



SCHOOL OF NURSING

Strategic Plan for Research

2020 - 2025

Message from the Dean

On behalf of the UTEP School of Nursing, thank you for your continued support and commitment to the success of our faculty and students during this time of transition for nursing education.

We are excited to present to you our 2020-2025 Strategic Plan for Research.

Health care is a continually changing environment. As such, the role of nursing education, professional practice and nursing research is expanding to better serve the needs of diverse patient populations in communities across the Paso del Norte region and beyond.

The COVID-19 pandemic has changed our teaching and research practices. However, our commitment to educating the region's best and brightest nurses has never wavered.

As we have done with past health crises, nursing will rise to meet this new challenge to ensure that patients continue to receive safe and effective nursing care.

Our research plan identifies eight strategic areas where we expect to make significant contributions to improve the quality of health care locally, regionally and globally. They include health disparities; emerging health care needs of older adults; chronic health conditions/co-morbidities, symptom science and self-management; COVID-19 pandemic impacts on the health care system and on diverse populations; bio-behavioral basis of symptomatology; environmental health; health promotion and wellness; and nursing education.

As an R1 top tier research university located along the U.S.-Mexico border, UTEP empowers our School of Nursing faculty to engage in evidence-based nursing research on Hispanic and border health-related challenges and other health issues of global importance.

Through the application of evidence-based research, our investigators seek to enrich nursing scholarship, improve patient outcomes, deliver high-quality health care and enhance the well-being and quality of life of residents in the borderland and across the world.

As health care providers and nursing scientists, we appreciate and understand the changing health care needs of our communities. With innovative nursing education programs, talented faculty and an ambitious strategic research plan, the UTEP School of Nursing is poised to effectively respond to the most pressing global health challenges of the 21st century.

Thank you for helping us with our school's vision to become a leader in nursing education, nursing practice and nursing research.

Sincerely,

UTEP School of Nursing Dean

Leslie K. Robbins,

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Charles H. and Shirley T. Leavell

Endowed Chair II in Nursing



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Strategic Plan for Research

2020-2025

This strategic plan presents a blueprint for nursing research at the University of Texas at El Paso, School of Nursing (SON) for the next five years and beyond. The plan describes our SON vision and goals for advancing nursing knowledge and developing evidence-informed quality patient care. The plan describes research initiatives to improve nursing research and to impact the quality of life in the US-Mexico border region. Broadly,

the plan embraces health and wellness throughout the lifespan, health conditions and symptoms, the role of socio-demographics, biology and behavior on health outcomes, and, of course, basic science. The plan is meant to be flexible as needs arise and opportunities emerge, and to offer guidance in committing resources to the SON research program.

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Objectives

GOAL 1.

Stimulate a culture of excellence in research at the School of Nursing

Promote activities that will capitalize on existing internal and external resources to create an open environment for productivity, creativity and innovation.

1. Provide opportunities for networking and team building.
2. Develop research networks & collaborations, including interdisciplinary research teams across campus and with other institutions.
3. Sustain group collegiality to facilitate networking and team building.
4. Support the culture of faculty mentorship by actively promoting mentor-protégé partnerships and through other deliberate mentorship support activities.
5. Encourage the development of white papers.

GOAL 2.

Develop a cadre of diverse nurse scientist leaders

Increase the numbers of research-active faculty who are competitive nationally and internationally in the acquisition of external funding and who will serve as mentors and doctoral dissertation leaders, and who will boost the SON's national reputation in an R1 top-tier institution

1. Provide support and guidance early on in the white paper/proposal development stage to ensure that NOI's translate into submitted proposals, and continue support through the post-award period, and encourage dissemination/translation of results in top tier peer-reviewed journals.
 - a. Increase the annual dollar amount of external funding per tenured/tenure track faculty member by pursuing applications for R-level NIH funding.
 - b. Increase research expenditures from the current \$282,500 annual average (past 3 years) to over \$500,000 per year on average.
 - c. Increase the volume of proposals submitted to 10 or more annually from the current 6-7.
 - i. Track NOIs, proposals submitted, and proposals awarded
 - d. Track the number of papers, abstracts, posters and presentations from tenured and tenure-track faculty members.



Objectives

Goal 2 Continued

2. Enhance support related to research design, grant writing, grants management, data analysis, statistical support, and manuscript development.
3. Conduct mock reviews.
4. Encourage participation in NIH Centers for Scientific Review.
5. Encourage attendance at grant-writing workshops.
6. Develop diverse research interest groups (RIGs) to bring together tenured, tenure-track and clinical faculty members together with interdisciplinary partners.
7. Support RIGs with biostatistics consultations, student RAs, and other relevant University and SON resources.

GOAL 3.

Develop a collaborative PhD program

Propose a joint PhD program with UT Tyler, leveraged on existing relationships between the two institutions.

1. The addition of a PhD program in nursing would enhance the SON's ability to attract senior nursing research faculty. A national shortage of nursing faculty and the COVID-19 pandemic have increased the difficulty of attracting talented researchers at nursing schools. The recruitment of top nurse scientists would increase the SON's capacity to secure external research funds as well as promote scholarly products (e.g., published peer reviewed articles in top-tier journals, presentations, and presence on national and international boards and review panels). A Nursing PhD program would also increase the pool of doctoral students available to work with the nursing faculty in writing research proposals and the production of scholarly products. The SON currently has a DNP program and promotes collaboration between PhD and DNP faculty and students.
2. Perform a preliminary joint needs assessment to establish a potential student pool, evaluate employment opportunities, and generally provide support for the proposal.

GOAL 4.

Capitalize on emerging COVID-19 funding to increase and maintain productivity

Maintain and develop new infrastructure integrity in a COVID-19 environment.

1. Secure input from the Research Steering Committee to brainstorm alternative futures.
2. Develop and strengthen the virtual research environment.
 - a. Assess the infrastructure for cloud computing and the IT infrastructure;
 - b. Implement strategies to improve such infrastructure in collaboration with ORSP.
3. Encourage on-line research approaches, such as meta-analyses.
4. Encourage utilization of big data sets and implement data science research approaches, an emerging area of strength at UTEP.
5. Promote use of libraries and existing data bases for research.
6. Encourage virtual internships and fellowships to develop faculty researcher capacity.
7. Implement virtual networking and team building strategies.
8. Develop alternative measures for research success that reflect team building and mentoring efforts, and that reward on-line research and broad scholarship as defined in the Boyer Model.

Research Strategies

STRATEGIC AREAS OF CONCENTRATION

Strategic areas of concentration for SON research are derived from specific research interests of the faculty through analyses of the areas of research being conducted at the SON. Additionally, the COVID-19 pandemic has opened up extraordinary funding opportunities and is therefore considered here. Finally, national nursing research priorities are given due consideration. Specifically the strategic areas of concentration include the following.

- Health disparities
- Aging throughout the life span
- Chronic health conditions/co-morbidities, symptom science and self-management
- COVID-19 pandemic impacts on the healthcare system and on diverse populations
- Bio-behavioral basis of symptomatology
- Environmental health
- Health promotion and wellness
- Nursing education

CROSS-CUTTING RESEARCH THEMES

Cross-cutting research themes vital to the advancement of nursing science and translation to clinical practice include innovative technology, data science, and genomic/molecular research. These three areas are essential to advancing our research portfolio and are emphasized in all programs and activities in this strategic plan. Innovative and cyberinfrastructure development cultivates education and research across disciplines. Emerging technologies include information technology, biotechnology and nanotechnology needed to address social and behavioral health problems in the El Paso-Juarez region.

Data science is an emerging cross-cutting research theme at UTEP that has become especially important during the COVID-19 pandemic. Data science is an interdisciplinary field related to data mining, deep learning and big data. It unifies statistics, data analysis and domain knowledge in order to understand and analyze phenomena with data. It is data-driven research.

Genomic/molecular research is increasingly relevant to advancing nursing science and clinical practice. Genomic/molecular discoveries are increasingly translated into patient management. The bio behavioral nature of this research makes it a relevant approach to our nursing research agenda at UTEP.

Research Resources

THE RESEARCH DIRECTOR AND RESEARCH STEERING COMMITTEE

The Director on Nursing Research is a focused leadership position designed to mentor, develop and guide other faculty in their scholarly/research aspirations while interfacing with the Office of Research and Sponsored Projects, and has oversight of the research Program at the SON. The Research Steering Committee membership consists of tenured, tenure-track and clinical faculty. The Committee oversees the implementation of this plan, advises and supports the Director of Research, executes the accountability strategies defined by this plan, serves as a role model for other SON investigators, coordinates research interest groups, advises on research funding/grant opportunities, serves as an internal review board for research proposals, and assists with identification of funding opportunities and partnerships.

THE BIO-BEHAVIORAL RESEARCH LABORATORY

VISION. The Bio-Behavioral lab (BbRL) is a valuable research resource, providing integrated pre- and post-award support with effective mentorship and guidance to increase the number of research-active faculty who are nationally and internationally competitive in the acquisition of external funding and who will serve as mentors and doctoral dissertation leaders.

RESEARCH MISSION. The research mission of the SON Bio-behavioral Research Laboratory (BbRL) is to impact communities affected by health disparities by increasing and leveraging our understanding of the

underlying mechanisms that connect biology, behavior and environment.

The Bio behavioral Research Laboratory (BbRL) specializes in human subject and population health disparities research focused on studying the biological, behavioral, and environmental pathways that affect health and wellness. The mission of the BbRL is to impact communities affected by health disparities by increasing and leveraging our understanding of the underlying mechanisms that connect our biology, behavior, and environment. The BbRL offers collaborative and consulting support to health centers and care providers interested in conducting biomedical and patient-centered outcomes research in the West Texas/Southern New Mexico/Northern Mexico region. The laboratory's highly trained and experienced full-time staff can assist nursing and UTEP faculty with:

1. Study Design and Conduct: proposal development, instrument formatting, data collection, data management, budget development, and participant recruitment
2. Laboratory Clinical Measures: analysis of HbA1c, glucose, triglycerides, total cholesterol, HDL, LDL and HDL/LDL ratio, hematological panel and biomarkers (up to 100 options upon request) in human blood samples; Measurement of blood pressure, pulse, temperature, waist circumference, height and weight; Retinal imaging, carotid-intima media thickness readings; and electrocardiograms.

The SON BbRL has four office spaces, two cubicles for screening, and four laboratory work stations within

the Health Sciences and Nursing Building. It is equipped with the necessary instrumentation to process and store all biological samples (e.g., centrifuges, Class II biological safety cabinet, automated liquid handling chamber, refrigerators and freezers). The BbRL has of two full-time staff members, both certified phlebotomists, and student research assistants funded by the internal On-Campus Student Employment Program.

SON MOBILE RV FIELD LABORATORY

Investigators also have access to a mobile data collection and transport RV unit that is equipped with bio behavioral data collection capacity and sample collection, storage and transport capacity. The RV enhances the capacity to collect community-level data while maintaining safety procedures during the COVID-19 Pandemic.





Background - Nursing Research in the UTEP Setting

NURSING RESEARCH

The purpose of nursing research is to develop and validate nursing knowledge that is translatable into clinical practice and the development of the discipline. Translatable nursing research serves to improve the health and wellbeing of individuals, families and communities across diverse settings and throughout the lifespan. Nursing research spans and integrates the behavioral and biologic sciences and develops the scientific basis for clinical research and practice.

The strategic plan is developed from underlying nursing values. The strategic plan values scientific research and its integration with clinical research and practice designed to improve patient care. Although faculty rely on empirics as a means to develop evidence-informed practice, we recognize the importance of all patterns of knowing in the nursing discipline, including qualitative, grounded and phenomenological research, which are important to develop clinical context and enhance applications. The resulting integrated knowledge base is rich and contextual. Broad nursing scholarship that spans the research cycle is valued and rewarded.

The SON faculty values mentoring and the dedication and commitment required to guide junior faculty to

become productive nationally known nurse researchers and mentors. There is emphasis on collegiality, networking and group building as critical internal resources to build research capacity and to develop an innovative, interdisciplinary, and diverse nursing science workforce.

INSTITUTIONAL RESEARCH ENVIRONMENT

The strategic plan promotes strategies to support the ongoing development of our research culture, faculty career development, and a collaborative PhD Program while capitalizing on COVID-19-related research opportunities. The institutional research environment forms the backdrop of support for nursing research. The Office of Research and Sponsored Projects (ORSP) executes strategies that support our initiatives. Nursing investigators have access to institutional programs designed to assist junior faculty to develop competitive research programs. Resources include Expertise Connector, a tool for networking and building research partnerships; a Grants Development Office; and a Biostatistics Consulting Laboratory, as well as an array of internal funding initiatives. The institutional environment

supports collaborative research networking with faculty from other doctoral programs. For example, nursing faculty serve as members of the doctoral faculties of the Interdisciplinary Health Sciences and the Environmental Science and Engineering PhD Programs.

The Interdisciplinary Research Program (IDR) and the Border Biomedical Research Center's (BBRC) pilot research program are two pilot-study funding mechanisms particularly relevant to nursing research. Both programs are designed to foster the formation of interdisciplinary research teams across campus, and both prioritize health-related research. The IDR also offers office and laboratory space and pilot funding for interdisciplinary teams, workshops and trainings to strengthen collaborative experiences and research program development.

The University offers state-of-the-art research facilities with substantial capacity to support nursing research. Specifically, the BBRC offers a comprehensive set of biomedical analytical capacities housed in the following cores: (a) cytometry, screening and imaging, (b) biomolecular analyses, and (c) genomic analysis. Research centers in addition, border policy and the environment offer additional infrastructure relevant to nursing research.

STUDENT BODY

This strategic plan emerges from our research-centered philosophy with a primary goal of enhancing the educational experience of our students. The SON's enrollment is nearly 1,000 students from across our multiple undergraduate, graduate, and doctoral academic programs. These programs are central to UTEP's success in serving as a regional catalyst for economic development, social mobility, and enhanced quality of life. Our thriving undergraduate program serves a student pool that averages an admission GPA of at least 3.65 and highlights the commitment and capacity of our student body. The SON proudly leads the nation in offering a first-class nursing education to a 21st century student population that mirrors the demographic distribution of the El Paso region (78% Hispanic). With the growing Hispanic population across the state of Texas and throughout the

United States, UTEP's SON is ideally positioned to respond to the national goal to diversify the cadre of nurse scientists.

FACULTY

The SON's guiding principles are excellence, innovation, and diversity. Notably, our faculty combines substantial experience across the educational, research, practice, and service domains. The SON's full-time faculty includes 11 members with PhDs, 14 members with DNPs, and 16 members with master's degrees, of whom 52% are Hispanic and 14% are males. The SON's part-time faculty includes 7 members with doctoral degrees, and 15 with master's degrees, of whom 45% are Hispanic and 30% are males. Our faculty adhere to and promote a paradigm of caring that addresses human responses throughout the age continuum. This paradigm includes education, practice, and research that encompass the provision of care, coordination of care, and professionalism. While the faculty subscribe to a variety of theoretical frameworks that reflect adaptation, self-care, and transcultural, and humanistic aspects, all faculty believe that the essence of nursing is caring.

COMMUNITY PARTNERSHIPS

Through its faculty, the SON maintains a strong clinical and service presence across the region's healthcare facilities and non-profit healthcare organizations. The strong working relationship between the SON and the regional healthcare facilities supports the implementation of a comprehensive training program for our students who complete their clinical rotations at the best clinical facilities throughout the city. Most of our graduates join the regional healthcare workforce and maintain relationships with the SON. The SON also enjoys readily available community partnerships, including those with Hospital Corporation of America, University Medical Center and Tenet Corporation. The SON's extensive collaborative network, which extends across the entire border region and reaches a highly diverse and vulnerable population, is a valuable resource and represents an opportunity for nursing research of national and global relevance.

Current and Prior Funding and Productivity

The School of Nursing is in transition from an outstanding professional school to a mature research-intensive unit. Benchmark data demonstrate current productivity and provide a measure for future output. We analyze data from the past 3 years to estimate productivity goals for the next 5 years.

SON SPONSORED PROJECTS EXPENDITURES FY 2017 THROUGH FY 2020

Source: Office of Research and Sponsored Projects, The University of Texas at El Paso School of Nursing

YEAR	TOTAL EXPENDITURES
2017	\$ 219,298.00
2018	\$ 329,944.00
2019	\$ 298,086.00

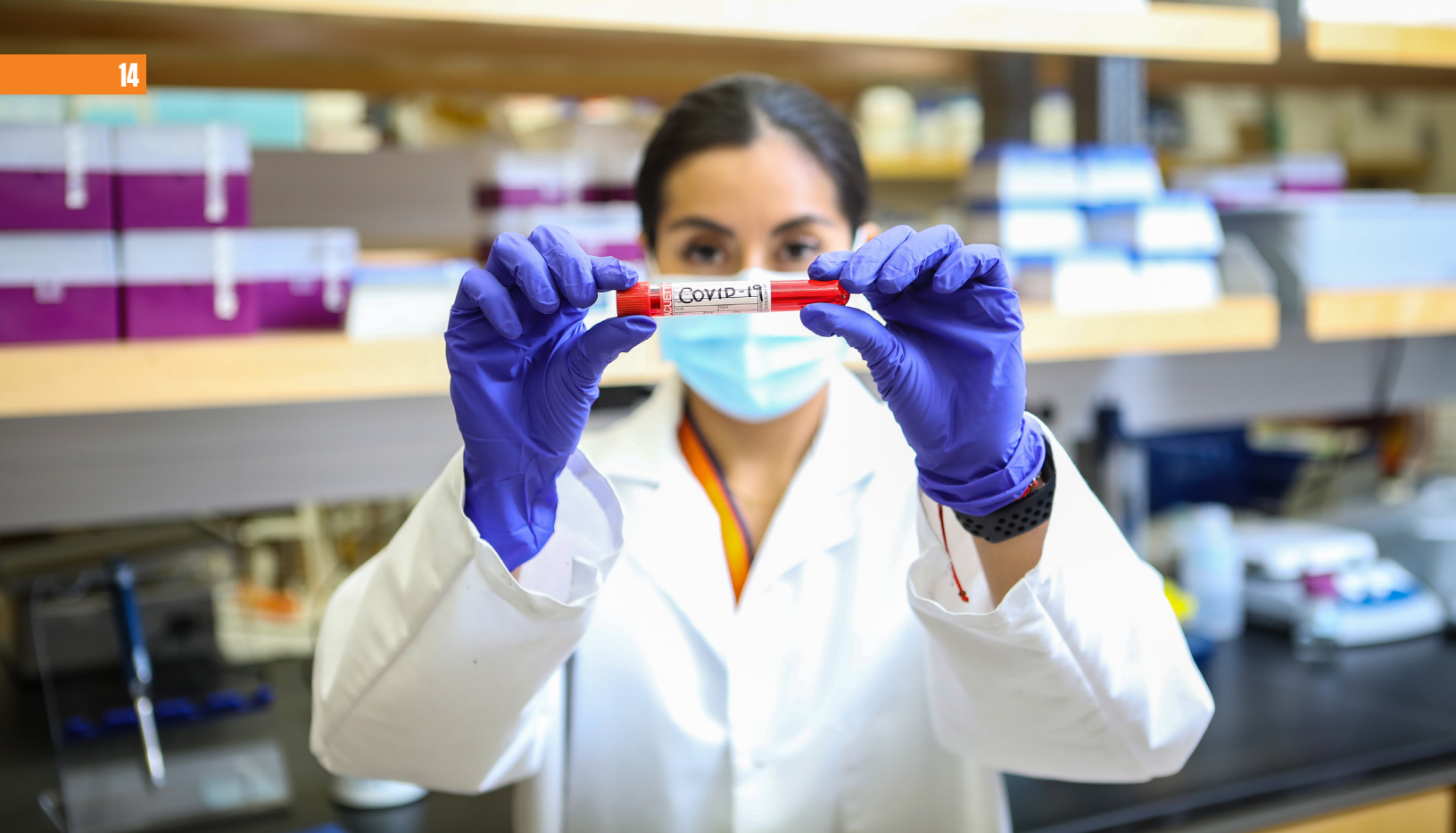
Table 1 shows that the total expenditures for 2017-2019 average \$282,443 per year. In that time period a total of 19 proposals were submitted and 5 were funded. This represents an average of 6 or 7 proposals submitted each year. On average 2 are funded. These figures represent important benchmarking data upon which to measure productivity and allocate support resources.

In 2020 there are a total of 10 tenured/tenure track members in the SON; their research career development provides an important focus for this plan. Since 2018 the BbRL has engaged 78% of tenured/tenure track faculty, and 18% of clinical track faculty in the SON. Specifically, the BbRL has provided guidance and material assistance

to investigators, including proposal development, instrument formatting, data collection, data management, budget development and purchasing, participant recruitment, and statistical consultation.

Among the external agencies to which proposals have been submitted are NIH, DHHS, American Nurses Foundation, Sigma Theta Tau International, National Association of Hispanic Nurses, American Association of Colleges of Nursing, and the Macy Foundation, among other funding agencies.

Since March 2020 the COVID-19 pandemic has impacted research activity. Strategies for maintaining growth are outlined below.



Impact of the COVID-19 Pandemic

The COVID-19 pandemic has affected research productivity nationally across U.S. campuses. There is an emerging need for consideration of alternative futures while maintaining growth in UTEP's research enterprise as an R1 top-tier institution. UTEP's overall goal is to double research expenditures in the coming decade. This must be accomplished while major changes occur in higher education, including the possibility of retrenchment and decreasing enrollments.

The SON seeks to capitalize on emerging research opportunities and to maintain student preparation for future development of a diverse interdisciplinary nursing work force. We recognize that there are emerging opportunities, such as online research, virtual internships and fellowships and virtual outreach to develop research teams, including interdisciplinary teams. Convergent with this is the need to develop alternative measures for

research success, such as broadening the SON research mission to include various forms of nursing scholarship. Our overall strategy is to encourage big data research as well as meta-analyses and data science by encouraging the use of libraries, and on-line and archival resources. Furthermore, there is a need to develop the infrastructure for cloud computing and IT infrastructure, including remote access. The SON will capitalize on its location on the U.S.-Mexico border, a medically underserved region with high COVID-19 rates and affecting the health of a population already burdened by health disparities. Nursing research is needed to impact co-morbidities and address access to and quality of health care. The BbRL supports community-level research while maintaining COVID-19 safety measures, including an RV which permits community data gathering while maintaining safety in the field.

Final Thoughts - A Conceptual Model

The SON's Research Conceptual Model emphasizes the role of research in education and leadership (figure 1.)

Our model recognizes that at the heart of the SON's mission is the preparation of professional nurses led by nursing faculty who interact across undergraduate, graduate, and doctoral academic levels. In the center band, practice refers to clinical practice, and educational and leadership practice settings where challenges are identified and knowledge is applied. The challenges identified in practice prompt and inform inquiry-driven research activities. Knowledge obtained through research is tested, evaluated, and translated into evidence-informed practice.

The outer band delineates leadership and education as the operational elements of the SON's guiding principles of research, innovation and diversity. This integrated model demands effective leadership across every level of the SON and commitment to educational excellence. The pursuit of educational excellence generates the supporting structure for research, translation, and practice.



Figure 1. SoN Research Conceptual Model