarians. Leaders have experience collaborating with other institutions, including the library, to garner support; therefore, I anticipate that leaders may not feel as uncomfortable in library settings as other LGBTQ+ people might. Second, an objective of this research is to frame public libraries as promoting information practices that facilitate LGBTQ+ health. Demonstrating to LGBTQ+ community leaders that a large library branch in the state capital and the State Library, are committed to improving their services to LGBTQ+ populations can advance this reframing as LGBTQ+ community leaders share their positive community forum experiences with their members. Research questions addressed at this project stage include:

- What perceptions do LGBTQ+ community leaders have about the role of public libraries in promoting the health-related information practices of their communities?
- What perceptions do public librarians have about the role of their libraries in promoting the health-related information practices of LGBTQ+ communities?
- How can public libraries leverage the skills and abilities of LGBTQ+ communities, as indicated by their current health-related information practices, to provide relevant and inclusive services, collections, and spaces?
- How can public libraries leverage social and structural factors that assist LGBTQ+ communities in creating, seeking, sharing, and using health-related information? How can public libraries combat the social and

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structural factors that hinder LGBTQ+ communities in creating, seeking, sharing, and using health-related information?

Following community forums and drafting of an initial guidance document, I will conclude Year Two by running 6 focus groups (8-12 people each) with LGBTQ+ people located in SC to verify findings from the individual interviews and community forums. Focus groups capture community context by having individuals collectively construct meaning about a topic. The estimated duration for each focus group is 90-120 minutes. Participants will be recruited using snowball techniques based on recommendations from LGBTQ+ community leaders and other focus group participants. Since not all LGBTQ+ people participate in community organizations, I will also recruit using social media (e.g., posting targeted Facebook ads). I will conduct the groups in multiple locations throughout the state based on participant availability, and in places that participants consider to be friendly, such as LGBTQ+ centers. The focus group protocol will follow a similar structure to individual interviews but adapted for a group context. The last 30 minutes of the focus group will be devoted to discussing current findings from the individual interviews and community forums and soliciting group feedback. Findings will be used to revise the guidance document. Focus group participants will receive a \$75 honorarium, and up to \$50 will be available to offset travel costs for 20 participants. Research questions addressed at this project stage include those elicited by community leader individual interviews as well as the following additional questions:

- What findings, if any, from individual interviews, do focus group interviews support? What findings, if any, do focus group interviews extend? What are, if any, additional findings they provide?
- What recommendations do focus group participants have for the design of the community forums?

The final stage of the research process, to be carried out in Year 3, is validating the study findings and testing the guidance document by running community forums at three library partner sites across the US. I will choose libraries that serve diverse populations as indicated by service sizes and geography informed by the IMLS Public Libraries Survey and US Census data. Based on the characteristics of Richland Library, I will select one library from the remaining three geographical regions of the US (West, Midwest, Northeast) with large, medium, and small population service sizes. I will combine these geographic and service size considerations with race and ethnicity data to identify libraries in areas that serve non-white populations. Further, I will identify libraries that have an explicit record of serving LGBTQ+ communities, as evidenced by their programming, outreach, and professional presence. I will then partner with each library to identify LGBTQ+ community leaders, engaging in the same purposive and snowball sampling strategies articulated above. These community leaders, along with librarians recruited with assistance from partner locations, will participate in half-day community forums. While these forums will be similar to the one conducted at Richland Library, the discussion questions and protocol may be revised based on focus group findings. I estimate that between 40-60 community leaders and public librarians will participate at each forum. Forum participants will receive a \$75 honorarium with table hosts receiving a \$100 honorarium. Findings from these three, nationally representative forums will be used to validate and strengthen the guidance document, bolstering its applicability at a national scale. Research questions addressed at this project stage include:

- How do the research and design-based elements of the guidance document operate in practice?
- What recommendations do community forum participants have for revision of the guidance document?

LGBTQ+ participants must reside in one of the four states sampled for community forums, identify as LGBTQ+, and be 18 years or older. The reason why participants must be 18+ is that it broadens the sampling pool to those who might be interested in participating but would not want to disclose their LGBTQ+ identities to their parents or guardians, who would have to sign their informed consent forms if under the age of 18. Second, this age range represents people who are more likely to be aware of their LGBTQ+ identities and have already engaged in information practices shaped by these identities; allowing them to recall and articulate these experiences.<sup>46,47</sup> LGBTQ+ participants in individual interviews and community forums must also be considered leaders in their LGBTQ+ communities, either officially or anecdotally as informed by snowball sampling strategies. I recognize the difficulties inherent in recruiting participants from hidden and hard-to-reach populations and have outlined

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strategies I will use to address these challenges, including introductions to community leaders made by mentors, advisory board members, and library partners; introductions to focus group participants made by community leaders; web outreach; and travel stipends. If needed, I also will amend the sampling criteria that LGBTQ+ participants must be from the same states in which community forums are located to include neighboring states. I will implement this decision pending IRB approval and IMLS approval to redirect funding to other sites, again, only if necessary. Librarian participants must be 18 years or older and hold a library or staff position at a public library in one of the four states sampled for community forums.

Research products include verbatim transcripts generated from the audio recordings of individual and focus group interviews, a reflexive journal cataloging researcher assumptions and interpretations, observational field notes from community forums, and table host notes recorded during the forums. Visual artifacts created by participants during information worlds mapping will be used to augment data analysis. The first step of data analysis will be to convert data to text. I will send audio-recorded interviews to a third-party transcription service after the RA scrubs each audio file of any identifying information. Any notes taken by hand will be transcribed by myself and the RA. After each text file is generated, we will compare it to the original to ensure accuracy. I will then import the text data into NVivo, which groups together examples of content to provide evidence for findings. Findings will be coded using an emic/etic approach.<sup>48</sup> Before coding the data, myself and the RA will create a codebook with all etic codes. Etic codes are derived deductively from the information practices approach and serve as a way to organize findings based on the theoretical framing of the research design. We will begin to assign codes to spans of text relevant to codebook themes. We also will begin to identify emic codes. Emic codes inductively capture insider participant perspectives. These codes are used to bolster and revise etic ones. Once we have coded 20% of the data for each type (individual interviews, focus group interviews, community forums), we will calculate inter-coder reliability (ICR) using Cohen's Kappa coefficient,<sup>49</sup> generated by NVivo. Based on the scores, we will have a discussion to address differences in coding and make revisions to the codebook as necessary before proceeding to code the remaining data. As further explicated by the *Diversity Plan* section, LGBTQ+ does not represent an identity monolith, but rather encompasses varying gender and sexual identities and expressions. Further, LGBTQ+ people have other, cross-cutting identities (e.g., race and ethnicity, age) that intersect to produce distinct experiences for each individual. During data collection, participants will be asked to signify the identities most salient in shaping their communities' health-related information practices. During analysis, myself and the RA will code community experiences that we interpret as being shaped by locations within social and structural hierarchies based on various identity categories. We will then compare these experiences across the data, identifying larger themes. These themes will be verified by participants via member-checking. Member-checking entails sharing emerging themes and findings with participants and asking them to comment on their accuracy.<sup>50</sup> This process allows participants to serve as internal auditors in data interpretation. Codes will also be verified via feedback from mentors and advisory board members. Subsequent coding will follow a constant comparative method<sup>51</sup> where we will compare emergent codes to existing ones, and coding categories are combined and revised accordingly. Data collection and analysis are not viewed as two distinct processes, but instead are iterative, with findings from each project stage informing the data collection instruments and methods of the next.

Qualitative research addresses generalizability through the following four factors: credibility (i.e., how well the researcher represents participant accounts), transferability (i.e., the degree to which researchers can apply findings to other settings), dependability (i.e., how well researchers account for changing research contexts), and conformability (i.e., whether others can corroborate results).<sup>52</sup> To counter credibility threats, I will engage in member-checking at all project stages. I address transferability threats in the research design, which triangulates data collection methods within individual interviews and focus groups and assesses the application of the resultant guidance document to a nationally representative context. I will attend to dependability threats by maintaining a reflexive journal documenting the biases and assumptions I bring to the study, including how my background shapes my interpretation of the findings. Finally, I will counter conformability threats by performing ICR during initial coding and having mentors and advisory board members perform external audits on data analysis.

Since this research explores sensitive issues affecting a vulnerable population, ethical concerns are paramount. I divide these concerns into two types: procedural ethics and ethics in practice.<sup>53</sup> Procedural ethics denote formal regulations imposed by the institutional review board (IRB) at USC. For this project, it will be required for all research participants to give informed consent by signing a form, which will explain the research

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design as well as the risks and benefits of participating in the study. Focus group and interview participants will also consent to have their sessions audio-recorded. All participant identities will be kept confidential, meaning that the research team will know the identities of participants, but I will not disclose these identities in any formal writing or reports of the project. Instead, participants will be referred to by chosen pseudonyms.

Ethics in practice denote everyday actions more nuanced than what is covered by formal regulations.<sup>53</sup> Regarding focus groups and individual interviews, I will consider if and when research becomes too sensitive or intrusive for participants and adjust my approach accordingly.<sup>54,55</sup> A reflexive journal that details my perceptions of interviews will focus on themes related to the power imbalance between myself, the researcher. I have also illustrated further ethical concerns associated with researching LGBTQ+ populations in previous work<sup>7</sup> and will follow these additional practices in this proposed research.

The final guidance document will consist of the research findings, suggestions for public libraries to connect with LGBTQ+ communities to support their health-related information practices, and strategies for conducting community forums akin to those completed in this research. This guidance document will be printed and distributed geographically to 100 libraries across the US with a focus on small and rural libraries that may not have access to this project's other means of research dissemination. I will develop this dissemination plan with guidance from the SC State Library. A professional web manager will work with me to develop a website hosting the guidance document, as well as resources and materials produced during the project. The website will be permanently housed online by the College of Information and Communications (CIC, which houses SLIS) during and after the award period. The site will operate using USC's custom content management system, which will allow me to update and maintain site content over time. The website will include strategies for public libraries to facilitate the information practices of LGBTQ+ communities that promote health at a variety of resource levels; these strategies may be particularly informative for libraries not able to conduct full community forums. Also, the website will contain strategies for LGBTQ+ people to engage in health-related information practices that promote their health. These strategies will be informed by individual and focus group data and target LGBTQ+ people who may live in communities where public libraries may not be supportive of these populations. Research mentors and advisory group members will guide the dissemination of this web resource.

I will also publish and present research outputs at a variety of scholarly venues focused on the following areas: LIS (sample journals: JASIS&T, Journal of Documentation, Library Quarterly; sample conferences: ASIS&T, ALA), health informatics (sample journals: LGBT Health, Health Education and Behavior, Qualitative Health Research, Health Information and Libraries; sample conferences: American Medical Informatics Association Symposium), LGBTQ+ studies (sample journals: Journal of Homosexuality, Transgender Studies Quarterly; sample conferences: Gender and Sexuality in Information Studies, Queer Internet Studies), and research methods (sample journals: Library & Information Science Research, Qualitative Inquiry; sample conferences: ALISE). I will also describe the progress of my research work on the project website and deposit research products into USC's Scholar Commons repository, following IRB protocols and publisher agreements.

This three-year project will adhere to the following timeline:

- Year 1 Activities (October 2018 – September 2019): Within the first six months of Year 1, I will secure IRB approval for the project; prepare LGBTQ+ community leader recruitment strategies and materials; develop data collection instruments; convene with the Mentors and Advisory Board for consultation on data collection and recruitment; recruit LGBTQ+ community leaders; begin individual interviews with LGBTQ+ community leaders; and work with the web developer to create the project website. In the latter six months of the project, I will complete individual interviews with LGBTQ+ community leaders; engage in initial interview analysis; perform member-checking; solicit feedback on findings from Mentors and Advisory Board; schedule a community forum to be run at Richland Library at the beginning of Year 2; develop data collection instruments for the forum; and begin to recruit for the forum. I will also start to submit preliminary findings to scholarly and professional conferences for presentation. I will update the project website throughout the year to keep others abreast of research progress and publications.
- Year 2 Activities (October 2019 – September 2020): Within the first six months of Year 2, I will finish recruitment for the forum; run the community forum; engage in initial analysis; perform member checking; consult with project partners at the State Library to document interview and community forum findings in a

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guidance document; draft the guidance document; and solicit feedback on the document from Mentors and Advisory Board. I will also begin to recruit focus group participants (consulting with Mentors and Advisory Board members on data collection), conduct focus groups, and identify three other nationally representative libraries to serve as project partners in Year 3. In the latter six months of Year 2, I will recruit and schedule community forums at three nationally representative partner libraries in Year 3; complete focus group interviews with LGBTQ+ people; engage in focus group interview analysis; perform member-checking; solicit feedback on findings from Mentors and Advisory Board; and revise the guidance document based on findings. I will publish results from Years 1-2 in scholarly venues and report on these findings in conferences throughout the year. I will update the project website throughout the year to keep others abreast of research progress and publications.

- Year 3 Activities (October 2020 – September 2021): Within the first six months of Year 3, I will conduct community forums at three nationally representative sites; engage in an initial analysis; perform member checking; and revise the guidance document, soliciting feedback from Mentors and Advisory Board. In the latter six months, I will finalize the guidance document; develop a dissemination plan for the guidance document with input from the SC State Library and other partner libraries; prepare drafts of final study products; and submit a final report to IMLS. The project website will be updated to keep others abreast of research progress and publications and include the final research products.

## ***Project Members and Staff***

**Principal Investigator:** Vanessa Kitzie, Ph.D., is an Assistant Professor at the USC SLIS where she teaches social informatics, communication and information science theories, and research methods. Broadly, her research agenda focuses on understanding how people make sense of information in their everyday lives. More specifically, she focuses on empowering people, often from marginalized communities, to make informed decisions that resonate within their social groups and individual situations and exploring the role of online technologies and libraries in facilitating this meaning-making. This research agenda has resulted in three, overlapping streams of work: information practices of marginalized groups, the role of online technologies in people's information practices, and the role of the library in the life of the user. Her dissertation research examined the information practices of LGBTQ+ people with research findings receiving a top paper designation at the 2017 ASIS&T Meeting. She has worked as a research team member on two IMLS grants – Seeking Synchronicity and Cybersynergy (along with research mentors Marie L. Radford and Lynn Silipigni Connaway) – and an Association of College and Research Libraries (ACRL) grant as part of the Values in Academic Libraries (VAL) initiative. She is the current chair of the Advocacy Committee for the American Library Association's (ALA) Gay, Lesbian, Bisexual, and Transgender Round Table (GLBTRT).

**Mentors:** Four seasoned researchers, as well as LIS and LGBTQ+ experts/advocates, have agreed to serve as mentors for this project: Dr. Marie Radford (Rutgers University), Dr. Lynn Silipigni Connaway (OCLC), Dr. David Lankes (USC), and Dr. Laura Hein (USC). All four mentors have extensive experience serving as PI and co-PIs on large, grant-funded projects in the areas of LIS (Radford, Connaway, and Lankes have all worked on IMLS grants) and health (Hein). Further, Dr. Hein is a leading scholar of LGBTQ+ health in South Carolina and has established ties to local LGBTQ+ communities – serving on the advisory board of the Harriet Hancock LGBT Center in Columbia, SC. Mentors will provide advice and ongoing assessment, feedback, and evaluation at all stages of the research process, including recruitment, data collection and analysis, and findings.

**Advisory Board:** I have assembled a separate advisory board comprised of experts at the intersection of LIS, health, and LGBTQ+ community issues for this project. The purpose of the advisory board is to provide additional feedback and assessment on data collection instruments, project findings, and the guidance document to ensure that they are relevant to LIS researchers and the LGBTQ+ community. The following four individuals have agreed to serve as advisory board members: Dr. Devon Greyson (Amherst University), Dr. Amelia Gibson (UNC Chapel-Hill), Dr. Charles Senteio (Rutgers), and Kathia Valverde (Reproductive Health Coordinator, PASOs). Members have an extensive history of research and practice that connects underserved communities to institutions, including public libraries, to improve their health information and healthcare outcomes. Before the award period, I will recruit two additional advisory board members – an LGBTQ+ community leader and a public librarian.□

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Library Partners: The SC State and Richland Libraries have agreed to serve as project partners. Their input will be critical for codifying the structure and findings of the first community forum into a guidance document. This document will provide the foundation for the additional forums tested on a national level. Richland Library will assist in recruiting librarians to participate in the community forums and will provide the space to conduct the forums. The SC State Library will help document the community forum process and disseminate the guidance document. Three additional nationally representative partner libraries will be identified in Year 2.

Student Staff: During the project, I will supervise one doctoral RA, Travis Wagner, who has agreed to work on this project. Wagner has a history of research and practice-based engagement with the SC LGBTQ+ community and is the co-creator of the Queer Cola Oral History and Digital Archive project, which gathers stories from the SC LGBTQ+ population. The skills Wagner develops during the research process can inform his dissertation work with LGBTQ+ populations. Wagner will assist with project administration, as well as data collection and analysis.

## **Diversity Plan**

The primary research population for this study is LGBTQ+ people. While “community” is the unit of analysis for this research, it represents a fraught concept since there is no collective authority or representation of what it means to identify as LGBTQ+. Instead, individuals contest these definitions. This contestation can result in certain people’s experiences becoming marginalized. For instance, transgender people have been systematically excluded from advances in LGBTQ+ health, such as in the 1970s when the American Psychiatric Association’s Diagnostic and Statistical Manual (DSM) removed homosexuality while categorizing transgender people under a new pathology.<sup>32</sup> Despite the fraught nature of community as a concept, I adopt it as a term in this research because it reflects how LGBTQ+ people engage in a shared set of practices shaped by common experiences of stigma and discrimination. In health contexts, these include a pathologic understanding of LGBTQ+ identities, experiences of minority stress and familial rejection, and a lack of protection for certain insurance policies.<sup>32,56</sup>

However, I do recognize that a diversity of experiences exists within LGBTQ+ communities, not only between identity categories but also within them. These experiences need to be captured by the research project, or it risks only being transferrable to specific LGBTQ+ communities. To capture diverse experiences within LGBTQ+ communities, I will engage in an intersectional approach to data collection and analysis.<sup>57-59</sup> Intersectionality represents the idea that diverse social identities (e.g., race, class, dis/ability) interact in ways that produce qualitatively distinct meanings and experiences. These identities do not exist separately and cannot be added together to form a certain experience.<sup>60</sup> To advance an intersectional perspective, I will recruit LGBTQ+ people with a variety of social identities, locations, and experiences. In addition to SC LGBTQ+ community contacts informed by specific research mentors and advisory board members (Hein, Valverde), I will engage in online outreach via community organization websites and social media. Further, I will ask identified LGBTQ+ community leaders to recommend others, as snowball sampling is an effective method for recruiting hidden populations.<sup>10</sup> I will engage in a similar process to identify LGBTQ+ focus group participants and community leaders at nationally representative sites, leveraging the knowledge of librarians at these sites of these leaders (as stated in the *Project Design* section, I will select libraries, in part, based on their history of outreach and services to their LGBTQ+ communities). During data collection, I will ask participants to identify salient identities, social locations, and experiences that they feel shape their community’s health information practices. Their responses and reasons for prioritizing specific identities will inform the iterative design of following data collection tools, and theoretical sampling, which will be employed to identify LGBTQ+ communities with identities deemed salient when engaging in health-related information practices. An intersectional analysis will involve looking for significant themes according to the intersection of the social identities, locations, and experiences identified by participants. Since my social identities, locations, and experiences limit my interpretations, I will rely on my research participants’ member-checking, mentor/advisory board feedback, and RA coding as an internal/external audit of these interpretations.

While my primary research population is LGBTQ+ people, librarians participating in community forums constitute a secondary population. One way to lessen potential mistrust of librarians by the LGBTQ+ community is to ensure that a diverse group of librarians participate in the community forums. Recruiting for diversity within librarianship can be difficult as the profession is disproportionately comprised of white women, ages 45-54, who are not limited by disability and work full-time.<sup>61</sup> Librarians will be recruited using snowball sampling, aided by partner

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libraries, which I will identify in part based on diversity in race and ethnicity. In addition to this sampling, I will engage in purposive sampling by posting recruitment notices to listservs, forums, and websites targeted at librarians with varying identity categories, including GLBTRT, Reforma, Spectrum, and ALA's Black Caucus, making sure to specify recruitment criteria that interested librarians reside in the states where library partners are located and work at public libraries. For SC librarians, I will also engage in snowball sampling using faculty knowledge of SLIS alumni who are public librarians and represent diverse identity categories and geographical locations (e.g., rural areas).

I will also aim to include diverse populations in the dissemination of project findings. Working with the SC State Library, I will target dissemination efforts to libraries at a national level that may not have access to findings presented at conferences and in professional/scholarly journals. Also, the project website will include content geared toward LGBTQ+ people to facilitate their health-related information practices. The four practice groups employed by the theoretical framework (i.e., creating, seeking, sharing, and using) will organize the presentation of these strategies. This content will be disseminated via library channels such as the GLBTRT listserv, as well as via LGBTQ+ organizations and websites. The intended outreach is for LGBTQ+ people who may not have physical or social access to a supportive library but use online environments to engage in health-related information practices. I will leverage these dissemination efforts with advice from research mentors, advisory board members, and project partners. I will also solicit additional input from GLBTRT members, who identify as LGBTQ+ and work as librarians and therefore have unique expertise to contribute when considering how I can best distribute findings to underserved LGBTQ+ populations.

## **Broad Impact**

The proposed research project seeks to understand better how public libraries can facilitate the creating, seeking, sharing, and using of health information among LGBTQ+ communities. It addresses a national need to promote the health of LGBTQ+ communities by leveraging the skills and knowledge of librarians to address the informational barriers to LGBTQ+ health promotion. The proposed project fosters collaboration among researchers, LGBTQ+ community members, and public librarians. This collaborative process gives LGBTQ+ communities a voice in the research process while fostering relationships between community leaders and public librarians. The theoretical framework of information practices recognizes the mutually constitutive relationship between social and structural factors and what LGBTQ+ communities do with health information, which provides holistic insights into the role of health information in their everyday lives. I will enhance the transferability of these insights to other LGBTQ+ communities by validating findings with diverse focus groups comprised of LGBTQ+ community members and three community forums held at nationally representative public libraries. Also, a diverse group of expert mentors, advisory board members, and partner libraries will provide feedback at all project stages.

I will codify empirical and practice-based findings into a guidance document and project website that will identify the health-related information practices LGBTQ+ people deem relevant for their communities (rather than having a prescriptive series of strategies or best practices imposed on them); provide strategies for public libraries to facilitate these practices at a variety of resource levels, including how to replicate the community forums performed in this research; and equip LGBTQ+ people who may lack institutional support with strategies to facilitate their health-related information practices. This project will benefit LIS research and practice by contributing empirical findings to an under-researched area about an underserved group and developing new models for public libraries to facilitate information practices that promote LGBTQ+ health within their communities. These benefits will be extended beyond the grant award conclusion through dissemination strategies to reach LIS and LGBTQ+ communities. Finally, the project has pedagogical benefits, as I can include research and practice-based findings and approaches developed during this project in the introductory LIS theory and methods courses I teach for early-career professionals.

*See Supportingdoc1.pdf for references.*

**Examining Public Library Service to LGBTQ+ Communities for Health Information - Schedule of Completion**

Activities	Pre-award	Year One (2018-2019)				Year Two (2019-2020)				Year Three (2020-2021)			
		Oct-Dec	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	Jan-Mar	Apr-Jun	Jul-Sep
<b>Project Management</b>													
Recruit 2 additional Advisory Board members (one LGBTQ+ community leader, one public librarian)													
Secure IRB Project Approval													
Schedule Ongoing Consultations with Mentors (Annual Basis)													
Schedule Ongoing Consultations with Advisory Board (Annual Basis)													
<b>SC LGBTQ+ Community Leader Interviews</b>													
Develop Recruitment Strategies and Materials													
Develop Data Collection Instruments													
Recruit SC LGBTQ+ Community Leaders													
Conduct Interviews with SC LGBTQ+ Community Leaders													
Data Analysis (Interview Transcripts, Reflexive Journal)													
Member-checking with SC LGBTQ+ Community Leaders													
<b>SC Community Forum</b>													
Schedule SC Community Forum													
Develop Recruitment Strategies and Materials													
Develop Data Collection Instruments													
Recruit SC LGBTQ+ Community Leaders and Public Librarians													
Run Community Forum													
Data Analysis (Table Host Notes, Participant Observations)													
Member-checking with Community Forum Participants													
Draft Guidance Document in Consultation with SC State Library													
<b>SC LGBTQ+ Community Member Focus Groups</b>													
Develop Recruitment Strategies and Materials													
Develop Data Collection Instruments													
Recruit SC LGBTQ+ Community Members													
Conduct Interviews with SC LGBTQ+ Community Members													
Data Analysis (Interview Transcripts, Reflexive Journal)													
Member-checking with LGBTQ+ Community Members													
Revise Guidance Document Based on Focus Group Feedback													
<b>Nationally Representative Community Forums</b>													
Strategic Sampling of Potential Partner Libraries													
Recruit and Confirm Partner Libraries													
Schedule Community Forums													
Recruit Community Forum Participants													
Run Community Forums													
Data Analysis (Table Host Notes, Participant Observations)													
Member-checking with Community Forum Participants													
Revise Guidance Document Based on Nationally Representative Community Forums													
<b>Iterative Development</b>													
Iterate Recruitment Materials Based on Mentor Feedback													
Iterate Data Collection Instruments Based on Mentor/Advisory Board Feedback													
Iterate Findings Based on Member-checking and Mentor/Advisory Board Feedback													
Iterate Guidance Document Based on Library Partner/Mentor/Advisory Board Feedback													
<b>Practice Oriented Dissemination</b>													
Design and Launch Project Website													
Provide Project Updates on Website													
Disseminate Guidance Document to Public Libraries													
Publish Guidance Document and Librarian/LGBTQ+ Community Strategies on Project Website													
<b>Research Dissemination</b>													
Project Website													
Conference Presentations													
Research Publications													
<b>IMLS Final Report</b>													

# DIGITAL PRODUCT FORM

## Introduction

The Institute of Museum and Library Services (IMLS) is committed to expanding public access to federally funded digital products (i.e., digital content, resources, assets, software, and datasets). The products you create with IMLS funding require careful stewardship to protect and enhance their value, and they should be freely and readily available for use and re-use by libraries, archives, museums, and the public. However, applying these principles to the development and management of digital products can be challenging. Because technology is dynamic and because we do not want to inhibit innovation, we do not want to prescribe set standards and practices that could become quickly outdated. Instead, we ask that you answer questions that address specific aspects of creating and managing digital products. Like all components of your IMLS application, your answers will be used by IMLS staff and by expert peer reviewers to evaluate your application, and they will be important in determining whether your project will be funded.

## Instructions

Please check here if you have reviewed Parts I, II, III, and IV below and you have determined that your proposal does NOT involve the creation of digital products (i.e., digital content, resources, assets, software, or datasets). You must still submit this Digital Product Form with your proposal even if you check this box, because this Digital Product Form is a Required Document.

If you ARE creating digital products, you must provide answers to the questions in Part I. In addition, you must also complete at least one of the subsequent sections. If you intend to create or collect digital content, resources, or assets, complete Part II. If you intend to develop software, complete Part III. If you intend to create a dataset, complete Part IV.

## Part I: Intellectual Property Rights and Permissions

**A.1** What will be the intellectual property status of the digital products (content, resources, assets, software, or datasets) you intend to create? Who will hold the copyright(s)? How will you explain property rights and permissions to potential users (for example, by assigning a non-restrictive license such as BSD, GNU, MIT, or Creative Commons to the product)? Explain and justify your licensing selections.

The main research products can be divided into three categories: *guidance document* and *project website*, *data products*, and *research publications* and *presentations*.

The *guidance document* for this project will be open access and hosted on the *project website*. The website will be hosted by USC's College of Information and Communications (CIC) – the larger college of which the School of Library and Information Science (SLIS) is part. This document and resources will be published under a Creative Commons Attribution 4.0 license, which allows the project's audience (librarians, researchers, LGBTQ+ people) to access, publish, share, and readapt the materials to suit their own purposes and contexts. These products will include attribution to the PI, all relevant stakeholders (mentors, advisory board, RA, participants) and IMLS for supporting the project. The PI will provide a clear overview of the license details including attribution and how the research products can be re-used. The guidance document will also be added to USC's Scholar Commons repository.

The *data products* include interview transcripts, community forum notes (from table hosts and observational data), notes from member checks, and information world drawings. With participant consent, these data will be made available to facilitate re-use. In instances where participants do not consent to have their data made available, the PI will note what data is not available (e.g., individual interview transcript 18 is not available). This decision is made to engender participant trust in the research process and openness when discussing sensitive topics surrounding health-related informational issues. The data products will be added to USC's Scholar Commons repository and will be available pending access protocols from USC's IRB office to protect participant confidentiality.

*Research publications* and *presentations* will be published in open access venues when possible with a copy of each being added to USC's Scholar Commons repository. When open access is not possible, the PI will pursue agreements to publish pre-print versions.

**A.2** What ownership rights will your organization assert over the new digital products and what conditions will you impose on access and use? Explain and justify any terms of access and conditions of use and detail how you will notify potential users about relevant terms or conditions.

USC has ownership of the *data products*, *guidance document*, and *project website*. The *guidance document* will be open access on the project website. The document and website content will be published under a Creative Commons Attribution 4.0 license. Data products that participants consent to being accessible, including primary data and other

supporting materials, will follow access protocols set by USC's IRB office to protect participant confidentiality. Finally, *research publication* ownership will vary based on agreements with various publishing venues. The PI and research stakeholders will promote access to project resources via meetings, conferences, and other channels, such as social media.

**A.3** If you will create any products that may involve privacy concerns, require obtaining permissions or rights, or raise any cultural sensitivities, describe the issues and how you plan to address them.

As mentioned, to foster participation and trust among participants, each participant gets to decide how their data is accessed and disseminated. If the participant consents to having their data made available, it will be de-identified, meaning that pseudonyms will be used and all potentially identifying information will be redacted. Participants will offer input as to what this identifying information may be during member-checking. In addition, the PI will limit access to data products (along with following USC IRB access protocols) and require a confidentiality agreement from re-users. The PI will share more widely aggregate data and project codebooks that contain no sensitive information.

The other research products (guidance document and project website, research publications and presentations) will contain no sensitive information. Participants will be referred to using pseudonyms.

## Part II: Projects Creating or Collecting Digital Content, Resources, or Assets

### A. Creating or Collecting New Digital Content, Resources, or Assets

**A.1** Describe the digital content, resources, or assets you will create or collect, the quantities of each type, and format you will use.

Asset	Description	Quantity	Format
Guidance Document	Research findings, Recommendations, Data collection instruments, etc.	1 report	PDF, paper
Project Website	Project information; Resources and recommendations for librarians, LGBTQ+ people	1 website	html
LGBTQ+ Community Leader Individual Interview Data	Interview audio-recordings, Interview transcripts, Reflexivity journal, Member-checking comments, Information worlds images, Data analysis codebook	30 transcripts, 30 journal entries, 30 member-checking comments, 30 images, 1 codebook	MPEG4, PDF, NVivo database, JPEG
Community Forum Data	Table host notes, Observational notes, Reflexivity journal, Member-checking comments	24 sets of table host notes (6 tables per forum), 8 sets of observational notes taken by PI and RA, 4 journal entries, 200 member-checking comments	PDF, NVivo database
LGBTQ+ Community Member Focus Group Data	Interview audio-recordings, Interview transcripts, Reflexivity journal, Member-checking comments, Information worlds images, Data analysis codebook	60 transcripts, 6 journal entries, 60 member-checking comments, 60 images, 1 codebook	MPEG4, PDF, NVivo database, JPEG
Research Publications and Presentations	Publications and conference presentations	TBD - Multiple	PDF, html

**A.2** List the equipment, software, and supplies that you will use to create the content, resources, or assets, or the name of the service provider that will perform the work.

Microsoft Office products will be used to create the guidance document, some of data products, and the research publications and presentations. Interviews will be recorded as MPEG-4 audio files using QuickTime. Information worlds maps will be scanned as JPEGs. Data files will be created using NVivo software. Notes will be handwritten then typed.

The project website will be hosted by USC's CIC on the University domain (sc.edu). USC webpages are created using a custom CMS, which will also be the case of the project website.

**A.3** List all the digital file formats (e.g., XML, TIFF, MPEG) you plan to use, along with the relevant information about the appropriate quality standards (e.g., resolution, sampling rate, or pixel dimensions).

.docx and .pdf (guidance document, some data products, research publications and presentations); .ppt (research presentations), .nvp (analyzed data files), .jpg (information worlds maps), .html (project website), .mpeg (recorded interview audio)

All documentation will be at or above relevant quality standards.

## **B. Workflow and Asset Maintenance/Preservation**

**B.1** Describe your quality control plan (i.e., how you will monitor and evaluate your workflow and products).

The PI will manage all project deliverables and review data products before publication. The RA, mentors, and advisory board will also review products as they are synthesized; participants will review initial data products to ensure they are accurate representations of their accounts/experiences. The PI and RA will work in tandem to ensure quality of data transcription and anonymization of collected data.

**B.2** Describe your plan for preserving and maintaining digital assets during and after the award period of performance. Your plan may address storage systems, shared repositories, technical documentation, migration planning, and commitment of organizational funding for these purposes. Please note: You may charge the federal award before closeout for the costs of publication or sharing of research results if the costs are not incurred during the period of performance of the federal award (see 2 C.F.R. § 200.461).

USC's CIC will permanently host the project website on a stable sc.edu URL. Research output, including publications, presentations, data products, and the guidance document will be permanently hosted in USC's Scholar Commons repository.

## **C. Metadata**

**C.1** Describe how you will produce any and all technical, descriptive, administrative, or preservation metadata. Specify which standards you will use for the metadata structure (e.g., MARC, Dublin Core, Encoded Archival Description, PBCore, PREMIS) and metadata content (e.g., thesauri).

The USC Scholar Commons repository interface will assign metadata to research and data products. The metadata is flexible and customizable based on dissemination needs. All of the metadata fields, whether or not they are patron-facing, are targeted to promote search discoverability. The PI will consult with USC librarians who maintain the commons on appropriate metadata standards and content based on the goals for dissemination, which will be established throughout the duration of the project.

**C.2** Explain your strategy for preserving and maintaining metadata created or collected during and after the award period of performance.

USC's Scholar Commons will support metadata for both data and research products after the award period.

**C.3** Explain what metadata sharing and/or other strategies you will use to facilitate widespread discovery and use of the digital content, resources, or assets created during your project (e.g., an API [Application Programming Interface], contributions to a digital platform, or other ways you might enable batch queries and retrieval of metadata).

USC Scholar Commons works with all of the highly-used regular and academic search engines (e.g., Google, Google Scholar, Bing, etc.) to push repository content to the top of result lists. Scholar Commons is also part of Digital Commons, the institutional repository provider of over 500 institutions, and allows for easy cross-searching from within the platform. PlumX metrics are automatically added to most research. The Commons also will be promoted by the PI and research team during dissemination of research products, including at conferences, meetings, and via other communication channels.

## **D. Access and Use**

**D.1** Describe how you will make the digital content, resources, or assets available to the public. Include details such as the delivery strategy (e.g., openly available online, available to specified audiences) and underlying hardware/software platforms and infrastructure (e.g., specific digital repository software or leased services, accessibility via standard web browsers, requirements for special software tools in order to use the content).

Access will be available via the project website, which is accessible using standard web browsers, as well as deposited in USC's Scholar Commons repository.

**D.2** Provide the name(s) and URL(s) (Uniform Resource Locator) for any examples of previous digital content, resources, or assets your organization has created.

Example of a project site created by project web developer, Patty Hall: <http://scloccivilrights.com/>

Example of project website hosted by USC's CIC:

[http://www.sc.edu/study/colleges\\_schools/cic/research/journalism\\_and\\_mass\\_communications/pr\\_strat\\_comm\\_research\\_group/index.php](http://www.sc.edu/study/colleges_schools/cic/research/journalism_and_mass_communications/pr_strat_comm_research_group/index.php)

USC Scholar Commons: <https://scholarcommons.sc.edu/>

### **Part III. Projects Developing Software**

#### **A. General Information**

**A.1** Describe the software you intend to create, including a summary of the major functions it will perform and the intended primary audience(s) it will serve.

N/A

**A.2** List other existing software that wholly or partially performs the same functions, and explain how the software you intend to create is different, and justify why those differences are significant and necessary.

N/A

#### **B. Technical Information**

**B.1** List the programming languages, platforms, software, or other applications you will use to create your software and explain why you chose them.

N/A

**B.2** Describe how the software you intend to create will extend or interoperate with relevant existing software.

N/A

**B.3** Describe any underlying additional software or system dependencies necessary to run the software you intend to create.

N/A

**B.4** Describe the processes you will use for development, documentation, and for maintaining and updating documentation for users of the software.

N/A

**B.5** Provide the name(s) and URL(s) for examples of any previous software your organization has created.

N/A

#### **C. Access and Use**

**C.1** We expect applicants seeking federal funds for software to develop and release these products under open-source licenses to maximize access and promote reuse. What ownership rights will your organization assert over the software you intend to create, and what conditions will you impose on its access and use? Identify and explain the license under which you will release source code for the software you develop (e.g., BSD, GNU, or MIT software licenses). Explain and justify any prohibitive terms or conditions of use or access and detail how you will notify potential users about relevant terms and conditions.

N/A

**C.2** Describe how you will make the software and source code available to the public and/or its intended users.

N/A

**C.3** Identify where you will deposit the source code for the software you intend to develop:

N/A

#### **Part IV: Projects Creating Datasets**

**A.1** Identify the type of data you plan to collect or generate, and the purpose or intended use to which you expect it to be put. Describe the method(s) you will use and the approximate dates or intervals at which you will collect or generate it.

In *Year One*, the project will collect individual semi-structured data from interviews with LGBTQ+ community leaders including audio interview recordings, transcripts from these recordings, the PI's reflexivity journal, and comments from participant member-checking. These data will inform the design of community forums and focus groups.

In *Year Two*, the project will collect data from a community forum ran locally in Columbia SC. These data are: notes from table hosts, observational data generated by the RA and PI, the PI's reflexivity journal, and comments from participant member-checking. Focus groups will validate interview and community forum data. Data collected are audio interview recordings, transcripts from these recordings, the PI's reflexivity journal, and comments from participant member-checking.

In *Year Three*, the project will collect data from three additional community forums. These data are: notes from table hosts, observational data generated by the RA and PI, the PI's reflexivity journal, and comments from participant member-checking. These data will validate interview, focus group, and SC community forum findings.

All data will contribute to scholarly publications and presentations, as well as to the creation of the guidance document and project website.

**A.2** Does the proposed data collection or research activity require approval by any internal review panel or institutional review board (IRB)? If so, has the proposed research activity been approved? If not, what is your plan for securing approval?

An IRB will be submitted to USC for this grant project within the first three months of grant approval. The PI will reapply for approval as directed by USC's IRB.

**A.3** Will you collect any personally identifiable information (PII), confidential information (e.g., trade secrets), or proprietary information? If so, detail the specific steps you will take to protect such information while you prepare the data files for public release (e.g., data anonymization, data suppression PII, or synthetic data).

All project participants will be assigned chosen pseudonyms. Any identifying information will be redacted from collected data such as interview transcripts. Final datasets made available for outside of the research team will be anonymized, with the verbal assent of participants. The PI will limit access to data products (along with following USC IRB access protocols) and require a confidentiality agreement from re-users. The PI will share more widely aggregate data and project codebooks that contain no sensitive information. All data collected and analyzed during the project will be stored on secure, password-protected machines, to which only the project staff will have access.

**A.4** If you will collect additional documentation, such as consent agreements, along with the data, describe plans for preserving the documentation and ensuring that its relationship to the collected data is maintained.

Project staff who have passed USC Human Subjects training will administer informed consent to all research participants and collect signed, paper consent forms. For any interviews conducted via Skype, participants will be required to sign, scan, and send (via email, mail, or fax), which must be received by the PI prior to the interview being conducted. A random three-digit numerical code preceded by a two-letter data type prefix, will be assigned to each participant (e.g., FG002, CF076). The PI will create a spreadsheet matching each code to the participant's name and project pseudonym. This file will be kept in a password protected folder only accessible to project staff. Consent agreements will be scanned and stored in this same folder. Print copies of agreements will be kept in a locked file cabinet for at least three years after the study's end (pursuant to USC IRB requirements). Once interviews have been transcribed, their corresponding audio files will be deleted to avoid identifiable voice information. All research data maintenance will follow a 3-2-1 backup plan: three copies of the data, two which are local but on different mediums, and one stored offsite. Each of the data sources will be in password protected (if digital) or locked (if physical) storage.

**A.5** What methods will you use to collect or generate the data? Provide details about any technical requirements or dependencies that would be necessary for understanding, retrieving, displaying, or processing the dataset(s).

Qualitative data will be collected using the Quicktime application, which can record audio on phones and computers. Audio files will be downloaded to secure machine and transcribed by a third-party service into .docx and .pdf files. Reflexivity journal, observational notes, and table notes can either be taken digitally or transferred from pen and paper to a digital format – either .docx or .pdf. Information worlds maps will be photographed as .jpeg files. Data will be analyzed in NVivo, which produces .nvp files. Codebooks will be produced in NVivo as well as Excel as .xlsx files. All raw data will only be visible to the PI, RA, and research mentors.

**A.6** What documentation (e.g., data documentation, codebooks) will you capture or create along with the dataset(s)? Where will the documentation be stored and in what format(s)? How will you permanently associate and manage the documentation with the dataset(s) it describes?

Codebooks, coding reports, and project memos will be created and stored on local, secure machines as .docx and .pdf formats. The naming convention of a randomly assigned three-digit number preceded by a two-letter prefix indicating the data collection type will be used to label these documents as necessary.

**A.7** What is your plan for archiving, managing, and disseminating data after the completion of the award-funded project?

All sharable datasets will be deposited into USC's Scholar Commons repository.

**A.8** Identify where you will deposit the dataset(s):

Name of repository: University of South Carolina Scholar Commons

URL: <https://scholarcommons.sc.edu/>

**A.9** When and how frequently will you review this data management plan? How will the implementation be monitored?

The data management plan will be evaluated monthly by the PI and RA, and annually in project meetings with research mentors and the advisory board. The PI will monitor compliance with the plan as well as new institutional and technological developments that might warrant modification of the plan. Datasets will be curated and preserved in accordance with USC Scholar Commons standards.