# UW School of Nursing Resources – template: tailor to your specific grant and remember not to include any URLS for grants going to NIH

*Updated August 2021*

**UNIVERSITY OF WASHINGTON (UW)**

The UW, founded in 1861 is one of the nation’s premier educational and research institutions. UW faculty and staff are the backbone of the school's continued top-ranking position committed to the pursuit of excellence in education, research, and community service.  Ranked No. 16 in the world on the [2020 Academic Ranking of World Universities](http://www.shanghairanking.com/ARWU2017.html), the UW educates more than 54,000 students annually. All faculty at the UW are required to attend training on the ethical conduct of research. All trainees have instruction in the nine elements of responsible conduct of research (I.e., data acquisition, management, sharing, ownership, mentor/trainee responsibilities, publication practices and responsible authorship, peer review, collaborative science, protection of human subjects, research involving animals, research misconduct, and conflict of interest and commitment). Bioethics & Humanities at the UW provides academic education & professional training in medical humanities through various continuing education activities for practicing health care professionals. The department focuses on issues of justice, health disparities, improving end-of-life care, genetics, & research ethics. The research community at the UW hosts a variety of accessible presentations, supported by schools and departments within the individual Schools of Health Sciences and the Institute of Translational Health Services (ITHS), that highlight state of the art research done by UW and visiting faculty. This gives the faculty a chance to view examples of completed research projects, which may be relevant in their field or using similar methodology.

**UW OFFICE FOR RESEARCH (UW-OR**)

The UW-OR provides numerous resources focused on supporting investigators during applications and throughout the grant lifecycle. This includes helping investigators to adhere to all state and federal compliance standards through our Office of Sponsored Projects. UW-OR offers support for faculty and graduate students who are seeking research funding, including a database that catalogues thousands of funding opportunities tailored to each School’s programs of research. The Office of Research Information Systems is constantly developing new electronic tools to facilitate grant application, compliance, and management. The office provides frequent and up-to-date training on scientific writing, grants management, compliance, and other topics via their webpage, through seminars and training sessions. **Dr. X will utilize this extensive research infrastructure by attending UW OR trainings on human subjects and post-award grant management and obtaining IRB approval for the proposed study through UW-OR's zipline IRB application.**

**University of Washington School of Nursing (SoN)**

Established as an independent school within UW Health Sciences in 1945, the UW SoN has been a top-ranked school in the nation since 1984, when the first national survey of nursing schools was conducted. The SoN is organized as an autonomous school within the Health Sciences Center. In 2020, the Seattle Campus of the SoN had 692 undergraduate and graduate students and 52 professorial and research faculty. The UWSoN is organized into two departments- Child, Family and Population Health Nursing and Biobehavioral Nursing and Health Informatics- (each led by a Chair) under Executive Dean Emami’s leadership.

 All faculty members are given an office in the SoN and their department provides each faculty member with computers, office supplies, and access to equipment such as printers and photocopiers. In addition, they will have access to shared conference rooms in which their research team can meet and conduct trainings. **Dr X and their team hold faculty appointments and maintain ample office space in X Department.**

Research is at the core of the school’s mission to improve education, practice and patient outcomes. As such the research facilities of the SoN are extensive, and the Dean and the Graduate Faculty have made research and research training in Nursing Science a priority. The SoN consistently ranks among the top schools for overall research grant funding, receiving more than $11 million in total research support from a wide variety of government and non-government sources in FY 2021. With more than 200 active and pending research projects, over 30 of which are funded through NIH and related agencies, the SoN ranks among the highest for NIH funding among nursing schools in the country. Our strategic research initiatives inform our faculty research and include four key areas:

* **Health Equity** research examines the differences in quality, outcomes and access of health and healthcare across populations around the globe. Areas of study include social injustice, underserved populations, community-based participatory research and environmental influence.
* **Symptom Science** research examines lifestyle, environmental and/or genetic factors that affect illness, disability and disease to develop improved, personalized strategies to treat and prevent adverse symptoms and chronic illness across diverse populations and settings.
* **Innovative Interventions** research deploys rare and novel strategies for understanding, interpreting, translating, gathering or otherwise using data and information to draw conclusions and ask important questions. Innovative interventions include big data analysis, new tools and technology, and utilizing established concepts in new ways.
* **Lifespan Health** research studies health and well-being across the human lifespan, from developing fetuses to end-of-life. Studies focus on understanding and promoting health during age-specific times in the human life.

**Office of Nursing Research (ONR)**

The ONR provides rich infrastructure which supports the UW SoN’s research mission to advance nursing science. UW is among the top ranked SoN in research funding from the National Institutes of Health (NIH), with five centers of research excellence and more than 200 active and pending research projects. ONR offers Statistical & Research Design Consulting to faculty, postdoctoral fellows and PhD students in the SoN. Under the ONR, the Associate Dean for Research (ADR) is responsible for overseeing the infrastructure for all aspects of research within the SoN. The ADR is available to support researchers at every stage of the research project development and implementation; assist individual investigators with identifying which of the UW core facilities can house and support projects; help facilitate networking within the SoN, the University of Washington, and the greater research community as well as assist in the development of the researchers’ long-term program of research and career goals. Through the ONR, the ADR also facilitates faculty access to resources that address issues in grant preparation including, methodology, analysis, statistical methods, grant form preparation, and scientific writing. The ADR leads the Group Consultations (aka Modeling Parties) designed to help faculty, postdoctoral fellows and PhD students develop and critique grant applications. Reviewers are made up of faculty from the SoN or other units on campus who have relevant experience with research design, analysis, the subject matter, and/or have served on internal and external grant review committees. ONR assists the researcher by identifying potential reviewers to provide feedback and coordinating the meeting time, place and any conferencing technology needed.

**LABORATORIES**

**University of Washington School of Nursing Biobehavioral Laboratories**

The Biobehavioral Laboratories in the UW School of Nursing includes several fully equipped Biochemical Laboratories, and expertise, for measuring innovative biomarkers including enzymes, hormones, cytokines and peptides in a variety of specimens including plasma, whole blood, stool, hair, and saliva.

Biochemical: The biochemical laboratory has instrumentation which measure neurochemicals (e.g., serotonin, 5-HIAA, catecholamines) and hormones (e.g., prolactin, growth hormone, testosterone, estrogen, progesterone, FSH, LH, cortisol, ACTH, melatonin). Biological sources for testing include whole blood, serum, plasma, urine, stool, hair and saliva. Assay methods are primarily of the ELISA type, using commercial analytical kits obtained from reliable manufacturers (R & D Systems, Salimetrics, and Cayman Diagnostics).

Immunology: The Immune Function Laboratory performs assays to determine cell phenotypes, and cytokine production using the ElliSpot technology. Equipment includes a Class II biological ​​safety cabinet; tissue culture incubator; refrigerated centrifuges; microfuge; microscopes (compound, inverted tissue culture and fluorescence); plate reader (for ELISA assays); plate washer; and ample refrigeration (-70° and -20° freezers, and liquid N2 storage).

Molecular: The Molecular Genetics Laboratory facilities include an ABI 7300 RT\_PCR  detector; high-speed refrigerated Jouan centrifuges; a NanoDrop™ DNA/RNA quantitator; Kodak imaging system for gel documentation; hybridization incubators for Northern and Southern analysis; 2D gel electrophoresis units; SpeedVac system; PAGE electrophoresis units; power supplies; and data analysis software for designing custom PCR primers and analyses.

The laboratories described above represent a wide array of accessible and contemporary testing services, which are available to investigators both within and outside of the UW. This service, which is self-sustaining, was established under the Office for Nursing Research and increases availability of and access to our resources. A personalized list of all assays and pricing is available to investigators by completing an intake form. **Dr. X will use the X,X,Y and storage services of the Biobehavioral Laboratory to complete the X analysis proposed in Aim X (see attached letter of support by Dr. Webel & Lab Manager Mr. Tolentino).**

**Behavioral Laboratory**

A Cardiovascular (CVS) Monitoring Laboratory is equipped with components of a BioPac physiological data acquisition and analysis system, Holter monitoring and analysis systems, ambulatory skin conductance (Hot Flash) monitors, and respisomnograph system.

Computational: The computational laboratory includes workstations that support monitoring and analysis of specialized heart rate variability/ANS data. ANCS-Pearson OPSCAN-5 mark-sense form scanners and associated workstation is available to qualified projects and users. This scanner supports high volume research data input (3600 forms per hour) for reading standardized preprinted mark-sense forms commonly used in educational testing and psychological assessment.

**Sleep Research Laboratory**

One of the first sleep research labs in the country, the University of Washington Sleep Research Laboratory consists of a fully equipped control room and sleep study research area with three bedrooms and shower/ bathroom facilities. Polysomnographic recordings of sleep can be obtained from three subjects simultaneously by means of a computer-based sleep EMBLA acquisition system and a portable computer-based polysomnographic sleep recording system is available for monitoring sleep in home or clinic settings. Numerous microprocessors (Mini-Mitter® actigraphy) are also available for recording of activity and body temperature (BioPac) and software is available for scoring the activity data for sleep detection and cosinor analysis of temperature data. Sleep Strategies also do off-site analysis of data.

More than 25 Actigraph watches for recording physical activity (Philips/Respironics/Minimitter, Sun River, OR) and software for scoring the data into wake and sleep stages are available for checkout. Ambulatory physiologic monitors (Minimitter, Sunriver, OR) are available for simultaneous recording of physical activity, heart rate and body temperature. **Dr. X will use the X, services of the UW SoN Sleep Research Laboratory to complete the X analysis proposed in Aim X (see attached letter of support by Dr. Webel & Lab Manager Mr. Tolentino).**

**Clinical Studies Unit**

The three clinical studies interview/exam rooms provide private and comfortable space for clinical research. Rooms are setup to allow private subject interviews, examinations, testing or blood draws and collection of body fluids. A refrigerator is available for storing samples for a short period (not to exceed 24 hours).

**Dr. X will use the UW SoN Clinical Research Unit to complete the interviews/assessments/ measurements (Aim X) (see attached letter of support by Dr. Webel & Lab Manager Mr. Tolentino).**

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## **STATISTICAL & RESEARCH DESIGN CONSULTING**

# Services are available for faculty, postdoctoral fellows and PhD students in the School of Nursing through the Office for Nursing Research (ONR).

## **Bioengineer:** *Analytic methods*: time series analysis, lag sequential Markovian analysis, causal models and confirmatory factor analysis. *Research areas of special interests*: Role of bioinstrumentation in complex research studies, cardiovascular psychophysiology, analysis of dynamic signals and systems, role of technology in nursing research, education, and practice.

## **Biostatistician:** Study design and interpretation; advanced statistical analysis methods including logistic regression, random and mixed effects models, survival time analysis, and generalized estimating equations for analysis of clustered data.

## **Statistician:** Multivariate models, variable and selection, graphical models and social networks.

**Survey Design & Research Consultant:** Catalyst and REDCap survey design, statistical programming in Stata, panel and pooled time series designs, structural equation models, multi-level modeling longitudinal analysis including latent growth models, random and mixed effects models

**Group Consultations** (aka Modeling Parties) are designed to help faculty, postdoctoral fellows and PhD students develop and critique grant applications. Reviewers are made up of faculty from the SoN or other units on campus who have experience with research design, analysis, the subject matter, and/or have served on internal and external grant review committees. Whenever possible, a modeling party is led by the Associate Dean for Research and one of the consultants from the Office for Nursing Research (ONR). The office also assists the researcher by identifying potential reviewers to provide feedback and coordinating the meeting time, place and any conferencing technology needed.

## The **Associate Dean for Research** is responsible for overseeing the infrastructure for all aspects of research within the School of Nursing. She is available to support researchers at every stage of the project development and implementation. She can assist individual investigators with identifying facilities to house and support projects; networking within the School of Nursing, the University, the greater research community; emphasizing the preparation of research grant proposals. The Associate Dean for Research is available to meet with researchers one-on-one to discuss the feasibility of an individual research project and also assist in the development of the researchers’ long-term program of research and career goals. Through the ONR, the Associate Dean also facilitates faculty access to resources that address issues in grant preparation including, methodology, analysis, statistical methods, grant form preparation, and scientific writing.

**PI. X has previously consulted with X, one of the UW SoN ONR biostatistics consultants and will continue to collaborate with them on the proposed project. X will serve as the biostatistician on the project and will provide oversite of the MS statistician, as described in the budget justification.**

**TECHNOLOGY RESOURCES**

**University of Washington**

 **Data Management**

The University of Washington maintains robust data management resources to facilitate all aspects of safe, rigorous, and reproducible data management. Our University Libraries provide one-on-one consultations to help investigators design a secure data management plan that encompasses the lifespan of the data. Starting with designing the data management plan that is consistent with all local and national standards through to the helping investigators store, preserve and archive data to maximize its value. New UW investigators are encouraged to attend its recurring Research Data Management Workshop, which provides information on basic data stewardship concepts as well as pointers to a host of UW resources. **We will use these state-of-the-art data management resources to design/carryout our data management plan and ensure data are managed in a way that will facilitate rigorous and reproducible research methods.**

**Data Security**

The University of Washington’s (UW) computing facilities are managed by UW Information Technology (UW-IT), the central UW computing services organization. These data centers are secured facilities administered with identity-controlled physical access. The data centers are used for the UW Medical Center (UWMC) clinical systems, as well as for School of Nursing and University administrative systems, and are equipped with fire suppression equipment, redundant power, redundant connectivity, and are located in seismically secure physical facilities. Both clusters are directly connected to the Pacific Northwest GigaPop (the regional Internet-2 high performance network node), for enhanced reliability and high-speed network performance, and located in secure facilities that also house both identified and de-identified patient data used in a variety of clinical and public health research projects, including the University hospitals’ operational clinical systems, and access is limited to the security administrators and system programmers. The security infrastructure is driven by concerns about participant privacy and therefore all data systems, whether research or operational, are treated as if they contain identified data.

Database management in the UW School of Nursing is built with multiple layers of security and follows best practices for securing sensitive data. The main levels of security are fourfold and include: secure cloud-based security of the primary data sources in the office of principal investigator, data directory access controls, physical server security as described above, and firewall level security. Project computers and drives are all password protected, are protected by the UW SoN firewall, and are in locked offices within a building having limited, electronic passkey access. **We will use this robust, secure data management environment to collect, manage, and integrate our data throughout the study period.**

**Secure Data Transfer**

To facilitate the securetransfer of data collected or developed during research (e.g., raw data, data sets, student info, personal health info) the UW has developed a streamlined process for establishing data transfer agreements amongst institutions through CoMotion (<https://comotion.uw.edu/>). Sponsored research involving human subjects, PHI, or restricted data will complete the appropriate DTA, preferably based on the templates developed in the Federal Demonstration Project. The UW Office of Sponsored Projects will review the DTA, and if necessary negotiate terms on behalf of the PI, and approve the final DTA. **We will use the UW Secure Data Transfer resources to establish our data transfer processes and to securely transfer data between site X and site y.**

**School of Nursing**

The University of Washington School of Nursing’s technology needs are supported by Information Technology and Learning Technology teams. SoN Information Technology (SoN-IT) provides a stable and secure technology platform for research and teaching, while SoN Learning Technologies (SoN-LT) adds a variety of media.

The University of Washington’s School of Nursing (SoN) technology needs are supported by the Learning and Information Technologies (SoN-LIT) unit. SoN-LIT offers a hybrid set of IT and media solutions comprising services that are operated and managed internally, combined with those from UW Information Technology. When necessary, SoN-LIT contracts services from outside vendors. This allows the SoN to utilize a foundation of robust general solutions provided to the whole University while providing high-quality solutions for the specific needs of SoN projects.

Computing resources are available on campus through our managed network or remotely through a secure online gateway. SoN confidential data is hosted in UW-IT data centers or with external vendors under a UW Data Privacy and Security Agreement (DPSA).  UW human subjects, HIPAA, and FERPA compliant resources are available. A “Confidential Data Risk Guide” is available for Faculty and Staff to inform the use of communication services and technology (<https://ciso.uw.edu/data-privacy/cdrg/>). The office of the UW CISO ([https://ciso.uw.edu](https://ciso.uw.edu/)) provides contemporary support and rigorous oversight with regard to data privacy and security.

SoN LIT provides support for both synchronous and asynchronous distance learning using Adobe Connect, Canvas LMS, and Zoom videoconferencing enabling both webinars and video meetings. Additional curricular support is provided with Poll Everywhere (audience response), Proctorio (remote testing) and course recording services. SoN LIT provides full service support for streaming or capturing lectures from any campus location using Mediasite video recorders. Faculty and staff can use UW Panopto to self-record lectures. SoN LIT maintains full video production and interactive media capabilities to create instructional video and online training modules.

The SoN maintains approximately 500 computer workstations across multiple locations in the greater Seattle area. Computer workstations are networked by high-speed wired and wireless connections. SoN Faculty and Staff use Office365 & Exchange Online for email, calendaring, scheduling and administrative coordination. SoN workstations use the Windows operating system and are secured by an integrated firewall and antivirus software.  All SoN have standard productivity application software for word processing, spreadsheets, and presentations installed. The SoN has the capacity to build study-related research websites.

SoN faculty and staff computer workstations can access both central UW and SoN provided research resources. These include statistical analysis, data management, and quantitative and qualitative analysis packages such as SPSS, STATA, M-PLUS, Stat Transfer, Atlas.ti, MAXQDA and MATLAB. UW-IT provides cloud-based and high performance data computing support to UW researchers

**We will use the robust resources of the SoN-LIT to support the team’s ongoing computing needs (Aims 1-3), to build the study’s website and digital presence (Aims 1-3), and to conduct our video-recorded XX… (Aim X).**

The SoN Simulation Center serves as a learning resource center for faculty, undergraduate students, graduate students and the UW community. It is a 7500 square foot space that is set up to support training in a clinically accurate space. It includes 3 hi-fidelity simulation areas with 2 debriefing rooms, 4 exam rooms, and inpatient and outpatient training areas. It includes practice materials, supplies and equipment for the performance of a variety of healthcare procedures, along with specialized high-tech equipment commonly used in acute care settings, in addition to a variety of patient care simulators and task trainers. Simulation center staff are highly trained experts in simulation and are available for consultation regarding training equipment purchases. Simulation Center staff can also assist researchers in determining how to apply simulation in training, systems integration and other applications. Email the simulation center team for more information at simctr@uw.edu <https://nursing.uw.edu/students/sim-center/>.

# SUPPORT FOR EARLY STAGE INVESTIGATORS

***Recommendation: Incorporate these resources only if the applicant is an ESI, K applicant or trainee. Otherwise, delete***.

Departmental Support: The SoN Vice Chairs for Research provide support for faculty within each department. They assist faculty with the development of grant proposals and provide mentorship as early stage investigators develop research programs or as mid-career or senior faculty develop new avenues of inquiry. The Vice chairs for Research meet with faculty to ensure that they are fully utilizing available resources in the School and University, and that new faculty are adequately supported and encouraged in research career development. The Vice Chairs are available to read and provide constructive feedback on grant applications, posters, scientific journal articles, presentations and other work that is vital to developing an independent researcher career. **PI X worked with VCR X to help solidify and access to X, which is critical to completing the proposed procedures.**

School of Nursing: The School of Nursing provides on-going training to assist faculty and staff who are unfamiliar with the grant cycle, regulation compliance, grant applications, progress reports, and different kinds of sponsors. Training topics include: overview of the grant process, budget development, cost-sharing, human subjects for applications, overview of the UW review process, resource and data sharing, software needed for disseminating findings (e.g., endnote or adobe reader), reading funding opportunities, and many more. Training is also provided whenever there is a major change in the application process (such as the transition to new other support pages or biosketches).

New/Early stage investigators are strongly encouraged to take advantage of the consulting and advising services provided by the methodological consultants and the Associate Dean for Research (described above).

## University of Washington: The UW offers its tuition exemption program to all employees. This program waives operating fees for the first six credits each quarter. Junior faculty may augment their education as they or their mentors see fit.

## The research community at the University of Washington hosts a variety of presentations, supported by schools and departments within the individual Schools of Health Sciences and the Institute of Translational Health Services (ITHS), that highlight state of the art research done by UW and visiting faculty. This gives the faculty a chance to view examples of completed research projects, which may be relevant in their field or using similar methodology. There are also more general presentations on obtaining funding, scientific writing, statistical skills and other relevant topics sponsored by entities such as the University’s Office of Research, the Center for Statistics in the Social Sciences (CSSS) or the ITHS.

All faculty at the UW are required to attend training on ethical research. All trainees have instruction in the nine elements of responsible conduct of research (data acquisition, management, sharing, ownership, mentor/trainee responsibilities, publication practices and responsible authorship, peer review, collaborative science, human subjects protection, research involving animals, research misconduct, and conflict of interest and commitment).

The UW Office for Research (OR) provides resources focused on supporting investigators during applications and throughout the grant lifecycle. OR offers support for faculty who are seeking research funding, including a database that catalogues thousands of funding opportunities. Their Office of Research Information Systems (ORIS) is constantly developing new electronic tools to facilitate grant application, compliance, and management. The office provides training on scientific writing, grants management, compliance, and other topics via their webpage, through seminars and training sessions. (www.washington.edu/research/or/)

# OTHER RESOURCES IN THE SCHOOL OF NURSING

# NOTE: ONLY INCLUDE THE ONES BEING USED IN THE PROPOSED STUDY AND PLEASE DESCRIBE HOW IT WILL BE USED IN THE PROPOSED PROJECT

Center for Global Health Nursing: The UW School of Nursing Center for Global Health Nursing works to promote nursing research and training to build capacity for appropriate and sustainable improvements in health and healthcare. The Center for Global Health Nursing aims to do this through innovative nursing science, across differing cultural contexts, both locally and abroad. The center harnesses the existing expertise, experience, and enthusiasm of the UW School of Nursing faculty and students in partnership with local, national and global nursing organizations and academic institutions.

The Center ascribes to the definition of global health presented in *The*[*Lancet*](http://www.thelancet.com/journals/lancet/article/PIIS0140-6736%2809%2960332-9/fulltext?_eventId=login)that global health concerns any health issue that transcends borders, requires global cooperation and collaboration from multiple disciplines, aims to achieve health equity and embraces population-level prevention, as well as clinical care.

The center has four core functions:

* Research to improve health and healthcare locally and globally
* Promote and communicate the role of nursing in global health
* Support and development of student programs
* Collaboration and partnership with local and international organizations

The center values and promotes international, as well as local, global health research and practice. We feel strongly that best practices in global health can and should be applied to local problems in Washington State and in the United States.

**PI X will work with the Center for Global Health Nursing to refine the implementation science procedures (Aim X) as well as facilitate international collaborations necessary to maximize the impact of the study findings.**

## Center for Innovation in Sleep Self-Management: The new Center for Innovation in Sleep Self-Management (CISSM) develops, tests and implements self-management interventions to help adults and children with chronic illnesses sleep better and improve their health. The center leverages self-monitoring technologies, such as smart home sensors that track noise, light and temperature; mobile applications that measure dietary, exercise and caffeine intake; and wrist monitors that measure sleep-wake activity and light levels. These tools allow patients to monitor their sleep behavior, set goals and receive feedback on adopting healthy behaviors.

## Researchers also incorporate common data elements (CDEs) including pain intensity, fatigue, sleep disturbance, anxiety, depression, and positive affect and well-being, and technology to create a large repository that can be shared with other National Institute of Nursing Research-funded center grants, benefiting scientists and patients nationwide.

## The de Tornyay Center for Healthy Aging: The de Tornyay Center for Healthy Aging honors Dr. Rheba de Tornyay, Dean Emeritus of the University of Washington School of Nursing, and her lifelong interest in healthy aging. The Center serves as a catalyst for promoting healthy aging through its support of research and education in the field of gerontology for the School of Nursing, the University of Washington, and the broader community. People are living longer and there is a growing awareness of the importance of enhancing these added years for older adults, their families, and friends. The de Tornyay Center for Healthy Aging is committed to advancing and sharing knowledge about successful aging and ways professionals and systems can support optimal experiences for older adults.

## Barnard Center on Infant Mental Health and Development (BCIMHD): The Barnard Center on Infant Mental Health and Development promotes interdisciplinary research, education and practice and advances policy related to the social and emotional development of all children during the first five years. Their goals are: to advance knowledge about infant mental health and the centrality of early relationships to the healthy development of young children; to promote collaborative university-community partnerships for infant mental health education and training, advocacy, and clinical research; to offer educational opportunities in infant mental health at the undergraduate and graduate levels; to promote the mental and emotional health of young children and their families through effective preventive approaches to children's emotional, social and behavioral problems; to conduct longitudinal and clinical research on the development of vulnerable children and effective interventions; and to devote special attention through research, education and services to improve the social and emotional health of vulnerable children who already exhibit developmental delays, and those whose families experience risk factors such as domestic violence, extreme poverty, homelessness, absence of social supports, substance abuse or mental illness.

## **Other Resources at the University of Washington**

# NOTE: ONLY INCLUDE THE ONES BEING USED IN THE PROPOSED STUDY AND PLEASE DESCRIBE HOW IT WILL BE USED IN THE PROPOSED PROJECT

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## Environment for Research, Community Resources: The University of Washington is located in King County, an area of approximately 2.2 million people, and has an enrollment of 46,000 students. In addition to being the major center for higher education in the Northwest, it has one of the largest research programs in the nation and is well known for the excellence of its many graduate programs. The School of Nursing is organized as an autonomous school within the Health Sciences Center. The research facilities of the School of Nursing are extensive, and the Dean and the Graduate Faculty have made research and research training in Nursing Sciences a priority. The SON has a history of conducting research in community settings and involving community members in the design and implementation of research projects. Such activities should demonstrate respect for the contributions of success which are made by community partners as well as respect for the principle of “doing no harm” to the communities involved. In order to achieve these goals, the following principles should guide the development of research projects involving collaboration between researchers and community partners, whether the community partners are formally structured community-based organizations or informal groups of individual community members. In order to avoid confusion and potential misunderstandings, faculty and community partners alike are encouraged to explicitly review and discuss these principles as they apply to specific projects.

###### Community-Based Research Principles

* Community partners should be involved at the earliest stages of the project, helping to define research objectives and having input into how the project will be organized.
* Community partners should have real influence on project directionthat is, enough leverage to ensure that the original goals, mission, and methods of the project are adhered to.
* Research processes and outcomes should benefit the community. Community members should be hired and trained whenever possible and appropriate, and the research should help build and enhance community assets.
* Community members should be part of the analysis and interpretation of data and should have input into how the results are distributed. This does not imply censorship of data or of publication, but rather the opportunity to make clear the community’s views about the interpretation prior to final publication.
* Productive partnerships between researchers and community members should be encouraged to last beyond the life of the project. This will make it more likely that research findings will be incorporated into ongoing community programs and therefore provide the greatest possible benefit to the community from research.
* Community members should be empowered to initiate their own research projects, which address needs they identify.

## Institute of Translational Health Services (ITHS):

The Institute of Translational Health Sciences is dedicated to speeding science to the clinic for the benefit of patients and communities throughout Washington, Wyoming, Alaska, Montana, and Idaho. ITHS promotes this translation of scientific discovery to practice by fostering innovative research, cultivating multi-disciplinary research partnerships, and ensuring a pipeline of next generation researchers through robust educational and career development programs.

ITHS can support researchers by offering a number of resources, tools, and services. Among its programs are expert consultations in [biostatistics](https://www.iths.org/investigators/services/cbs/), [biomedical informatics](https://www.iths.org/investigators/services/bmi/), and [bioethics](https://www.iths.org/investigators/services/bioethics/). The ITHS [Education Program](https://www.iths.org/education/) supports investigators, scholars and research support staff through the development and maintenance of curriculum and career development education.

The ITHS [Research Coordination Center](https://www.iths.org/investigators/services/rcc/) is a multidisciplinary team of research coordinators, regulatory specialists, research nurses, and study monitors who provide creative research staffing solutions for projects involving human subjects. ITHS also offers mentoring in [preclinical development](https://www.iths.org/investigators/services/prd/) of novel therapeutic products, and in [clinical trials design](https://www.iths.org/investigators/services/clinical-trials-consulting/) and implementation. Their [Research Navigator](https://www.iths.org/about/contact/ask-the-research-navigator/) is available for personalized guidance on resources, services and strategies to most effectively translate research from the lab to the clinic.

For investigators that require clinical research space to conduct clinical research, the ITHS also maintains the Translational Research Unit (TRU), which is located in the UW Medical Center. The TRU offers access to dedicated inpatient and outpatient facilities, ten private and semi-private beds, office and computer space for research teams, a CLIA-certified laboratory, meal services, and two consultation rooms. Trained nurses are available for blood draws, placement of IVs, nursing observation, and vital signs monitoring. The TRU staff is experienced in supporting a variety of therapeutic, observational, and interventional clinical studies. Their areas of expertise include immunotherapy studies; high-volume and/or serial, closely spaced blood draws; and pharmacokinetic studies.

## Adult Translational Research Unit: The University of Washington Translational Research Unit is a core resource within the Institute of Translational Health Sciences (ITHS) that provides clinical research space and support for investigators conducting research with human subjects. The mission of the TRU is to enable investigators to conduct research protocols in the clinical setting.

The TRU facility includes: five patient care rooms (a total of 10 beds) for both overnight and day use; three patient care rooms (a total of 7 recliner chairs) for day use; a multi-purpose room used for blood draws, interviews; a consult room; a study staff room; a disability accessible shower/toilet; a clean utility and medication room; a soiled utility and specimen processing room; a staff work room; a nourishment room / tray hold area; and a conference room.

The TRU can conduct therapeutic trials, observational studies, feeding trials, questionnaire based studies and even population based studies requiring high throughput blood draws and sample collection for research on novel biomarkers.

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## Center for Cost and Outcomes Research: The mission of the Comparative Effectiveness, Cost and Outcomes Research Center (CECORC) is to discover the most cost-effective, evidence-based approaches to improving the health of patients and populations, and to identify ways to put these improvements into practice. CECORC’s primary emphasis is to evaluate medical devices, diagnostics and medical procedures. The research group carries out this mission by conducting innovative research, participating in clinical, database, other comparative studies, advancing the state of scientific knowledge through publications and education initiatives, and improving methodologies for studying the costs, quality and outcomes of medical care. CECORC investigators are committed to promoting collaborative, multidisciplinary cost and outcomes research, and to providing opportunities for fellows, residents and students to participate in comparative effectiveness, cost-effectiveness, and outcomes research.

CECORC brings together diverse investigators who have a common interest in health technology assessment and evaluating the value of medical technologies and procedures. Having a community of researchers and shared resources most importantly enhances the ability of individuals within the group to obtain extramural funding related to health services research in their respective fields. CECORC is a tangible center that has a strong publication record whose investigators are nationally and internationally recognized for their research. CECORC fills a much-needed niche at the University of Washington and regionally with its focus on the evaluation of medical technologies and procedures. Every Department and School involved with the health sciences is a potential collaborator. From a health policy perspective, State and Federal initiatives are now promoting comparative effectiveness and other type of health services research. In addition, private and public payers are increasing their standards for organizations to demonstrate evidence of value and appropriateness for medical products and procedures. Reimbursement policies are becoming more value-based, which directly relates to the core organizational objectives of CECORC, i.e., developing, evaluating, and disseminating evidence of value for medical technologies.

## Center for Human Development and Disability: CHDD is one of the nation’s largest and most comprehensive interdisciplinary research and training centers focusing on a wide array of developmental disabilities. More than 600 University of Washington faculty and staff members, as well as numerous doctoral and post-doctoral students, provide clinical services, interdisciplinary clinical and research training, and technical assistance and outreach training to community practitioners and community agencies. CHDD scientists and clinicians also conduct basic and applied research to generate new knowledge and disseminate information widely. The center includes two major cores:

*Eunice Kennedy Shriver Intellectual and Developmental Disabilities Research Center (IDDRC)* studies underlying causes of mental retardation and other developmental disabilities, and develops behavioral and biomedical techniques to prevent disabilities or minimize their impact. University of Washington faculty members from a wide variety of scientific disciplines are appointed as CHDD Research Affiliates. Supported by Scientific Core Facilities, they work in interdisciplinary collaborations to address developmental disabilities from a broad range of perspectives, including genetic factors, neurobiological processes, and behavior.

*University Center for Excellence in Developmental Disabilities* *(UCEDD)* is part of the Association of University Centers on Disabilities (AUCD), established in every state to train professionals within an interdisciplinary framework to meet the needs of people with disabilities, provide clinical services and model projects, reach out to the community with technical assistance and training, conduct applied research, and disseminate information widely. (depts.washington.edu/chdd/)

## Center for Ecogenetics and Environmental Health: Founded in 1995 under the leadership of Dr. David Eaton, The Center for Ecogenetics and Environmental Health (CEEH) strives to understand and communicate how genetic factors influence human susceptibility to environmental health risks. Researchers affiliated with the Center focus on the biochemical and molecular mechanisms underlying human variability in response to environmental exposures. The Center fosters collaborations between a large network of investigators working in toxicology, molecular biology, genetics, and environmental epidemiology, and includes a well established Community Outreach and Ethics Core (COEC) that has been serving K-12 students, science educators, and the general public for over twelve years.

The purpose of the CEEH is to provide an administrative infrastructure and technical support to foster multidisciplinary collaborations between researchers. To this end, the Center is organized into seven Areas of Research Emphasis (AREs). For the sake of clarity, faculty members affiliated with the Center are assigned to the ARE that most closely represents their primary area of research interest, although many have interests that cut across the various areas.

Center for Health Sciences Interprofessional Education, Research and Practice (CHSIE): CHSIE is dedicated to transforming practice by furthering collaboration between the healthcare professions, and functions as the coordinating body for interprofessional education (IPE). The Center’s core faculty, staff and partners represent disciplines across the health sciences, who are passionate about advancing interprofessional teamwork to improve patient safety and quality in healthcare. IPE at the University of Washington is comprised of a diverse array of projects, events and courses available to teams of faculty, clinical partners, UW staff and students from the six UW Health Sciences Schools as well as community partners. Our offerings include courses and training events for students at all educational levels (from pre-licensure to advanced practice); community-service learning opportunities; IPE leadership training for educators, administrators, healthcare providers; and continuing education and professional development for practicing care-team members.

In addition to IPE, our center is leading research efforts locally and nationally to promote Practice Transformation and Team Science. CHSIE researchers have partnered with the UW Institute for Translational Health Sciences (ITHS) to lead a new Team Science initiative within their Clinical and Translational Science Award from the National Institutes of Health. The Team Science team within CHSIE leads research and training promoting collaboration and cross-disciplinary research to address a scientific health challenge from bench to bedside. In addition, CHSIE has been increasingly involved in practice transformation since 2014. Practice Transformation or “Collaborative Practice” in healthcare occurs when multiple health workers from different professional backgrounds provide comprehensive services by working with patients, their families, and communities to deliver the highest quality of care across settings (WHO, 2010). The Center’s current work around Practice Transformation is focused on team-based approaches in ambulatory clinical care settings.

Institute for Public Health Genetics: The promise of revolutionary advances in medicine, public health, pharmacology, nursing, and other fields of application brought about by the development and constant improvement of sequencing technologies has aided in the understanding of the genetic influences on diseases of public health importance. At the same time, these discoveries bring attention to the urgent need for educating professionals, especially educators and public health practitioners, in the implications of translating these advances to clinical and public health practice.

To meet this need, the Institute for Public Health Genetics graduate-level program is effective in integrating numerous disciplines and approaches. Students are trained in how to confront the interrelated medical, public health, economic, social, and ethical questions of the future. A growing consensus is emerging around a number of core competencies that public health professionals need to have if they are to function successfully as the application of genomic knowledge accelerates.

The Center for Studies in Demography and Ecology (CSDE): CSDE supports population research and training at the University of Washington. It also functions as a regional center that gives population scientists at affiliated institutions in the Pacific Northwest access to cutting-edge demographic infrastructure and services. The core of CSDE consists of a large group of productive population scholars, with disciplinary homes in the departments Sociology, Anthropology, Economics, Geography, History, Statistics, Psychology, and International Studies as well as the UW schools of Evans School of Public Affairs, Social Work, and School of Public Health. Our faculty affiliates are highly visible members of the population research community. We have drawn faculty into a cohesive research community anchored by a weekly seminar series, collaborative projects, and shared use of state-of-the-art technical, administrative, and consulting services.

Research at CSDE continues to advance knowledge on the fundamental issues of demography—-fertility and family change, migration, health and mortality—with new data, new conceptual approaches, and new techniques, as well as to ask new questions about demographic behaviors and population outcomes. The Center provides research support services and educational opportunities to its members through its graduate student, postdoctoral and mid-career professional training; computer lab and services; administrative support for grants, statistical consulting; library collection and information services; support in use of biomarkers in research; working paper series; and weekly research seminar.

The University of Washington Medical Center: UWMC is one of the nation’s leading academic medical centers, which provides highly specialized medical care in areas such as cardiology, high-risk pregnancy and neonatal intensive care, oncology, orthopedics and organ transplantation. Patients travel from across Washington, Wyoming, Alaska, Montana, and Idaho for these specialized services. The University of Washington’s Medical Center is ranked #1 in Washington by US News & World Report’s 2021 America’s Best Hospitals and is ranked nationally in nine adult specialties. It was also named the nation’s first Magnet Hospital for excellence in nursing care by the American Nurses Credentialing Center.

Harborview Medical Center: HMC is one of the nation’s leading academic medical centers and the only Level 1 adult and pediatric trauma and serves as the bure center for Washington, Alaska, Montana and Idaho. UW Medicine physicians and other health professional based at Harborview provide highly specialized services for emergency medicine, orthopedics, neurosciences, ophthalmology, vascular surgery, behavior health, HIV/AIDS, complex critical care and rehabilitation. Harborview also serves as the Disaster Medical Control Center for Seattle/King County.​

U.S. News & World Report recognized Harborview Medical Center as “high performing” in two specialties and procedures: Urology and Pulmonology & Lung Surgery, and Abdominal Aortic Aneurysm Repair and Heart Failure. HMC is owned by King County, governed by a board of trustees appointed by the county and managed by the University of Washington. Harborview is an entity of UW Medicine, which also includes Northwest Hospital & Medical Center, Valley Medical Center, UW Medical Center, UW Neighborhood Clinics, UW Physicians, UW School of Medicine and Airlift Northwest.

## Clinical Nutrition Research Unit: The Clinical Nutrition Research Unit (CNRU) has been designed to promote and enhance the interdisciplinary nutrition research activities at the University of Washington. By providing a number of Core Facilities, the CNRU attempts to integrate and coordinate the abundant ongoing activities with the goals of fostering new interdisciplinary research collaborations, stimulating new research activities, improving nutrition education at multiple levels, and facilitating the nutritional management of patients. Core facilities are available for use by Affiliate Investigators, who are broadly dispersed throughout several Schools and numerous departments and divisions within the University of Washington. The goals of the core facilities are: The physiological component of the animal studies core **provides investigators with a comprehensive state-of-the-art resource for energy balance/metabolic phenotyping in small animals, as well as consultation and guidance in choosing among the methods;** **the genetics component of the Animal Studies Core provides investigators expertise in genetic analysis of rodent models relevant to nutrition, obesity, diabetes or related disorders;****the analytic core provides investigators access to state-of-the art nutritional assays at a reduced cost, and new methods development; and** **the Human Studies Core provides investigators with services and facilities to aid them in performing patient-oriented research in nutrition.**

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## Northwest Lipid Research Clinic: The Northwest Lipid Research Clinic is a multi-disciplinary unit devoted to characterization of hyperlipidemic disorder. The clinic is located at Harborview Hall, part of Harborview Medical Center. The clinic can provide measurement relative to lipoprotein metabolism, and is an excellent resource of development of studies related to gender and cardiovascular disease in women. Their services include Lipoprotein and apolipoprotein measurements for single-center trials and Consultation, biostatistical and data management services for nutrition research.

## Northwest Institute of Genetic Medicine: The Northwest Institute of Genetic Medicine is a collaboration of Institutions funded by the Washington State Life Sciences Discovery Fund, UWMC, and Seattle Children´s Hospital, which includes Group Health, the Fred Hutchinson Cancer Research Institute, and biotechnology. The goal of the Northwest Institute of Genetic Medicine is to support translational genetic research by improving access of clinical investigators to cutting edge human subject support, informatics and phenotype definition, genomic technologies, and innovative genetic analyses. The Institute provides consulting, analysis, an expertise support to researchers in addition to research seminars and funding for small pilot studies. Their laboratory supports DNA extraction and quality control, statistical analysis of genotyping data, and DNA sequencing.