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NSB Releases Science and Engineering Indicators 2012

The National Science Board (NSB) has released the biannual Science and Engineering Indicators report. The 2012 version was prepared by the National Science Foundation's National Center for
Science and Engineering Statistics (NCSES) led by Lynda Carlson. These quantitative representations of “factors relevant to the scope, quality, and vitality of the science and engineering (S&E) enterprise,” provide the government and the nation a chance to examine “where we are on the globally competitive map,” according to NSF Director Subra Suresh.

Suresh, joined by NSB Chairman Ray Bowen, Rep. Rush Holt (D-NJ), and staff from NCSES, spoke at a congressional briefing on January 18. Suresh thanked Congress for its “bipartisan confidence in NSF,” by increasing its budget in these trying economic times. He also noted that the impact of the global recession has not precluded the U.S. facing significant competition “to keeping the U.S. at the forefront of science and engineering.”

The NSF Director particularly noted, and the evidence is in the report, the role of the emerging economies on science and technology. Especially in Asia, he declared, investment in scientific infrastructure and the expansion of higher education have made these economies much more “knowledge intensive.” As Rolf Lehming of NCSES noted in his presentation of some of the report's data, research and development (R&D) expenditures by China and other countries in Asia caught up to U.S. spending by 2009. In addition, between 2009 and 2010, Lehming reported, China increased its spending for R&D by 20 percent. At the same time there has been an increase in the number of researchers in Asia as well.

The other part of the report highlighted in the presentation was the significant decline in state funding for major public research universities at the same time as enrollment in those universities has soared. Jeri Mulrow, of NCSES demonstrated a virtual tool designed to present information about various aspects of state S&T infrastructure. These include 58 separate indicators for each of the 50 individual states, the District of Columbia and Puerto Rico. The tool also allows for state vs. state comparisons.

Another issue raised at the event was the increasing cross-border R&D that is occurring. The report noted that R&D expenditures by overseas affiliates of U.S. multinational companies reached $37 billion in 2008. At the same time, collaborations among researchers in different countries have accelerated. This is a good thing according to Rep. Holt, who has a Ph.D. in physics, made a strong argument for retaining open communication among scientists. He also suggested that it was also a time for the U.S. to "seize opportunities" from the more vigorous scientific enterprise in other nations.

The report, which Holt called “the most important document for where we are in the science and engineering enterprise in America,” also examines: U.S. R&D funding and performance; the federal portfolio of U.S. R&D; STEM education; the trends and composition of the S&E workforce, with some moderately good news regarding women and minorities; and the research outputs of publications and patents, which again show the rest of the world's advancements.

In concluding the event, Suresh asserted that the S&E enterprise is marked by risk taking that involves long-term planning. However, he expressed some frustration that this is more difficult in the U.S. than in some of its competitors because of the year-to-year nature of the funding of U.S. science agencies. He suggested this also make international collaboration more difficult.


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**NSB Examines NSF's Merit Review Criteria**

At its December 14 meeting, the National Science Board (NSB) gave approval to a report from its Task Force on Merit Review, co-chaired by NSB Members John Bruer, President of the James S. McDonnell Foundation, and Alan Leshner, Chief Executive Officer of the American Association for the Advancement of Science (AAAS). Joanne Tornow, Deputy Assistant Director for the Social, Behavioral, and Economic Sciences directorate, served as the Executive Secretary for the Task Force. The report was released in early January.
The NSB in February 2010 charged the Task Force with examining the effectiveness of the two criteria the National Science Foundation (NSF) uses to evaluate proposals for research support. These two criteria, Intellectual Merit and Broader Impacts, especially the latter, have been the subject of complaints about interpretation and application by NSF reviewers.

The NSF merit review process has evolved over the years. As the report noted, in the beginning there was a single review criterion: “the scientific merit of the proposed research, including the competence of the investigator.” However, from its inception other factors impinged on this single notion. Thus, the uniqueness of the proposed research, the reasonableness of the budget, the quality of available resources at the institution, the relationship to the national efforts, and demographics related to geographical and institutional distribution, all became part of the proposal assessment. The NSB examined the review process in 1967, 1974, 1981, and 1997.

The Broader Impact criterion was instituted in 1997 as necessary to ward off criticism from lawmakers who were asking what the use of basic research was if it did not contribute to improvements in society. The America Competes Act reauthorization in 2010 also addressed the issue.

Following the Task Force’s efforts, the Board decided not to change the two criteria, but sought “to more clearly define them” and to add a Principles component “to enhance and clarify their function.”

The report suggests the following three principles should apply to the merit review process:

- All NSF projects should be of the highest quality and have the potential to advance, if not transform, the frontiers of knowledge.
- NSF projects, in the aggregate, should contribute more broadly to achieving societal goals. These “Broader Impacts” may be accomplished through the research itself, through activities that are directly related to specific research projects, or through activities that are supported by, but are complementary to, the project.
- Assessment and evaluation of NSF funded projects should be based on appropriate metrics, keeping in mind the likely correlation between the effect of broader impacts and the resources provided to implement projects. If the size of the activity is limited, evaluation of that activity in isolation is not likely to be meaningful. Thus, assessing the effectiveness of these activities may best be done at a higher more aggregated level than the individual project.

The Board noted that “when evaluating NSF proposals, reviewers should consider what the proposers want to do, why they want to do it, how they plan to do it, how they will know if they succeed, and what benefits would accrue if the project is successful. These issues apply both to the technical aspects of the proposal and the way in which the project may make broader contributions.”

They defined the two criteria as follows:

**Intellectual Merit** encompasses the potential to advance knowledge; and **Broader Impacts** encompasses the potential to benefit society and contribute to the achievement of specific, desired societal outcomes.

The Board then indicated that reviewers should take into account the following elements in their assessments:

1. What is the potential for the proposed activity to a. advance knowledge and understanding within its own field or across different fields (Intellectual Merit); and benefit society or advance desired societal outcomes (Broader Impacts)?

2. To what extent do the proposed activities suggest and explore creative, original, or potentially transformative concepts?
3. Is the plan for carrying out the proposed activities well-reasoned, well-organized, and based on a sound rationale? Does the plan incorporate a mechanism to assess success?

4. How well qualified is the individual, team, or institution to conduct the proposed activities?

5. Are there adequate resources available to the PI (either at the home institution or through collaborations) to carry out the proposed activities?

The full report is available at:

Grant Reform and Transparency Act Raises Concerns in Science and University Community

In mid-November the House Oversight and Government Reform Committee, chaired by Rep. Darrell Issa (R-CA), considered and recommended for House passage the Grant Reform and Transparency Act (GRANT), H.R. 3433. Since then, the legislation, which did not have a hearing, and at the moment has no Senate counterpart, has generated a number of responses from Members of Congress and the scientific and higher education community questioning some of its provisions and its overall need.

The goal of the Act is to provide greater transparency to federal grant programs to increase their accountability. It requires executive agencies to use merit-based procedures in awarding grants and to conduct an evaluation of the ability of a prospective grantee to successfully carry out a grant before awarding it.

It also asks the Director of the Office of Management and Budget (OMB) to: (1) upgrade any public website for finding federal grant opportunities so that such website serves as a central point of information for competitive grants, (2) issue and disseminate guidance to aid agencies in establishing merit-based selection procedures for grant programs and in identifying amounts of undisbursed funding remaining in grant accounts, and (3) submit a plan to improve the single audit process for auditing the financial statements and federal awards of a non-federal entity.

What raised eyebrows among the community are the provisions that indicate the information required for the public grant website, including grant funds availability and grant award information, and a provision requiring agencies to explain to grant applicants the basis for award decisions involving grants exceeding $100,000.

The bill would compel agencies, including the National Science Foundation and the National Institutes of Health, to post online complete applications of all proposals submitted to them. This would move beyond the current practice of providing abstracts of funded grants and cooperative agreements. In their letter to House Science Committee Chairman Rep. Ralph Hall (D-TX) and Ranking Member Rep. Eddie Bernice Johnson (D-TX), Reps. Elijah Cummings (D-MD) and Gerald Connolly (D-VA), argue that such a requirement "could endanger American intellectual property and potentially allow groundbreaking American innovations to be stolen by competing institutions and foreign adversaries." This argument has also been made by the Coalition for National Science Funding, of which COSSA is a member, and the Association of American Universities and the APLU.

Cummings and Connolly also suggest that posting all these applications "would create an immense amount of paperwork for agencies and universities," since to protect against breaches of intellectual property law these groups would need to hire experts "to perform extensive redactions to every grant application."

In a letter addressed to House Speaker Rep. John Boehner (R-OH) and Minority Leader Rep. Nancy Pelosi (D-CA), Reps. Rush Holt (D-NJ) and David Price (D-NC) argue that the certain provisions of the legislation would "pose significant threats to our nation's scientific research system and will stifle innovation and economic growth." They echo the Cummings and Connolly opposition to the
full posting of the grant applications. Holt and Price are also disturbed by a provision in the original bill that would have required the disclosure of the names, titles, and employers of peer reviewers for the grant program. This provision was eliminated by an amendment sponsored by Cummings at the full committee markup.

The bill also includes agencies to justify in writing any deviations “in which the award of the grant is not consistent with the numerical rankings or any other recommendations made by grant reviewers.” As NSF Deputy Director Cora Marrett told the House Science Committee in a hearing last year (see Update, August 8, 2011), NSF’s peer review panels only provide “recommendations” to the program directors who can revise these to “balance the portfolio” among areas within a discipline or area in making those decisions.

Given the Oversight and Government Reform Committee and its Chairman’s past interest in defunding already awarded NSF and NIH grants, what is the purpose of this legislation? The White House Office of Science and Technology Policy has asked scientists and organizations to comment on the issue of posting research results and preserving data from publicly funded research grants and therefore there is a sense of redundancy in this proposed legislation.

**NIMH Holds 230th Meeting of National Advisory Mental Health Council**

On January 20th, National Institutes of Mental Health (NIMH) director Tom Insel called to order the 230th meeting of the National Advisory Mental Health Council (NAMHC). The agenda included an update of NIMH’s activities by Insel, the National Action Alliance for Suicide Prevention, an update of NIMH’s AIDS behavioral science research, the role of NIMH’s Office of Science Policy, and an overview of NIMH’s Division of Developmental Translational Research.

Insel’s report to NAMHC included a discussion of the Institute’s FY 2012 budget. The FY 2012 Consolidation Appropriations Act provided NIMH with $1.48 billion in funding, an increase of 0.2 percent above the FY 2011 funding level. The Act provided the National Institutes of Health (NIH) with a budget of $30.869 billion, an increase of 0.8 percent. Both sums were less than the President’s request. Insel noted, however, that FY 2012 is a better year than expected for the Institute with its slight increase above the FY 2011 funding level.

He also noted that the National Defense Authorization for FY 2012 reauthorized the Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) programs for six years. The Act included provisions designed to increase the flexibility of SBIR by allowing small businesses primarily owned by venture capital to participate in the program and it increased the flexibility in awarding Phase I and Phase II SBIRs across the federal agencies. Additionally, the congressional set aside for the SBIR program will increase each year from 2.5 percent in FY 2011 to 3.2 percent in FY 2017. Similarly, the set aside for the STTR program increases from 0.3 percent in FY 2011 to 0.45 percent in FY 2017.

According to the director, in FY 2011, NIMH awarded its lowest number of new and competing research project grants (RPGs), 465, a 16 percent reduction from FY 2010 and the lowest number since 1998. In FY 2012, he reported that the Institute will support new and competing RPGs at a level equivalent to the 15th percentile for established investigators and at a level equivalent to the 18th percentile for new and early stage investigators. The Institute intends to continue the practice of investing 15 percent of its competing RPG funds towards Request for Applications also referred to as Funding Opportunity Announcements that target research gaps in areas where the Institute is not receiving unsolicited grant applications. Noncompeting continuation grants will be maintained at FY 2011 levels, with no inflationary increases in FY 2012. A two percent stipend increase, however, will be allowed in FY 2012 for research training grants.

He informed the Council of the formal establishment of the National Center for Advancing Translational Sciences (NCATS). Its mission is: “To catalyze the generation of innovative methods
Insel highlighted the NIH Common Fund (CF) Programs and Initiatives where NIMH staff is taking a lead, including Health Economics (David Chambers and Agnes Rupp) and Science and Behavior Change: Finding Mechanisms of Change in the Laboratory and the Field (SOBC) (Shelli Avenevoli and Bettina Osborn). The Health Economics CF initiative, jointly led by NIMH and the National Institute of Aging (NIA), has launched multiple requests for applications on the economics of prevention, organization, structure and delivery of care, incentives to incorporate comparative effectiveness results into health care systems and knowledge to improve long-term care. In response to a recent Request for Information to solicit input on the feasibility, scope and design of a State Health Policy Database (SHPD) to identify specific policy areas for inclusion in the SHPD. According to the Institute, 12 responses were received which will assist the Program in developing the SHPD for scientific research purposes. According to Insel, in October 2011, the SOBC submitted an annual progress report to the NIH Office of the Director summarizing its accomplishments. Plans are underway for a 2012 trans-NIH SOBC meeting and for the second annual meeting of investigators funded under a 2010 RFA on mechanisms of behavior change.

**Division of Developmental Translational Research**

Insel pointed out that the Institute's five-year strategic plan (2008 -2013) is coming to a close and it is a great time to begin a conversation regarding "What Next?" for the NIMH. Accordingly, the various components of the Institute will make presentations to the NAMHC beginning with a presentation by Molly Oliveri, director of the Division of Developmental Translational Research (DDTR). The Division is one of four non-AIDS funding divisions.

Oliveri reported that the mission of DDTR is to "Translate knowledge from basic science to discover the developmental origins of mental disorders and effect their prevention and cure." The Division's priorities include: **Neurobehavioral Mechanisms** (neurobiological, genetic, experiential influences; biologically based markers (risk, diagnostic, treatment-relevant); dimensional phenotypic measurement; and sex differences); **Developmental Trajectories** (integrative longitudinal models of risk/protection, sensitive periods in development, and early identification/prediction) and **Novel Interventions** (targeted treatments, preemptive strategies, and mechanisms of action).

According to Oliveri, in FY 2011, the Division awarded $148.2 million in grants. Three percent of the awards consisting of 10 percent of DDTR dollars went to support Research Centers (P50); 20 percent of the awards consisting of eight percent of the DDTR dollars supported mentored career awards; and 63 percent of the Divisions' awards, totaling 75 percent of its budget support DDTR research project grants.

She concluded her presentation by highlighting DDTR's current Funding Opportunity Announcements (FOAs) which include:

- **RFA:** *Neural Processes underlying Sex Differences related to Risk and Resilience for Mental Illness,*
- **PAR:** *Translational Research for the Development of Novel Interventions for Mental Disorders* (R21/R33),
**RFA: Mechanisms explaining Differences in Depressive and Anxiety Disorders across Racial/Ethnic Groups (ORDGMH).**

**AIDS Behavioral Science Research Updates: Current Strategies and Initiatives**

NIMH Deputy Director Phil Wang presented an update of the Institute's current strategies and initiatives on behalf of Division of AIDS Research Acting Director Dianne Rausch. Wang noted that $196 million of its $1.4 billion budget is going to support HIV research, much of that is in support of behavioral interventions. He noted that ending the scourge of HIV is "far more complicated than working out a vaccine." The Institute has convened a couple of summits, the most recent last summer, with the National Institute of Allergy and Infectious Diseases with the goal of "catalyzing behavioral science research and expanding the integration of behavioral and biomedical science."

Recent advances have led to optimism regarding ending the AIDS epidemic. Wang highlighted several watershed studies:

- **CAPRISA 004 +/- ADHERENCE:** A study testing a vaginal ARV microbicide (tenofovir) found its use before and after sex was 39 percent more protective against HIV infection than a placebo gel among women at high risk of HIV.
- **iPreX Study:** Intermittent pre-exposure prophylaxis study that demonstrated daily use of Truvada, reduced the risk of HIV infection by 43.8 percent among men who have sex with men at high risk of acquiring HIV.
- **HPTN 052:** A study of sero-discordant couples showed immediate use of Initiation of Anti-retroviral Therapy (ART) by HIV-infected individuals reduced transmission of HIV to their HIV-uninfected partners by 96 percent.

There is poor engagement of care of those infected - only 17 percent of individuals infected with HIV engage in the full spectrum of care with the end game of an undetectable viral load, said Wang. He pointed out that there is great variability in prevention technologies and cited the lack of adherence as being responsible for this variability. The challenges associated with prevention as treatment, the reduction of viral load/infectivity, include: expanding testing, linking care, maintaining care, and adherence to treatment regimen. The challenges associated with treatment as prophylaxis include increasing the: knowledge and acceptance of risk, consistent use of prophylaxis (daily or intermittent), availability of medication, tissue availability (oral versus genital) and acceptability of preparation. The Division, he explained, is undergoing a structural reorganization to meet these challenges, including developing an incubator space, without losing sight that there are interventions available to be taken up.

Wang emphasized that HIV prevention now has the biomedical tools to make transformative changes in HIV transmission and potentially end the epidemic. Accordingly, behavioral components are critical to the success of: preventing new infections, expanding testing, engaging individuals in care, adherence to treatment and prevention strategies, and maintenance in care.

In addition to the integration of the biomedical and the biobehavioral, goals of the summit also include: increasing intervention efficacy and durability, personalizing and targeting high risk groups, optimizing reach but avoiding redundancy, and disseminating widely with fidelity. Recommendations from the summits called for: renewed attention to a focused strategic plan which encourages innovative approaches, expands integration of effective behavioral science into biomedical prevention efforts, target high risk groups, bring interventions to scale, increase collaboration with other stakeholders, and develop principles for international research support.

New NIMH initiatives and recently completed request for applications have supported research that addressed the following subjects: HIV prevention for men who have sex with men, integration of behavioral science into biomedical interventions for HIV prevention, promoting engagement in care and time ART initiation following HIV diagnosis, and advancing HIV prevention through transformative behavioral and social science research. A recently cleared concept addresses community level approaches to prevention in high risk populations, Wang noted. He reiterated that addressing behavior is critical to success.
New NIMH council member and former NIMH director Steve Hyman noted that the behavioral community is in alliance with the medical community. With HIV, however, “it is more difficult,” Hyman argued “to engage the infectious disease community that believes that everything will be solved with a vaccine.” Insel explained that there is recognition that the NIH might be part of the problem given that it has separate Institutes with separate agendas addressing HIV from different perspectives. According to Insel, the 2011 summit was designed to bring the National Institute of Allergy and Infectious Diseases (NIAID) to the table. He shared that the HPTN trial has been instrumental in convincing the director of NIAID Tony Fauci “that AIDS is a behavioral problem.” Insel explained that in the area of AIDS research NIMH wants to fully integrate with NIAID. The program should be integrated in the same institute and that should be part of the vision of getting there, Insel posited.

OJP Scientific Advisory Board Meets; Lauds Robinson

On January 23, the Scientific Advisory Board (SAB) of the Office of Justice Programs (OJP), chaired by former COSSA President Al Blumstein of Carnegie Mellon University, held its third meeting. Laurie Robinson, Assistant Attorney General (AAG) for OJP and creator of the SAB, had earlier announced her resignation effective in early February. Since this was her last SAB meeting, the Board spent time lauding Robinson for her leadership of OJP, not only during the past three years under President Obama, but also for her previous seven year service as AAG under President Clinton.

Mary Lou Leary, currently Principal Deputy AAG at OJP will become Acting AAG when Robinson leaves. Leary served similarly at the end of Clinton Administration before becoming the Executive Director of the National Center for Victims of Crime for four years. She has also been acting Director of the Office of Community Oriented Policing Services (COPS).

The rest of the SAB meeting involved a series of reports from the Subcommittees established by the Board. For this meeting a new Subcommittee focused on the Bureau of Justice Assistance was formed with Edward Mulvey of the Western Psychiatric Institute and Clinic at the University of Pittsburgh School of Medicine as the chair.

The Quality and Protection of Science Subcommittee, chaired by Rob Sampson of Harvard, focused on the issue of independence, objectivity, and quality for OJP agencies. There was agreement that Robinson had implemented procedures that aided the agencies in this regard during her tenure, but there was concern about how to maintain that independence in the face of new leadership, particularly if there is a new administration.

Sampson reported that the Subcommittee considered specific measures that included fixed terms for all directors. They specifically recommended that the directors of the National Institute of Justice (NIJ) and Bureau of Justice Statistics (BJS) should be chosen by soliciting candidates from major stakeholders, such as the American Society of Criminology and the Academy of Criminal Justice Sciences, and that members of the scientific community should participate in framing the research portfolio of the agency. It was okay, they agreed, for policymakers to mandate requests for types of research, but that details such as methodology or specific research questions “should be independent of such outside influences.” Sampson also indicated support for field-generated, investigator-initiated research as part of the research agenda and that “transparency in solicitations received and projects awarded is necessary,”

They called for the evaluation of NIJ’s new standing committee peer review process, which NIJ Director John Laub assured the committee would happen. The Subcommittee strongly argued that approval and oversight of research findings should be based on scientific quality and that there should be no pre-publication approval or clearance “other than through some established objective review by scientific peers.” They asked for “instituting norms of common scientific practice” throughout the OJP science agencies.

Following Sampson’s report, there was considerable discussion about the Obama Administration’s Scientific Integrity policy. Alan Leshner, a member of the SAB, noted that the National Oceanic and
Atmospheric Administration has agreed not to place any restrictions on scientists at the agency to report findings from research supported there. OJP is working with the Justice Department to determine policy for its five science agencies, which include NIJ, BJS, the FBI, the Drug Enforcement Administration, and the Bureau of Alcohol, Tobacco, and Firearms. The latter three maintain laboratories, rather than support extramural research.

David Weisburd of George Mason University and a former member of the COSSA Board of Directors, reported for the NIJ Subcommittee. He indicated that his panel was delighted that NIJ was now led by "a serious scientist." The Subcommittee was still interested in protecting the NIJ research mission within OJP. It was also still trying to figure out if it can fulfill a recommendation of the National Academies' report and act as an NIJ Advisory Board. Weisburd also noted the presence of new members of the Subcommittee with expertise in the physical and forensic sciences. One of Director Laub's goals, Weisburd noted, is to integrate these sciences with the social science part of NIJ.

Richard Rosenfeld of the University of Missouri, St. Louis, chairs the BJS Subcommittee. Its concern focused on the significant reduction in BJS's budget from FY 2011 to FY 2012 and the freeze at Justice that prevents the hiring of much-needed statistical experts for the Bureau. They recommended an exemption from the freeze, something Robinson did not think could occur. They also asked for an evaluation of the FBI's Uniform Crime Reports. In addition, Rosenfeld noted support for making small-area data from the National Crime Victimization Survey publicly available with the proper data suppression to safeguard confidentiality.

The AAG introduced Melodee Hanes as the new Acting Administrator for the Office of Juvenile Justice and Delinquency Prevention (OJJDP). She recently served as counselor to the Office's previous Acting Administrator Jeff Slowikowski. Hanes served for 16 years as a deputy county attorney prosecuting child abuse, sexual assault and homicide cases, and for years trained and lectured on child abuse-related topics.

The SAB will next meet on June 20 during the NIJ Conference.

Reorganization of the Commerce Department May Involve Census, BEA, BLS and NOAA

On January 13 President Obama asked Congress to reinstate the president's authority to fast-track executive branch reorganization. The authority, removed during President Reagan's first term, provides the White House the ability to reorganize the government with Congress' role reduced to an up-or-down vote on the proposal.

In making the announcement, the President suggested that he would use the restored authority to reorganize the Commerce Department. Although the details are sketchy and not set in concrete, Jeffrey Zients, Deputy Director at the Office of Management and Budget (OMB) and subsequently elevated to Acting Director with Jacob Lew's move to become White House Chief of Staff, told the press that the President intends to consolidate six agencies into one more efficient department to promote competitiveness, exports and American business.

The White House focused on those agencies dealing with business and trade, such as the Small Business Administration, the Office of the U.S. Trade Representative, the Export-Import Bank, and others. At the same time, Zients also told the press that a fourth pillar of the new Department would include economic and demographic statistics, which would encompass the U.S. Census Bureau, the Bureau of Economic Analysis (BEA), the Bureau of Labor Statistics (BLS), and the National Science Foundation's National Center for Science and Engineering Statistics. In the late 1990s, then-Senator Daniel Moynihan (D-NY) proposed moving Census, BEA, and BLS to OMB. Hearings on the legislation held by former Rep. Steve Horn (R-CA) heard testimony from COSSA urging significant caution in combining these agencies. The proposal went nowhere.

The National Oceanographic and Atmospheric Administration (NOAA) would move to the Interior
Department. According to President Obama, NOAA was supposed to go to Interior when it was created but President Nixon's unhappiness with then-Secretary Walter Hickel's opposition to the Vietnam War sent it to Commerce instead.

Whether any of this happens this year seems unlikely. The Republicans in Congress have not given President Obama much of anything he requests and an election year seems a strange time to start. In addition, granting the authority and then presenting the details of the reorganization could also create other justifications for obstruction.

APA Releases Report on Stress in America

On January 11, the American Psychological Association (APA) held a press conference about the newly released report Stress in America: Our Health at Risk. The Stress in America Survey, which began annually in 2007, was conducted online among 1,226 U.S. residents between August and September 2011.

This year's study showed that many Americans consistently report high levels of stress, with 22 percent reporting extreme stress of an 8, 9, or 10 on a 10-point scale where 1 is little or no stress and 10 is a great deal of stress. The average level of stress actually dropped from 2010's 5.4 to 5.2, and yet 39 percent reported their stress has increased over the past year. This average of 5.2 is also disturbingly 1.6 points higher than the top stress level Americans reported as healthy. Most adults, nine in 10, believe that stress can contribute to the development of major illnesses, and yet a large amount, 36 percent, believe that it has only a slight or no impact on their own physical health. APA believes that this disconnect is a cause for concern and needs to be remedied.

Norman B. Anderson, CEO and Executive Vice President of APA, was among four speakers at the event and noted that “various studies have shown that chronic stress is a major driver of chronic illness, which in turn is a major driver of escalating health care costs in this country. It is critical that the entire health community and policymakers recognize the role of stress and unhealthy behaviors in causing and exacerbating chronic health conditions, and support models of care that help people make positive changes.” Other speakers present included Suzanne Bennett Johnson, Current APA President and a member of the COSSA Board of Directors; Katherine C. Nordal, Executive Director of the Practice Directorate at APA; and Jonathan Lever, Vice President, Health Strategy and Innovation at YMCA of the USA.

Lever was present to announce a partnership between APA and the YMCA to Advocate for America's Well-Being. The two organizations intend to provide strategies to help families improve their overall well-being and physical health specifically by promoting the effects of individual behaviors, such as eating healthy and participating in regular physical activity, can have in reducing risk factors for chronic disease.

While the overall message of the report and press conference revolved generally around stress and its consequences on health, this year's survey also took more in-depth looks at obesity and depression and their links to stress, and caregivers and stress. The mean level of stress reported by caregivers is 6.5 compared to the general population's 5.2. The latest data also points out that caregivers are more likely than people in the general public to have chronic illness (82 percent versus 61 percent).

People living with depression report an average stress level of 6.3, and those living with obesity report a level of 6.0. While 11 percent of the general public reports that their disabilities or health issues prevent them from making healthy lifestyle change, 34 percent of those who are obese and 22 percent of those who are depressed report the same.

For more information on this report please visit www.stressinamerica.org.
Politics and Economics of Energy and Water Focus of Briefing

On January 12 the Hudson Institute held an event titled Energy, Water, and Debt: Linked Problems, Common Solutions? The event was sparked by the rise in the last year of conflicts between energy needs and water quality and supply. Opposition to both the Keystone XL pipeline and shale gas development has roots in worries about water pollution. Further, in 2011 power plant output was threatened, not by lack of fuel, but by insufficient supplies of cooling water.

Jim Nussle, President of Growth Energy, former Director of the Office of Management and Budget, and former Chairman of the House Budget Committee, delivered the keynote address. Nussle noted that most policy makers just have a passing interest in these issues since their constituents aren't pushing for action the majority of the time. While many legislators develop energy plans while gas prices are high, they are soon forgotten in almost all cases. According to Nussle, this has been going on for forty years with every President since Nixon claiming we would soon be energy independent. The time has come, Nussle posited, to actually investigate the appropriate courses of action.

The rest of the event was divided into two panels. The first panel provided brief overviews of the main challenges posed by the energy water nexus. On the panel were Craig Zamuda, Senior Policy Advisor of the U.S. Department of Energy's (DoE) Office of Climate Change Policy and Technology; John Lyman, Director of the Atlantic Council's Energy and Environment Program; and W. David Montgomery, Senior Vice President of NERA Economic Consulting. Zamuda laid out the fundamental issue: energy production requires water and water production requires energy, meanwhile climate change is altering how the environment provides energy and water. Both our water and energy demands are increasing; by 2030 there will be an estimated 40 percent gap between demand and supply of water which will drastically increase the likelihood of water conflict. In trying to find ways around these issues, the DoE is searching for ways to reduce climate change which carries obvious policy implications.

Lyman began by noting that the first step must be capturing the attention of citizens and Congress. The next step, he asserted, will be to build a new system that addresses the increased complexity of the relationship between energy and water; increased costs may well be a mandatory adjustment. Montgomery chiefly emphasized that if we priced water correctly most issues would be handled in the marketplace.

The second panel sought out to critically assess current proposed solutions. Speaking were Gary Libecap, the Bren School of Environmental Science & Management, UC Santa Barbara; Jes Munk Hansen, President of Grundfos North America; Shiela Olmstead, Fellow, Resources of the Future; and Kassia Yanosek, Founding Principal, Tana Energy Capital LLC. Libecap chiefly spoke about the value of water rights and markets. He noted that water is much more valuable if moved out of agriculture and that market rules and practices vary dramatically by state. He called for clarifying water rights within the constraints of actual water amounts and increasing the number of markets. Olmstead noted that we manage water in a very different way than energy, when it's scarce we regulate it but prices do not rise. She called for aligning prices with scarcity better than we do now. Hansen attempted to point to new technologies for the answers, noting that we should set requirements for equipment systems for conservation and build new skill sets. Yanosek promoted investing in solutions, noting that currently investors don't have the incentives to invest in new solutions. According to her, there is a boom and bust cycle to policy incentives for energy and water conservation due to fear of tax credits disappearing. Yanosek advised promoting policies that pull technology into the market.

For more information about this event please visit www.Hudson.org.

Census Bureau Seeks Scientific Advisory Board Nominations

The U.S. Census Bureau is requesting nominations of individuals and organizations to the Census Scientific Advisory Committee. Nominations are due by February 9, 2012.
The Census Scientific Advisory Committee will advise the Director of the U.S. Census Bureau on the uses of scientific developments in statistical data collection, statistical analysis, survey methodology, geospatial analysis, econometrics, cognitive psychology, and computer science as they pertain to the full range of Census Bureau programs and activities (including: communications, decennial, demographic, economic, field operations, geographic, information technology, and statistics).

Committee members will provide scientific and technical expertise from the following disciplines: Demography, economics, geography, psychology, statistics, survey methodology, social and behavioral sciences, Information Technology and computing, marketing, communications, and other fields of expertise, as appropriate, to address Census Bureau program needs and objectives.

The Committee, consisting of 20 members and a chair appointed by the Director of the Bureau, will function as an advisory body under the Federal Advisory Committee Act and report directly to the Director. Members will serve for a two or three-year term with staggered term-end dates.

Nominees must have scientific and technical expertise in such areas as demography, economics, geography, psychology, statistics, survey methodology, social and behavioral sciences, information technology, computing, or marketing. Such knowledge and expertise are needed to provide advice and recommendations to the Director of the Census Bureau on the trends, uses, and application of scientific innovations and developments in relation to the full range of Census Bureau programs and activities. They cannot be U.S. government employees.

Individuals, groups, and/or organizations may submit nominations on behalf of individual candidates and nominations of organizations may come from individuals or organizations. Organizations also may self-nominate.

Nominations should go to: Jeri Green, Chief, Office of External Engagement, U.S. Census Bureau, Room 8H182, 4600 Silver Hill Road, Washington, DC 20233. Nominations also may be submitted via fax at (301) 763-8609, or by email to jeri.green@census.gov. For further information also contact Ms. Green at the numbers and addresses above.

Request for Information: NIH Director Working Group on Diversity in the Biomedical Research Workforce

The National Institutes of Health (NIH) Advisory Committee to the NIH Director (ACD) has issued a Request for Information (NOT-OD-12-031) for input into the deliberations of the ACD to the NIH Director Working Group on Diversity in the Biomedical Research Workforce (see Update, December 14, 2011). The Working group is charged with providing concrete recommendations to the ACD and the NIH director on ways to enhance diversity throughout the various research career stages, particularly with regard to underrepresented minorities, persons with disabilities, and persons from disadvantaged backgrounds.

The Working Group is seeking input from various sources, including extramural and intramural researchers, academic institutions, industry, and the public, to help inform the development of recommendations to present to the ACD and the NIH Director on actions the NIH can take to increase the diversity of the biomedical research workforce.

The Working Group has identified the following issues as important to consider when developing recommendations:

- Biomedical Research Workforce Pipeline
  - The appropriate transition points where NIH’s training, career development and research grant programs could most effectively cultivate diversity in the biomedical research workforce
    - Entry into graduate degree programs
    - Transition from graduate degree to post-doctoral fellowships
- Appointment from a post-doctoral position to the first independent scientific position
- Award of the first independent research grant from NIH or equivalent in industry
- Award of tenure in an academic position, at the NIH, or the equivalent in an industrial setting
- The role of mentorship in the training and success of biomedical researchers throughout their careers
  - Development of relationships between professional societies, institutions, and individuals to develop mentoring programs
  - Creation and expansion of institutional mentoring programs
  - Mentoring of applicants and preparation of applications prior to submission
- The influence of role models whose qualities and characteristics can positively affect the training and success of underrepresented biomedical researchers through their careers
- The role of NIH messaging in encouraging underrepresented researchers to apply for NIH fellowships and grants
- The role of institutional infrastructure support and climate as a factor in the success of underrepresented researchers
- Factors in the Review Process
  - The potential role of institutional affiliation, academic pedigree, and various conscious and unconscious factors on review outcomes
    - Exploration of the possible influences of racial, ethnic, gender, affinity, or other biases
    - Research on the NIH Peer Review system to determine appropriate methods or interventions to identify and if necessary redress bias, including efforts to anonymize applications or test the effects of unconscious bias training on outcomes.

Comments will be accepted through February 24, 2012 and must be submitted electronically to http://grants.nih.gov/grants/guide/rfi_files/nih_dbrw/add.cfm.

For more information or respond to the RFI see http://grants.nih.gov/grants/guide/notice-files/NOT-OD-12-031.html.

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**Request for Information: NIH Director Working Group on Data and Informatics**

The National Institutes of Health (NIH) Advisory Committee to Director (ACD)) special Data and Informatics Working Group (DIWG) is seeking input into its deliberations. The DIWG is charged to provide the ACD and NIH director Francis Collins expert advice on the management, integration, and analysis of large biomedical datasets. It is further charged to address: research data spanning basic science through clinical and population research; administrative data related to grant applications, reviews, and management; and management of information technology (IT) at the NIH. Final recommendations from the Working Group are due by the ACD's June 2012 meeting.

Input is sought from data and informatics experts and stakeholders, including investigators, administrators, and IT professionals, as well from the general public. **Responses to the RFI will be accepted through March 12, 2012.** The Working Group has identified the following issues as important to consider when developing recommendations:

- Scope of the challenges/issues
  - Research information lifecycle
  - Challenges/issues faced by the extramural community
  - Tractability with current technology
Unrealized research benefits
Feasibility of concrete recommendations for NIH action

Standards development
Data standards, reference sets, and algorithms to reduce the storage of redundant data
Data sharing standards according to data type (e.g., phenotypic, molecular profiling, imaging, raw versus derived, etc.)

Secondary/future use of data
Ways to improve efficiency of data access requests (e.g., guidelines for Institutional Review Boards)
Legal and ethical considerations
Comprehensive patient consent procedures

Data accessibility
Central repository of research data appendices linked to PubMed publications and RePORTER project record
Models and technical solutions for distributed querying
Comprehensive investigator authentication procedures

Incentives for data sharing
Standards and practices for acknowledging the use of data in publications
"Academic royalties" for data sharing (e.g., special consideration during grant review)

Support needs
Analytical and computational workforce growth
Funding for tool development, maintenance and support, and algorithm development

The DIWG is co‐chaired by David DeMets, University of Wisconsin‐Madison and Lawrence Tabak, Principal Deputy Director, NIH. Its members include: Russ Altman - Stanford University; David Botstein - Princeton University; Andrea Califano - Columbia University; David Ginsburg - University of Michigan; HHMI; Chair, NCBI Needs‐Assessment Panel; Patricia Hurn - The University of Texas System; Dan Masys - University of Washington; Jill Mesirov - Broad Institute; NCBI Needs‐Assessment Panel; Shawn Murphy - Harvard University; and Lucila Ohno‐Machado - University of San Diego.

All comments must be submitted electronically to: http://grants.nih.gov/grants/guide/notice-files/NOT‐OD‐12‐032.html.

Biodemography of Aging: Applications Wanted

The National Institute on Aging is seeking applications that combine demographic and life‐science approaches for expanding the current understanding of aging/senescence, frailty and mortality. Biodemography is defined as the integration of demographic and biological theory and method, providing an innovative tool for understanding the impact of aging on health and longevity.

According to the Funding Opportunity Announcement (FOA), the field of biodemography has made a good start in address some key question about life history, health and aging, including:

- What are the key mechanisms by which senescence operates?
- Are there characteristics of aging, frailty and mortality that are universal across populations and/or species?
- What factors have shaped the unique life history of humans?
How does aging at different rates of bodily systems aggregate to characteristic age profiles of disability and mortality at population levels?

Applications should include evolutionary and life history theories as a framework for investigating individual and population-level factors that underlie changes in lifespan and health life expectancy, including sex and population differentials in late-life frailty and mortality. Applications are encouraged to draw upon theory and methods from demography and one or more other fields, including but not limited to: behavioral ecology, biological anthropology, evolutionary biology, genetics/genomics, gerontology/geriatrics, human biology and physiology, mathematics, molecular and cellular biology, population genetics, and social epidemiology. Research that emphasizes interdisciplinary communication and diverse technical expertise is encouraged. According to the FOA, useful approaches/frameworks can include, but are not limited to:

- Comparative studies of human populations (either contemporary or historical populations), including those subject to very different disease burdens and/or natural environments;
- Comparative studies of other species, either observational or experimental, and including animal populations in the wild, to elucidate effects of social stratification, hierarchies, and other social processes and influences on health and aging;
- Population genetics (effects of demographic history on distribution of alleles in modern human populations) and study of gene-environment interactions;
- Modeling of late-life mortality, based on stable population theory or on models of heterogeneous frailty; including differences by sex and population.
- Modeling of evolutionary forces shaping patterns of senescence, morbidity and mortality.
- Development and empirical tests of evolutionary theories of lifespan, life histories, and the role of sociality, intergenerational transfers, kin selection and other potentially adaptive behaviors in the evolution of characteristic life histories.
- Empirical, experimental and theoretical studies of post-reproductive lifespan in both females and males.
- Study of important characteristics of mortality and healthy lifespan distributions, including not only measures of central tendency (e.g. life expectancy at various ages) but also measures of dispersion of age at onset of disability or death.
  - Social epidemiologic, empirical studies of senescence and late-life health using a cross-cultural or cross-national research design.
  - Secondary data analysis for comparing biodemographic characteristics within or across populations.
- Integration of existing models of senescence, including optimization and mutation accumulation models; could include genetic, epigenetic data.

Applications may be submitted no earlier than February 13th. To apply or for more information see: http://grants.nih.gov/grants/guide/pa-files/PAR-12-078.html.

There are companion FOAs for Exploratory/Developmental Grant (PAR-12-079) and Small Research Grant (PAR-12-080).

New COSSA Member

COSSA is pleased that the Society for Empirical Legal Studies has joined the Consortium. The Society encourages and develops empirical and experimental scholarship on legal issues. We welcome their participation in COSSA and look forward to working with them on matters of mutual interest.
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The Consortium of Social Science Associations (COSSA) is an advocacy organization promoting attention to and federal support for the social and behavioral sciences.

UPDATE is published 22 times per year. ISSN 0749-4394.