Developing a Social Service Model in Rural Libraries
Project Summary: The research team at Indiana University Indianapolis (IUPUI) is applying for the NLG research grant to request $498,268 to develop a social service prototype for rural libraries based on multistep studies to explore rural communities' social needs and libraries' current practices. This project has a national focus and addresses two IMLS goals: ***Strengthen community engagement*** and ***Building capacity***.

1. PROJECT JUSTIFICATION
1.1. Background and Project Rationale
The role of libraries as community and civic centers has emerged from the changing needs of communities. Past research has shown the prevalence of patrons experiencing diversifying social, physical, and psychological needs in public libraries, because libraries are seen as a safe, neutral space that is approachable to patrons (Kelley, Riggleman, Clara, & Navarro, 2017). This has resulted in libraries seeking innovative ways to meet patrons' needs related to mental illness, homelessness, poverty, and physical health issues (Collins, Howard, & Miraflor, 2009; Foster, 2016; Whaler et al., 2020). As libraries have a mission to provide free access to information, some libraries have been connecting their communities with needed social services, especially for underserved populations (Hines, 2015). Hines (2015) argued that providing social services ties well with libraries' core value of promoting social justice as a democratic and democratizing institution. Still, there are many barriers to libraries connecting communities with social services, such as time, money, and various partnership models with governments and non-governmental organizations (NGOs) that offer social services.

In recent years, COVID-19 brought new challenges regarding health care, unemployment, and poverty to the steps of libraries. As a result, more public libraries have started investigating different ways to meet patron's diversifying needs and offer various social services, from stocked resource rooms for addressing homelessness to case management of patrons through interprofessional collaborations with social work professionals (Lee et al., 2022; Whaler et al., 2020). Particularly, the statistics from Whole Person Librarianship indicate growth in this type of collaboration: Approximately 60 public libraries across the nation have professional social workers in place. Library professionals have also tried to develop best practices and resources that can be integrated to address patrons' social needs at libraries (e.g., the Public Library Association's Social Work Task Force and the Social Work Interest Group from the American Library Association).

Despite public libraries' growing efforts to respond to communities' diversifying needs (e.g., Schofield, n.d.), there are still clear gaps in research and practice. First, while two-fifths of U.S. libraries are in rural areas and serve a total population of over 30 million, most library social services are provided in metropolitan areas (mostly in the northeast or on the west coast), indicating the death of social services at public libraries in rural areas (Lee et al., 2022). While not all librarians see their role as social service (Westbrook, 2015), rural libraries may currently have different community demands for social services because of the rapid changes brought about by COVID-19. However, offering library social services has been a challenge due to less capacity, resources, and experience. Previous research has also shown that not all library staff hold a level of confidence in their skills and knowledge of working with patrons' diversifying needs, and if staff motivations are low or they have negative attitudes toward persons experiencing crises, this could hinder services for vulnerable patrons (Pressley, 2017; Williams & Ogden, 2021). Second, because library social services are still in their infancy, there has been less research on them, despite recent growth in practice. Library social services present new opportunities and challenges for interprofessional collaboration, education, and practices (Soska & Navarro, 2020). Introducing and integrating new services into existing practices requires careful adoption of existing practices (e.g., policy changes, raising professionals' awareness) and educational preparation (e.g., topics on community practices and organizational leadership).

To address this gap in research and practice, **our project aims to develop a model for social services in public libraries**. Our study design is based on our preliminary study that the PI conducted as a part of her previous IMLS-funded project (#LG-96-17-0184-17), which aligned with what existing literature reported. The PI and the team collected a small set of interview data from five rural library directors presenting rural

communities' diversifying needs, such as homelessness, mental health, opioid addiction, aging, food insecurity, and housing issues. Rural librarians reported the biggest challenges responding to those needs, including limited human, financial, and knowledge resources at libraries, community's confusion, and dissatisfaction due to the lack of help, as well as difficulties building a local network. They also discussed several desired resources to offer better support for their communities, including 1) partnership with social service agencies to co-locate services in the library or reference to social services agency, 2) librarians' social service skill assessment, 3) targeted programming to meet the social service needs of communities, and 4) librarian training on how to deal with patrons with social service needs.

Our focus is rural libraries, given the urgent needs and lack of resources in these areas. The condition of rural areas is commonly understood as "non-metropolitan (non-metro) areas." In this research, we operationalized the term "rural" as a combination of the following three conditions: open countryside, rural towns (places with fewer than 2,500 people), or urban areas with populations ranging from 2,500 to 49,999 that are not part of larger labor market areas (metropolitan areas), following the definition of "rural" proposed by the Office of Management and Budget and the Economic Research Service of the U.S. Department of Agriculture (USDA-ERS, 2022). We also integrated USDA-ERS's multi-level country classifications in our study site selection to understand rurality in more detail, which enabled us to address social diversity indicators (e.g., immigrants, language) (see 2. Project Work Plan).

To achieve our project goal of developing a social service model in public libraries, we will (1) explore rural communities' diversifying needs and rural libraries' existing efforts to meet those needs and (2) design a prototype social service that can be used in rural libraries. Our overarching research question is: ***How can rural libraries meet communities' psychosocial needs?*** This is followed by three sub-questions:

RQ1. *What are rural communities' social service needs?*

RQ2. *How have rural libraries' existing social services and library social workers addressed their communities' social needs? What are the libraries' perceived roles in this?*

RQ3. *How can rural libraries provide social services to their communities?*

1.2. IMLS Goal's Alignment

This project meets IMLS agency-level ***Goal 2: Strengthen Community Engagement*** by generating a social service model that can serve unmet communities' needs while engaging rural librarians and community members. Our work will help address the issue of equitable access to information and resources for underserved populations by connecting community members with resources through or in libraries. Rural communities' engagement in research is known to be challenging. Our strategy to promote their participation is to utilize local human resources through the network of Indiana University School of Social Work's (IUSSW), which can lower the barrier of communication and participation.

This project meets the National Leadership Grants for Libraries Program ***Goal 2. Build the capacity of libraries to lead and contribute to efforts that improve community well-being and strengthen civic engagement***. Specifically, this project meets ***Objective 2.1: Develop or enhance replicable library programming, models, and tools that engage communities and individuals of diverse cultural and socioeconomic backgrounds.*** Our project will help libraries design social services based on the theoretical model created by the research team and practitioners, while sharing practices and resources in the field of public libraries. Capacity building cannot be achieved by a one-time trial; thus, our goals are to assist libraries in initiating or extending their efforts to meet communities' social needs on a smaller scale and to help them design sustainable services.

2. PROJECT WORK PLAN
2.1. Project Goal and Intended Outcomes

The goal of this project is to build public libraries' capacity for social services by raising awareness of this topic and identifying relevant resources, skills, and knowledge for librarians. The objective of this project is to help

achieve our long-term goal by creating a theoretical model through evidence-based practices that can create an implementation model in our future research. Our study proposes the following specific objectives:

O1. Explore rural communities' self-identified diversifying needs;

O2. Explore rural libraries' existing efforts to meet those needs and identify the necessary resources to provide social services;

O3. Explore library staffs' perceptions of the role of libraries in social services; and

O4. Design a prototype social service that can be used in rural libraries.

The key outputs include the following: (a) a list of rural communities' diversifying needs, (b) an environmental map of the existing social service systems in those communities, (c) a list of desired resources relevant to social services based on rural library staffs' lived experiences of working with communities and providing social services, (d) library staffs' perceptions on changing landscape and roles in social services, as well as opportunities and challenges, (e) a theoretical model of, and practical recommendations for, library social services, and (f) a prototype model of the libraries' social service with guide to implement the model.

2.2. Intended Audiences

The outcomes expected from the project will serve five primary audiences:

(1) Rural librarians who want to initiate social services at their libraries and build capacity. Rural librarians will benefit from this project by learning how to provide the services and resources necessary to meet their communities' needs by increasing their knowledge, awareness, and motivations. Providing social services not only enables libraries to proactively respond to the communities' changes and libraries' functions, but also supports libraries' core value of promoting social justice.

(2) LIS educators who want to train future information professionals, particularly rural/public librarians, to raise awareness of new roles and educate them about a new service model through master's-level coursework and provide professional development opportunities for current practitioners who want to expand their knowledge to serve and engage their communities.

(3) Social work practitioners who are interested in working with underserved populations in rural areas. Rural/urban disparities in health, and access to health care have been a long-standing issue in social work practice. Given the lack of access to basic health/social services among rural residents, social work practitioners can actively reach out and create collaborative partnerships with rural libraries to address the unmet needs of rural residents.

(4) Social work educators who want to expand practicum settings for social work students. Community practice is one of the core areas of the social work profession. Rural libraries can be a potential internship setting for community practice in that social work students can develop an understanding of the context of rural communities' challenges and promote social change and justice.

(5) Community organizations/partners who work in collaboration with libraries to address the communities' diversifying needs. Our project intends to help build collaboration among different community stakeholders, and each organization can complement others by sharing information or resources and serving the needs of different communities. Community members in need of social services will be indirect, but long-term beneficiaries of this project.

2.3. Research design (see Supporting Document 1—Summary of Project Activities)

Phase 1. Rural community study with community members and local librarians

The goal of Phase 1 is to conduct an in-depth community study to unpack rural communities' unique needs, local libraries' perspectives, and practices in responding to community needs, and existing community resources (O1–3; RQ1 and 2).

We limit our scope to rural counties in Indiana to increase the validity, relevance, and feasibility of our study. First, despite its fewer racial minorities and immigrants and a relatively lower poverty rate compared to the national rural statistics (Johnson & Lichter, 2022; Rural Indiana Stat, n.d.), rural Indiana faces serious

challenges that are common in other rural communities across the nation, such as job loss, food insecurity, lack of safe housing, and disparities in access to basic services (Ball State University, 2022; Pew Research Center, 2018). Thus, our study of rural Indiana will provide implications for rural areas nationwide that have these commonalities. Second, a local in-depth study will allow us better access to the study site, participation, and results from rural communities. Previous studies targeting rural communities reported several challenges in rural data collection, which resulted in accuracy issues in rural representation, such as lower response rates caused by internet access challenges and/or language barriers, the educational status of households, and dealing with people's expectations and non-cooperation (Cheema et al., 2018; Scally & Burnstein, 2020; Pierce & Scherra, 2004). Utilizing local resources (e.g., local students, field coordinators) through the IUSSW network, we will be able to increase local participation and capture community members' unique perspectives.

To select our study site, we will use the Indiana Office of Community and Rural Affairs' (OCRA) classification of rural counties, considering the state-specific features in determining rural and urban areas. According to the OCRA, 72 out of 92 counties are rural, and around 34% of the state's population lives in rural areas (Indiana State University, 2014). Based on the common geographic boundaries used, we divided Indiana into three regions—north (26 rural counties), central (23 rural counties), and south (23 rural counties)—and conduct our rural community survey with two to three rural counties from each region. This stratified approach will allow us to conduct a statewide assessment to examine rural community needs. To comprehensively access rural community needs, we will conduct a survey with community residents (*Phase IA*), interviews with local librarians (*Phase IB*), and an environmental scan of local resources (*Phase IC*).

Phase 1A. Phone survey with community members: We will first conduct a phone survey with about 120 rural community members (40 from each region) to examine their self-identified needs, expectations of libraries for such needs, and any other local resources. Once we develop a structured questionnaire, we will recruit our study participants using the IUSSW's statewide professional and educational network. IUSSW has seven campuses across the state of Indiana: three campuses in the north region, two campuses in the central region, and one campus in the south region. We will hire two to three students from each campus as survey participant recruiters; they will distribute the invitation flyers of the survey, which include a brief explanation about the survey and contact information of the project team in local grocery stores, gas stations, post offices, local events, libraries, hardware stores, etc. In the flyer, those who are interested in participating in the survey will be instructed to contact (email/phone-call) the project team. While distributing the flyers, the recruiters will also collect contact information from potential participants. While we acknowledge there is a potential limitation of this approach (e.g., recruiters' unconscious bias when reaching out to community members), it would be still an effective, non-obtrusive recruiting method for our study.

Once we obtain the contact information of potential participants, our doctoral research assistant will contact them and administer the phone survey. Prior to conducting the survey, the research assistant will explain the survey in detail, screen for eligibility (being a resident in rural counties aged 18 or older) and obtain informed consent. Participants will receive a $40 gift card upon completion of the survey via their preferred delivery method (mail or email). In our survey, we will ask about socio-demographic characteristics (age, gender, household income/occupation, race, residing county, etc.), physical, social, and mental health-related needs, identify their unmet needs, and examine their expectations of local libraries. Because survey interviews will be administered anonymously and no personally identifiable information will be collected for the survey, no signature for informed consent will be sought. The use of local students to recruit survey participants and promote our study can be a strength of this study, as we will utilize the local networks embedded in the community. Descriptive and bivariate analyses will be performed using R and SPSS.

Phase 1B. Interview with local librarians: We will conduct interviews with seven rural librarians across rural counties in Indiana. The interviews will help us to understand rural librarians' views and experiences in dealing (or not dealing) with communities' needs identified from Phase IA, community resources, partnerships, etc. We

will individually contact and send an interview invitation to the nearby rural libraries where our survey participants from Phase IA reside. Once the rural librarians agree to participate in our study, we will schedule a time for the interview, which will allow the rural librarians to choose a time that is convenient for them. The PIs will read, explain, and obtain informed consent first and then proceed to the interview. We will use a semi-structured interview schedule that includes the following three categories of questions, such as rural librarians' experiences with diversifying needs and their responses to such needs (e.g., How has your library responded to those needs? How much were you able to address such needs? How sufficient are your resources to address such needs?) and the role of the library (e.g., What should the role of the library be in addressing such needs, or should the library respond to those needs? What would you need to better respond to such needs?). The data obtained from Phase 1A will further inform the refining of the questions. A $70 gift card will be emailed as compensation for participating in the survey. The interview data will be inductively coded and analyzed using qualitative data analysis software (e.g., NVivo) while searching for emerging themes.

Phase 1C. Environmental scan of local resources: During Phase 1, we will continually conduct an environmental scan on our study site. The purpose of doing an environmental scan is to identify relevant stakeholders, existing resources and community agencies, and existing/potential partnerships. Based on the findings from our environmental scan, interview and survey data collected during Phase 1, and the local knowledge that we learned from the study, we will create a community resource map relevant to social services to obtain a full picture of community information and service infrastructure around social services. We do not know if we will have one map of community resources or seven separate maps, but we will be searching for commonalities among those maps while indicating the uniqueness of the local context that can be replicated in other rural areas. We will also compare this resource map with rural library staffs' (who are interviewed in Phase 1B) understanding of local resources to investigate the libraries' level of understanding and current/potential engagement of local resources. The implications of the community resource map(s) will be threefold. First, the environmental scan will identify key internal and external factors that affect the operation of rural libraries, and thus help to develop a sustainable social service model in rural areas. Second, the community resource map(s) will provide a preliminary example that can be utilized by other rural libraries across the country, enhancing the national impact of this project. Third, the environmental scan will benefit rural communities, as we will systematically assess local strengths and barriers and explore the optimum use of local resources to address various needs of patrons in rural areas, contributing to empowering rural communities.

Phase 2. National study with rural libraries and library social workers
Based on the in-depth community study conducted during Phase 1, the main goal of the Phase 2 study is to explore our research questions at the national level and identify the role of stakeholders, librarians, and social workers relevant to providing social services at public libraries (O2 and 3; RQ1 and 2). Phase 2 of the study contributes to bringing national perspectives of practitioners across the nations outside of the rural Indiana context, which will contribute to the generalizability of our study. We will consider social diversity indicators based on the USDA-ERS's multi-level country classifications when inviting potential study participants.

Phase 2A. National Survey: First, we will conduct a national survey targeting rural library staff. We will design survey questions based on the data collected from Phase 1, but potentially our survey questions will address rural communities' social needs, rural library staffs' perceived role in supporting communities' social needs, current library practices to provide social services, existing and desired resources, challenges, and partnerships. We will collect the feedback on our survey questions from our advisory board (AB) and rural librarians who participated in Phase 1, and administer the survey using Qualtrics, on an online survey platform, by working with relevant professional organizations, such as the Association for Rural & Small Libraries (ARSL), Big Talk from Small Libraries, and the Rural Library Network. To increase the survey response rate, a small incentive in the form of a $20 Amazon.com e-gift card will be awarded to 200 participants. If we have over 200 responses,

we will randomly select participants upon completion of the survey. Once the survey is closed, we will clean the data and import them into SPSS or R for statistical analysis. As the goal of this survey is to describe the practices and perceptions of rural librarians, the data analysis will be limited to descriptive measures, and the data will be analyzed using univariate and bivariate descriptive statistics (e.g., frequency distribution).

Phase 2B. Interview with library social workers: Second, we will conduct in-depth interviews with 15 library social workers (five each from urban, suburban, and rural areas) to understand their lived experiences and perspectives in addressing patrons' diversifying needs, the challenges of offering social services at libraries (e.g., organizational culture, policy changes, levels of support, etc.), and desired resources. While our study focuses on rural context, we will include urban and suburban social workers in this interview for two reasons: First, as we noted in our study justification, most library social services are placed in metropolitan areas, which impacts on our study sample. Second, despite the rural libraries are different than metropolitan libraries in terms of resources, capacity, and serving communities, library social workers' lived experiences will still provide implications across different settings, such as challenges to work in non-traditional settings for social workers, dealing with different work cultures, library policy implications when integrating social services, etc.)

We will identify full-time library social workers from the Whole Person Librarianship, which is the largest network of library social workers, and invite them to participate in the study. We aim to interview 15 library social workers, each of whom will receive a $70 gift card as compensation for their time. The interview questions will be developed based on the information collected during Phase 1 and Phase 2A, but in general, three categories of questions will be addressed during the interviews: What are the motivations for having social workers at libraries? What is the role of library social workers? What are current work practices and how are they different in other social services (non-library settings)? What are some challenges and barriers? Are there any suggestions for better practices as well as desired resources? A test batch of interview data will be inductively coded by the project team using qualitative analysis software (e.g., NVivo). We will conduct an inter-rater reliability test to compare the coding agreement among team members and develop an initial coding scheme to code the remaining data. The interactive analysis cycle will continue until we find common themes.

Phase 3. Prototype social service co-design

In Phase 3, we will utilize evidence from our findings to develop library social services (O4; RQ3).

Phase 3A. Theoretical model development: First, using the findings from Phase 1 and 2 studies, including interviews/surveys data and community resource maps, the project team will create an initial theoretical model of and practical recommendations for library social services. The purpose of developing the model is to suggest a method for providing social services through or at libraries and integrating the services into library work practices by presenting different stakeholders and local or remote infrastructures that can or should be involved in library work. The initial theoretical model and practical recommendations will be sent to our advisory board for their initial review and feedback. To gain broad community feedback, we will also run a half-day workshop at ARSL conferences (usually in September) or at the other conferences (see Phase 3B for details).

Phase 3B. Workshop: Goals for a half-day workshop are twofold: One is to bring rural librarians into broader conversations relevant to social services, build a foundation for community of practices, which will be helpful for our future study (model implementation, see section 2.7.), and two is to discuss the potential of generalizability of our model as attendees will be from nationwide. The workshop will be designed to provide rural librarians with an overview of social services in libraries and the potential role of libraries in serving community members' needs. We will briefly share our findings from Phases 1 and 2, and participants will explore opportunities to engage in social services in their own contexts. We will invite 2–3 speakers from our advisory board, rural librarians, and library social workers from Phase 1 and 2 studies to bring lived experiences to the participants. Participants will engage in hands-on activities to understand our theoretical model, guided discussion to provide feedback on the model, and a brief Q&A with speakers and project teams while networking with other participants with the same interests to exchange ideas and insights. We aim to have about 20 participants in this workshop, and participants will receive pre-workshop materials (e.g., background and

bibliography), slides, exercises, and the schedule before the workshop. To promote participation in various rural areas, a travel grant ($1,000) will be given to 10 participants who apply to the workshop grant program. If we have more than 10 applicants, we will select the recipient based on a variety of geographic regions that reflect the ethnic, racial, and economic diversity of the applicants' communities.

Phase 3C. Co-design of prototype social services with partners: While we are developing our initial model, we will also start recruiting participating libraries to co-create our service model. Our goal is to recruit four libraries nationwide that have implemented some efforts to provide social services or that are interested in building services for their communities. For recruitment, we plan to invite one library from Phase 1. For the other three, we will use our AB network, advertisements through ARSL during the workshop, and various communication channels, including social media. We will also attend the American Library Association (ALA) and other conferences to advertise our project and recruit partners. We will consider the ethnic, racial, and economic diversity of applicants' communities as well as various geographic regions in our selection of partner libraries.

Once recruitment is completed, we will work with partner libraries to co-design a prototype social service. Prototype services for public library users will evolve alongside the theoretical model, and we will host an individual library meeting (monthly) and a group meeting for all libraries (quarterly) to share different insights and experiences. When designing the service model, we will adopt the organizational capacity dimensions that were initially developed in the PI's previous project (#LG-72-17-0139-17) and successfully adopted in a model building and testing (#LG-96-17-0184-17, #LG-250098-OLS-21). Capacity dimensions include six different areas—vision, human resources, financial resources, administration, infrastructure, and network—and have been useful in systematically reviewing organizations' readiness to start new initiatives or expand existing efforts. We cannot specify what types of services we will be designing; our goal is to let the data guide us with the project's progress. However, at this point, given the existing research, we know that there are many intervening factors for rural libraries' social service design, such as less concentrated social resources, small library spaces with limited privacy, etc., which will be reflected in our service design.

The final prototype social service model will be evaluated by our AB and rural librarians from the Phase 1 study. To gain broad community feedback, we will also conduct a focus group study with six to eight relevant stakeholders, including rural librarians, library social workers, library educators, social work educators, and community agencies. Our final prototype will be widely shared with communities through various channels (see our **Dissemination Plan**).

2.4. Project Evaluation

Two types of evaluation, 1) research and 2) project, will be conducted to ensure this project's effectiveness, efficiency, quality, and timeliness. To evaluate the research's progress, rigor, and outcomes, we will adopt a participatory evaluation framework and invite our advisory board and our partner libraries (Phase 3 only) to evaluate the project during each phase. Our AB (a team of experts from rural libraries, social work domains, and public libraries) will participate in the ongoing evaluation (e.g., reviewing the development of the instrument, such as survey questions and interview protocols, the implementation processes, and the team's collaborative work with partners). Each year, the AB will be invited to attend a half-day annual evaluation to discuss project outputs and how our findings reflect or contrast with their own experiences, how actions or plans to connect communities to social services would work in their organizations, and whether the resources and services developed are flexible enough to meet diverse organizational or community needs. As a community-engaged research project, we will utilize our target audience to collect their feedback. During the process of our prototype service design, we will continuously collect community feedback through ARSL or relevant professional associations, study participants from Phases 1 and 2, and our partner libraires to ensure the co-creation of knowledge and practice, as well as reflection from participants. After developing our social service model, we will conduct a focus group study with stakeholders to externally validate the model. In a formal setting, we will share the project outcomes at relevant conferences (see **Dissemination Plan**).

For the project evaluation, we will use a basic project management framework that includes processes, timelines, activities, and outcome measurements. We will use the **Schedule of Completion**, **Summary of Project Activities**, and **Performance Measurement Plan** to ensure appropriate project management.

2.5. Project Resources: Personnel, Time, and Budget

Project Team

Ayoung Yoon (PI) is an associate professor in the Department of Library and Information Science (DLIS) at Ruddy School of Informatics, Computing, and Engineering, Indiana University Indianapolis (IUPUI). Her research has been focused on community data and data reuse, which led her to the issue of underserved communities' social needs. She is the recipient of several IMLS grants on the topic of community data, public library's data services, data curation, and community data competency development (PI: #LG-72-17-0139-17, #LG-96-17-0184-17; Co-PI: #LG-250098-OLS-21, #RE-252380-OLS-22).

Michin Hong (Co-PI) is an associate professor at the School of Social Work at Indiana University. Her areas of research have focused on modifiable factors that affect disparities in health and access to health care. As a result, she conducted numerous research projects examining the unmet needs of underserved populations, including rural hospice social workers, language minorities, and older adults with cognitive impartments.

Graduate Student Research Assistant: The graduate student researchers (one PhD student and one master's student) will assist in various research activities, literature review, research protocol development (surveys and interviews), data collation, and initial data analysis. They will also attend professional conferences to advertise our project, present our research findings, and build a network.

Advisory Board (AB) (See **Supporting Document 2 — Letter of Support**)

Yanna McGraw is a social worker at Indianapolis Public Library. As a licensed social worker in Indiana, she has experience working in mental health, home-based services as a case manager, and visitation facilitator.

Andrea Copeland is a Chair and Associate Professor at DLIS, IUPUI. Her research area is public libraries and community engagement. She was the Co-PI of IMLS funded project, Data Reuse for Local Communities (LG-96-17-0184-17) investigating community data reuse practice and PI a project (#LG-250098-OLS-21).

Beth Wahler is a Director of the School of Social Work, University of North Carolina at Charlotte, and founder of Beth Wahler Consulting. She is a researcher, educator, consultant, and social worker that has collaborated with individual libraries, large library systems, and statewide library organizations throughout the U.S. to conduct needs assessments of their patrons' psychosocial needs and staff challenges with these types of patron needs, compare needs between urban and rural libraries, provide training to library staff.

Ali Iserman has been Director of Mediapolis Public Library, IA since August of 2019. In 2019, Ali was one of only 30 librarians in the country to be accepted into the ARSL Outstanding in their Field ARSL Leadership Institute. Ali's true passion is life-long learning.

Jessica Anderson is Director of the Humboldt County Library System in the rural northwest with a bookmobile and branches in Winnemucca, Denio, and McDermitt. She has worked in a variety of positions with people and sees the value the library can offer within the community in social services and education.

Project Collaborator (See **Supporting Document 2 — Letter of Support**)

Association of Rural and Small Libraries (ARSL) is a professional network dedicated to the positive growth and development of libraries serving rural and small communities. The project team will partner with ARSL to conduct a national survey study with rural librarians and collect community feedback on our project outputs.

Project Budget

Total project cost $498,268 (Indirect cost: $174,047, 58.50%). See the details in **Budget Justification**.

Project Plan and Timeline

This is a three-year project. The **Schedule of Completion** lays out the duration of the major activities.

2.6. Communication and Dissemination Plan

It is important that the PIs ensure effective communication throughout the project phases, both internally and externally. There are several avenues through which information about this project will be disseminated and communicated: (1) communication with the communities served by the rural libraries that are interested in

using library social services; (2) communication with the rural librarians participating in Phase 1 and our partner libraries and stakeholders during the process of data collection, theoretical model development, and service development; (3) communication with library professionals and LIS educators to increase their awareness of the project and the topic and achieve a broader impact; and (4) communication with social work professionals and social work educators that can promote further collaboration and future work. For internal communication within the project team, participating rural librarians, library social workers, the partner libraries, and our board, we will use a virtual storage space to share progress through IU OneDrive and host a monthly/quarterly partner meeting (Phase 3), as well as a yearly AB meeting.

For project and outcome dissemination for feedback and promotion, the project team will use several approaches including the following methods: conference presentations (e.g., ARSL, ALA, RIPL, ALISE, Society of Social Work Research, Council of Social Work education, and Rural Social Work Caucus), journal articles, a project website, a workshop, a focus group, our partner libraries and collaborators, project teams' professional networks and affiliations with professional associations, the DLIS, IUSSW alumni network, the National Association of Social Workers, and targeted outcome announcements on a wide range of listservs for library audiences including ARSL, the Library and Information Science Educators' Information and Discussion List (JESSE), and Whole Person Librarianship. Our workshop will provide an opportunity to easily bring together individuals from libraries and library social workers, which effort can be extended to include community agencies, and LIS educators in our future study.

2.7. Sustainability and Future Plans
The impact of this research beyond the project will depend on how successful we are at building capacity throughout the project. First, it will be important to raise awareness among relevant stakeholders about the significance of social services, the roles of libraries, practical methods to meet communities' social needs, and the potential impact on communities by sharing the experiences of rural libraries dealing with communities' diversifying needs. Further, by working with rural librarians to co-create the service model with practical recommendations and to facilitate provisional social services in rural libraries, it will be likelier that the model will be adopted by others and will undergo continued development.

Upon successful completion of this project, the project team will apply for the full National Leadership Grants for Libraries to validate the generalizability of the model and implement the model. While we argue that our model would be applicable in different rural contexts and has the potential to impact all public library strategies for addressing social service needs, testing and validation of the model is significant for advancing our team's efforts and promoting libraries' engagement with social services while ensuring the external validity of the model. Furthermore, one weakness of our model is our community study conducted in rural Indiana. Compared to national statistics, rural Indiana shares several commonalities of rural characteristics of nations, such as poverty, food insecurity, etc., but is less diverse compared to southern rural areas (e.g., new immigration, undocumented populations, multi-language ethnic groups). Validating our model will enable the transfer of knowledge across situations, resulting in generalizability and scalability beyond this project. We will also integrate the model into our master's courses targeting both social work and LIS students (e.g., S575 Public Library Services, S604 Community Engagement, and S604 Special Topic on Social Services) and disseminate the work to the LIS and social work education community.

3. Project Results and National Impact
This research creates tangible products for rectifying gaps in both library and information science and social work's research, practice, and education. This project is truly interdisciplinary from development, implementation, and evaluation of the project. Thus, it will maximize the benefits of interdisciplinary collaboration while providing an implication for future interdisciplinary research, practice and education.
Research

Our findings will broaden the understanding of library social services and the role of library social workers. Overall, library social services are an understudied area, especially in the context of rural libraries. With the growing needs of rural communities for social services, it is timely to investigate rural communities' perspectives from a bottom-up approach and connect the communities with existing resources and infrastructure. The ultimate outcome of this project will promote a change in the practice of libraries through different social service approaches. Ideally, an increasing number of libraries will adopt some or all models to provide the services needed by their communities. Methodologically, our study can also be a testbed for studying and engaging rural communities and overcoming known challenges, such as restrictive cultural norms, by utilizing local human resources and local networks. Our research will demonstrate the value of theoretical research for understanding the impact of the dynamic and reciprocal relationships between public/rural libraries and their communities on library services. Our prototype model can potentially be implemented at various locations if validated on a national scale, which can be a useful resource/tool for rural libraries to meet community needs.

Practice

Our outcomes will have a strong implication for and impact on library practices and their communities and help bring attention and awareness to potential barriers and opportunities for social services for rural communities. Our work will offer insight into interlibrary practices as well as external partnership building because providing social services in libraries does not mean simply hiring a social worker who can deal with patrons in crisis. Preparing and offering a new community service in collaboration with other professions involves changes in internal practice and policies (e.g., most library policies present serving homeless people to get access to resources and services such as proof of ID and address are required, which homeless people do not hold), understanding of interprofessional knowledge and skills, knowledge in intensive community practices, etc. Our model will be a useful resource for reviewing the different dimensions of library social services.

This project will offer a new way of serving rural communities to social work practitioners, as libraries are a nontraditional setting for social work professions. Our findings will delineate the essential responsibilities and expectations of library social workers in rural communities, promoting the necessity of and awareness of the role of library social workers. Also, this project will promote collaboration between librarians and social workers to deal with the obstacles that rural social work practitioners often face (e.g., social, and spatial isolation, the lack of resources and trained practitioners, and limited access to services and care), not working as a silo but working as a team, which creates greater collaboration with community agencies, and other relevant stakeholders in rural areas.

Education

Our findings will also provide implications for LIS education by broadening the role of Library and Information professionals in social services and by identifying the necessary skills and knowledge to perform this new role. As previous studies argued that MLIS programs do not generally provide significant preparation in skills in social services (Soska & Navarro, 2020), our study findings will be used to train future informational professionals with those skills and knowledge, create interdisciplinary educational opportunities with a collaboration with social work, public administration, organizational studies, etc.

This project will have two implications for social work education. First, our findings will provide empirical evidence to teach social work students the necessary skills and knowledge to be competent rural social work practitioners. Second, the project will broaden the scope of social work internships, which are an essential component of social work education. Given the increasing interest in community-based internships, our project will demonstrate the possibility of rural libraries as a social work practicum setting.

Social Service Design in Rural Libraries: Schedule of Completion (8/2023 – 7/2026)

Phase	Activity	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul
Prep	Project set up; IRB submission	x	x										
1-A (2023-2024)	**Rural community survey**: student training, survey prep		x										
	Rural community survey: data collection			x	x	x	x						
	Rural community survey: data analysis & summary					x	x	x					
1-B (2023-2024)	**Librarian interview**: IRB approval, protocol development							x	x				
	Librarian interview: data collection & analysis								x	x	x	x	
1-C (2023-2024)	**Environmental scan** & community resource maps				x	x	x	x	x	x	x	x	x
	Year 1 Advisory board meeting												x
	Interim report due to IMLS					x							
2-A (2024-2025)	**National survey**: IRB, questionnaire development, pretesting	x	x										
	National survey: data collection & analysis		x	x	x	x							
2-B (2024-2025)	**Library social worker interview**: IRB, protocol development					x	x						
	Library social worker interview: data collection & analysis					x	x	x	x	x	x	x	x
	Interim report due to IMLS					x							
	Year 2 Advisory board meeting												x
3-A (2025-2026)	**Theoretical model development**	x	x										
	Workshop: prep, hosting, wrap-up	x	x	x									
	Co-designing prototype social services: Partner recruitment	x	x	x	x								
	Co-designing prototype social services: Designing				x	x	x	x	x	x			
	Co-designing prototype social services: Community feedback & Focus group study									x	x	x	
	Project wrap up, prepare for next step (IMLS proposal)												x
	Final report to IMLS												x

Digital Products Plan

Type
This project will produce digital products including survey (descriptive statistics) and interview data, community resource map(s), workshop materials, a prototype service model, and evaluation data on project outputs. Survey data will be collected using the Indiana University (IU) license of Qualtrics, then exported in CSV and Excel format. Interview data will be collected using the IU licensed Zoom and transcriptions will be analyzed using the IU license of NVivo. Standard web services, word and image processing tools will be used to create other project resources, including Microsoft word and PowerPoint. These digital products will be in spreadsheet, text format, code, and images. Formats will include PDFs, Word docs, PowerPoint, CSV, Excel, R, SAV, MP4, and JPEG/JPG or PNG.

We will submit appropriate IRB for all aspects of this project that involve human subjects and will follow the appropriate IRB procedure. All personally identifiable information (PII) and organizations' names will be anonymized prior to publication. No PII will be kept within the research data and will be destroyed once this project has been completed. All interview recordings will be used only for internal analysis and recordings will be destroyed once the analysis is complete.

Availability
The data products will be deposited in an appropriate place, such as ICPSR, Qualitative Data Repository, IUPUI ScholarWorks (scholarworks.iupui.edu), IUPUI DataWorks (dataworks.iupui.edu), and other open dissemination networks (i.e., Open Science Framework, Zenodo). Some of digital product may still have a risk of breach of confidentiality (e.g., interview data from a small, specialized study populations when asked a highly community contextual questions), which will make data deposit difficult. In this case, we will consult with an expert/staff in data archive to discuss a possibility of deposit and a level of availability.

Access
The PIs will hold the copyrights of the digital products. To maximize dissemination and reuse of project resources/outputs, we will assign Creative Commons Attribution (CC By 4.0) license. This license promotes sharing, reusing, and dissemination. The users can share (copy and redistribute) and adapt (remix, transform, and build upon) digital products. They must provide attribution, a link to the license, and indicate if changes were made. They must not be used for commercial purposes. The licensing information will be included in all materials and users will be notified of the licensing information through ScholarWorks, DataWorks, and OERCommons.

Sustainability
All data products will be stored during the project's duration using IU's One Drive, which provides backup and sharing of data products. The data products will be shared through domain or institutional repositories (e.g., ICPSR, IUPUI's institutional repositories ScholarWorks and Data Works). This will provide DOIs for permanent access. The domain and institutional repositories will preserve, backup, and ensure metadata is migrated over-time when needed.

Data Management Plan

Data Overview

The current proposal will collect two types of primary data. This involves the collection of survey data (quantitative data) and interview data (qualitative data). Those data will be used to answer two primary research questions specified in the project proposal (RQ1. *What are rural communities' social service needs?* RQ2. *How have rural libraries' existing social services and library social workers addressed their communities' social needs? What are the libraries' perceived roles in this?*).

Two different survey data will be collected. First on is with rural communities in Indiana (between Oct – Dec 2023). We aim to collect about 120 responses from the phone survey after our recruiters distribute the invitation flyers of the survey, which include a brief explanation about the survey and contact information of the project team in local grocery stores, gas stations, post offices, local events, libraries, hardware stores, etc. All participants will receive $40 gift card upon the completion of the survey. The second survey has a national focus targeting rural library staff. We will distribute an online survey using Qualtrics through ARLS network between Sep – Nov 2024. To increase the survey response rate, a small incentive in the form of a $20 Amazon.com e-gift card will be awarded to 200 participants.

Interview data will be also collected from two different populations. First interview data will be collected from rural library staff across rural counties in Indiana. Our goal is to interview seven library staff, and each participant will receive a $70 gift card. The data will be collected between Mar to Jun, 2024. Second interview will target library social workers across the nation. These interview data will be collected from in-depth interviews with 15 library social workers (five each from urban, suburban, and rural areas). Each participant will also receive a $70 gift card, and the data will be collected between Feb to Apr, 2026. All interview data will be collected using IU license Zoom (audio only).

Sensitive Information

The project will not collect any sensitive information, personally identifiable information (PII), confidential information (e.g., trade secrets), nor proprietary information. The only PII will be used during our data collection is the name, position, and contact information (work numbers, email addresses) of library and social work professionals, which will be used to identify and contact the study participants. We will keep this information in a separate excel file in a secured folder under IU OneDrive, which only the project team has exclusive access to, and will remove the file upon the analysis of data. The overall accessibility, security, and protection of this server is under the governance of University Information Technology Services (http://uits.iu.edu/) and regulated. Only project team members (IRB approved research personnel) will have access to the project folder and data. Also, audio recordings from the interview data will be permanently deleted after being transcribed. While the content of the interviews is not particularly sensitive, all personally identifiable information will be removed from the transcriptions.

Finally, while the project team will remove all personally identifiable information, they may still include some identifiable information due to the contextual nature of qualitative data (e.g., interview data with library social workers as the study populations are small and their work is highly based on the community characteristics).The project team will consult with the social science data librarian at IUPUI as well as the data curator at the Qualitative Data Repository (QDR) at Syracuse University to consult the possibility of data deposit and properly process additional anonymization of data if necessary.

Requirements and Dependencies

The survey data will be analyzed using SPSS (Statistical Package for the Social Sciences) or R and the interview data will be analyzed using NVivo. However, we will export our raw and processed data in non-propriety format, such as CVS and .docx, which can be access using standard software (e.g., Microsoft word and Excel) as well as open-source software such as Google Docs.

Documentation

The project team will manage the data at document level and create data documentation from the point of data creation. We will use the Dublin Core metadata standard to provide a project-level description associated with the data collection and a file-level description. The codebook will also be kept with data documentation.

The project will follow the best practices of data organization and documentation (e.g., naming conventions, file structure, and data formats) as suggested by ICPSR (Inter university Consortium of Political and Social Research) and QDR.

Post-Project Data Management

Intermediate and preliminary results may be shared with participants and collaborators, as approved by the IRB, without violating confidentiality and privacy.

All data will be freely available and proactively disseminated to the public, the research community, and the professional community. For public access, our data will be deposited in an appropriate place, such as ICPSR, Qualitative Data Repository, IUPUI ScholarWorks (scholarworks.iupui.edu), IUPUI DataWorks (dataworks.iupui.edu), and other open dissemination networks (i.e., Open Science Framework, Zenodo).

However, given the time-intensive nature of data analysis and the process of data preparation required for sharing data, immediate sharing of data may not be possible.

Data reusers may download any part of the data for non-commercial, personal or research uses under Creative Commons Attribution (CC By 4.0. While there is no restriction will be placed on the sharing and reusing of our data, we will encourage a recommended practice of data reuse through data citation. The licensing information will be included in all materials and users will be notified of the licensing information through repositories.

Review and Monitoring

Our DMP will be reviewed by the project team members upon the completion of each data collection. We will integrate data management plan as a part of project practice and train our research assistants to implement and monitor the practice. We will also conduct a yearly audit on our data management plan for any necessary changes and updates. Depending on the nature of data, we will also consult with a professional staff (e.g., data management librarian) to implement best practices for data deposit and future reuse.

Organizational Profile

Organizational Description

Indiana University is a major multi-campus public research institution, grounded in the liberal arts and sciences, and a world leader in professional, medical, and technological education.
Indiana University's mission is to provide broad access to undergraduate and graduate education for students throughout Indiana, the United States, and the world, as well as outstanding academic and cultural programs and student services.

Indiana University–Purdue University Indianapolis (IUPUI), a partnership between Indiana and Purdue universities, is Indiana's urban research and academic health sciences campus.
IUPUI's mission is to advance the state of Indiana and the intellectual growth of its citizens to the highest levels nationally and internationally through research and creative activity, teaching and learning, and civic engagement. By offering a distinctive range of bachelor's, master's, professional, and Ph.D. degrees, IUPUI promotes the educational, cultural, and economic development of central Indiana and beyond through innovative collaborations, external partnerships, and a strong commitment to diversity.

The Indiana University Luddy School of Informatics, Computing, and Engineering at IUPUI fosters a broad and interdisciplinary view of informatics and uses this view to explore and expand knowledge in informatics education and research. Along with the many schools and departments located on the Indiana University Purdue University urban Indianapolis campus, the School is firmly committed to a welcoming environment, a diverse faculty and student body, and to efforts which support Indiana's economic development.

The mission of the Indiana University Luddy School of Informatics, Computing, and Engineering is to excel in education, research, and civic engagement in the field of informatics, an integrative discipline which advances knowledge in computing, information, and media technologies; the implications those technologies have for individuals and society; and their application to any field of study adapting to the challenges of the Information Age.