Congress left town for a two-week Thanksgiving recess still far short of completing action on the FY 2008 appropriations bills. The Democratic leadership’s strategy of packaging the Labor, Health and Human Services, and Education spending bill with the Veterans’ Affairs, Military Construction bill fell apart in the Senate on a procedural challenge by Republican Senators. Thus, the Labor bill was sent to the President on its own, and as promised, on November 13, the President vetoed the legislation. He claimed the bill “includes an irresponsible and excessive level of spending and contains other objectionable provisions.” According to the Administration, the bill would spend $10 billion more than the President proposed for these Departments and agencies and $3.2 billion for programs that the Administration had targeted for elimination. An attempt to override the President’s veto fell short in the House as enough Republicans continued to support the President to prevent the necessary two-thirds majority.

The President signed the FY 2008 appropriations for the Department of Defense (DOD). The act included a 4.5 percent increase for DOD basic research, but also a cap of 35 percent on the indirect charges for any grant or contract. Congress attached another Continuing Resolution (CR) to the DOD legislation to keep the government...
open until December 14. This new CR mirrored the first version that expired on November 16 and funds all non-
DOD agencies at the FY 2007 level with a few exceptions.

After much activity by the Census Bureau and its stakeholders, the Office of Management and Budget requested
and Congress agreed to exempt the Bureau and provided it with an operating rate of $1.025 billion for its
Periodic Censuses and Programs, “in order to accommodate contracts and activities needed to be undertaken
now to stay on schedule for 2010 decennial census and the economic censuses.”

The other eleven spending bills remain stuck at various stages in the process. The Veterans’ Affairs, Military
Construction bill, and the Transportation, HUD bill have been through House-Senate conferences. However, the
Democrats, in the CR, funded the Department of Veterans’ Affairs at the FY 2008 request level removing some
pressure to move the legislation forward as they seek a strategy to overcome the President’s unwillingness, so
far, to negotiate any compromise that would allow the FY 2008 appropriations process to end.

Just before they left town, the Democratic Congressional leadership floated a proposal to package the remaining
eleven bills in one omnibus piece of legislation and offered to split the difference with the President, halving the
proposed increases. A White House spokesperson rejected the offer for now.

In addition, the Congress left with a lot of other unfinished business, including the Farm Bill, which is stalled on
the Senate floor, tax proposals, the Higher Education Act renewal (see below), a second attempt to extend the
SCHIP medical insurance program, and the continued debate over funding the wars in Iraq and Afghanistan.

Below are the provisions of the Labor, HHS, Education Conference Report as reported by the House and the
Senate. The likelihood is that the final numbers will look different, but for the moment these numbers suggest
what the Congress is thinking about these agencies.

**Congress’ Labor, HHS, Education Numbers for FY 2008**

For FY 2008, the bill provided $30 billion for the National Institutes of Health (NIH), a 3.8 percent increase of
$1.1 billion in funding above the FY 2007 funding level. Of the total for NIH, $300 million is a transfer for Global
HIV/AIDS, proposed by both the House and the Senate. Included in this sum is $110.9 million in funding for the
National Children’s Study which was moved to the Office of the NIH Director by Congress in FY 2007.

The bill also provided $531.3 million for the Common Fund as proposed by the Senate, which represents 1.77
percent of total funding for NIH and meets the statutory requirements that the Common Fund percentage of total
NIH appropriation at least equal the share of total NIH funding for the Common Fund represented during the prior
year. In FY 2007, the Common Fund represented 1.67 percent of total NIH funding.

The conference agreement provided funding for a 2.5 percent increase in the average cost of new grants and for
committed levels for existing grants. For training stipends, it provided “sufficient” funds to provide an average
2.2 percent increase in research training stipends.

For the Director’s Pioneer Award, Pathway to Independence Award, New Innovator Award, and Bridge Awards,
the measure provided the FY 2007 level. For the Director’s Discretionary Fund, Congress allotted $10 million.
The measure also provided $224.6 million for the Institutional Development Award (IDeA) program coordinated by
the National Center for Research Resources.

For the Agency for Healthcare Research and Quality (AHRQ), the conference agreement provided $334 million
in funding for FY 2008, $5 million more than initially proposed by the House and the Senate. The additional
money will fund activities associated with the methicillin-resistant staphylococcus aureus (MRSA) and related
infections. The agreement also allocates $30 million of AHRQ’s overall budget to comparative effectiveness
research, consistent with the House and Senate proposals. In addition, the agreement includes a general
provision proposed by the Senate restoring the authority to transfer one percent of the amounts made available
for National Research Service Awards (NRSA) to the Health Resources and Services Administration and AHRQ.

The conference agreement provided $6.1 billion in funding for the Centers for Disease Control and Prevention
(CDC), a 6.6 percent increase above the FY 2007 funding level. The agreement includes bill language designating
$116.5 million for the National Center for Health Statistics (NCHS) made available through Public Health Service’s
one-percent evaluation set-aside. The House had proposed $120 million and the Senate had proposed $108.6 million for the statistical agency. Also with set-aside funds, the agreement included $44.5 million for Health Marketing and $463,000 for health marketing evaluations. It provided $97.4 million in funding for FY 2008 to carry out occupational safety and health research activities related to the National Occupational Research Agenda (NORA). CDC was also asked to conduct a study “of the impact of school nutrition and physical activity programs on academic outcomes.”

Congress allocated $110.7 million for Title VI International Education and Foreign Languages Studies programs, a $5 million increase from the FY 2007 amount. The increase includes a boost of $4 million for domestic programs, and $1 million for overseas programs. The Fund for the Improvement of Postsecondary Education (FIPSE) received $126.3 million with most of the funds earmarked for specific projects. These include: $5 million for the [Howard] Baker Center for Public Policy at the University of Tennessee; $2 million for the Charles Rangel Center for Public Service at the City College of New York; $1 million for the Clinton School of Public Service at the University of Arkansas; $1 million for the Thomas Daschle Center for Public Service and Representative Democracy at South Dakota State University; and $1 million for the [Robert] Matsui Center for Politics and Public Service at the University of California at Berkeley. For the second year in a row, Congress rejected the Administration’s request for $24 million for the Advancing America through Foreign Language Partnerships program. The conferees agreed with the House and once again rescued the Thurgood Marshall Scholarship program from elimination as proposed by the Administration and the Senate, allocating almost $2.5 million for the program.

The Institute for Educational Sciences (IES) received $561.3 million, an increase of $43.8 million over FY 2007. Assessment went up over $12 million to $104.8 million, Statistics increased by $5 million to $95.5 million, and Research, Development, and dissemination decreased slightly ($17,000) to $162.5 million. The Congress agreed with the President’s request to more than double funding for Statewide Data Systems to $49.2 million, but prohibited the Department of Education from implementing a pilot study of a student record data system.

Congress appropriated $566.8 million for the Bureau of Labor Statistics (BLS). From these funds, $185.8 million goes for the Prices and Cost of Living surveys, with the expectation that the increase above FY 2007 will lead to continuous updating of the housing and geographic area samples of the Consumer Price Index (CPI). The conferees added a provision requiring BLS to issue a report “assessing the number of U.S. jobs, on an industry-by-industry basis, that were created as a consequence of NAFTA, and the number of U.S. jobs, on an industry-by-industry basis, that were lost as a consequence of NAFTA.”

HIGHER EDUCATION ACT RENEWAL EMERGES FROM HOUSE COMMITTEE

After numerous extensions of the expired Higher Education Act (HEA), Congress seems poised to finally reauthorize its non-student loan provisions. On November 15, the House Education and Labor Committee, chaired by Rep. George Miller (D-CA) reported out its version of the bill, H.R. 4137. The Senate passed its version in July.

The bill reauthorizes the Javits Graduate Fellowship program, the Thurgood Marshall Legal Educational Opportunity program, and the Fund for the Improvement of Postsecondary Education.

The Committee also renewed the provisions relating to the Title VI programs in international education and foreign languages, which had been controversial in earlier versions of the reauthorization with the inclusion of an oversight monitoring board (see Update, Sept. 12, 2005). The new House bill does not include such a Board, despite the efforts of Rep. Peter Hoekstra (R-MI) to insert such a provision into the bill. The Committee defeated Hoekstra’s amendment on a voice vote. Hoekstra also offered and then withdrew an amendment that would have mirrored the Senate language requiring an application, complaint, and accountability procedures concerning the “teaching of diverse perspectives and wide range of views.” Chairman Miller suggested that Hoekstra’s view would continue to get consideration as the bill’s progress moved through the House floor and into a conference with the Senate.

The Committee adopted an amendment by Rep. Rush Holt (D-NJ) to create an Assistant Secretary for International and Foreign Language Education in the Department of Education. This was a recommendation of the National Academies’ report on Title VI (see Update, April 2, 2007).
The Committee also defeated an attempt by Rep. Mark Souder (R-IN) to include an “Academic Bill of Rights” in the legislation.

The latest extension of HEA expires March 31, 2008. Congress hopes to complete the bill by then.

**FIRST AWARDS MADE, SCIENCE OF SCIENCE AND INNOVATION POLICY MOVES FORWARD**

In 2005, Presidential Science Adviser John Marburger spoke at both the COSSA Annual Meeting and the AAAS Public Policy Forum about the need to examine science and innovation policy. He called for a “social science of science policy.”

The National Science Foundation’s Social, Behavioral, and Economic Sciences (SBE) Directorate took up Marburger’s challenge and initiated a program in the “Science of Science and Innovation Policy” (SciSIP). At the 2006 COSSA Annual Meeting, SBE Assistant Director David Lightfoot presented SBE’s plans for the initiative (see Update, November 6, 2006).

At the recent SBE Advisory Committee meeting on November 8, Kaye Husbands Fealing, who leads the SciSIP initiative, discussed the program so far. She noted that the goals of the initiative are the “development of an evidence-based platform for science policy.” You accomplish this, Fealing said, by: gaining understanding by developing usable knowledge and theories; improving and expanding science metrics, datasets, and analytical models and tools; and by cultivating a community of practice that focuses on SciSIP across the academy, the public sector and industry. That “community of practice” is, Fealing related, “interdisciplinary, international, innovative, and inclusive.”

The SciSIP project delineated ten “grand challenges:

- A full systems approach to mapping science, technology and innovation;
- portfolio models of investment in science and technology;
- behavioral and dynamic models of the relationship between scientific discovery and policy decisions;
- maps and cyber tools linking the evolving taxonomy of science and engineering to policy decision-making;
- full accounting of intangible assets and international workforce flows, and their contributions to science and technology outcomes;
- real-time evaluative and decision-making tools for assessing public sector investment in fundamental science and technology on economic growth and social well-being;
- measures of spillover effects between scientific discovery and technological innovation, particularly among universities, firms, and government labs;
- evaluative measures of disciplinary cultures on transformative work;
- computational models of creativity; and
- evaluative approaches to measuring diversity and its impact on science and technology developments.

SBE has now made the awards from the first major SciSIP solicitation. From 60 proposals, 19 projects were funded. According to Fealing, they fell into five categories: 1) human capital development and the collaborative enterprise related to science, technology, and innovation outcomes; 2) returns to international knowledge flows; 3) creativity and innovation; 4) knowledge production systems; and 5) science policy implications.

Under the heading of lessons learned from the solicitation, Fealing noted that proposals from a variety of fields and varied methodologies performed well, as did multidisciplinary studies if all of the necessary areas of expertise were well represented by engaged researchers. There was not much response for small grants to conduct pilot studies. Infrastructure development took a back seat to research studies.

The next solicitation scheduled for early 2008 will emphasize data development and community building.
The National Science Foundation’s Education and Human Resources (EHR) Directorate Advisory Committee, chaired by University of Kentucky President Lee Todd, met on November 7 and 8.

At the session, Cora Marrett, the Assistant Director for EHR, outlined a new thematic framework for the directorate. It includes the following:

- Promoting cyber-enabled learning strategies to enhance Science, Technology, Engineering, and Mathematics (STEM) education;
- Promoting learning through heightening research and evaluation;
- Promoting public understanding of science and advancing scientific literacy;
- Broadening participation to improve workforce development; and
- Enriching the education of STEM teachers.

The 17 EHR programs run the gamut from supporting elementary and secondary school curricula development and teacher training, informal science education at museums, television programs, undergraduate and graduate programs, including fellowships, a plethora of programs to help individuals from underrepresented groups, and research and evaluation. The Math Science Partnership (MSP) program, which encourages college and university faculty to partner with K-12 schools to improve math and science education, is also part of this mix. A meeting of the Principal Investigators of NSF-funded MSP projects as well as those funded by its sister program in the Department of Education will occur soon.

Many of these programs have been enhanced, at least at the authorized level, by the America COMPETES Act passed earlier this year (see Update, August 6, 2007). When the FY 2008 NSF appropriation finally gets enacted, EHR should get a significant boost to its budget, which is still operating at the FY 2006 level.

In assessing the new thematic approach, Committee members seemed pleased. Dennis Bartels of the San Francisco Exploratorium expressed an interest in field-initiated research. Robert Baruch of the University of Pennsylvania and a leader in the evidence-based policy arena worried about the “appearance of coherence.” He also warned about “naïve indicators” in trying to make the themes “meaningful.” Marrett stressed a research and evaluation emphasis in examining EHR’s portfolio and the need for “flexibility.”

The Committee also heard a report about NSF’s Cyber-Enabled Discovery and Innovation program (CDI) from one of its co-directors, Sirin Tekinay. CDI is a major new initiative in NSF FY 2008 budget proposal. NSF recently issued the first solicitation for the program (see Update, October 8, 2007). Committee member Marcia Linn of the University of California, Berkeley recalled NSF’s earlier programs in Knowledge and Distributed Intelligence and Learning and Intelligent Systems as the forerunners of CDI. She acknowledged that these programs had difficulty selling themselves to policy-makers, but that good research products emerged from them.

Wang Jian of Microsoft Research Asia discussed with the Committee how new more powerful hardware and software and the mobility of computer devices will transform data collection and analysis. The altered cyber-world will have important implications for both how we teach and how people learn, he said.

On November 8, the National Institutes of Health (NIH) Office of Portfolio Analysis and Strategic Initiatives (OPASI) held a planning meeting of the NIH Council of Councils (CoC) which was created by Congress in the National Institutes of Health Reform Act of 2006, (Public Law 109-482). According to OPASI director Alan Krensky, the Council’s inaugural meeting will be held in 2008.
The Division of Program Coordination, Planning, and Strategic Initiatives (DPCPSI) also established by the NIH Reform Act and modeled on OPASI, is not fully developed yet. NIH Deputy Director Raynard Kington leads that process. Once DPCPSI becomes established, the CoC will interact with it and serve as a second advisory committee to the NIH Director, albeit with a more focused mandate than the Advisory Committee to the NIH Director (ACD). Likewise, once the Division is established, OPASI and the program offices within the NIH Office of the Director, the Office of AIDS Research, Office of Research on Women’s Health, Office of Behavioral and Social Sciences Research (OBSSR), Office of Disease Prevention, Office of Dietary Supplements, and the Office of Rare Diseases will come under its auspices. The statute, however, specifies that these offices will retain the authorities in effect prior to the establishment of the new Division.

The Act also authorizes the NIH Director, through the Division, to identify and report on research representing emerging scientific opportunities, rising public health challenges, or knowledge gaps that deserve special emphasis and would benefit from conducting or supporting additional research that involves collaboration between two or more institutes and centers (ICs) or would benefit from strategic coordination and planning. Funding for the initiatives would come from the Common Fund. The CoC will consider research proposals submitted to the Common Fund. The Council’s membership is currently comprised of representatives from the 27 ICs advisory councils. Krensky indicated that the NIH is seeking to expand the number of members to 30 to allow all of advisory bodies to the NIH to have a representative on OPASI.

Zerhouni’s Charge to the Council

NIH Director Elias Zerhouni thanked the CoC members for agreeing to serve and doing “double duty.” Zerhouni informed council members that more than 31,000 scientists help the NIH with its work and that the agency could not do its job without them. He related that science has changed, noting that 50 years ago there was no concept underpinning the evolution of the disease process. Today we can see a convergence of chronic diseases and their associated overwhelming costs, said Zerhouni, adding that patients often have multiple diseases. Additionally, public health has changed and with the tools for research converging, a new concept for conducting research is required; all making the case for change.

Zerhouni provided the CoC with the evolution of policy that led to the Council’s creation, including concern by Congress about the agency’s effectiveness. Arguing that the NIH is the “most successful knowledge organization in the world,” Zerhouni noted that the agency’s support of 122 Nobel laureates over the years is not by chance. It is easy to change when things are falling apart, the question is how you implement change so that the NIH remains at the forefront of science, he posited.

Zerhouni cited a 2003 National Academies’ report, chaired by Harold Shapiro, Woodrow Wilson School of Public and International Affairs, Princeton University and a CoC member, as the inspiration for many of NIH’s organizational changes, including the Roadmap (see Update, August 11, 2003). According to the Director, the Roadmap is “proof of concept.” It resulted from 125 scientists coming to the NIH and asking them to identify the roadblocks to progress, along with “the gaps that needed to be addressed in the conceptual system of the biological, behavioral, and social sciences.” The overriding question was how to implement the “great ideas” formulated by the scientists. An experimental space was needed. The Common Fund/Roadmap provides that, Zerhouni argued.

Zerhouni also stressed that he did not expect the CoC to have all answers, but instead he expected them to define experiments that can be done. He urged them to be “bold” and not to proactively support one field. Driven by the analysis of the science, Zerhouni stressed that he would like the Council to expand the venture space provided by the Common Fund.

A fundamental question that the CoC needs to address is how well the agency is doing. This is not an easy task since there is no agreed upon standard of evaluation, Zerhouni informed the group. He noted that the perennial question he gets asked by the Office of Management and Budget leadership is “what have you cured lately?” Although counting publications measure output, the evaluation of the science is not there, he told the Council. Zerhouni emphasized that the CoC members are representing the “whole of the whole” and encouraged them to act that way.

Citing the National Children’s Study (NCS) as an example, he highlighted the rise in the number of interactive collaborative efforts by the ICs. Mary J.C. Hendrix, President and Scientific Director, Children’s Memorial
Research Center Northwestern University Feinberg School of Medicine, responded that the NCS is a great opportunity to look at the pediatric precursors to adult disease.

When asked if the CoC’s mission included examining the issue of training by Dilip V. Jeste, Distinguished Professor of Psychiatry and Neurosciences, Department of Psychiatry, University of California, San Diego/VAMC, Zerhouni responded “absolutely” and noted that he has two passions: training new investigators - the young pioneers, and giving innovators independence. He added that “we are creating too many obstacles and artificial barriers between the disciplines and the science.” Removing those barriers is the most important thing the CoC needs to do, Zerhouni stressed. We should no longer have “this guild mentality,” we are in the revolutionary phase, he asserted.

Edwin Flores of Chalker Flores, LLP, followed up with an inquiry regarding the diversity of students and argued that the NIH was not doing a good job in increasing the diversity of its scientists. According to Flores, the “data is horrible” and there is no pressure on research intensive institutions to share that burden.

**Council of Councils Members**

Ronald L. Arenson, M.D., Professor and Chairman, Department of Radiology, University of California, San Francisco
Donna Bates Boucher, President, Bates Group, Inc.
Enriqueta C. Bond, Ph.D., President, Burroughs-Welcome Fund
Richard Chabran, M.L.S., Chair, California Community Technology Policy Group, Los Angeles, CA
Coleen K. Cunningham, M.D., Chief, Pediatric Infectious Diseases, Duke University Medical Center
Robert Dickler, Senior Vice President, Association of American Medical Colleges
Cecile A. Feldman, D.M.D., M.B.A., Professor and Dean, University of Medicine and Dentistry of New Jersey
Edwin Flores, Ph.D., J.D., Chalker Flores, LLP
Joseph H. Graziano, Ph.D., Associate Dean for Research and Professor, Columbia University
Bevra H. Hahn, M.D., Professor of Medicine, University of California-Los Angeles
Mary J.C. Hendrix, Ph.D., President and Scientific Director, Children’s Memorial Research Center
Northwestern University Feinberg School of Medicine
Dilip V. Jeste, M.D., Professor of Psychiatry and Neurosciences, University of California, San Diego/VAMC
Lenworth N. Johnson, M.D., Professor of Ophthalmology and Neurology, University of Missouri-Columbia
Warren A. Jones, M.D. FAAFP, Professor of Health Policy, University of Mississippi Medical Center, Jackson
Arthur M. Kleinman, M.D., M.A., Professor of Medical Anthropology and Psychiatry, Harvard University Medical School
Joseph Loscalzo, M.D., Ph.D., Chair, Department of Medicine, Harvard Medical School
Marjorie K. Mau, M.D., M.S., Professor and Chair John A. Burns School of Medicine, University of Hawaii at Manoa
Juanita L. Merchant, M.D., Ph.D., Professor of Internal Medicine and Molecular and Integrative Physiology, University of Michigan
Sandra Million-Underwood, Ph.D., R.N., Professor, College of Nursing, University of Wisconsin-Milwaukee
Daria Mochly-Rosen, Ph.D., Professor, Department of Chemical and Systems Biology, Stanford University School of Medicine
Sergio R. Ojeda, D.V.M., Division Head, Oregon National Primate Research Center, Oregon Health & Science University, Beaverton, OR
Orien Reid, M.S.W., Chairman, Alzheimer’s Disease International, President, Consumer Connection, Laverock, PA
Martin Rosenberg, Ph.D., Chief Scientific Officer, Promega Corporation, Madison, WI
Richard R. Rudick, M.D., Vice Chairman, Research and Development, Neurological Institute, Director, the Mellen Center, Cleveland Clinic, Cleveland, OH
Harold T. Shapiro, Ph.D., President Emeritus and Professor, The Woodrow Wilson School of Public and International Affairs, Princeton University
Phyllis M. Wise, Ph.D., Provost and Executive Vice President, University of Washington, Seattle
Marina E. Wolf, Ph.D., Professor and Chair, Department of Neuroscience, Rosalind Franklin University of Medicine and Science, North Chicago, IL
2008 NIH DIRECTOR’S NEW INNOVATOR AWARD/PIioneer AWARDs:
APPLICANTS WANTED

The National Institutes of Health (NIH) is seeking applications for its NIH Director’s New Innovator Award and the Director’s Pioneer Award.

The **Director’s Innovator Award** was created in 2007 to support a small number of new investigators of exceptional creativity who propose bold and highly innovative new research approaches that have the potential to produce a major impact on broad, important problems in biomedical and behavioral research. The research proposed need not be in a conventional biomedical or behavioral discipline but must be relevant to NIH’s mission. The New Innovator Award is designed to complement ongoing NIH efforts to fund new investigators through its R01 (investigator-initiated) grants. Thirty awards were made in 2007.

NIH will fund awards for up to a total of $1.5 million in direct costs (average of $300,000 per year) for a five-year budget/project period. All applications will be considered new applications, regardless of any previous ones made to the New Innovator Award Program. Applicants must meet the definition of “new investigators” which are defined as those researchers who have never been a principal investigator on an R01 or equivalent NIH grant or leader of a center grant peer-reviewed projects. The New Innovator Award application period is from March 3 to 31, 2008.


The **NIH Director’s Pioneer Award Program** (RFA-RM-08-012) is meant to complement NIH’s traditional, investigator-initiated grant programs by supporting individual scientists of exceptional creativity who propose pioneering and possibly transformative approaches to major contemporary challenges that have the potential to produce a major impact in a broad area of biomedical or behavioral research. To be considered, the proposed research must reflect ideas substantially different from those already being pursued in the investigator’s laboratory or elsewhere. Biomedical and behavioral research is defined broadly in the announcement as encompassing scientific investigations in the biological, behavioral, clinical, social, physical, chemical, computational, engineering, and mathematical sciences.

Awardees must commit at least 51 percent of their research effort to activities supported by the Pioneer Award. The application period is December 16, 2007 through January 16, 2008.

This is the fifth competition for the Award. In FY 2004 nine awards were made, 13 awards each were made in 2005 and 2006, and 12 awards were made in 2007. In FY 2008, NIH expects to make 5-10 new awards of $500,000 in direct costs per year for five years.


**AAAS Briefing Examines Women and Minorities in Higher Education**

The nation’s changing demographics require that we no longer “lose critical talent” in science and engineering, declared Shirley Malcom, director of Education and Human Resources at the American Association for the Advancement of Science, at a luncheon briefing on October 31.

Malcom, a member of the COSSA Board of Directors, moderated the event held on Capitol Hill that focused on the release of a new report by Donna Nelson from the Department of Chemistry at the University of Oklahoma, *A National Analysis of Minorities in Science and Engineering Faculties at Research Universities*.

Nelson presented data demonstrating that most disciplines are not matching the overall population growth of underrepresented minorities (blacks, Latinos, and native Americans) in the number of bachelor’s degrees and doctoral degrees conferred, and in faculty appointments at the nation’s top research universities.
Her data for disciplines in the social sciences indicated that they are doing better than the physical and natural sciences and engineering. Yet, in comparisons from 2000 to 2005 for degrees and 2002 to 2007 for faculty, the growth rates are not great: Economics B.A.s, grow from 12.4 percent to 13.1, Ph.D.s, 9.2 percent to 10.7, and faculty at the top 50 research universities, 4.3 percent to 5.7; for Political Science B.As grow from 20.1 percent to 20.8, Ph.D.s from 12.1 percent to 13.9, and faculty remains at 6.9 percent; for Psychology B.A.s go from 20.1 percent to 21.6, Ph.D.s from 13.3 percent to 13.4, and faculty from 6.3 percent to 7.1; and for Sociology, B.A.s grow from 27 percent to 28.7, Ph.D.s from 17.7 percent to 19.2, and faculty from 10.1 percent to 12.9.

Nelson also contrasted her data for underrepresented minorities with data regarding women. For Sociology and Psychology, over 70 percent of Bachelor’s degrees awarded in 2005 went to women. There was a slight majority in Political Science, and almost a third in Economics. For doctoral degrees, almost two-thirds in Sociology and over two-thirds in Psychology were awarded to women. The number for Political Science is almost 45 percent, and 36 percent in Economics. Women accounted for almost 40 percent in Sociology, 36 percent in Psychology, 26 percent in Political Science, and 15 percent in Economics in faculty appointments at the top 50 research universities.

The briefing also included remarks by Irving Pressley McPhail from the National Action Council for Minority Engineers (NACME). He described his organization’s scholarship and mentoring programs to entice middle school students to consider engineering careers. NACME also is focusing on community colleges as a key source of underrepresented minority students who might consider engineering careers.

Richard Tapia, Professor of Applied Mathematics at Rice and a former member of the National Science Board, praised the Texas plan that offers places at the University of Texas to anyone who graduates in the top ten percent of their high school class. He suggested that this incentive was working in moving underrepresented minorities into science and engineering majors and motivating them to remain in college. On the other hand he criticized high-stakes testing as forcing elementary and secondary school teachers to focus on preparing their students to pass tests and not to excel in subjects such as science and math.

The briefing was co-sponsored by the American Chemical Society and was facilitated by the office of Rep. Silvestre Reyes (D-TX). Rep. Vern Ehlers (R-MI) made welcoming remarks. Nelson’s full report is available at: http://cheminfo.chem.ou.edu/~djn/diversity/briefings/Diversity%20Report%20DFinal.pdf

REDUCING HIGHWAY ACCIDENTS THROUGH HUMAN FACTORS RESEARCH

In 2006 highway crashes resulted in nearly 43,000 fatalities, and more than 2.5 million injuries. Driving fatalities are the most common cause of death for individuals between the ages of 4 and 34. Studies of both private and commercial drivers have shown that roughly 10 percent of drivers account for almost 50 percent of the crash risk. The Federation of Behavioral, Psychological, and Cognitive Sciences held a congressional briefing on November 13, entitled “Preventing Crashes: Driver Safety through Human Factors Science.”

Human factors’ science studies human capabilities and limitations and applies that knowledge to products to make them safer, more comfortable, and user friendly. Researchers believe human factors’ science has much to contribute to increasing driver safety through better vehicle design, signage, training, and overall integration of the driver into the vehicle/highway system.

The most often cited transportation safety statistic is that human error is responsible for anywhere from 70 to 90 percent of all crashes. The major human error factors that contribute to the risk of a crash include: impairment, inattention/distraction, drowsiness, and judgment-related error. The largest contributing factor is the driver looking away from the roadway just prior to an unexpected event. Drivers who look away from the road for longer than two seconds can more than double the odds of an accident. John Lee, Director of Human Factors Research at the National Advanced Driving Simulator at the University of Iowa, believes “distraction and inattention represent a serious and growing safety problem.” And drivers who engage in secondary tasks such as changing CDs or talking on the phone account for most of the inattention-related risk. Crashes caused by cell phones talking account for an estimated 2,600 fatalities and 330,000 injuries.

Another major factor leading to crashes is drowsiness, which accounts for approximately 15-20 percent of all crashes. Even driving while only “moderately” drowsy increases the risk of crashing almost eight times as
compared to driving while fully alert. New technology can enable cars to assess whether a driver is distracted and then guide his/her attention to critical events. However, a greater research base is needed to help designers tailor technology to drivers’ needs and capabilities and help them drive more safely, Lee concluded.

Drivers’ limited attention capacity makes them vulnerable to distraction, particularly novice drivers. New research shows that while all drivers are inattentive at times, teen drivers are at the greatest risk. From 1996 to 2005 the fatality rate among individuals age 16 to 20 was significantly higher than any other age group. Studies also show that 18 to 20 year old drivers experience four times as many inattention-related accidents and near-accidents compared to older drivers. According to Donald Fisher of the University of Massachusetts at Amherst, “newly licensed drivers, those between the ages of 16 and 17, during their first six months of solo driving are up to 11 times more likely to die in a crash than drivers 40 to 50 years old.” This increased risk results largely due to failure of anticipation, failure of attention, and failure to avoid potential hazards. In an attempt to address these problems researchers are beginning to develop and evaluate alternative programs designed to increase the chances that newly licensed drivers will not crash. Fisher believes that although the Federal government has funded analyses of the differences between the skills of newly-licensed and experienced drivers, it has not provided the funds required to determine whether the training programs under evaluation not only decrease unsafe behaviors, but also reduce crashes, injuries and fatalities.

Paula Sind-Prunier, Senior Accident Investigator at the U.S. Department of Transportation’s National Transportation Safety Board reinforced the notion that behavioral research is important to understanding the factors that contribute to crashes, and the relative risk of these factors. She told the session that “because it represents the leading contributor to crashes, improving our understanding of the factors that lead to human error holds the greatest potential for reducing injuries and fatalities on the highways.” As technological innovations create new opportunities for aiding drivers, research is needed to evaluate the impact of these technologies on drivers’ behavior. Understanding the underlying causes of human error would be instrumental in crafting educational initiatives, technological interventions, and other measures to influence driver behavior and reduce crash risk, she declared.

ACADEMIES’ REPORT CALLS FOR MEETING THE PSYCHOSOCIAL HEALTH NEEDS OF CANCER PATIENTS

While cancer care today “provides state-of-the-science biomedical treatment, [it] fails to address the psychological and social (psychosocial) problems associated with the illness. This failure can compromise the effectiveness of health care and thereby adversely affect the health of cancer patients,” according to a recent Institute of Medicine (IOM) report, Cancer Care for the Whole Patient: Meeting the Psychosocial Health Needs.

The IOM Committee on Psychosocial Services to Cancer Patients/Families in a Community was chaired by Nancy Adler, Professor of Medical Psychology and Vice-Chair, Department of Psychiatry, University of California-San Francisco. Adler noted in the preface to the report that while “Americans place a high premium on new technologies to solve our health care needs,” technology alone is not enough. “Health is determined not just by biological processes but by people’s emotions, behaviors, and social relationships.” She emphasized that their importance is doubted by many and the evidence is dismissed because it is based on “soft science.” According to Adler, Cancer Care of the Whole Patient documents “a growing body of scientific evidence” that demonstrates that psychological and social problems can prevent individuals from receiving needed health care, complying with treatment plans, and managing their illness and recovery.

The National Cancer Institute’s Division of Cancer Control and Population Sciences (DCCPS) and the Office of Behavioral and Social Sciences Research (OBSSR) within the Office of the Director at the National Institutes of Health commissioned the study. The IOM was asked to empanel a committee to examine the delivery of the diverse psychosocial services needed by cancer patients and their families in community settings. Part of that task included producing a report describing barriers to access to psychosocial services and ways in which these services can best be provided, analyzing the capacity of the current mental health and cancer treatment system to deliver such care, delineating the associated resource and training requirements, and offering recommendations and an action plan for overcoming the identified barriers.

The Committee found “good evidence of the effectiveness of a variety of services in relieving the emotional distress - even the debilitating depression and anxiety - experienced by cancer patients.” Conversely, the
Committee noted that it is not sufficient to simply have effective services; interventions to identify patients with psychosocial health needs and link them to appropriate services are needed as well.

Commending the IOM Committee, DCCPS Director Robert Croyle lauded the report and noted that previous IOM reports have played a central and critical role in informing NCI’s request for applications and other initiatives. He acknowledged that there has been a “slow, steady culture change,” over the past decade, including the creation of his branch within NCI (see Update, June 12, 2000). The Committee’s report is essential to the evolution toward recognition of the need to test interventions for cancer care delivery, said Croyle.

OBSSR Director David Abrams also commended the Committee for an “outstanding model report.” Abrams told the group that he was pleased to see systems integration in the report; linkages are not often made in the same place, he explained. The report brings together the systems thinking and systems integration in biopsychosocial factors, explained Abrams, adding that “the brain and behavior are the bridge between biology and social adaptation.” Abrams also commended the Committee’s recommendation calling for standardization of the nomenclature.

A Research Agenda

The IOM Committee emphasized that “improving the delivery of psychosocial health services will require targeted research. This research should aim to clarify the efficacy and effectiveness of new and existing services, including identifying subpopulations that benefit from specific services and the circumstances in which given services are most effective.” The report also underscores that health services research is also needed to identify more “effective and efficient ways of delivering these services to various populations in different geographic locations and with varying levels of resources.” The Committee’s recommendations included:

- **Standardize the Nomenclature:** To facilitate research on and quality measurement of psychosocial interventions, the NIH and the Agency for Healthcare Research and Quality (AHRQ) should create and lead an initiative to develop a standardized, transdisciplinary taxonomy and nomenclature for psychosocial health services.

- **Research Priorities:** Organizations sponsoring research in oncology care should include the following areas in their funding priorities:
  - Further development of reliable, valid, and efficient tools and strategies for use by clinical practices to ensure that all patients with cancer receive care that meets the standard of psychosocial care. These tools and strategies should include:
    - Approaches for improving patient-provider communication and providing decision support to cancer patients.
    - Screening instruments that can be used to identify individuals with any of a comprehensive array of psychosocial health problems.
    - Needs assessment instruments to assist in planning psychosocial services.
    - Illness and wellness management interventions.
    - Approaches for effectively linking patients with services and coordinating care.
  
  - Identification of more effective psychosocial services to treat mental health problems and to assist patients in adopting and maintaining healthy behaviors, such as smoking cessation, exercise, and dietary change. This effort should include:
    - Identifying populations for whom specific psychosocial services are most effective, and psychosocial services most effective for specific populations.
    - Development of standard outcome measures for assessing the effectiveness of these services.

  - Creation and testing of reimbursement arrangements that will promote psychosocial care and reward its best performance.

The Committee emphasized that research on the use of these tools, strategies, and services should also focus on how best to ensure delivery of appropriate psychosocial services to vulnerable populations, such as those with low literacy, older adults, the socially isolated, and members of cultural minorities.
Promoting Uptake and Monitoring Progress: NCI/NIH should monitor progress toward improved delivery of psychosocial services in cancer care and report its findings on at least a biannual basis to oncology providers, consumer organizations, group purchasers and health plans, quality oversight organizations, and other stakeholders.

**Recommendations for Action**

The Committee offered recommendations for making attention to psychosocial health needs an integral part of quality cancer care.

1. **Standard of Care.** All parties establishing or using standards for the quality of cancer care should adopt the following as a standard:

   All cancer care should ensure the provision of appropriate psychosocial health services by:
   - Facilitating effective communication between patients and care providers
   - Identifying each patient’s psychosocial health needs.
   - Designing and implementing a plan that (a) links the patient with needed psychosocial services; (b) coordinates biomedical and psychosocial care; and (c) engages and supports patients in managing their illness and health.
   - Systematically following up on, reevaluating, and adjusting plans.

2. All cancer care providers should ensure that every cancer patient within their practices receives care that meets the standard for psychosocial health care.

3. Patient education and advocacy organizations should educate patients with cancer and their family caregivers to expect, and request when necessary, cancer care that meets the standards for psychosocial care.

4. NCI, the Center for Medicare and Medicaid Services (CMS), and AHRQ should individually or collectively, conduct a large-scale demonstration and evaluation of various approaches to the efficient provision of psychosocial health care in accordance with the standard of care.

5. Group purchasers of health care coverage and health plans should fully support the evidence-based interventions necessary to deliver effective psychosocial health services.

6. NCI, CMS, and AHRQ should fund research focused on the development of performance measures for psychosocial cancer care.

7. Congress and Federal agencies should support and fund the establishment of a Workforce Development Collaborative on Psychosocial Care during Chronic Medical Illness. This cross-specialty, multidisciplinary group should comprise of educators, consumer and family advocates, and providers of psychosocial and biomedical health services.

**GOVERNMENT SEEKS COMMENTS ON STANDARDIZED RESEARCH PERFORMANCE PROGRESS REPORT**

Acting on behalf of the Chief Financial Officers Council’s Grants Policy Committee, the Grants.gov Executive Board, and the National Science and Technology Council’s (NSTC) Research Business Models Subcommittee (RBM), the National Science Foundation (NSF) is soliciting public comments on a standardized Research Performance Progress Report (RPPR) format.

Developing a standardized RPPR is an initiative of the NSTC’s RBM Subcommittee. The objective is to establish a uniform format for reporting performance on Federally-funded research projects.

According to the announcement, standard reporting categories will facilitate a common electronic solution for collecting the information in lieu of collecting it through numerous agency-unique reporting forms currently used. The new proposed format, the government asserts, would directly benefit award recipients by making it easier for them to administer Federal grant programs through standardization of the types of research information required in performance reports. This proposed format is for interim progress reports only, and once implemented, will replace other formats. The NSTC RBM Subcommittee may consider a similar format for final reports, subsequent to the present initiative.

Comments are due by January 8, 2008. They should be addressed to Suzanne H. Plimpton, Reports Clearance Officer, Division of Administrative Services, National Science Foundation, 4201 Wilson Blvd, Arlington, VA 22230, Email: splimpton@nsf.gov; Telephone: (703) 292-7556; Fax (703) 292-9188.

The full announcement may be found in the Federal Register, November 9, 2007, pp.63629-31.

INTERNATIONAL SCIENCE AGENCY OFFERS GRADUATE STUDENT SUPPORT

The International Institute for Applied Systems Analysis (IIASA) in Vienna, Austria sponsors a Young Scientist Summer Program that provides support for graduate students. About 50-60 students from around the world will spend June 2 to August 29, 2008 working with IIASA senior researchers on projects relevant to the student’s thesis topic. The application deadline is January 15, 2008.

The National Science Foundation (NSF) provides funds to support nine fellows from the United States. IIASA’s scientists engage in scientific and policy research in the following areas:

- **Energy and Technology**: including dynamic systems and integrated modeling environment.
- **Natural Resources and Environment**: including land use and agriculture, evolution and ecology, atmospheric pollution and economic development,
- **Population and Society**: including world population, risk and vulnerability, international negotiation, population and climate change, and health and global change.

For more information and the on-line application go to: http://www.iiasa.ac.at/yssp/register.

For questions contact: Tanja Huber at: ysspsupport@iiasa.ac.at.

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