56th Meeting of the NIH Advisory Committee on Research on Women’s Health

Janine Austin Clayton, M.D., FARVO
NIH Associate Director for Research on Women’s Health
Director, Office of Research on Women's Health
National Institutes of Health
April 6, 2022 – Director’s Report
Outline of ACRWH Director’s Report

I. Opening Remarks
II. Sleep Matters: New Science and New Strategy
III. NIH & ORWH Updates
IV. Scientific Collaborations
V. New in Sex and Gender
VI. Careers
VII. FY21 Research Programs Funding
VIII. Closing
Welcome & Acknowledgement
In Memoriam
Rebecca DelCarmen-Wiggins
1957 – 2021

Something Beautiful Remains

The tide recedes but leaves behind bright seashells on the sand.
The sun goes down, but gentle warmth still lingers on the land.
The music stops, and yet it echoes on in sweet refrains.....
For every joy that passes, something beautiful remains.

Martha Vashti Pearson
Wake up! Why sleep matters

“When people don't get enough sleep, they don't get a strong circadian rhythm. And if we don't have a strong circadian rhythm, the cells in our body don't get enough energy.”

Michael Twery, Ph.D., NHLBI
Health is interrelated and sleep is important

- Chronic Pain
- Chronic Fatigue
- Depression
- Hypertension
- Heart Disease
- Obesity
- Pancreatitis
- Diabetes
- Kidney Disease

Inactivity
Psychosocial Stress
Diet
Social Network

Source: Regensteiner et al., 2015

Sex and Gender Lens
Puberty
Menstruation
Pregnancy
Menopause

National Institutes of Health
Office of Research on Women's Health
Sleep disorders strike women uniquely over life course

- Respond differently to sleep disorders, deprivation and deficiency
  - In unique ways that
  - May require distinct management
- Each phase of woman’s life increases risk of sleep disturbance
  - Poor sleep quality
  - Sleep deprivation
  - Sleep disorders (e.g., OSA, restless legs syndrome, and insomnia)
- New research – increased risk during hormonal changes for
  - Sex hormones
  - Sleep changes/post-reproductive stage
  - Interactions of aging, hormonal changes, comorbidities
  - Impact of sleep disturbances – especially in pregnancy
  - Drug metabolism

E = estrogen | P = progesterone | TST = total sleep time | WASO = wake after sleep onset

NIH sleep research plan targets sex differences, sets high-priority research areas

Sets goals and critical research opportunities to advance sleep research – key focuses:

• Studying sleep/circadian mechanisms underlying health, disease
• Improving treatments
• Understanding sleep’s role in health disparities, including women’s
• Developing diverse workforce in sleep research

Goal 4 sets high-priority research area – seeks better understanding of:

• Health disparities
• Sex and gender differences
• Impact of racial discrimination and other SDOH

“Plan incorporates crosscutting NIH priorities that address minority health and health disparities, sex as a biological variable, inclusion across the lifespan, the opioid epidemic...”

Marishka K. Brown, Ph.D.
Director, National Center on Sleep Disorder Research

www.nhlbi.nih.gov/all-publications-and-resources/2021-nih-health-sleep-research-plan
NIH & ORWH Updates
NIH Leadership Update

Lawrence A. Tabak, D.D.S., Ph.D.
Acting Director

Tara A. Schwetz, Ph.D.
Acting Principal Deputy Director

Courtney Ferrell Aklin, Ph.D.
Acting NIH Associate Deputy Director

Number of women IC directors

Dr. Jennifer Webster-Cyriaque
Deputy Director, NIDCR
GH5050 ranks NIH a “high performer” – one of 37 and in top 30%

- Assessed gender-related policies, practices and outcomes of the 200 leading organizations active in global health
- Examined whether and how organizations are addressing
  - Inequality of opportunity in career pathways inside organizations
  - Inequality in who benefits from the global health system
- NIH was one of just 37 “High” performing organizations, placing it in the top 30% of organizations

Variables Considered*

- Commitment to gender equality
- Public definition of gender
- Workplace (WP) gender equality policy
- WP diversity & inclusion policy
- Board diversity & inclusion policy
- Gender parity in senior management
- Gender parity in governing body
- Gender-responsiveness of programmatic approaches
- Reporting of sex-disaggregated programmatic data

* NIH scored highly in variables highlighted in **bold**.

https://globalhealth5050.org/
The Report of the Advisory Committee on Research on Women’s Health: Fiscal Years 2019—2020
Online Release January 2022

• Thank you, partners!
• Highlights research on
  o Women’s health
  o Influence of sex and gender on health and disease
• Reviews adherence to NIH inclusion policy
• Presents NIH women’s health research spending for FY 2019 (and FY 2017–2018)
• New section on NIH workforce and grantees

https://orwh.od.nih.gov/research/funded-research-and-programs/research-reports/biennial-report
NIH extramural workforce is more diverse – intramural WF mirrors academia

FY 2020: Scientific and Infrastructure Workforce by Sex and Program

- **Extramural**
  - Scientific Occupations: 1,338 Female, 946 Male
  - Infrastructure Occupations: 1,009 Female, 357 Male

- **Intramural**
  - Scientific Occupations: 2,856 Female, 2,399 Male
  - Infrastructure Occupations: 1,173 Female, 443 Male

Sources: Data and definitions provided by the NIH Office of Equity, Diversity, and Inclusion’s (EDI) Data Analytics Branch
Award trend lines reflect gender parity in career, largest increase in centers

Research Grant Investigators: Percentage of Women by Award Mechanism and FY

Analysis by race and ethnicity shows power of disaggregation – advances among Black and Hispanic researchers

NIH R01-Equivalent Grant Success Rates for Females by Race and Ethnicity

<table>
<thead>
<tr>
<th>Year</th>
<th>Black or African American</th>
<th>Asian</th>
<th>Hispanic</th>
<th>Other Non-White</th>
<th>White</th>
</tr>
</thead>
<tbody>
<tr>
<td>2016</td>
<td>13.9</td>
<td>19.0</td>
<td>14.9</td>
<td>15.3</td>
<td>20.9</td>
</tr>
<tr>
<td>2017</td>
<td>13.3</td>
<td>18.1</td>
<td>15.1</td>
<td>20.2</td>
<td>20.2</td>
</tr>
<tr>
<td>2018</td>
<td>15.6</td>
<td>19.9</td>
<td>23.6</td>
<td>24.0</td>
<td>21.9</td>
</tr>
<tr>
<td>2019</td>
<td>12.0</td>
<td>21.3</td>
<td>23.2</td>
<td>23.6</td>
<td>23.2</td>
</tr>
<tr>
<td>2020</td>
<td>18.1</td>
<td>21.5</td>
<td>23.2</td>
<td>23.6</td>
<td>24.1</td>
</tr>
</tbody>
</table>
JWH article surveys ORWH’s founding, mission, programs and advances

Background
- Authored by ORWH staff
- Marking ORWH’s 30th anniversary

Topics
- Events and “overall zeitgeist” behind formation
- Role as NIH focal point for coordinating WHR
- Mission and signature programs
- Paradigm shifts
  - Health over the life course
  - Multidimensional framework – including effects of environmental exposures
  - NIH inclusion and SABV policies
- Career programs, progress, and barriers relating to women’s advancement in biomedical careers

Three key inclusion-related reports

**GAO* Report on inclusion closed**
- 2015 report examined NIH-funded research relating to:
  - Inclusion of women
  - Analysis of sex differences
- Recommended that NIH examine and report more detailed data
- With release of 2019-2020 Biennial Report, NIH addressed the final recommendation**
- GAO Report is officially closed

**NASEM report on sex and gender terminology***
- Requested by Congress, ORWH-funded
- Drew on expertise in sociology, psychology, public health, medicine, survey methodology, statistics

*Highlights*
- **Assessment** of sex, gender, gender identity, sexual orientation, two spirit
- **Guiding principles** and **guidelines** for collecting data
- Recommends “forced logic” to assess
  - Sexual orientation identity
  - Sex assigned at birth
  - Gender identity
  - People with transgender experience and intersex traits

**Equator Network study**
- Review of integration of sex and gender concepts in published research reporting guidelines
- Of 407 guidelines
  - 57.7% mentioned at least one sex- and gender-related word
  - 13.8% mentioned “sex”; 11%, “gender”
- Only SAGER met criteria for correct use of sex and gender concepts
  - Criteria inc. nonbinary, appropriate categorization & non-interchangeability
- Recommended: EQUATOR should
  - Encourage developers to update guidance
  - Provide “more operative information, including the use of SAGER.”


* United States Government Accountability Office
** NIH Report on the Advisory Committee on Research on Women’s Health: Fiscal Years 2019-2020
*** Measuring Sex, Gender Identity, and Sexual Orientation, nap.edu/catalog/26424/measuring-sex-gender-identity-and-sexual-orientation

Dawn Corbett, M.P.H.
NIH Inclusion Policy Officer
NIH Office of Extramural Research
Scientific Collaborations
NIH-wide program seeks to prevent maternal deaths, reduce maternal morbidity, promote health equity before, during, after pregnancy

Focus

• Biological, behavioral, sociocultural, and structural factors contributing to maternal mortality and morbidity
• CVD, infection, immunity, and contributing health conditions such as COVID-19, mental health, substance use disorders, diabetes, obesity
• Geographical disparities and social determinants of health, including education, racism, and socioeconomic status

Investments since FY 2020

• NIH Office of Director and 12 ICs contributed >$20.7 M supporting 58 awards
• Recipients include 43 institutions across 21 states
• Potential funding in FY22 budget

nih.gov/research-training/medical-research-initiatives/improve-initiative
### A closer look: Funding and activities

<table>
<thead>
<tr>
<th>FOA &amp; FY (Release Date)</th>
<th>Recipients/No. of States</th>
<th>ICOs</th>
<th>Total Funding</th>
<th>ORWH-funded Areas of Research (Co-funding IC)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Admin. Supp. NOT-OD-20-104 FY20 (5/5/20)</td>
<td>36 awards 10 states</td>
<td>8</td>
<td>$7.3 M</td>
<td>Wellness and preventive care</td>
</tr>
<tr>
<td>NOSI NOT-EB-21-001 FY21 (2/22/21)</td>
<td>• 15 applications received – none funded</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Activities

- Jan. 18th Workshop – Technology to Improve Maternal Health Community
- IMPROVE Awardee Workshop, 2/15/22*

*https://web.cvent.com/event/f721f036-91cb-49cd-8ff7-2717519f3e35/summary

- Develop Navigating Wellness digital tool for librarians and patrons
- User-centered design process
- Improve underserved population’s access to screening and wellness information
INSTITUTIONAL DEVELOPMENT AWARD (IDeA) PROGRAM

• With ORWH leadership and funding, NIGMS expanded IDeA to include women’s health
• Supports NIH-wide efforts to address maternal mortality and morbidity
• Serves parts of the country with the lowest levels of NIH funding

Funding Opportunities

• NOSI: Supporting research through the Centers of Biomedical Research Excellence (COBRE) Phase I Program (NOT-GM-21-056)
• Two administrative supplements
  o To date, 34 grants totaling $9 million awarded in 18 IDeA States
  o ORWH co-funded 8

<table>
<thead>
<tr>
<th>Admin. Supps.</th>
<th>Apps Rec./No. of States</th>
<th>Recipients/No. of States</th>
<th>ICs</th>
<th>Total Funding</th>
<th>ORWH-funded ICs</th>
<th>FY2020 Funding</th>
</tr>
</thead>
<tbody>
<tr>
<td>NOT-GM-20-017 FY20</td>
<td>37 apps/15 states</td>
<td>19 awards/15 states</td>
<td>9</td>
<td>$4.8 M</td>
<td>Fetal growth, Cancer immunotherapy</td>
<td>Alzheimer use, Alzheimer Disease</td>
</tr>
</tbody>
</table>

• Marshall U. – risk of maternal morbidity in pregnant women with obesity-associated metabolic syndrome & substance use disorder
• LSU – whether weight loss in early pregnancy can alter genetic programming and attenuate risk for adult onset cardiometabolic disease in female offspring

https://www.nigms.nih.gov/News/results/Pages/20201009.aspx
ORWH updates and expands U3 webpages

**Key Highlights:**

- Downloadable fact sheet explains importance of each “U” in the U3 framework, with datapoints for each. Resource is friendly to non-scientific audiences
- New page for researchers provides details specifically focused on the U3 Administrative Supplement
- Navigational tiles invite users to explore Current and Previous U3 Projects, resources, and U3 Women’s Health Lecture Series
Current and Previous Projects page features an interactive map that displays datapoints for each past and current U3 Projects.

When clicked, each datapoint provides description of project, researchers, and institution.

The “Sort by U3 Population” feature allows users to filter the map to show only projects focused on a specific population.

Page features U3 Investigator and is updated quarterly.

- **70 projects have been funded across FY17-21 in over 20 states across the US**

- **U3 Projects Map**

- **Current and Previous Projects**

- **U3 Featured Investigator**

- **70 Projects funded to date across FY17-21**

- **20+ States across the US in which U3 projects have been funded**

- Dr. Lu is the Wharton Distinguished Chair in Gynecologic Oncology and Professor and Chair in the Dept. of Gynecologic Oncology and Reproductive Medicine at the University of Texas MD Anderson Cancer Center. As a Principal Investigator recipient of the ORWH-sponsored U3 administrative supplement in 2020, Dr. Lu extended the work of the Specialized Programs of Research Excellence for Uterine Cancers at her university to incorporate molecular diagnostics in clinical decision making and develop and promote novel prevention and therapeutic strategies to address the unmet needs of populations of women. This work focuses on African American/Black women.
Identifying Risks and Interventions to Optimize Postpartum Health Workshop | Nov. 2022

Proportion of deaths by timing of death

- 31% During pregnancy
- 17% Day of delivery
- 19% 1 to 6 days postpartum
- 21% 7 to 42 days postpartum
- 12% Between 43 and 365 days postpartum


**ODP Pathways to Prevention (P2P) Process**

**Proposal Review, Approval, and Coordination | 9-12 months**
- **Proposal Review**: ODP; Agency Leads
- **Proposal Acceptance**: ODP
- **P2P Coordination**: ODP; AHRQ; Agency Leads

**Planning and Implementation | 12 - 15 months**
- **Organizational Meeting**: ODP; Agency Leads
- **Content-Area Experts Group Meeting**: ODP; Agency Leads; EPC
- **Systematic Evidence Review**: ODP; Agency Leads; EPC

**Dissemination and Follow-up | 6 - 36 months**
- **Post-Workshop Dissemination**: ODP; Agency Leads; EPC
- **Federal Partners Meeting**: ODP; Agency Leads
- **P2P Evaluation & Impact Assessments**: ODP; Agency Leads

**Portfolio Review**

* **Responsible Parties**: Agency for Healthcare Research and Quality (AHRQ); Agency Leads; Evidence-based Practice Centers (EPC); Office of Disease Prevention (ODP). Agency Leads: Representatives from an agency or organization outside of the ODP that serve as co-sponsors for a P2P workshop.
Main Components of a P2P Workshop

Evidence Report

Presentations

Audience Participation

NIH Portfolio Analysis

Independent Panel

Panel Report
Research gaps and recommendations for advancing the field

QUESTIONS

• At birthing person’s **entry into prenatal care**, what combinations of risk indicators have greatest effect on poor postpartum outcomes?
• Do these **predictors vary by race/ethnicity**?
• Same questions, but at **immediately before or after delivery and before release from care**?
New in Sex and Gender
Sex and Gender R01 program demonstrates innovation and advantages of interdisciplinary research approaches

Cutting edge research by New Investigator is uncovering sex, gender, and race influences in clinical care

Problem | Over-reliance of the evidence base and potential implicit bias may perpetuate diagnostic delay and poorer management for certain patients

Project Focus | Clinicians’ use of mental shortcuts* in diagnostic decision making for conditions that do not have definitive diagnostic tests

• Rules of thumb based on representativeness of given case among “the average” case

• Research shows repeated use can introduce errors into evidence base – leading to confirmation bias in evidence-based medicine

Methods | Novel method that combines methods from sociology, experimental design, and behavioral science

Testing |

• Does patient’s deviation from the “norm” based on the evidence influence diagnosis?

• In these circumstances, does patient’s diagnosis vary when all that differs is sex, gender, and/or race?

• Are there differences in diagnosis of female-predominant diseases?

• What’s the clinicians’ perspective regarding differential diagnoses?

Note: Dr. Simard is also an Early Stage Investigator

* Cognitive heuristics
Hypertension’s disproportionate impact on Black women

• Among African-American women ages 20 and older, nearly 50 percent have heart disease¹
• More than 50% of Black women over 20 have hypertension²
• African American women are twice as likely to have a stroke as compared to non-Hispanic White women³

Pandemic linked to increases in blood pressure – greatest among women

Pre-Pandemic
• Changes from 2019 in systolic and diastolic BP similar to those in Jan-March ‘20

During Pandemic
• Annual BP increase significantly higher in April-Dec ‘20 [early peak] than in ‘19
• Mean changes each month, compared with ‘19, ranged from
  o 1.10 to 2.50 mm Hg for systolic BP
  o 0.14 to 0.53 mm Hg for diastolic BP
• Larger increases seen in women

Multiple Factors May Explain
• Missed MD’s appointments, unfilled prescriptions
• Stress-related changes: more salt and alcohol; less exercise and sleep
• Pandemic’s disproportionate burden on women – related to childcare, finances, children’s remote learning

Gary H. Gibbons, M.D.
Director, NHLBI

Laffin LJ et al. 2022 (originally published 12/6/21). Circulation. doi.org/10.1161/CIRCULATIONAHA.121.057075
RFI seeks knowledge on intersection of COVID-19 pandemic, long COVID, and women’s health

• Clinical outcomes of COVID-19 present sex differences in immune response
• Sex disparities appear to vary in relation to behaviors, health status, jobs, other social identifiers
• Seeks comments on research gaps and opportunities specific to health consequences of COVID-19 and long COVID at the intersection of women’s health concerns—such as
  o Sex and gender differences
  o Reproductive health issues
  o Domestic violence or intimate partner violence
  o Diseases such as cancer, CVD, obesity, mental health conditions, substance use disorders

• Release Date: March 15, 2022
• Response Date: May 6, 2022

Most people giving birth had poor heart health before pregnancy – had at least one cardiovascular risk factor

- Only about 40% of U.S. women who gave birth in 2019 had **good heart health** prior to pregnancy
  - Excess weight being major driver
  - Represents decline – from 43.5% to 40.2% – from 2016 to 2019
- Optimal heart health: BMI between 18-24.9 kg/m² and not having hypertension or diabetes
- Favorable pre-pregnancy cardiometabolic health varied
  - Younger women more likely to have good heart health
  - Less healthy: South (38.2%) and Midwest (38.8%)
  - More healthy: West (42.2%) and Northeast (43.6&)
  - Inverse correlation between
    - State-level percentage of favorable cardiometabolic health and
    - State-level percentage of high school education or less and Medicaid enrollment

Cameron NA et al. 2022. *Circulation*. doi.org/10.1161/CIRCULATIONAHA.121.057107
Sexual assault and harassment linked with high blood pressure in women

- Measured over 7-year period from 2008 to 2015
- Researchers drew from Nurses’ Health Study II (NHS II)
- Experiences of sexual violence were common:
  - About 23% of women experienced sexual assault
  - 12%, workplace sexual harassment
  - About 6%, both
- About 21% of the women reported developing HBP over the follow-up period
- Women who experienced both sexual assault and workplace sexual harassment had the highest risk (HR, 1.21; 95% CI, 1.09–1.35)
  - Then, women who experienced workplace sexual harassment (HR, 1.15; 95% CI, 1.05–1.25)
  - Women who experienced sexual assault (HR, 1.11; 95% CI, 1.03–1.19)

Assessment is key to SABV Implementation

- Why? To identify and close gaps to design evidence-based resources
- Significant effort to date to move SABV from concept to policy to practice
- Support grows in biomedical community in U.S. and globally

<table>
<thead>
<tr>
<th>Four Stages of SABV Implementation</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>No. 1</strong> Develop policy</td>
<td></td>
</tr>
<tr>
<td>Design, analyses, and reporting</td>
<td>✓</td>
</tr>
<tr>
<td><strong>No. 2</strong> Resources</td>
<td></td>
</tr>
<tr>
<td>NIH staff</td>
<td>✓</td>
</tr>
<tr>
<td>Applicants</td>
<td></td>
</tr>
<tr>
<td>Peer reviewers</td>
<td></td>
</tr>
<tr>
<td>Awardees</td>
<td></td>
</tr>
<tr>
<td>SABV Guidance</td>
<td>✓</td>
</tr>
<tr>
<td>FAQs</td>
<td></td>
</tr>
<tr>
<td>Road shows/workshops</td>
<td></td>
</tr>
<tr>
<td>Primer</td>
<td></td>
</tr>
<tr>
<td>Instruction Guide</td>
<td></td>
</tr>
<tr>
<td><strong>No. 3</strong> Reviews</td>
<td></td>
</tr>
<tr>
<td>SABV: A 5-Year Progress Report and Call to Action*</td>
<td>✓</td>
</tr>
<tr>
<td>The Integration of Sex and Gender into Biomedical Research**</td>
<td></td>
</tr>
<tr>
<td>NIH</td>
<td>✓</td>
</tr>
<tr>
<td>International funding agencies</td>
<td></td>
</tr>
<tr>
<td><strong>No. 4</strong> Progress Assessment</td>
<td></td>
</tr>
<tr>
<td>Applicants</td>
<td></td>
</tr>
<tr>
<td>Peer review</td>
<td></td>
</tr>
<tr>
<td>Funded investigators</td>
<td></td>
</tr>
<tr>
<td>NIH staff</td>
<td></td>
</tr>
<tr>
<td>Landscape analysis</td>
<td></td>
</tr>
<tr>
<td>SABV checklist study</td>
<td></td>
</tr>
<tr>
<td>SRO survey</td>
<td></td>
</tr>
</tbody>
</table>


** White J et al 2021 *Journal of Clinical Endocrinology Metabolism* DOI: 10.1210/clinem/dgab434
NIH SABV Policy Progress Assessment

Landscape Analysis

Question: Has the use of keywords associated with SABV changed from 2011 – 2021?

Approach: Text Mining using keywords
- R01, R21 and R03 applications
- Summary Statements
- Vertebrate animal studies only
Percentage of all applications with keywords

Keyword approach shows clear increase in post-2016 use of terms relevant to SABV policy

SABV represents seminal change in research and medicine.
ORWH E-Learning has global reach

Institutional affiliations

- **BENCH TO BEDSIDE COURSE**
  - 766 either started (255) or completed (411) one module
  - Most completed: Immunology (206), then CVD (134)

- **SABV PRIMER**
  - 599 either started (159) or completed (441) one module
  - Most completed: SABV and Health of Women and Men

- **ORWH COURSE DASHBOARD**
  - 1,623 registrants

- **LEARNER CHARACTERISTICS**
  - 58% are researchers (half clinical; half basic)
  - 32%, students
  - 19%, professors; 19%, clinicians

Learners are affiliated with institutions in 48 countries

As of 3/1/22
Bench to Bedside now offers free CME credits

• Developed by ORWH in partnership with FDA Office of Women’s Health
• Provides thorough, up-to-date understanding of sex and gender influences on health and disease
• For staff, researchers, clinicians, students, academic faculty
• Offered free in accordance with Accreditation Council for Continuing Medical Education through joint provision of Johns Hopkins University School of Medicine and NIH

Introducing SABV Train the Trainer Course

• ORWH developed to train researchers, grant applicants, and trainers to account for and teach SABV policy
• Six independent, interactive modules
• Covers in-person training, virtual training, and one-on-one training
• https://orwh.od.nih.gov/career-development-education/e-learning/sabv-primer-train-trainer
Global interest in sex and gender grows

• Testimony before UK House of Commons’ Science and Technology Committee | 12/1/21
  o Non-legislative, bipartisan “caucus”
  o On effects of gender and sex bias on reproducibility

• King’s Fund podcast “What women want: addressing women’s health inequalities” | 3/7/22
  o Why women struggle to get clinicians to listen to them
  o Impact on diagnosis, treatment, and mental and physical effects on women

• UK research body adopts SABV policy
  o Medical Research Council is part of UK govt.’s United Kingdom Research and Innovation
  o Will require sex to be specified in design of grant applications involving animals, and human and animal tissues and cells
  o Single-sex studies only where strong justification

www.kingsfund.org.uk/audio-video/podcast/addressing-womens-health-inequalities
op.europa.eu/en/publication-detail/-/publication/ffcb06c3-200a-11ec-bd8e-01aa75ed71a1/language-en/format-PDF/source-232129669
Careers
“Community voices: NIH working toward inclusive excellence by promoting and supporting women in science”

• Data continue to shock
  o Half of medical degrees in U.S. are awarded to women, but they account for 18% of key leadership positions
  o Are paid less
  o Women of color are dramatically underrepresented across all medical career stages (13% of faculty)

• Often cope with sexual harassment and gender discrimination

• This is reason to redouble efforts to support and promote women in science
  o Pandemic’s disproportionately negative effect
  o Persistent implicit bias
  o Inequities in salaries, resources, space, and opportunities for advancement

The components of inclusive excellence interact to foster a diverse scientific ecosystem and the full inclusion of women in the scientific workforce.

Inclusive Excellence

Enhanced Flexibility Options

Research Interventions/Best Practices

Culture of Inclusion

Action-oriented Accountability

Demonstrable Leadership Support

Sexual harassment policies, reporting mechanisms, and investigative procedures

Reporting mechanisms for extramural harassment

Safe work environment established as explicit condition of NIH awards

Cohesive environment established as explicit condition of NIH awards

Codes of conduct at NIH-sponsored conferences

“Causal factors and interventions research

Continued research on effects of racism, discrimination, harassment, and policies that promote positive change

AGIE Center to study barriers to gender equity and strategies to advance women

Challenge prize recognizing and disseminating institutional best practices for addressing diversity and equity

Ten Hagen KG et al. Nature Communications. DOI: 10.1038/s41467-022-28665-2
New UNITE initiatives target health disparities and inequities

Common Fund FOA builds MSI capacity, funds disparities research

Transformative Research to Address Health Disparities and Advance Health Equity at Minority Serving Institutions | RFA-RM-22-001

- Supports unusually innovative research projects intended to have a major impact in developing, implementing, or disseminating innovative and effective interventions to prevent, reduce, or eliminate health disparities and advance health equity
- Builds research capacity building at Minority Serving Institutions that
  - Serve students underrepresented in biomed research and/or biosciences and
  - Receive limited NIH grant funding
- Timeline
  - Due date May 23, 2022
  - Live Q&As – April 13th

ComPASS concept cleared by Council of Councils

- Community Partnerships to Advance Science for Society: FY2023
- Facilitate and implement cross-IC framework for health equity structural intervention research
- Catalyze, deploy, and evaluate community-driven health equity structural interventions that leverage multisector partnerships to reduce health disparities
  1. Community-driven, health equity structural interventions
  2. Coordination Center with National Health Equity Research Assembly (National HERA)
  3. Health Equity Research Hubs for Scientific Support and Partnership

https://commonfund.nih.gov/healthdisparitiestransformation
Diverse Voices Virtual Talk:
Environmental Exposures and Disparities in Pregnancy | March 31

• Part of ORWH quarterly series, “Diverse Voices: Intersectionality and the Health of Women”

• Speakers:

**Tamarra James-Todd, Ph.D.**
Assoc. Professor of Environmental Reproductive Epidemiology
Harvard T.H. Chan School of Public Health

*Environmental justice framework and the role of exposure assessment in understanding disparities in reproductive health outcomes*

**Mahasin Mujahid Ph.D., M.S., FAHA**
Assoc. Professor of Epidemiology
University of California Berkeley School of Public Health

*Historical redlining, disparities in severe maternal morbidity in marginalized groups; Enhancing Recruitment and Retention of Underrepresented Pregnant Hispanic Women Phase III Randomized Clinical Trial*
FY21 Research Programs Funding
ORWH Budget History & FY2021 Extramural Grant Award Profile

- Award investments do not adjust for inflation.
- Source: NIH IMPAC II FY2021 frozen data.
- Note: ORWH total investments = $35,514,780. Funding portfolio excludes Contract R&D, IAA, and Loan Repayment awards.
ORWH FY2021 Career Programs
Total = $11,550,610 including Loan Repayment awards

Source: NIH IMPAC II FY2021 frozen data and DPCPSI/ORWH Co-funding Portal (for Loan Repayment awards).
Note: Excludes funding to the OITE program.
ORWH FY2021 Extramural Award Investments by IC (including BIRCWH funding)

Source: NIH IMPAC II FY2021 frozen data.
Note: ORWH total investments = $35,514,780. Funding portfolio excludes Contract R&D, IAA, and Loan Repayment awards.
Source: NIH IMPAC II FY2021 frozen data.
Note: ORWH total investments = $26,958,545. Funding portfolio excludes NICHD and NIDA’s BIRCWH investments, Contract R&D, IAA, and Loan Repayment awards.
# ORWH Extramural Award Investments by Research Program in FY2021

<table>
<thead>
<tr>
<th>Program</th>
<th>ORWH Investments</th>
<th># of Co-Funding ICs</th>
<th>List of Co-Funding ICs</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIRCWH*</td>
<td>$8,556,235</td>
<td>2</td>
<td>NICHD; NIDA</td>
</tr>
<tr>
<td>Career Programs:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Without Loan Repayment</td>
<td>$2,648,041</td>
<td>14</td>
<td>NCI; NHLBI; NIA; NIAAA; NIAMS; NICHD; NIDA; NIDCD; NIDCR; NIDDK; NIGMS; NIMH; NINDS; OD-ECHO</td>
</tr>
<tr>
<td>With Loan Repayment**</td>
<td>$2,994,375</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SCORE</td>
<td>$11,026,106</td>
<td>5</td>
<td>NIA; NIAAA; NIDA; NIDDK; NIMH</td>
</tr>
<tr>
<td>Sex/Gender R01</td>
<td>$1,830,047</td>
<td>8</td>
<td>NHGRI; NHLBI; NIA; NIAID; NIDA; NIDCR; NIEHS; NINR</td>
</tr>
<tr>
<td>Sex/Gender Admin Supp.</td>
<td>$1,583,262</td>
<td>8</td>
<td>NCI; NEI; NHLBI; NIAID; NIAMS; NICHD; NIDCD; NIDDK</td>
</tr>
<tr>
<td>U3 Admin Supp.</td>
<td>$2,666,811</td>
<td>9</td>
<td>NCATS; NHLBI; NIA; NICHD; NIDDK; NIEHS; NIGMS; NIMHD; NINR</td>
</tr>
<tr>
<td>Other IC Co-Funds</td>
<td>$7,204,278</td>
<td>15</td>
<td>FIC; NCATS; NCCIH; NCI; NHGRI; NHLBI; NIA; NIAMS; NICHD; NIDA; NIDDK; NIGMS; NIMH; NIMHD; OD-ORIP</td>
</tr>
</tbody>
</table>

* In FY2021, NICHD, NIDA, NCI, NIAAA, and NIAID also supported the BIRCWH program with additional funds.
Sixth Annual Vivian W. Pinn Symposium | May 12, 2022

Honoring the first full-time director of ORWH | Held annually during National Women’s Health Week

The Impact of the COVID-19 Pandemic on the Careers Of Women Scientists

May 12, 2022 | Virtual Meeting

Vivian W. Pinn, M.D.

bit.ly/ORWHevents
Women’s Health Research Events 2022

8th Annual Women’s Health Awareness (NIEHS) | April 9
Environmental Impacts on Women’s Health Disparities and Reproductive Health (NIEHS) | April 27-28
6th Annual Vivian W. Pinn Symposium | May 12
Diverse Voices Virtual Talk: COVID-19 in Women | July 28
Diverse Voices Virtual Talk: Violence and Women | September 29
57th Meeting, NIH Advisory Committee on Research on Women’s Health | Oct. 18

bit.ly/ORWHevents

Case sensitive
Parking Lot
Evaluation of Trans-NIH Strategic Plan on WHR underway – planning begun for 2024-28 plan

- ORWH developed implementation and evaluation guide
- ORWH and OEPR, with CCRWH SC input, developed module for evaluating SP’s implementation
- Module intended to
  - Facilitate data collection
  - Ensure collection of appropriate data
  - Systematize process—make it easier for ICOs
- Data calls:
  - Summer and Winter 2021
  - Summer and Winter 2022
  - Final call – Fall 2023
- Planning for next SP has begun

Incorporation of the SP objectives in each ICO’s strategic plan

Increased number of NIH-supported publications and citations that address the SABV and inclusion concepts

New infographic reveals breadth of NIH-funded research

The health of women during pregnancy, pre-pregnancy, pregnancy, and postpartum periods is a major public health concern. The physical, mental, and social health of women during these periods can have long-term impacts on their well-being and the health of their children. The National Institutes of Health (NIH) supports research on maternal health to improve outcomes for women and their families. 

Definitions
- **Maternal Mortality**: The number of maternal deaths per 100,000 live births. 
- **Maternal Morbidity**: The presence of any adverse condition that occurs during pregnancy, childbirth, or the postpartum period. 

**Maternal Mortality in the United States**
- **In High-Income Countries**: Maternal mortality rate (MMR) is 13 per 100,000 live births. 

Factors Influencing MMR
- **Age**: Young and middle-aged women are at higher risk. 
- **Socioeconomic Status**: Women from lower socioeconomic status have higher MMRs. 
- **Educational Level**: Women with higher educational attainment have lower MMRs. 

The Health of Women Across the Life Cycle

- **Maternal Health**: Ensuring the health of women during pregnancy, childbirth, and the postpartum period is crucial for improving overall health outcomes. 
- **Maternal Mortality and Morbidity**: Understanding the causes and factors contributing to maternal mortality and morbidity is essential for developing effective interventions.

NIH RCDC Database | Portfolio Visualization Module