

Federal Opportunities to Support Public Health Research

A Presentation to the UIC School of Public Health
April 24, 2019

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Introduction:

- About Lewis-Burke Associates LLC:
 - Twenty-eight policy experts with range of expertise/backgrounds allow multi-layered issue teams with deep expertise in agencies and scientific/education areas
 - Support federal relations activities at UIC to develop and implement federal strategies to pursue, shape, and create new sources of funding to increase and diversify research portfolio
- Goal of Presentation:
 - Provide an overview of federal opportunities to support public health faculty at federal agencies
 - Help faculty in the School of Public Health connect their research goals with federal research trends and identify programs and priorities at federal agencies in order to help identify funding opportunities and/or help make grant and fellowship applications more competitive
 - Serve as a resource to you and the School of Public Health

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Department of Health and Human Services

- National Institutes of Health
- Agency for Healthcare Research and Quality
- Health Resources and Services Administration
- Substance Abuse and Mental Health Services Administration
- Centers for Disease Control and Prevention

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Department of Health and Human Services Crosscutting Priorities

- Secretary Azar's priorities are carried through activities across HHS
 - Addressing the Opioid Crisis
 - Drug Pricing
 - Value-Based Care Transformation
 - Healthcare Reform

NIH Overview

- Funded at \$39.1 billion for FY 2019
- Comprised of 27 institutes and centers (ICs) which are largely organized into types of disease (i.e. National Cancer Institute (NCI), National Institute of Allergy and Infectious Diseases (NIAID)) or anatomy (National Heart, Lung, and Blood Institute (NHLBI), National Eye Institute (NEI))
- Mission: “seek fundamental knowledge about the nature and behavior of living systems and the application of that knowledge to enhance health, lengthen life, and reduce illness and disability.”
- Current Priority Areas:
 - Curing or developing a treatment for Alzheimer’s Disease by 2025
 - Response to opioid epidemic, Helping End Addiction Long-term (HEAL) Initiative
 - Cancer Moonshot and combatting cancer broadly
 - The Brain Research through Advancing Innovative Neurotechnologies® (BRAIN) Initiative

Public Health Support at NIH

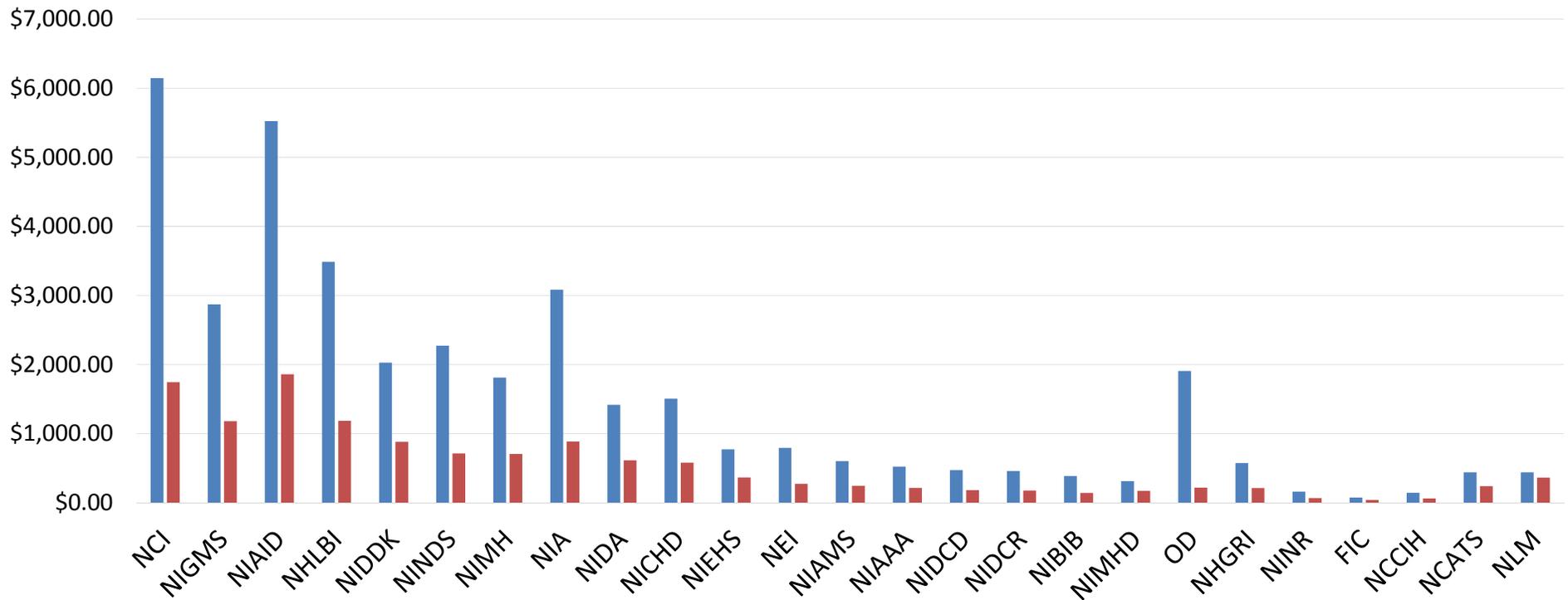
- Research on public health cuts across the ICs, on most topics with the exception of gun violence research. Areas include communicable disease, health disparities, addictions of all kinds, childhood development, environmental health, maternal health, aging in place, etc.
- NIH also collaborates with other agencies in the Department of Health and Human Services (HHS):
 - 601 total collaborations in 2017, including 38 new topics
 - Committee, Work Group, or Advisory Group; research initiatives; resource development; meetings and workshops; public education campaigns, etc.
- Interagency collaborations on the following themes:
 - Preventing disease & disability (WG on Child Abuse & Neglect, Prevention Research Comm.)
 - Providing Evidence-Based Health Information (Safe to Sleep, Health Vision Month)
 - Improving Diagnosis & Treatment (Cancer Moonshot, Alzheimer's Dz Neuroimaging Initiative)
 - Keeping Americans Safe (Antimicrobial Drugs AC, Pathogen Detection Project)
 - Assessing the Public's Health (Birth Defects Prevention Study, SIDS registry)
 - Broad multi-purpose coordination (Healthy People 2020, Autism Coordination Committee)

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Funding for Public Health at NIH by IC (in millions)



Agency for Healthcare Research and Quality (AHRQ)

- AHRQ's focus is health services research
 - Produce evidence to support health systems and providers to ensure high quality, safe, equitable, and high-value care through activities such as research, practice improvement, data, and analytics
- Research:
 - Current focus areas include opioids, social determinants of health, and digital health
 - New priorities:
 - Transforming care for people with multiple chronic conditions
 - Powering decision making through analytics
 - Improving diagnosis
 - Supports investigator-initiated research
 - Relatively small funding compared to NIH (\$338 million)
 - Uses “Special Emphasis Notices (SEN)” to communicate priorities
 - Current SEN:
 - Health Services Research Priorities for Achieving a High Value Healthcare System

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AHRQ Continued

- Current Opportunities (In addition to Investigator Initiated Opportunities):
 - [AHRQ Health Services Research Project: Partners Enabling Diagnostic Excellence \(R01\)](#)
 - [“Using Data Analytics to Support Primary Care and Community Interventions to Improve Chronic Disease Prevention and Management and Population Health \(R18\)](#)
- Other AHRQ Research Opportunities
 - Conference Support (R13)
 - Mentored Research Scientist Research Career Development Award (K01)
 - AHRQ Health Services Research Dissertation Program (R36)
- Currently completing a study of health services and primary care research that will inform future activities.
- The Project Research Online Database (<https://prod.ahrq.gov/projectsearch/>) can provide an idea of what AHRQ funds

Health Resources and Services Administration (HRSA)

- HRSA's focus is to improve the health of underserved and vulnerable populations
 - Primary care
 - Maternal and Child Health
 - Workforce
 - Rural Health
- Focus areas: HIV/AIDS, opioids, mental and behavioral health, telehealth, and rural health
- Most funding opportunities eligible to universities are within **Bureau of Health Workforce (BHW)**, **Office of Rural Health Policy (ORHP)** and **Maternal and Child Health (MCH)** divisions
- **Maternal and Child Health (MCH)**
 - Smaller funding and competitive
 - Translational and applied research
 - Focus areas include maternal and child health services, healthy development, Autism, health disparities, and quality care
 - Field-Initiated Innovative Research
 - Secondary Data Analysis
- **HIV/AIDS**
 - Part of the Trump Administration's efforts to End HIV
 - Oversees the Ryan White HIV/AIDS Program

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Health Resources and Services Administration (HRSA)

- **Health Professions**

- Title VII Health Professions support grant programs to support workforce education and training in medicine, mental and behavioral health, psychology, oral health and geriatrics

- Interprofessional

- Focus on rural/underserved

- Telehealth

- **Current opportunity focused on opioid workforce expansion**

- Programs are often competed for three and four years so it is important to apply when available

- Provides loans and scholarships

- Scholarships for disadvantaged students

- Faculty Loan Repayment Program

- Title VIII Nursing Education Programs support nursing education for primary care and advanced practice nurses, support for nurse anesthetist training, support for veterans transitioning to nursing, and enhancing nursing education-Available to nursing programs

- **Rural Health**

- Oversees telehealth

- Supports rural opioid health activities, including new pilot program on SUD/OD

- Research on population health and health care policy impacting rural area

- Supports research centers

- Great weekly newsletter if you are interested in rural health/research

- Current opportunity [Rural Maternity and Obstetrics Management Strategies Program](#)

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Substance Abuse and Mental Health Services Administration (SAMHSA)

- SAMHSA aims to reduce the impact of substance abuse and mental illness on communities
 - Significant portion of funding supports block grants to states for mental health and substance use activities
 - Not a research agency; more focused on evidence, services, prevention, treatment, care, evaluation and dissemination
 - Limited workforce training
 - Technical assistance
- Priorities:
 - Opioids Crisis - A large focus of current activities
 - Serious mental illness and emotional disturbances
 - Substance abuse
 - Workforce (specifically training and education for health practitioners)
 - Data collection, dissemination, evaluation
- Some interest in supporting research on pain and addiction
 - Likely more focused on:
 - Using the Mental Health and Substance Use Laboratory for evaluation
 - Working with other partners at HHS to identify research needs

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Centers for Disease Control and Prevention

- CDC protects the nation from health, safety, and security threats, both foreign and domestic
- Large national agenda focused on a state and local level
 - Limited resources and a big mission
 - A lot of work is intramural but CDC does support research/research centers
 - Several center programs were just recompleted
 - For example, Prevention Research Centers (UIC awarded new grant through 2024)
- Priorities:
 - Ending HIV
 - Opioids and the increase in infectious disease outbreaks
 - Hepatitis
 - Influenza Vaccines
 - Modernization, technology, productions, and effectiveness
 - Acute Flaccid Myelitis
 - Surveillance to understand long-term effects and causes, prevention, education and treatment

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National Science Foundation

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NSF Overview

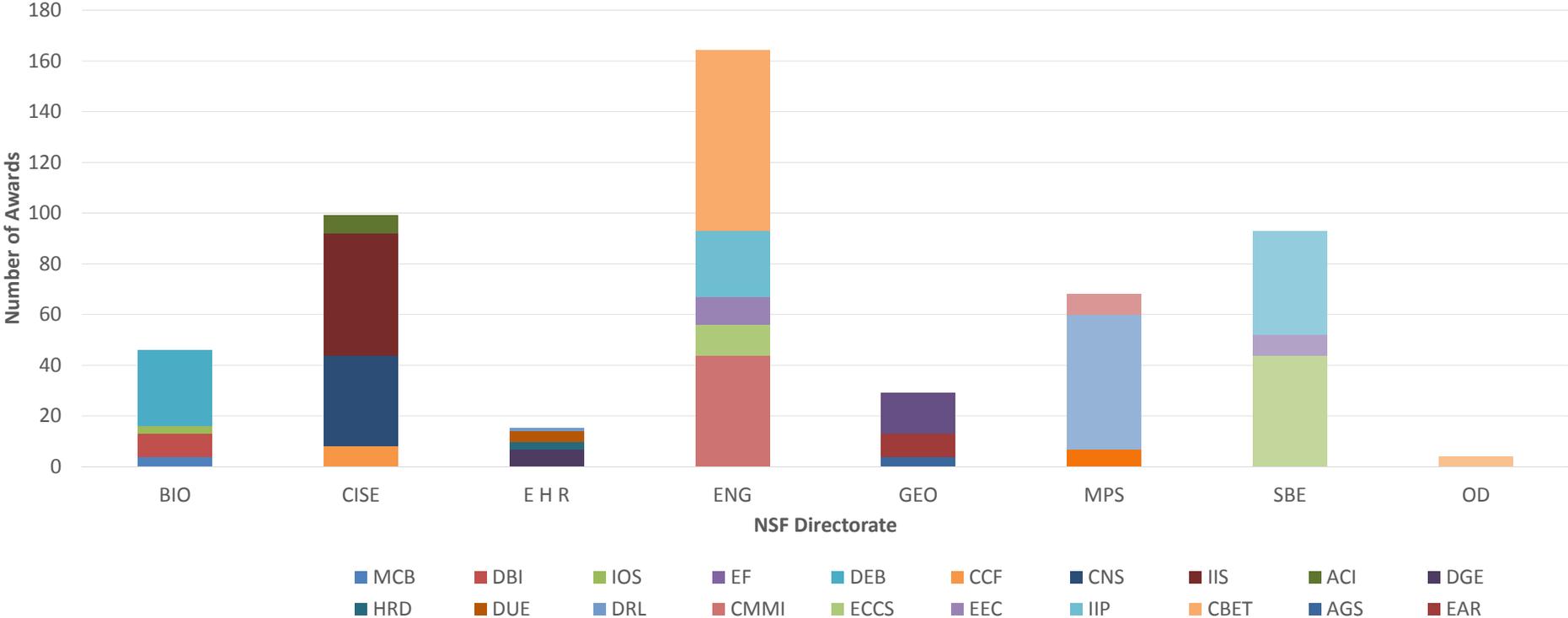
- Funded at \$8.075 billion for FY 2019
- 6 Research Directorates organized by science and engineering disciplines:
 - Biological Sciences (BIO)
 - Computer and Information Science and Engineering (CISE)
 - Engineering (ENG)
 - Geosciences (GEO)
 - Mathematical and Physical Sciences (MPS)
 - Social, Behavioral, and Economic Sciences (SBE)
- Education and Human Resources (EHR) directorate focuses on STEM teaching, learning, and workforce development
- Focus on ***10 Big Ideas for Future Investment***
- Funds individual researchers, teams, workshops, networking, international

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NSF Awards Featuring “Public Health”



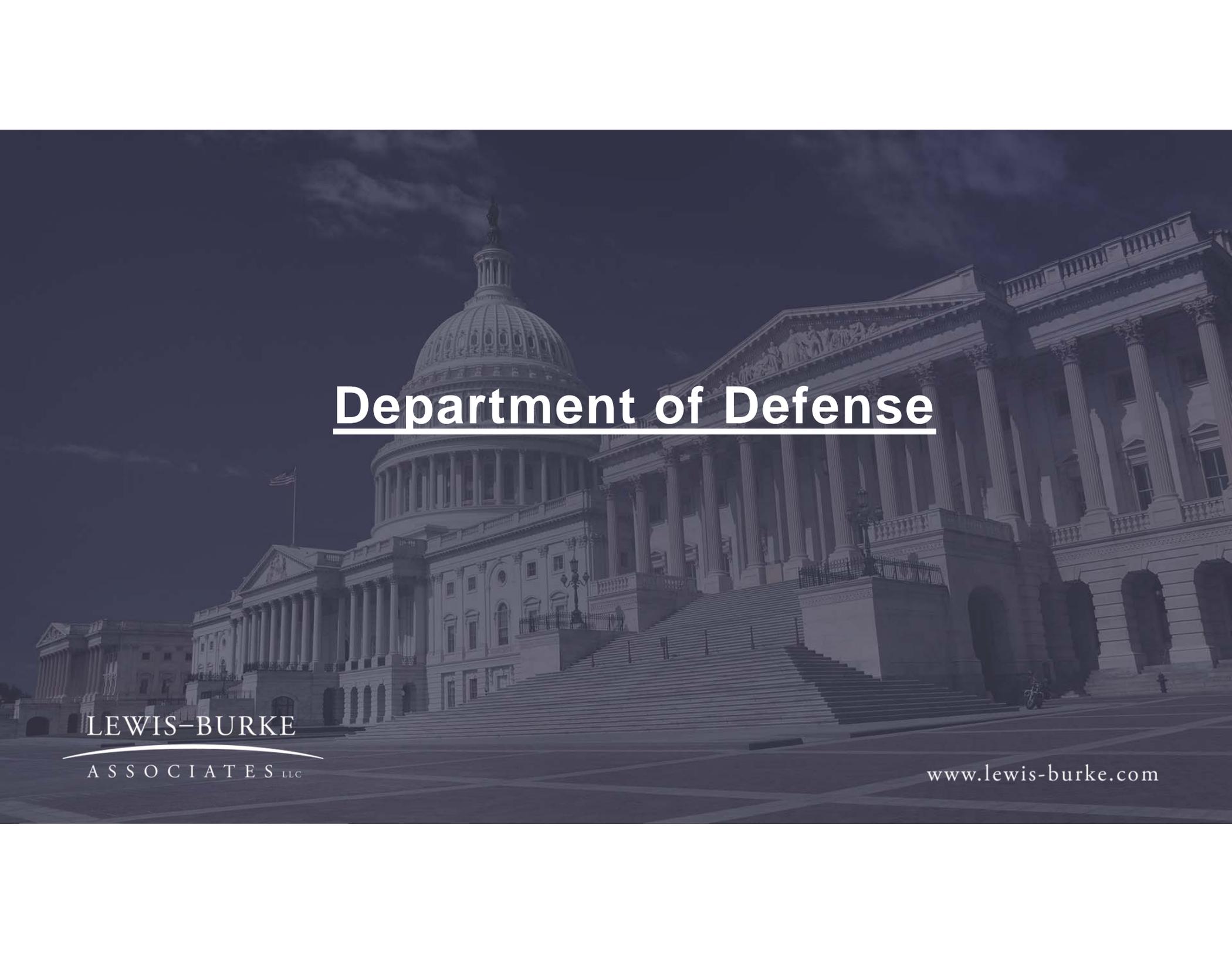
Public Health Support at NSF

- SBE supports social science and behavioral science related to health issues across programs
- ENG and CISE are more open to health funding
 - Informatics and Robust Intelligence may fund small groups, mostly individual investigator focused
 - Cross-cutting programs such as Smart and Connected Health, Secure and Trustworthy Cyberspace require interdisciplinary teams
 - Programs related to Smart and Connected Communities Initiative can focus on health applications
- MPS supports modeling and statistics research related to public health through Mathematical Biology and Statistics programs
- BIO traditionally does not fund health or biomedical research
 - Most current public health support related to vector research around infectious diseases
- Large funding opportunities can be health oriented
 - Engineering Research Centers, Science and Technology Centers, Partnerships in International Research and Education

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Department of Defense

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DOD Medical

- DOD Health Research Priorities: approximately \$2 billion invested
 - **Hemorrhage** – blood products (storage, transportation, in theater transfusions); extend blood platelet shelf life; improved pre-hospital treatments for critical patients; alternatives to using anti-biotics for post-wound care
 - **Traumatic Brain Injury (TBI)** – classification of TBIs that can inform future technology and treatment strategies; biomarkers to replace CAT scans (affordability); development of chronic traumatic encephalopathy (CTE)
 - **Mental Health** – PTSD, suicide prevention, substance abuse, rural healthcare/telemedicine
 - **Pain Management** – burn care, opioid use
 - **Infectious Disease** – prevention, diagnostics, therapeutics, surveillance, warfighter v. civilian health
 - **Combat casualty care** – surgical systems and procedures, surgical en-route care, neurotrauma, minimizing blast-related injury
 - **Health IT** – electronic health records, mobile health technology, telemedicine (in theater and at home)
 - **Chemical, Biological, Radiological, and Nuclear (CBRN) Threats** – surveillance, prevention, detection, and treatment
- Work executed through U.S. Army Medical Research and Materiel Command (MRMC) & Congressionally Directed Medical Research Programs (CDMRP), as well as DOD basic research offices with some medically-oriented programs
- Also involved with multi-agency priorities, including:
 - Global Health Security Agenda (biosurveillance, antimicrobial resistance, and Ebola/infectious disease research and response)
 - Precision Medicine
 - Big Data: data sharing standards, software tools, enhanced training, centers of excellence

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CDMRP – FY 2019 Topics

Bolded items reflect increases and * reflect new programs in FY 2019

- Peer-Review Medical (**\$350 m**)
- Breast Cancer (\$130 m)
- Traumatic Brain Injury and Psychological health (\$125 m)
- Prostate Cancer (\$100 m)
- Peer-Review Cancer (**\$90 m**)
- Joint Warfighter Medical (\$50 m)
- Peer-Review Orthopedic (\$30 m)
- Spinal Cord (\$30 m)
- Gulf War Illness (**\$22 m**)
- Ovarian Cancer (\$20 m)
- Kidney Cancer (**\$20 m**)
- Vision (**\$20 m**)
- Neurofibromatosis Research (\$16 m)
- Neurotoxin Exposure Treatment Parkinson's (\$16 m)
- **Combat Readiness Medical Research (\$15 m)***
- Alzheimer's Disease (\$15 m)
- Lung Cancer Research (\$14 m)
- HIV/AIDS program increase (\$12.9 m)
- Reconstructive Transplant (\$12 m)
- **Melanoma (\$10 m)***
- **Chronic Pain Management (\$10 m)***
- Trauma Clinical (\$10 m)
- Amyotrophic Lateral Sclerosis (\$10 m)
- Hearing Restoration (\$10 m)
- Orthotics and Prosthetics (\$10 m)
- Global HIV/AIDS Prevention (\$8 m)
- Military Burn (\$8 m)
- Epilepsy (\$7.5 m)
- Autism Research (\$7.5 m)
- Tuberous Sclerosis (\$6 m)
- Multiple Sclerosis (\$6 m)
- Tick-Borne Disease Research (\$5 m)
- Lupus (\$5 m)
- Alcohol and Substance Abuse (\$4 m)
- Duchenne Muscular Dystrophy (\$3.2 m)
- Bone Marrow Failure (\$3 m)

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Peer Reviewed Medical Research Program (PRMRP): FY 2019 Topics

- Acute Lung Injury
- Antimicrobial Resistance
- Arthritis
- Burn Pit Exposure
- Cardiomyopathy
- Cerebellar Ataxia
- Chronic Migraine and Post-Traumatic Headaches
- Congenital Heart Disease
- Constrictive Bronchiolitis
- Diabetes
- Dystonia
- Eating Disorders
- Emerging Infectious Diseases
- Epidermolysis Bullosa
- Focal Segmental Glomerulosclerosis
- **Frontotemporal Degeneration***
- Guillain-Barre Syndrome
- **Hemorrhage Control***
- Hepatitis B
- Hereditary Angioedema
- Hydrocephalus
- Immunomonitoring of Intestinal Transplants
- Inflammatory Bowel Diseases
- Interstitial Cystitis
- Lung Injury
- Metals Toxicology
- Mitochondrial Disease
- Musculoskeletal Disorders
- Myotonic Dystrophy
- **Nanomaterials for bone regeneration***
- Nutrition Optimization
- Pancreatitis
- Pathogen-Inactivated Blood Products
- **Polycystic Kidney Disease***
- Post-Traumatic Osteoarthritis
- Pressure Ulcers
- Pulmonary Fibrosis
- **Resilience Training***
- Respiratory Health
- Rett Syndrome
- Rheumatoid Arthritis
- Scleroderma
- Sleep Disorders
- Spinal Muscular Atrophy
- Tinnitus
- Tissue Regeneration
- Tuberculosis
- Vascular Malformations
- Women's Heart Disease

*Denotes new topic in FY 2019

Engaging DOD for Health and Biomedical Research

- **CDMRP Feedback Submission:** CDMRP recently launched a new feedback submission feature to its website. Investigators can use the tool to submit an abstract for feedback or ask questions. Stakeholders now have the option to provide input on programs and process recommendations, as well as submit reviewer nominations and other feedback: <http://cdmrp.army.mil/contact>
- **Military Health System Research Symposium (MHSRS):** DOD hosts the annual MHSRS in August, in Orlando, Florida. MHSRS is the Department's scientific meeting, focusing on military medicine and research: <https://mhsrs.amedd.army.mil/SitePages/Home.aspx>
- **Chemical and Biological Defense Science and Technology Conference (CBD S&T):** The Defense Threat Reduction Agency (DTRA) hosts the CBD S&T annually. Through the Conference, DTRA seeks to review and project cutting-edge basic and applied research in chemical and biological defense: <https://www.cbdstconference.com/home2017/>

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Military Health System Research Symposium 2019 Focus Areas

- **Warfighter Medical Readiness**
 - Training Effectiveness for Point of Injury Medical Care
 - Innovative Countermeasures and Diagnostics to Emerging Infectious Diseases
 - Enhancing Human Performance and Survivability in Extreme Environments
 - Early Research in Total Exposure Health
 - Auditory Injury Prevention
- **Expeditionary Medicine**
 - Innovative Approaches to Prevent, Diagnose, and Treat Sepsis During Prolonged Field Care
 - Approaches for Monitoring Warfighter Blast-Related Exposures in Training to Develop Effective Safety Standards
 - Clinical Decision Support, Medical Robotics, & Autonomous Medical Systems for Prolonged Care & Evacuation
 - What's New in Brain Health for Elite Warfighters
- **Warfighter Performance**
 - Managing Physiologic Events in Military Aviation
 - Management of Sleep & Fatigue for Maximization of Soldier Operational Readiness
 - Spinal Musculoskeletal Injury Prevention in Fixed & Rotary Wing Environments
- **Return-to-Duty**
 - What's New in Antimicrobial Development to Counter Multidrug-resistant Bacterial Infections in Military Personnel
 - Assessment & Treatment of Battlefield Auditory System Injuries
 - Far Forward Military Behavioral Health Innovations
 - Innovations in PTSD Prophylaxis/ Prevention & Biomarker Research in Military Populations
- **Additional Sessions**
 - Delivering & Applying Artificial Intelligence for Warfighter Health & Readiness - A Combat Multiplier
 - Directed Energy Health Effects
 - Expeditionary Nursing
 - Updates on Military Women's Health

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Department of Justice

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Department of Justice (DOJ)

- Funds a diverse array of research to improve knowledge and understanding of crime and justice issues
- Findings should be replicable for criminal justice entities throughout the nation
- Current funding opportunities address public health themes, include:
 - Health and wellness in the criminal justice system, including wellness for corrections officers
 - Assistance for offenders with mental disabilities
 - Strategies for officer interaction with individuals presenting with mental illness
 - Understanding and preventing violence
 - Sexual assault prevention
 - Support for victims of crimes
 - Re-entry of offenders
 - Assess impact of drugs and crime, including addressing opioid abuse
 - Research on human trafficking
 - Youth impacted by crimes, drugs, and violence
- Funding can be for research or technical support
- Important to partner directly with local law enforcement and other criminal justice entities
- Several opportunities for graduate research projects

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Department of Justice (DOJ)

- **National Institute of Justice (NIJ):** Primary research arm of DOJ, strategic goals are (1) fostering science-based criminal justice practice; (2) translating knowledge to practice; (3) advancing technology; (4) working across disciplines; and (5) adopting a global perspective
 - NIJ typically releases new solicitations between December and May.
 - Increased cross-cutting emphasis: human trafficking, combatting opioid abuse, domestic radicalization, and some mental health issues
 - NIJ recently released five year strategic research plans related to investments in: policing; corrections; safety and wellness in the criminal justice system; and responses to sentinel events
- **Bureau of Justice Assistance (BJA):** Partners with local police and criminal justice authorities, translates research and data for use by practitioners in areas such as policing tactics; opioid abuse; prison reentry; managing individuals with mental disorders in the criminal justice process; violent gang and gun crime prevention, etc.
- **Community Oriented Policing Services (COPS) Office:** Provides some support for universities to conduct applied research, host forums, design training and technical assistance modules that advance community policing practices and drug prevention.
- **Office of Juvenile Justice and Delinquency Prevention (OJJDP):** Research and technical assistance for juvenile justice policies and practices. Most research to be transported to NIJ in future years.
- DOJ has attempted to penalize or outright exclude institutions in “sanctuary cities/states” applying for certain BJA and COPS Office programs – courts have struck down various activities but review solicitations carefully

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Other Federal Opportunities

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Other Federal Agencies to Consider

- US Department of Agriculture (USDA) Research, Education and Economics (REE):
 - **National Institute of Food and Agriculture (NIFA)** programs: with some limited eligibility
 - **Food Insecurity Nutrition Incentive (FINI)** Grant Program for land-grant universities: outreach program to support hands-on learning, applied science, and program data to ensure program effectiveness, efficiency, and accountability for low-income adults and youth populations
 - **SNAP-Ed**: land-grant universities only: community outreach program to support evidence-based nutrition education and obesity prevention interventions and projects for persons eligible for the Supplemental Nutrition Assistance Program (SNAP) through complementary direct education, multi-level interventions, and community and public health approaches to improve nutrition
 - **Expanded Food and Nutrition Education Program (EFNEP)**: land-grant universities only: employing paraprofessional staff and influencing nutrition and physical activity behaviors of low-income families, particularly those with young children through a community-based, relationship-driven, hands-on educational approach
 - **Community Food Projects**: competitive grants program (CFPCGP): funding to support projects that increase food security in communities by bringing the whole food system to improve self-reliance, long-term solutions, innovative marketing activities that benefit producers and low-income consumers
 - Grants are a “one-time” infusion ranging from \$10-40k over 1-4 year duration
 - **Agriculture and Food Research Initiative (AFRI)**: annual, extramural grants competition open to all universities/non-profits (released each Dec)
 - Sustainable Agricultural Systems (SAS): LOI deadline June 4: integrated projects with a systems-based approach, including priority of enhancing rural prosperity and health by ensuring access to affordable, safe and nutritious food to sustain healthy lifestyles (awards \$10M max each)
 - Foundational and Applied Science Program: individual-PI driven (similar to open BAA or FFO) with six priority topic areas including: food safety, nutrition and health, as well as exploratory areas
 - Education and Workforce Development: enhancing agricultural literacy and workforce training (in any agricultural science discipline); developing pathways in food, ag sectors and graduate programs; advancing science through predoctoral and postdoctoral fellowships

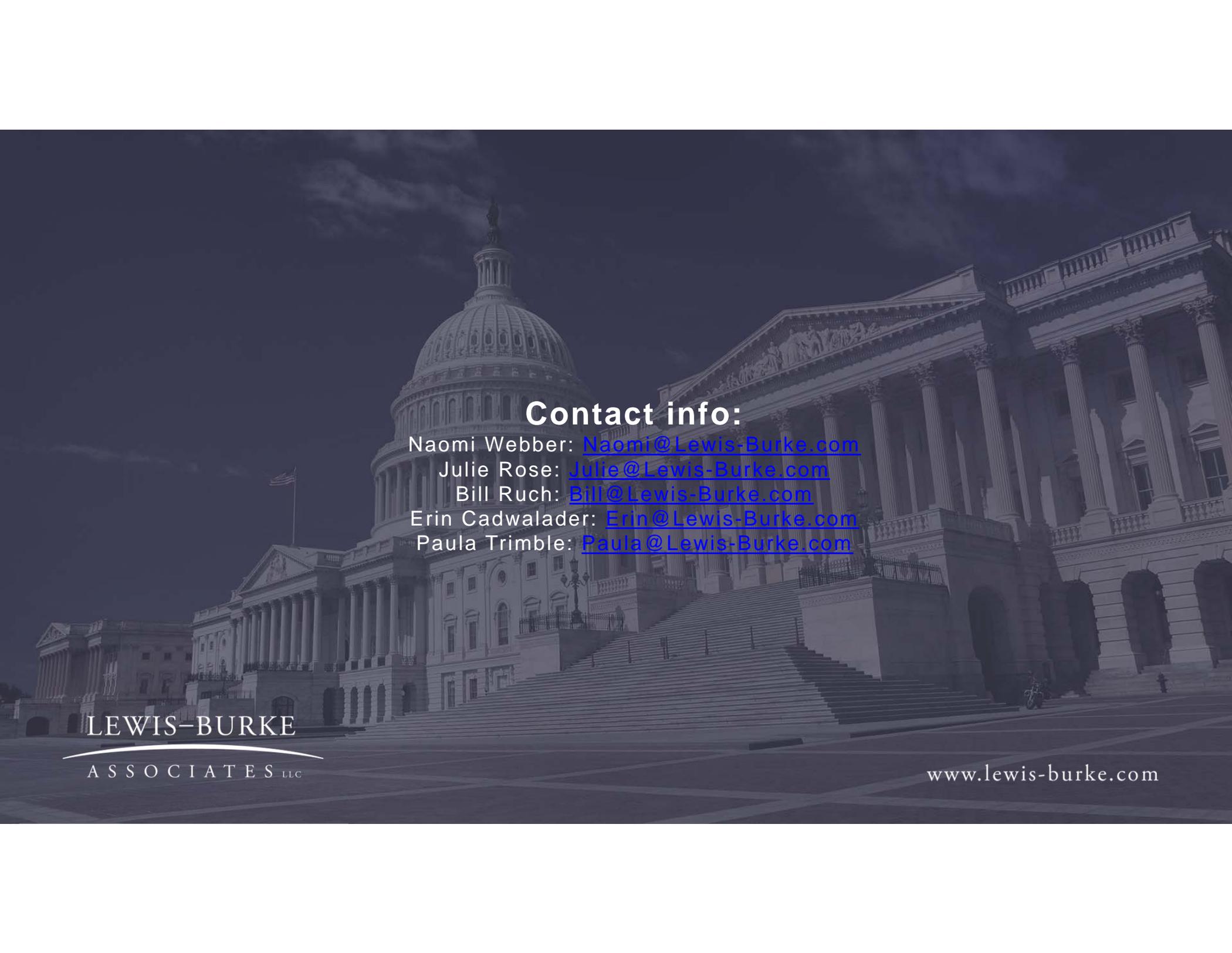
Other Federal Agencies to Consider

- **National Oceanic and Atmospheric Administration (NOAA) Climate Program Office (CPO):** annual, extramural competitive grants open to all universities and non-profits (roughly \$60 million total annually)
 - **Climate and Societal Interactions Program:** supports research and community projects focused on science for adaptation (knowledge, tools and networks to enhance communities ability to anticipate, plan, adapt for climate change impacts); building capacity and partnerships with local communities and organizations; international research partnerships
 - Regional Integrated Sciences and Assessments (RISA) program: supports regional research teams across country that conduct innovative, interdisciplinary, stakeholder-driven, and regionally relevant research that informs resource management, planning and public policy (EX: in Oklahoma, this project created planning tool for public in predicting tornadoes)
 - Sectoral Applications Research Program; focuses on specific needs of regions/stakeholders within socioeconomic sectors grappling with pressing climate-related issues (Ex: extreme drought or extreme flood)

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Contact info:

Naomi Webber: Naomi@Lewis-Burke.com

Julie Rose: Julie@Lewis-Burke.com

Bill Ruch: Bill@Lewis-Burke.com

Erin Cadwalader: Erin@Lewis-Burke.com

Paula Trimble: Paula@Lewis-Burke.com

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