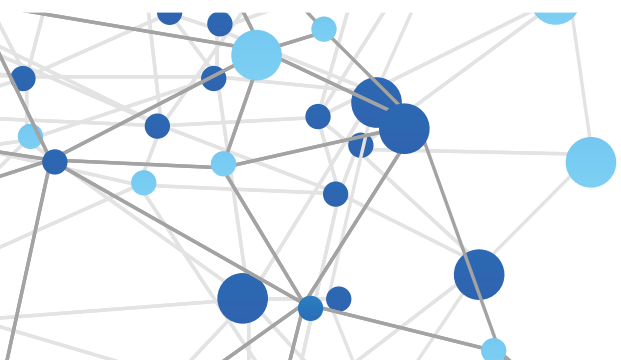
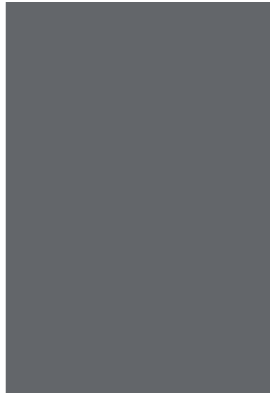




**Office of Nursing
Research & Scholarship**

**2017-2018
ANNUAL REPORT**



**University of Kentucky, College of Nursing
Office of Nursing Research
Annual Report FY 18
Thomas Kelly, Associate Dean for Research**

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Research Report

This University of Kentucky (UK) College of Nursing (CON) Office of Research report provides highlights and trends in CON extramural and intramural researching funding during Fiscal Years (FY) 2014-2018.

Types of Grants

CON principal investigators (PIs) submit various types of grants, generally to one of two types of award programs— extramural research (research dollars are awarded from an organization external to the University of Kentucky, examples include the National Institute of Nursing Research, the National Cancer Institute, the Health Resources & Services Administration, the Patient Centered Outcomes Research Institute, the Kentucky Department for Public Health, American Nurses Foundation) and intramural research [research dollars are awarded from a program internal to the University of Kentucky; examples include the Center for Clinical and Translational Science (CCTS) awards, the Office of the Vice President for Research (VPR) awards, and UK Women & Philanthropy]. Grant awards provide funding for the cost of conducting the research (i.e., direct costs) as well as the cost to the institution for the facilities and administration of the research (indirect costs). The indirect (facilities and administrative, or F&A) funds associated with a grant vary contingent upon the type of funder as well as the type of funding mechanism. Intramural research awards, for example, do not provide funds for indirect costs.

When applying for extramural funding, PIs cast a wide net, targeting federal and state agencies, private foundations, and professional associations. Awards to UK vary by funding type. National Institute of Health (NIH) grants are awarded for multi-year intervals, but funds are distributed on a year-to-year basis, and funding amounts each year can change from that committed at the time of the initial award. Funds for contracts, however, are guaranteed when the contract is initially awarded. Therefore, the total amount over the life of the contract is counted as occurring at the time the initial contract is awarded. A good example of this would be Patient Centered Outcomes Research Institute (PCORI) funding.

As of FY 18, sixteen of the College of Nursing's faculty serve as PI (or Multi-PI) on funded, extramural research.

Information on Indirect (Facilities & Administrative) Costs

Facilities & Administrative (F&A costs) are real expenses incurred by the university in support of sponsored projects, but which by federal regulation cannot be charged directly to a specific grant, contract, or other sponsored agreement. F&A costs stem from the institutional need to maintain a shared infrastructure that supports the research and scholarly activities of all investigators. F&A costs are divided into facilities costs (e.g. building depreciation, operation and maintenance, utilities) and administrative costs (e.g. sponsored projects administration, purchasing, accounting, legal services). These funds are important to the College of Nursing because a portion of the funds is returned to the College to support future grant development.

The federal F&A cost rate is negotiated periodically with the university's audit agency, the Department of Health and Human Services. The F&A rate varies by type of project (e.g., research, instruction, career development) and location of the work (on-campus vs. off-campus). For research projects that are

conducted on the UK campus, which is the most common type of extramurally sponsored project received by the CON, the F&A rate is 53%. F&A support for research projects conducted off campus is 26%. Federal awards involving instruction have a lower F&A rate (46%), and career development awards (e.g., 'K' awards) have an even lower indirect rate (8%). Private foundations, associations and state agencies may or may not separately reimburse F&A costs, and the rates are generally set by the funding agency. PCORI, an independent, nonprofit, nongovernmental organization, has an F&A cost rate limit of 40%. Some foundation awards (e.g., Robert Wood Johnson Foundation's Future of Nursing Scholars; Jonas Scholars) do not provide any F&A reimbursement.

F&A payments are driven by grant expenditures, rather than awards. If UK received a grant for \$100,000, but only spent \$70,000 of that award on research, UK, in turn, would receive an F&A payment based on the \$70,000 that was spent. Due to the amount of time needed for F&A calculations, it takes two years for the F&A to return to the College. In other words, in FY 18, the College of Nursing is receiving F&A distributions from grant expenditures that occurred in FY 16.

Unique Facts about the University of Kentucky, College of Nursing's Research Portfolio

When looking at the total number of research dollars generated by an academic unit per fiscal year, it is important to consider the number of faculty members who are supported by the unit that are able to compete for extramural funding. At the University of Kentucky, the College of Nursing has a smaller number of Regular Title Series (RTS) and Special Title Series (STS) faculty (i.e., tenure-eligible faculty) than many other colleges at UK. Within the faculty workforce, RTS faculty members typically receive the greatest amount of institutional support for research and are, in turn, called upon to compete for extramural research funding. The number of faculty members (particularly the number of RTS faculty) within an academic unit is thus a critical resource in competing for grant awards. STS faculty members typically have special assignments (e.g., administrative, clinical or educational assignments) that restrict time for research activities; these faculty members typically receive less institutional support for research. STS faculty members are expected to contribute scholarship, often in association with their special assignments, and are expected to compete for extramural awards to support their special assignments, but are not expected to compete for extramural research funding.

Grant Productivity

Tables A thru D below show a breakdown of extramural research funding trends by RTS within the College of Nursing. Table A provides the number of RTS and STS faculty in the College of Nursing since FY14. Over the past 5 years, the total number of RTS and STS faculty in the College of Nursing has increased by 17% (30 to 35). However, the number of RTS faculty has decreased from 18 to 16, while the number of STS faculty has increased by 12 to 18. This shift in faculty distribution has occurred in order to address the broad academic needs of the College of Nursing. The research and scholarship portfolio of the College should be evaluated based on the distribution of RTS and STS faculty.

Table A. Total Number of RTS and STS CON Faculty

	FY 14	FY 15	FY 16	FY 17	FY18
Regular Title Series (RTS) Faculty*	18	17	16	16	16
Special Title Series (STS) Faculty	12	16	18	19	18

*The Dean of the College of Nursing is not included in the RTS totals.

Table B and Figure 1 provide data on total number of grant submissions and on the number of grants submitted per faculty member over the past five years. The data indicate that the total number of grant applications has remained fairly steady across the past 5 years, the number of grants per RTS faculty member remains stable at approximately 3 grants for every RTS faculty member.

Table B. Extramural (EM) Grant Applications

	FY 14	FY 15	FY 16	FY 17	FY 18
Total # of EM grant applications submitted by CON PIs	52	54	46	44	51
Average # of grant applications per RTS faculty member	2.9	3.2	2.9	2.75	3.19

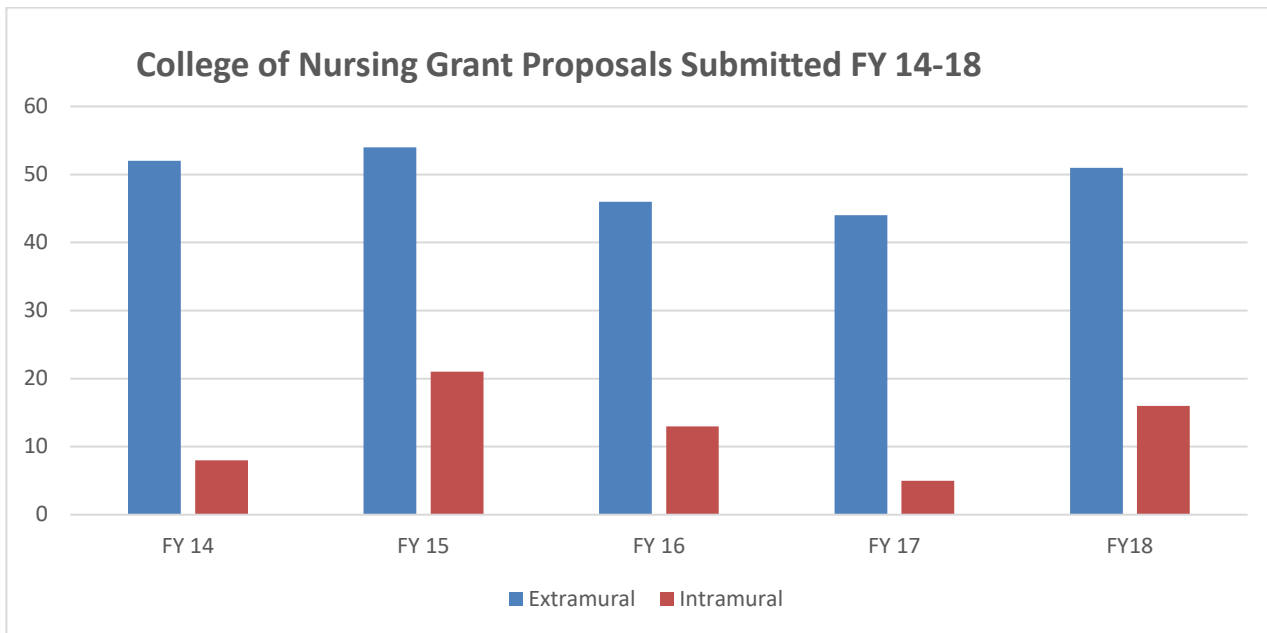


Figure 1. CON Grant Proposals Submitted FY 14-18.

Table C and Figure 2 present extramural grant funding for the College over the past five fiscal years. From the low of approximately \$2 million dollars in direct funding awarded in FY14, the CON has been awarded over \$4 million dollars in each of the last two years. On average, over the past two years, each RTS faculty member has generated over \$250,000 in direct research dollars per year.

Table C. New Extramural Grant Funding; Directs Costs Only

	FY 14	FY 15	FY 16	FY 17	FY 18
Total EM Funding	\$1,902,159	\$3,770,156	\$3,465,937	\$4,221,848	\$4,080,684
Average # of grant \$ per RTS faculty member	\$ 105,675	\$ 221,774	\$ 216,621	\$ 263,866	\$255,042

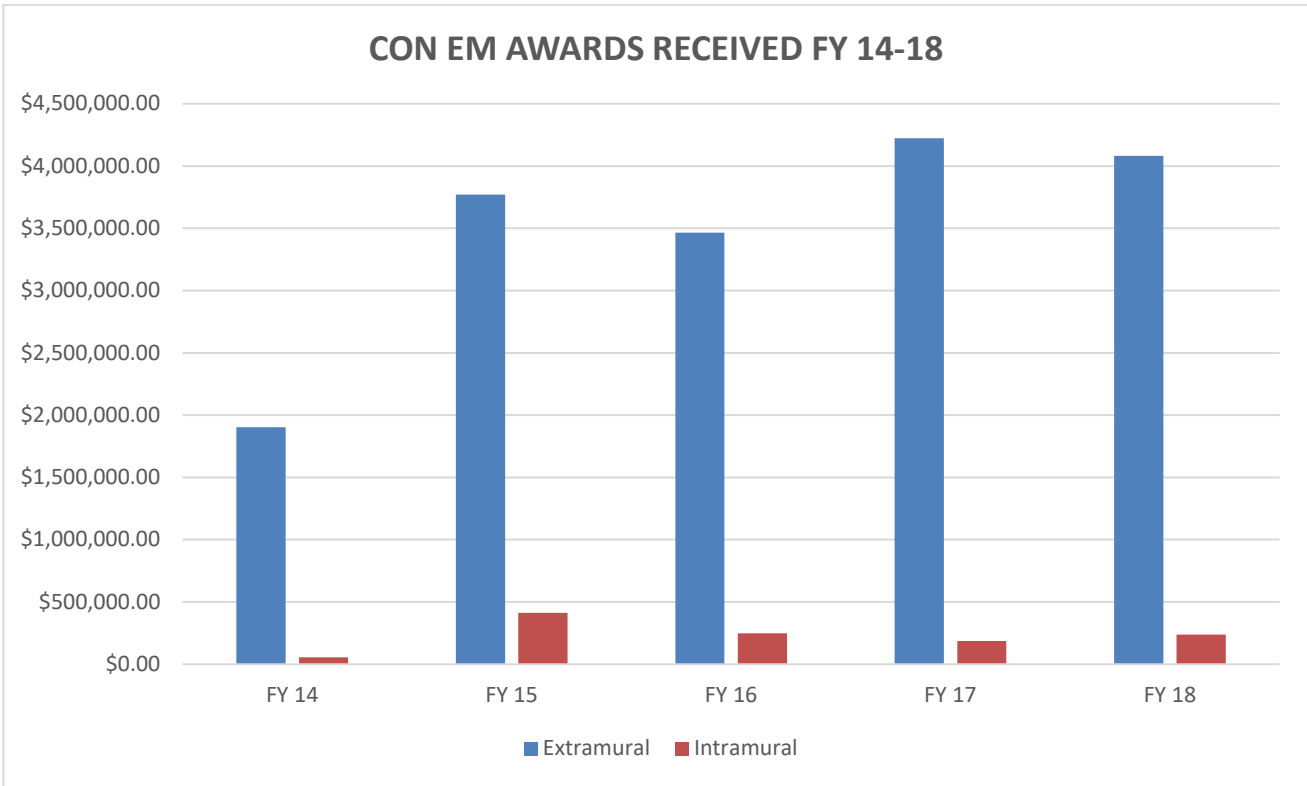


Figure 2. CON Extramural Awards Received FY 14-18

Figure 3 presents the number of grants that were funded for the College since FY 14. With the exception of FY 15, the number of individual proposals that were funded each year has remained relatively constant (15 awards per year). Given the increase in award funding over time (see Figure 2), it is clear that the total amount of funding per award has been increasing over time.

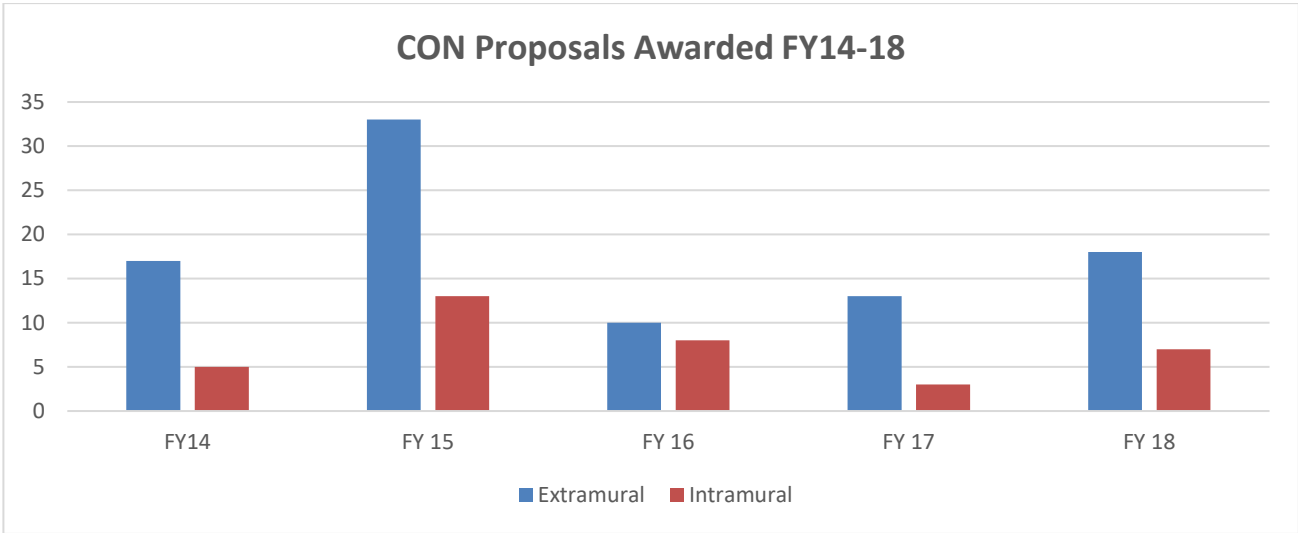


Figure 3. CON Proposals Awarded FY 14-18

Table D details the amount of extramural grant expenditures, per fiscal year, from CON PIs. Of note, grant expenditures are a more direct way of tracking actual research effort, as expenditures were driven by actual research activity. Table D demonstrates a positive acceleration in research effort over the past four years, which is consistent with the increases in total research funding awarded to the College.

Table D. Extramural (EM) Grant Expenditures (Total/Total per RTS) from CON PIs

	FY 14	FY 15	FY 16	FY 17	FY 18
EM Grant Expenditures	\$3,470,368	\$4,107,056	\$4,574,497	\$4,225,617	Not Available
Average EM Grant Expenditure per RTS faculty member	\$ 192,798	\$ 241,592	\$ 285,906	\$ 264,101	Not Available

Table E presents the standing of the University of Kentucky College of Nursing in total NIH funding relative to other academic units of Nursing as of September 7, 2018*. The CON currently ranks 14th among all academic units (6th among public institutions). *NIH FY18 ends September 30, 2018.

Table E: Top 20 NIH-funded Academic Nursing Units

ORGANIZATION	AWARDS	FUNDING
University of Pennsylvania	25	\$12,381,782
Columbia University Health Sciences	17	\$8,220,551
University of Pittsburgh at Pittsburgh	20	\$7,809,854
Emory University	21	\$7,644,778
University of California, San Francisco	21	\$7,547,813
New York University	10	\$6,943,271
University of Washington	18	\$6,751,107
University of Michigan at Ann Arbor	18	\$6,022,049
Duke University	15	\$5,115,014
Johns Hopkins University	18	\$4,835,761
University of Alabama at Birmingham	6	\$4,266,162
University of Illinois at Chicago	12	\$4,038,636
Case Western Reserve University	11	\$3,872,358
University of Kentucky	9	\$3,753,996
University of Maryland-Baltimore	7	\$3,743,996
University of Minnesota	8	\$3,582,004
University of Texas at Austin	8	\$3,570,846
Arizona State University-Tempe	8	\$3,354,232
Medical University of South Carolina	7	\$3,278,596
University of Miami-Coral Gables	4	\$2,773,912

Intramural Funding Sources

CON PIs have received funding from several intramural sources such as the UK Office of the Vice President for Research Support Grants Program, the Center for Clinical and Translational Sciences (CCTS), and UK Markey Cancer Center’s pilot funding opportunities [e.g., the Cancer Center Support Grant (CCSG) and Kentucky Lung Cancer Research Program awards]. Table F provides the number of IM applications submitted and funded, as well as the amount awarded, for FY14-18.

Table F. CON IM applications submitted, funded, and dollar amount by fiscal year

	FY 14	FY 15	FY 16	FY 17	FY 18
# IM Applications Submitted	5	13	8	6	16
# IM Applications Funded	2	5*	3	3	7
Total IM Funding	\$44,968	\$324,934	\$225,000	\$186,000	\$238,769

*Reflects funding from Building Interdisciplinary Research Careers in Women’s Health (BIRCHW) and KL2 (CCTS) awards.

Of note, CON Faculty received two intramural NIH awards in FY 15 – Building Interdisciplinary Research Careers in Women’s Health (BIRCWH K12) and Center for Clinical and Translational Sciences Career Development (KL2). Both are mentored career development programs for early-career faculty, with the BIRCWH supporting investigators interested in women’s health, while the KL2 supports investigators interested in clinical/translational research. Both programs are highly competitive and prestigious awards that provide support for salary (75% effort) and research.

In FY 18, the College of Nursing allocated a portion of the returned F&A funding to support a pilot-funding program for its faculty members. Applications were received and peer-reviewed in February and July, and funds were awarded in March and August. Since this was a new program, activities supported by this program are not included in the data provided in Table F. In FY 18, seven pilot study applications were received and two applications received \$17,000 and \$15,000 respectively in funding.

Sources of research support

Figure 4 presents the funding sources for all active awards in FY 18. Over the last four years, NIH has been the predominant source of extramural funding agency for CON faculty. Some faculty members have pursued funding from other federal agencies (Health Resources & Services Administration [HRSA], Centers for Disease Control and Prevention [CDC], Substance Abuse and Mental Health Services Administration [SAMHSA]), with positive outcomes.

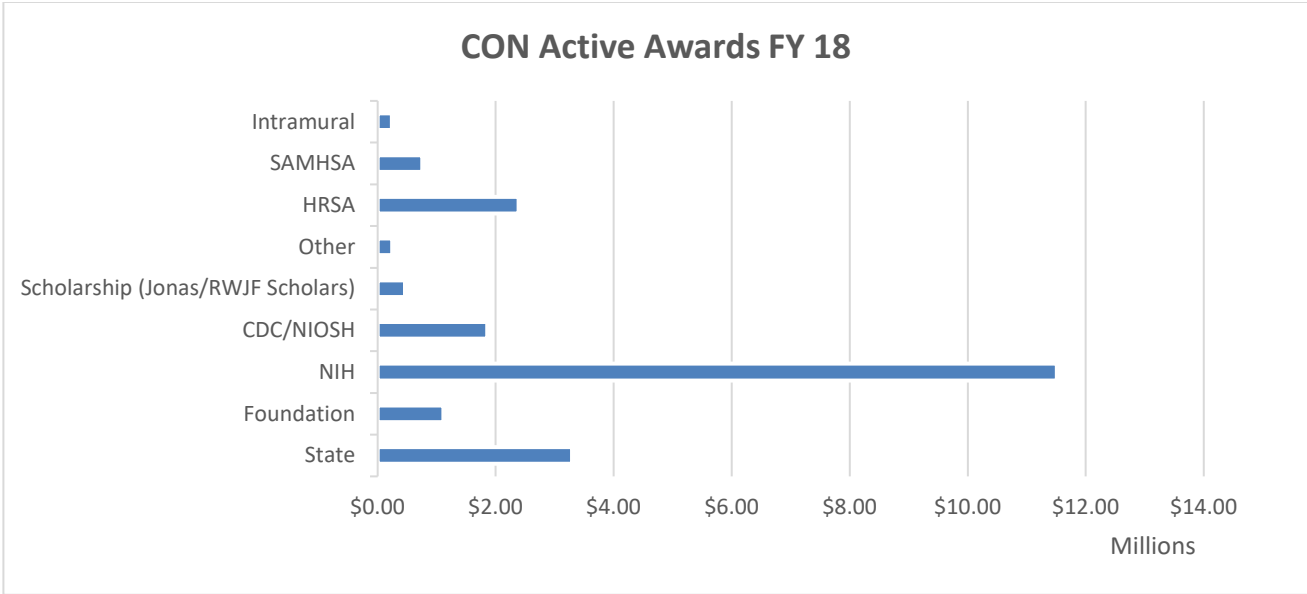


Figure 4. CON Active Research Awards (total funding) in FY 18

Scholarship

Table G lists the number of presentations given by CON faculty (RTS and STS) since FY 2014. During FY 18, College of Nursing faculty gave a total of 147 research-focused presentations at professional conferences (4.2 presentations per faculty member). This reflects a slight reduction in productivity from previous years. These data come from the Digital Measures database, which is dependent on faculty reporting of productivity. At this time, it remains unclear whether this reflects a reduction in faculty productivity from previous years or a change in faculty reporting fidelity, and these data will require continued scrutiny in the next fiscal year.

Table G. CON Faculty Presentations (source: Digital Measures)

Table G	FY 14	FY 15	FY 16	FY 17	FY18
Presentations	292	273	170	156	147
Presentations/Faculty*	9.7	8.3	4.9	4.4	4.2

*Includes RTS and STS faculty.

Table H lists the number of publications given by CON faculty (RTS and STS) since FY 2014. During FY 18, College of Nursing faculty published 84 data based articles in referred journals (over 2.5 publications per faculty member). These data come from the Digital Measures database, which is dependent on faculty reporting of productivity. These totals represent a significant reduction in productivity over previous years. At this time, it remains unclear whether there have been changes in faculty productivity across years or a change in faculty reporting fidelity.

Table H: CON Faculty Publications (source: Digital Measures)

Table H	FY 14	FY 15	FY 16	FY 17	FY18
Data-Based	147	195	157	154	84
Data-Based/Faculty*	4.9	5.9	4.5	4.3	2.5

*Includes RTS and STS faculty.

Conclusion

The University of Kentucky College of Nursing faculty members are actively engaged in patient-oriented and public policy focused research that impacts the citizens of the Commonwealth (e.g., cardiovascular health, tobacco smoking, drug abuse, maternal and fetal health, occupational health of farmers). By all reasonable metrics, including grant submissions and funding, and data-based publications and presentations, the CON is making significant contributions to the science of nursing and producing new knowledge that advances the health of the Commonwealth of Kentucky and beyond.

Research Profile: Kristin Ashford, PhD, WHNP-BC, FAAN

Dedicated Program of Research



UK Perinatal and Wellness Research Team (From left to right):

Holly Dye, Amanda Fallin-Bennett, KRISTIN ASHFORD,
Andrea McCubbin, Janine Barnett, Letitia Ducas

Kristin Ashford, PhD, WHNP-BC, FAAN, Professor, Director of the UK Perinatal Research and Wellness Center, and Associate Dean for Undergraduate Faculty Affairs has led five national, extramurally funded research studies, all of which were centered on the science of perinatal tobacco and substance use, continuing to advance the field of perinatal research and wellness. Over the past decade, Dr. Ashford's team has successfully recruited thousands of participants, prospectively collecting immune biomarkers in various biological media (carbon monoxide (CO), hair, whole saliva, serum, and cervicovaginal fluid). Through current work funded by a NIH R01 (1R01DA040694-01), the -

center has studied perinatal immune response and identified significant differences in immunological, behavioral, and dependency among tobacco, electronic cigarette, cannabis, and opioid users.

Tobacco use in pregnancy is one of the most modifiable risk factors associated with poor maternal and birth outcomes. With a continued focus on perinatal wellness, Dr. Ashford leads programs to promote smoking cessation among pregnant and postpartum women. The VIZP-funded *Tobacco use in Pregnancy Intervention for Cessation (ToPIC)* study utilizes the expertise of a Certified Tobacco Treatment Specialist to deliver an individualized tobacco cessation intervention during pregnancy and the postpartum period, while simultaneously evaluating psychosocial and behavioral changes that may impact cessation success. Similarly, the center conducts *Get Fit and Quit*, a smoking cessation program aimed to teach women of childbearing age in residential treatment for substance use disorders how to replace smoking behaviors with physical fitness activities.

Community-Engaged Approach



The Pathways/Beyond Birth program is a nurse-led initiative serving women with substance use disorders in an outpatient setting. Beyond Birth is a comprehensive addiction recovery program serving postpartum women and their children for up to five years. This clinic is unique in its focus on helping patients effectively manage behavioral as well as health aspects of addiction recovery. Women in the Beyond Birth program are provided basic preventive and reproductive health care as well as in-house management of hepatitis c by becoming part of the UK GI's ECHO program that trains nurse practitioners to offer hepatitis c treatment. The clinic also offers screening and management of

infectious diseases such as endocarditis, osteomyelitis, bacteremia and cellulitis related to past IV drug use. In addition, partnerships with Developmental Pediatrics and Pediatrics have enabled the program to provide developmental screenings, parenting classes and supported guidance as women strive to build bonds with their babies and developing children.

Dr. Ashford has been instrumental in forging the partnerships that have made the Beyond Birth program possible. Dr. Ashford's leadership and advocacy with leaders in the UK HealthCare system have demonstrated the impact of nursing care on women's lives. As a result, UKHC has helped the Beyond Birth expand to a beautiful new location that will enable the program to serve 200 new patients in the next two years. As part of this expansion, Beyond Birth is formally expanding on established partnerships that include offering Get Fit and Quit to women in the Chrysalis House program, to providing access to a nurse practitioner who will offer intake physicals for women in the Chrysalis House residential treatment program.

Current Active Funding: Primary Investigator

Primary Investigator Sponsor	Title	Total Award Amount
National Institute on Drug Abuse (R01)	The Impact of Electronic Cigarettes (e-cigs) on Perinatal Immune Responsiveness and Birth Outcomes in Appalachia	\$2,327,683
KY Department of Medicaid Services	University Partnership – Substance Use Disorder Treatment Beyond Birth	\$1,383,411
National Institute on Drug Abuse (R34)	Behavioral and Enhanced Perinatal Intervention for Cessation (B-EPIC): Reducing Tobacco use among Opioid Addicted Women	\$688,500
Rita and Alex Hillman Foundation <i>Innovations in Care</i>	Nightingale Perinatal Assistance and Treatment Home (PATHways) Program	\$600,000
University of Kentucky College of Medicine/Health Services Research <i>Value of Innovation to Implementation Program (VI2P)</i>	Tobacco use in Pregnancy Intervention for Cessation	\$110,000
KY Department of Maternal Child Health	Prenatal and Postpartum Training	\$43,422
University of Kentucky Center for Clinical and Translational Science (CCTS)	Western Consortium CCTS Collaborative	\$25,000

Select Publications

Ashford, K. B., Chavan, N. R., Wiggins, A., Barnett, J., McCubbin, A., Ducas, L., & O'brien, J. M. (2018). 717: Prenatal electronic cigarette, dual use and nicotine dependency. *American Journal of Obstetrics and Gynecology*, 218(1), S431-S432.

Ashford, K., Chavan, N. R., Wiggins, A. T., Sayre, M. M., McCubbin, A., Critchfield, A. S., & O'Brien, J. (2018). Comparison of Serum and Cervical Cytokine Levels throughout Pregnancy between Preterm and Term Births. *American Journal of Perinatology Reports*, 8(2), e113.

Ashford, K., Wiggins, A., Rayens, E., Rayens, M.K., Assef, S., & Fallin, A. (2017). Perinatal biochemical confirmation of smoking status by trimester. *Nicotine and Tobacco Research*, 19(5), 631-635

Chavan, N. R., Ashford, K. B., Wiggins, A. T., Lofwall, M. R., & Critchfield, A. S. (2017). Buprenorphine for Medication-Assisted Treatment of Opioid Use Disorder in Pregnancy: Relationship to Neonatal Opioid Withdrawal Syndrome. *American Journal of Perinatology Reports*, 7(4), e215.

McCubbin, A., Fallin-Bennett, A., Barnett, J., & Ashford, K. (2017). Perceptions and use of electronic cigarettes in pregnancy. *Health education research*, 32(1), 22-32.

Research Profile: International Scholarship

The College of Nursing is a vibrant community proudly committed to global health. The College offers numerous opportunities for students to pursue international education and have a global influence in the field of nursing through Education Abroad and other global health initiatives. The College of Nursing also has an active portfolio of international research and scholarship activities – efforts that both impact health and quality of life globally, as well as support the training of an international nursing research workforce and the next generation of nurse scientists capable of addressing global health challenges.

Many students in the PhD program, for example, are international – they come to the University of Kentucky College of Nursing for advanced research training and return to their home countries upon completing the program to apply their advanced research knowledge and skills. The College of Nursing hosts many international visiting

scholars who spend up to a year studying and collaborating with our faculty. Our faculty are also active in mentoring students who are completing their



advanced research training in international programs. Our RICH Heart team hosts an annual summer writing workshop that is frequented by international scholars seeking further training in scientific communication (see photo above). Over the last two years, 23 faculty from Sweden, Taiwan, Japan, South Korea, as well as the United States have participated. Across these programs, the University of Kentucky College of Nursing is supporting health research, scholarship and clinical services in America, Europe, and Asia. The activities of three of our faculty are featured as examples of our global impact.

Dr. Misook Lee Chung

Research and Scholarship

Dr. Chung is an internationally recognized expert on cardiovascular and stroke patient and caregiver dyads. Collaborations with colleagues in Scotland, Italy, Scandinavia have allowed her to extend and expand her research of the interdependent relationships in self-management between patients with chronic illnesses (e.g., cardiovascular and stroke patients) and their caregivers in Europe. These collaborations have already resulted in nine data-based manuscripts, with more papers in progress. In 2018, Dr. Chung contributed to four posters using dyadic analysis that were presented at the prestigious EuroHeartCare meeting. Representative publications from her international collaborations include:



Italy: Vellone, E, **Chung, M.L.**, Rosaria Alvaro, Paturzo, M., & Dellafiore, F. (In press). The influence of mutuality on self-care in heart failure patients and caregivers: a dyadic analysis. *J of Family Nursing*.

Scotland: Thomson, P., Molloy, G. & **Chung, M. L.** (2012). The effects of perceived social support on quality of life in patients awaiting CABG and their partners: testing dyadic dynamics using the Actor-Partner Interdependence Model. *Psychology, Health & Medicine*, 17(1), 35-46.

Sweden: Waldréus, N., **Chung, M.L.**, van der Wal, M.H.L., & Jaarsma, T. (In press). Trajectory of thirst intensity and distress from admission to 4-weeks follow up at home in patients with heart failure. *Patient Preference and Adherence*.

Global Korean Nursing Foundation-USA

Dr. Chung serves on the Board of Directors for the Global Korean Nursing Foundation-USA. She served on their workshop-program committee from 2015-2018. She currently serves as chair of their scholarship-award committee and her service was recognized by receiving The Outstanding Service Award in 2018.

International Visiting Scholars

Dr. Chung has been actively engaged in the visiting scholar exchange program at the UK College of Nursing. To date, she has hosted 3 visiting scholars:

- Jaok Kim, Associate Professor at Wonkwang Health University, South Korea (January, 2018).
- Suk Jeong Lee, Professor at the Red Cross College of Nursing, Chung-Ang University, South Korea (September, 2018 – February, 2019).
- Maria Liljeroos, Pre-doctoral scholar (October, 2015), & Post-doctoral scholar (August, 2017), Linköping University, Sweden

Dr. Chizimuzo (Zim) Okoli

Research and Scholarship

Dr. Okoli has had the opportunity to publish extensively. Representative publications from his international collaborations include:

Canada: Okoli, C.T.C., Anand, V., Khara, M. (2017). A retrospective analysis of the outcomes of smoking cessation pharmacotherapy among persons with mental health and substance use disorders. *Journal of Dual Diagnosis* 13(1):21-28.

India: Nagarajan, D. & Okoli, C.T.C. (2016). A systematic review of tobacco use among adolescents with physical disabilities. *Public Health* 133:107-115.

China: He, H., Okoli, C.T.C. (submitted June 22nd, 2018). The association between smoking and secondary or recurrent stroke: A systematic review. *Biological Research for Nursing*.

Taiwan: Guo, S.E., Shen, H.C., Okoli, C.T.C., Liao, Y.C., Tsai, K.D., Lin, M.S., Hsu, H.T. (submitted June 4th 2018). Nurses' knowledge, attitudes, and behavioral intentions toward promoting pulmonary rehabilitation for patients with chronic obstructive pulmonary disease: A cross-sectional correlational study.

Dr. Okoli has also been successful in competing for extramural funding through these international collaborations. Representative grants from his International collaborations include:

Canada: Smoking on the Margins: An Equity Analysis of the Outcomes of an Outdoor Smoke-Free Policy. BC Center of Excellence for Women's Health; CIHR; 03/2011 – 02/2016.

Taiwan: Impact of Particulate Matters on Respiratory Symptoms Change, Lung Function, and Self-Care Behaviors in Patients with Chronic Obstructive Pulmonary Disease in Southern Taiwan: A Pilot Study, Chang Gung Medical Foundation. 9/1/2013-8/31/2017.

Kiang Wu Summer Inbound Exchange Programme (July 8-14th, 2018)

Dr. Okoli attended the Inaugural Summer Inbound Exchange Programme hosted by the Kiang Wu Nursing College of Macau in Macau (SAR), China. This program hosted 33 faculty and students from 6 different

countries/regions (USA, Thailand, Malaysia, Taiwan, Hong Kong, Macau, China) for presentations, simulated cases scenarios, and visiting hospitals and healthcare centers within Macau. The purpose of this trip was to promote exchange of Nursing Knowledge and Education among affiliated Institutions. In addition, he provided guest lectures to the faculty of the Kiang Wu Nursing College of Macau on Writing



Systematic Reviews.



International Visiting Scholars

Dr. Okoli has been actively engaged in the visiting scholar exchange program at the UK College of Nursing,



resulting in the establishment of a Memorandum of Understanding with the Kiang Wu Nursing College of Macau as well as multiple published peer-reviewed manuscripts. To date, he has hosted 6 visiting scholars:

- Divya Nagarajan from the Kasturba Medical College, Manipal India (Jan-April, 2015)
- U Wai Ang & Cheong Wan from the Kiang Wu Nursing College of Macau (July-Aug, 2015)
- Huijuan He from the Hubei Traditional Chinese Medicine University, Wuhan City, Hubei Province, China (Jan-July 2018)
- Esraa Mansour (2nd year Nursing student) from the American University of Cairo, Cairo, Egypt (Jun-July, 2018)
- Jialin Wang from the Chengdu University of Traditional Chinese Medicine, Chengdu City, Sichuan Province, China (July-2018-Jun 2019).

Dr. Ana Maria Linares: Fulbright Scholar

As a Fulbright scholar, Dr. Linares will be investigating sources of iron-deficiency anemia in Ica, Peru, from March to June of 2019. Her research project will evaluate a cohort of Peruvian children (3 to 12 months old) and measure biological and environmental factors that are associated with decreased hematocrit such as the type of feeding, fecal occult blood, lead and arsenic concentrations, and intestinal parasites. She will also collect information about feeding history and feeding practice of the children and water minerals concentration.



The specific research questions she will address include:

1. What is the rate of iron-deficiency anemia in Peruvian children?
2. What is the level of Peruvian children with fecal occult blood and/or intestinal parasites?
3. What is the rate of Peruvian children with unsafe concentration of lead and/or arsenic?
4. What are the predictors of iron-deficiency anemia in Peruvian children?

The National University of San Luis Gonzaga, Ica (UNICA), Peru will host Dr. Linares during her period of research. Trained certified research nurses from Peru will collaborate with Dr. Linares in participant recruitment and data collection, including biosamples. The biosamples will be shipped to the University of Kentucky for analysis. The study will provide foundational knowledge to inform appropriate future interventions targeting iron-deficiency anemia in Peruvian children. These studies will be conducted in partnership with research collaborators in Peru.

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315 College of Nursing Building
University of Kentucky
Lexington, KY 40536-0232

uky.edu/nursing