E4. Faculty Scholarship

The school has policies and practices in place to support faculty involvement in scholarly activities. As many faculty as possible are involved in research and scholarly activity in some form, whether funded or unfunded. Ongoing participation in research and scholarly activity ensures that faculty are relevant and current in their field of expertise, that their work is peer reviewed and that they are content experts.

The types and extent of faculty research align with university and school missions and relate to the types of degrees offered.

Faculty integrate research and scholarship with their instructional activities. Research allows faculty to bring real-world examples into the classroom to update and inspire teaching and provides opportunities for students to engage in research activities, if desired or appropriate for the degree program.

1) *Describe the school's definition of and expectations regarding faculty research and scholarly activity.*

   GWSPH defines research and scholarly activities as the creation of new knowledge. According to the APT guidelines, "critical to scholarship are the concepts of original, critical thinking, formal recognition of accomplishment by members of a field or discipline, independence and creativity, peer review (as evidence of importance to the field), and publication of results, whether through a peer-reviewed journal, government publication, or major symposia." The 2020 strategic plan set the goal of propelling the school's interdisciplinary research portfolio to national prominence, ensuring that the research portfolio was relevant to public health policy, practice and management nationally and internationally.

   For tenured and tenure track faculty, the expectation is that faculty will have at least 50% research coverage, while non-tenure accruing faculty have a level of research expectation in balance with their other duties of teaching and service. For research faculty, that expectation may be as high as 100% research coverage. For specialized teaching faculty, there is no expectation of research coverage, but exceptions can be made for up to 20% effort (see ERF > Criterion A > Criterion A1 > A1.3: Bylaws-Policy Documents).

2) *Describe available university and school support for research and scholarly activities.*

   GW is home to approximately 70 research centers and institutes contributing to the university's missions of discovery, scholarship and service. These chartered research organizations span all ten of GW's schools, and many spur innovation through cross-disciplinary collaboration. Additionally, GW has several campus-wide research administration groups that represent and advocate on behalf of research endeavors at the university. In 2023, GWSPH updated a report detailing all of the school's facilities and other research resources (see ERF > Criterion E > Criterion E4 > E4.2: Faculty research support).

   Research Centers and Institutes Hosted by GWSPH
   GWSPH hosts over 25 research centers and institutes spanning the range from specific diseases like HIV/AIDS to climate change, and focusing on both domestic and global arenas. These include 13 research centers, five institutes and six programs or units,—all headed by GWSPH faculty and staff. Some, such as the Genomics Core, provide service beyond the school and are considered "cores" for the GW research systems.

GWSPH Office of Research Excellence (ORE)
Led by the Senior Associate Dean for Research and Innovation, the Office of Research Excellence (ORE) is dedicated to supporting the research efforts of faculty, staff and students within the school. ORE serves GWSPH and its departments in different ways by offering strategic research expertise and support for various research-related functions, procedures, systems and other business support functions that impact research and security while catalyzing research productivity. It is responsible for research coordination, compliance with applicable regulations and institutional policies, research integrity and training, research communication, contracting and enhancement, and providing excellent service to advance research and discovery by faculty, students, staff and individuals affiliated with GWSPH (see ERF > Criterion E > Criterion E4 > E4.2: Faculty research support).

GW Research POD 2
Research POD 2 is a hybrid shared service model with the purpose of propelling its stakeholders' interdisciplinary research portfolios to national and international prominence. The POD is structured to provide scalable capacity with the sponsored research administrators divided into working teams. Each team is designated a research portfolio assignment responsible for both pre- and post-award (cradle-to-grave), while others may focus on pre- or post-award (specialization). The result of this shared service structure enables POD 2 to be flexible with research administrative services when other teams are overburdened and to be scalable to provide high quality research administration support for its stakeholders.

POD 2 is comprised of a POD Head (GWSPH Senior Associate Dean for Research and Innovation), three managers and several experienced staff dedicated to enhancing research productivity and maintaining world-class quality in the research ecosystem at GW. Within the POD there is a management team and three levels of research administrative roles. As noted above, GWSPH shares Research POD 2 with GW Law, but the law school conducts very little research.

GWSPH Research Day
At this annual event, undergraduate, master's and doctoral students plus postdocs, research staff and alum from GWSPH present their outstanding research during an interdisciplinary poster session. Additional activities at GWSPH Research Day include oral presentations, workshops for student presenters, presentation feedback from a judging panel, an awards ceremony, and remarks from The Michael and Lori Milken Dean of Public Health and Senior Associate Dean for Research and Innovation (see ERF > Criterion E > Criterion E4 > E4.2: Faculty research support).

Office of the Vice Provost for Research (OVPR)
The GW Office of the Vice Provost for Research (OVPR) works with university faculty to support cutting-edge research and scholarship across all stages of the research lifecycle. OVPR leads several initiatives and programs with the strategic aim of growing research capacity and boosting the impact of GW-led discovery and innovation. OVPR sponsors various intramural funding competitions and incentive programs to support and encourage research and scholarship at the university. On a limited basis, GW provides institutional support for research, including start-up packages for new research faculty, cost-sharing on sponsored research projects and Research Enhancement Incentive Awards. OVPR's Research Enhancement Unit provides investigators at GW with services and guidance to successfully apply for federally sponsored research funding. The Office of Human Research (OHR) is the administrative support office for the university's IRB. OHR's mission is to support the GW research community in the conduct of innovative and ethical research by providing guidance, education and oversight for the protection of human subjects.

3) *Describe and provide three to five examples of student opportunities for involvement in faculty research and scholarly activities. This response should focus on instances in which students were employed or volunteered to assist faculty in faculty research projects and/or independent student projects that arose from or were related to a faculty member's existing research.*

Example No. 1: Two student workers in ORE assist in research communication and promotion. Under the supervision and guidance of the ORE team, they help host the biweekly Bioethics Webinars, produce the ORE biweekly Research Newsletter and help maintain the ORE website. Additionally, they participate in all ORE event planning, such as GW Research Day and more.

Example No. 2: Another student worker at ORE assists with research metrics and development. Under the supervision and guidance of the ORE team, he helps with the management system of lower-level research data related to GWSPH Intramural Awards, which includes monitoring critical indicators in proposal submission, principal investigator communication, data management, awards tracking and report development.

Example No. 3: Keith Crandall, PhD, MA, is Professor in the Department of Biostatistics and Bioinformatics, Director of the GW Computational Biology Institute and Director of the Genomics Core. Dr. Crandall teamed up with an undergraduate public health student and a doctoral student (from SMHS) on a project to examine the impact of transposable elements (namely, endogenous retroviruses [ERVs]) on gene expression at candidate genes associated with Alzheimer's Disease (AD). They partnered with world leaders in Alzheimer's genetics (Carlos Cruchaga at Washington University and John "Keoni" Kauwe at Brigham Young University) to access novel data collected by Washington University on a unique AD cohort and then combined these data with two other RNA-Seq datasets available from a different cohort on AD that were publicly available. They identified 698 statistically significantly differentially expressed ERVs across their three datasets and identified associations of ERV differential expression with differential expression of candidate genes associated with AD. They used novel methods and software developed in the Computational Biology Institute by a former PhD student. Their results were published in *Frontiers in Aging Neuroscience*[90] with both students as co-first authors on the publication.

Example No. 4: Kyle Levers, PhD, is Assistant Professor in the Department of Exercise and Nutrition Sciences and Director of the MET Lab Service Core. In the spring of 2023, he worked with an undergraduate student research team on the impact of an ultra-endurance backpacking event on markers of health, human performance and recovery. As a result of working with the project, these students demonstrated a thorough understanding of all the physical research protocols in addition to proper participant care and communication. The students also collaborated with all members of the research team to create data collection systems and electronic documentation in preparation for the research study. As members of the research team, the students worked together to obtain consent from, familiarize and collect data on the research participants through both in-person physiological testing and mobile app-based daily questionnaires. Between data collection sessions, the students collated, organized and analyzed research data collected from each physiological testing block in addition to the daily questionnaire information. Finally, the students worked together in a culminating experience, assembling a research abstract from the collected data and presenting it as a research poster during a schoolwide research event.

---

[90] Dawson, T., Rentia, U., Sanford, J., Cruchaga, C., Kauwe, J. S. K., & Crandall, K. A. (2023). Locus specific endogenous retroviral expression associated with Alzheimer's disease. *Frontiers in aging neuroscience*, *15*, 1186470. https://doi.org/10.3389/fnagi.2023.1186470

Example No. 5: Jennifer Sacheck, PhD, MS, is Sanofi Professor of Prevention and Wellness and Chair of the Department of Exercise and Nutrition Sciences. Dr. Sacheck collaborated with an MPH student on a federally funded research project. The student worked on a systematic review that was needed to complement the main Creating Opportunities for Adolescents through Coaching, Healthy Eating, and Sports (COACHES) Study (a near peer intervention in low-income New Orleans public middle schools designed to improve physical activity and social-emotional learning; this was in partnership with the national nonprofit Up2Us Sports). The student developed a train-the-trainer model for the near peers in the intervention schools and conducted a corresponding systematic review that was published.[91] Further, in her desire to go on for a PhD, she analyzed and published[92] data on food security and diet quality in this population.

Example No. 6: Allison Sylvetsky, PhD, is Associate Professor in the Department of Exercise and Nutrition Sciences. Over the last few years, Dr. Sylvetsky has been working with a doctoral student on several research projects. The student has become well-versed in designing data collection instruments and creating study databases and workflows; recruiting and enrolling participants from diverse and underserved backgrounds; and collecting, managing and analyzing quantitative and qualitative data. The student has also written and presented several scientific abstracts and manuscripts.[93] In 2022, the student received an award for her presentation on the impacts of the COVID-19 pandemic on children's sugary drink consumption at the George Washington University Research Showcase.

4) *Describe and provide three to five examples of faculty research activities and how faculty integrate research and scholarly activities and experience into their instruction of students. This response should briefly summarize three to five faculty research projects and explain how the*

---

[91] St Pierre, C., Guan, W., Barry, L., Dease, G., Gottlieb, S., Morris, A., Merrill, J., & Sacheck, J. M. (2021). Themes in Train-the-Trainer Nutrition Education Interventions Targeting Middle School Students: A Systematic Review. *Nutrients*, *13*(8), 2749. https://doi.org/10.3390/nu13082749

[92] St Pierre, C., Guan, W., Merrill, J., & Sacheck, J. M. (2022). Urban Youth Perspectives on Food Insecurity during the COVID-19 Pandemic: Evidence from the COACHES Study. *Nutrients*, *14*(3), 455. https://doi.org/10.3390/nu14030455

[93] Ferguson, K., Moore, H., Kaidbey, J. H., Khattak, S., Saeed, A., Cogen, F. R., Streisand, R., & Sylvetsky, A. C. (2022). Impacts of the COVID-19 Pandemic on Pediatric Type 1 Diabetes Management: A Qualitative Study. *The science of diabetes self-management and care*, *48*(6), 522–532. https://doi.org/10.1177/26350106221125701

Ferguson, K., Gunthert, K., Kaidbey, J. H., Parr, M., Visek, A. J., Sacheck, J. M., & Sylvetsky, A. C. (2023). Behavioral Patterns of Sugary Drink Consumption among African American Adolescents: A Pilot and Feasibility Study Using Ecological Momentary Assessment. *Nutrients*, *15*(9), 2171. https://doi.org/10.3390/nu15092171

Kaidbey, J. H., Ferguson, K., Halberg, S. E., Racke, C., Visek, A. J., Gearhardt, A. N., Juliano, L. M., Dietz, W. H., Sacheck, J., & Sylvetsky, A. C. (2022). Stop the Pop: A Mixed-Methods Study Examining Children's Physical and Emotional Responses during Three Days of Sugary Drink Cessation. *Nutrients*, *14*(7), 1328. https://doi.org/10.3390/nu14071328

Sylvetsky, A. C., Kaidbey, J. H., Ferguson, K., Visek, A. J., & Sacheck, J. (2022). Impacts of the COVID-19 Pandemic on Children's Sugary Drink Consumption: A Qualitative Study. *Frontiers in nutrition*, *9*, 860259. https://doi.org/10.3389/fnut.2022.860259

Sylvetsky, A. C., Moore, H. R., Kaidbey, J. H., Halberg, S. E., Cogen, F. R., DiPietro, L., Elmi, A., Goran, M. I., & Streisand, R. (2021). Rationale and design of DRINK-T1D: A randomized clinical trial of effects of low-calorie sweetener restriction in children with type 1 diabetes. *Contemporary clinical trials*, *106*, 106431. https://doi.org/10.1016/j.cct.2021.106431

faculty member leverages the research project or integrates examples or material from the research project into classroom instruction. Each example should be drawn from a different faculty member, if possible.

Example No. 1: Lorien Abroms, DSc, MA, is Professor of Prevention and Community Health, Associate Dean for PhD and MS Programs, and Co-Director of the GW BRIGHT Institute. Dr. Abroms' research focuses on the application of digital communication technologies for health promotion, including for smoking cessation and vaccine uptake. In PUBH 6570 Advanced Public Health Communication: Theory and Practice, Dr. Abroms uses her development and evaluation of smoking cessation programs, Text2Quit and Text4baby (the latter focuses on pregnant individuals), as case studies for discussion and examination. These same programs are also used as examples of successful health communication interventions in PUBH 6503 Introduction to Public Health Communication and Marketing. Dr. Abroms has worked with at least two MPH students on their CE projects using data from her vaccine uptake on social media research.

Example No. 2: Susan Anenberg, PhD, is Professor and Chair of the Department of Environmental and Occupational Health and Director of the GW Climate and Health Institute. Dr. Anenberg integrates her research into various aspects of PUBH 6140 Global Climate Change and Air Pollution. Students read and discuss a systematic review[94] on climate change and air pollution interactions, authored by Dr. Anenberg. The discussion also involves Dr. Anenberg describing her motivation for doing the research, how it was carried out, what she found, how the findings could affect science and action, and how the research integrates into the broader context and existing knowledge. In a later week, Dr. Anenberg integrates her qualitative and quantitative research approaches for evaluating co-benefits of reducing greenhouse gases. The unit also covers Dr. Anenberg's experience recruiting nonacademic stakeholders and formulating research questions that fill critical information gaps and interpret data appropriately.

Example No. 3: Deanna Kerrigan, PhD, MPH, is Professor and Chair of the Department of Prevention and Community Health and leads the Behavioral Sciences Core for the DC Center for AIDS Research. Her research focuses on the development, implementation and evaluation of community-driven multilevel interventions to prevent and treat HIV infection and promote the overall health and human rights of multiply marginalized women in lower- and middle-income settings. Dr. Kerrigan developed, in partnership with local research and community groups, particularly in Latin America and the Caribbean, a portfolio of both observational and intervention mixed methods research on the role of social-structural and individual factors driving these outcomes. In PUBH 6510 Community Oriented Primary Care Principles and Practice, Dr. Kerrigan provides students with a case study example of how formative mixed methods work in partnership with local research and community groups. The case study explores how such research can be leveraged to develop and implement interventions at multiple levels, including individual counseling, peer education and navigation, provider sensitivity training and community mobilization. Dr. Kerrigan engages students in conversations about the challenges and solutions to bringing these models to scale and sustaining funding for this work, particularly in low-resource settings. Ultimately, the goal of this case study is to bring to light the value of community-engaged research for program development and highlight unique and innovative intervention models that can be rigorously evaluated using multiple methods and approaches that support their continuity.

---

[94] Anenberg, S. C., Haines, S., Wang, E., Nassikas, N., & Kinney, P. L. (2020). Synergistic health effects of air pollution, temperature, and pollen exposure: A systematic review of epidemiological evidence. *Environmental health*, *19*(1), 130. https://doi.org/10.1186/s12940-020-00681-z

Example No. 4: Amita Vyas, PhD, MHS, is Professor in the Department of Prevention and Community Health and Director of the GWSPH Center of Excellence in Maternal and Child Health. She has been working in India since 2015 and launched a national Girl Rising campaign to improve attitudes toward girls' education and increase gender equity. As part of the project, Dr. Vyas and her research team have conducted multiple quantitative and qualitative studies, including a quantitative survey across 11 cities in northern India with low rates of girls' secondary school completion. Dr. Vyas shares her research in PUBH 6551 Maternal and Child Health 2 (3 credits), which provides students an opportunity to gain a deeper understanding of issues facing adolescent girls in India. PUBH 6551 is a skills-based course that focuses on how survey research is designed, conducted and analyzed. Most important, the course focuses on how to interpret statistical analysis as part of guiding the development of interventions and policies for MCH populations. Dr. Vyas discusses her research in India, taking students through the survey research process, including framing research questions, selecting a study design, selecting survey administration modes, developing and formatting questionnaires, implementing and monitoring data collection, dataset creation/cleaning and statistical analysis. Students use her Girl Rising cross-sectional dataset with a diversity of variables (categorical and continuous) to conduct univariate, bivariate and multivariate statistics (using SPSS) and interpret the statistical findings.

5) *Describe the role of research and scholarly activity in decisions about faculty advancement.*

According to the APT guidelines, appointment or promotion in regular, tenure track or tenured positions are dependent on professional achievement and excellence in education, scholarship and service. For these faculty, scholarship is an essential component for promotion and cannot be demonstrated without evidence of peer-reviewed publications. In line with the requirement for excellence in scholarship, the overall quality of publications takes precedence over quantity, though both are expected to increase with increasing academic rank. The APT guidelines provide a list of acceptable evidence of scholarship achievement.

For regular, non-tenure track faculty positions, appointment or promotion is also dependent on professional achievement in education, scholarship and service, though the expectation of scholarly evidence is much lower than the tenure-accruing track.

For appointment or promotion, research faculty must provide evidence of excellence in scholarship, and the expectation is that they will also provide some evidence of activity in service and education, including teaching and mentoring. Teaching faculty must provide evidence of excellence in teaching, and the expectation is that they will also provide some evidence of activity in service (see ERF > Criterion A > Criterion A1 > A1.3: Bylaws-Policy Documents).

6) *Provide quantitative data on the unit's scholarly activities from the last three years in the format of Template E4-1, with the unit's self-defined target level on each measure for reference. In addition to at least three from the list in the criteria, the school may add measures that are significant to its own mission and context.*

Template E4-1

Outcome Measures for Faculty Research and Scholarly Activities				
Outcome Measure	**Target[95]**	**FY 2021**	**FY 2022**	**FY 2023**
Total research expenditures	$100 million	$96.65 million	$87.89 million	$81.06 million
Number of GW IRB submissions by GWSPH investigators (new studies)	100	92	75	78
Number of research proposals submitted to donors/funders	300	290	254	283
Number of PIF who act as principal investigators	125	114	117	132
Projects submitted by GWSPH students through the Oversight Portal	700	490	679	634

See ERF > Criterion E > Criterion E4 > E4.6: Temp 4-1.

7) *If applicable, assess strengths and weaknesses related to this criterion and plans for improvement in this area.*

Strengths

- GWSPH provides a supportive research environment that enables faculty, staff and students to engage in research and scholarly activities. Under the leadership of Senior Associate Dean for Research and Innovation Adnan Hyder, ORE supports identifying funding opportunities, formulating research agendas, fine-tuning grantsmanship, ensuring research integrity, compliance and ethics and providing research administration and coordination. ORE strengthened institutional review and ethics systems for both faculty and student research. There are a growing number of postdoctoral researchers and PhD students in the school, and ORE hired additional support staff, such as a research finance manager, to assist with research. GWSPH experienced sustained growth over the past few years and increased indirect costs. GWSPH researchers are publishing in top-notch journals with greater frequency and participating in more national and international collaborative grants.
- Since 2019, GWSPH received increased grant funding (minus one large grant that was completed). Not only are the amounts increasing, but also the durations, the quality and the competitiveness of the grants. In 2022, GWSPH was awarded its first T32 grant and submitted its first U grant for consideration. Funding received from global health training grants have been used to support research capacity strengthening in various countries including Armenia (D43), Democratic Republic of Congo (G11), Mali (R25), Pakistan (R25) and Zambia (D43). Additionally, Research POD 2 reports that GWSPH has a success rate of 27–30% for grant funding, which is remarkable, considering the NIH average is 20.7%.
- In June 2023, GW was inducted into the prestigious Association of American Universities, a feat only accomplished by 70 other premier research universities working to address challenging problems through research while educating and training the next generation of leaders.

[95] Targets were developed by the Senior Associate Dean for Research and Innovation based on his aspirations for the school. As a result, they are higher than the actual counts.

- In 2023, Adnan Hyder, PhD, MD, MPH, received the 2023 GW Distinguished Research Career Award. He was selected because of his significant contributions in research and scholarship to the university and society. For more than 20 years, Dr. Hyder worked to improve global health in low- and middle-income countries and pioneered empirical work around health systems, ethics and injury prevention in the developing world.
- Emma K. Stapp, PhD, MHS, received a 2023 NARSAD Young Investigator Grant. Dr. Stapp submitted a proposal for a project to investigate mood disorder subtypes, with the goal of understanding the mechanisms that are directly actionable and inform recommendations about dose and timing of physical activity most beneficial to affective regulation.
- GWSPH is a member of the M8 Alliance of Academic Health Centers, Universities and National Academies. This network of 28 members in 20 countries sets the agenda for global health improvement and development of science-based solutions to global health challenges. The M8 Alliance is the academic backbone of the World Health Summit. GW hosted the World Health Summit Regional Meeting 2023, and Dr. Hyder served as World Health Summit International President 2023. The 2023 theme, *Bridging the Science to Policy Gap for Global Health,* highlighted the essential role of evidence-based science for the development of global health policy.
- GWSPH has several institutes and centers chartered by GW.
- According to President Granberg, GWSPH accounts for 45% of the research conducted at the university.
- In FY 2023, GWSPH received over $32 million in federal NIH funding, placing it among the top ten schools of public health to receive NIH funding.

Challenges

- While ORE hired additional support personnel in the last few years, research administration still needs additional staff to meet growing research needs as well as pathways for career advancement for these hires.
- ORE faces challenges managing and tracking global research across the school. This is particularly important for research conducted outside of the Department of Global Health. ORE is currently discussing processes to track this research and engage in more research collaborations across departments.
- Currently, the university and school use separate systems for managing research creating challenges in communication between university entities. With GW's induction into the Association of American Universities, it's vital that GW move to a centralized school and university system that rivals that of other premier research institutions.
- Overall, GWSPH has grown faster in research than other parts of GW and often leads the way in new research areas, new geographical research sites or new collaborations. This often requires new decisions, which often takes time and sometimes delays the start of projects.

Future Plans

- GWSPH is committed to further growth in its research enterprise over the next three to five years, including (1) increased number of large and consortia grants; (2) greater number of training grants both domestically and globally; and (3) diversification of the funding portfolio to both new federal and nonfederal donors.
- GWSPH will be reviewing the current research ecosystems at the school and supporting offices at GW to try and optimize them, and we hope to work closely with university leadership to develop in-house capacity for an "idea to delivery" system.
- GWSPH plans to build a robust research administration who can streamline and enhance the services offered. To assist in the hiring process and new vision for research, the GWSPH webpages dedicated to research were revised in 2023 to reflect open positions and planned services.
- One project currently under development is a bibliometric analysis of GWSPH faculty publications, in collaboration with our library support systems. This analysis will be used on future grant proposals and highlighted on our website.
- Currently, GWSPH 10 ten postdocs working on research, and to support the growth in research, we are hoping to increase this number in the next five years.