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CJS Spending Bill Emerges from House and Senate Committees; NSF Increased

With the enactment of the House Budget Resolution on March 29 (see Update April 2, 2012) and the

Senate decision to simply use the numbers from the Budget Control Act of last year, the FY 2013 appropriations process got off to a swift start in April. By the end of the month, the Senate had moved four bills through its Appropriations Committee and the House had moved two.

One of those bills, providing funding levels for agencies and programs in the Commerce, Justice, Science (CJS) area, has now been moved by both Appropriations Committees and is ready for floor action. The House expects to take up the spending legislation the week of May 7. The schedule for the Senate is unclear. Given the \$19 billion difference in overall FY 2013 spending limits between the House and the Senate and the \$731 million difference on the CJS bill, there is still a long way to go before final passage. Below Update looks at the recommendations for a number of the agencies in the CJS bill that are important to social and behavioral science research.

National Science Foundation

Although neither the House nor the Senate provided the President's request for NSF, \$7.373 billion, both the House and the Senate managed to recommend increased funding over the FY 2012 level. The House provided \$7.332 billion, close to a \$300 million boost over FY 2012. The Senate number was slightly lower at \$7.272 billion.

The House allocated \$5.943 billion for the Research and Related Activities account, which includes the funding for the Social, Behavioral, and Economic Sciences directorate. The Senate number was \$5.883 billion. Both the draft House and Senate reports accompanying the bill commented on NSF Director Subra Suresh's OneNSF and the emphasis on interdisciplinary cross-directorate programs. The Senate comments indicated some uneasiness with this direction for the Foundation. The Senate Committee report notes: "However, the Foundation has chosen, in its budget request, to prioritize new initiatives while cutting support for core, merit-based science grants and for scientific infrastructure like ships and facilities. The seven "OneNSF" framework priority activities have grown nearly fivefold from \$166,750,000 in fiscal year 2011 to \$807,100,000 in the fiscal year 2013 request. While the Committee supports these multi-disciplinary initiatives, it cannot do so by cutting NSF's core programs. The Committee directs that the \$100,000,000 reduction below the fiscal year 2013 request level for R&RA be taken from the proposed \$290,850,000 increases in OneNSF initiatives and not from core NSF program or infrastructure funding."

The House report appears more concerned with the management of these initiatives. It suggests: "The Committee supports NSF's efforts to craft cross-Foundation initiatives that leverage the resources and capabilities of multiple research divisions and overcome disciplinary stovepipes. However, the Committee has noted some confusion both in the Congress and the academic community about how these cross-Foundation activities, such as OneNSF initiatives, are being administered... The Committee encourages NSF to promulgate some clear standards and guidance on administrative issues surrounding these cross-Foundation activities and to share them broadly with interested stakeholders."

Both the House and the Senate provided \$875.6 million for the Education and Human Resources (EHR) directorate, the same as the President's request and \$46.6 million above FY 2012. Again this year, the Senate report includes language pertaining to the Graduate Research Fellowship program concerning clinical psychology. It states: "The Committee is concerned that meritorious applications from the field of psychology are being rejected without review based solely on the fact that the applicant is enrolled in a Clinical Psychology program, even when his or her application and academic work is focused on areas of basic research within the NSF mission. Therefore, the Committee urges NSF to ensure that the review of GRFP applications is based on the merits of the research proposed and that applicants are not rejected for reasons unrelated to the quality and merits of the proposed research."

The House report emphasizes that "NSF shall continue working to develop and carry out a tracking and evaluation methodology to assess the implementation of the recommendations contained in the NRC's 2011 report entitled Successful K-12 STEM Education: Identifying Effective Approaches in Science, Technology, Engineering and Mathematics."

Census and BEA

The Senate Committee recommended \$970 million for the Census Bureau in FY 2013, \$82 million above the fiscal year 2012 level. Part of this increase will be paid for by taking \$17 million from the Census Bureau's Working Capital Fund.

By contrast, the House Committee allocated \$878.7 million. At the full Appropriations Committee markup in the House, Rep. Chata Fattah (D-PA), Ranking Democrat on the CJS Subcommittee expressed his hope that when the bill reaches a House-Senate conference committee later in the year, that the Census Bureau appropriation would be closer to the Senate than the House number. Rep. Frank Wolf (R-VA), Chairman of the CJS spending Subcommittee, noted the constraints placed on the House number by the budget resolution and suggested that he might be able to accommodate Fattah down the road.

For the Bureau's Periodic Censuses and Programs account, which includes the American Community Survey, the planning for Census 2020, and the 2012 Economic Census, the Senate panel provided \$694.3 million. The House allocated only \$625.4 million.

In the report, the Senate panel again this year expressed its concern over the cost of the decennial census in 2010 and indicated that controlling costs for the 2020 decennial census remained a top oversight concern for the Committee. It, therefore, directed the bureau to "bring down the cost of the 2020 decennial census at a level less than the 2010 census and to further consider spending less than the 2000 census, not adjusting for inflation." The Committee also directed the Bureau "to incorporate a web-based version of its census forms when planning for the 2020 decennial census," while at the same time "to enlist the best cybersecurity practices and protocols to ensure personal information remains secure and confidential."

Meanwhile, the House Committee cut the request for the 2020 Decennial Census planning by \$51.5 million from the request. Its rationale for the cut, "because the Bureau has not yet established procedures that will enable it to increase response rates while containing costs." The Committee therefore, directs the Bureau "to submit yearly cost estimates and a total life cycle cost estimate for the 2020 Decennial as part of its fiscal year 2014 Congressional budget submission." It also expects the total life cycle cost for the 2020 decennial will not exceed the \$13 billion cost of the 2010 count.

The Senate Committee was very supportive of the 2012 Economic Census, while the House reduced the request by \$20.4 million because "responses are not due until five months into fiscal year 2013, and for data tabulation and macro analysis because Census will not begin these efforts until the end of fiscal year 2013."

For the Salaries and Expense account, the Senate panel recommended \$259.2 million, the same as the President's request and \$5.8 million above FY 2012. Again, the House number was lower, at \$253.3 million, which is the same as FY 2012.

The Senate Committee was also more generous to the Economic and Statistics Administration, which includes funding for the Bureau of Economic Analysis (BEA). It allocated at the President's request level of \$100.3 million, \$4.3 million above FY 2012. The House number was \$96 million, the same as FY 2012.

Justice Research and Statistics

Once again, the House and Senate committees did not accept the significant increases proposed by the President for the National Institute of Justice (NIJ) and the Bureau of Justice Statistics (BJS). The House allocated \$40 million for NIJ's base budget and the Senate \$45 million, although the Senate, as it had done previously, directed that \$5 million of this total should be transferred to the National Institute on Standards and Technology for DNA Forensics work. NIJ would also receive \$4.5 million from the budget of the Office of Violence Against Women for research, including studies on

violence against Indian women. The House also, for the second year in a row, provided \$4 million for research on domestic radicalization.

The Senate panel recommended \$50 million for the BJS. From that total, it designated \$26 million for the National Crime Victimization Survey (NCVS) and \$10 million for its continuing redesign. The Committee also designated \$500,000 for "Indian Country Statistics." The House panel provided \$45 million for BJS, without any language.

Both the House and Senate committees accepted the Department's recommendation that two percent of funding in the Office of Justice Programs be set-aside for further research, evaluation, and statistics funding.

Senate Committee Approves FY 2013 Agriculture and Rural Development Spending Bill

On April 26, the Senate Appropriations Committee approved its draft FY 2013 spending bill for the U.S. Department of Agriculture by a bipartisan vote of 28-1. Sen. Ron Johnson (R-WI) was the only senator voting against advancing the measure. The Agriculture bill would provide \$20.8 billion in discretionary spending for FY 2013 for USDA programs, the Food and Drug Administration and other related agencies. The figure is \$50 million less than the Obama administration's request and \$1.2 billion more than current spending.

The fiscal year 2013 bill provides \$1.239 billion for the National Institute on Food and Agriculture (NIFA). Specifically within NIFA, the Agriculture and Food Research Initiative (AFRI) is funded at \$298 million, well below the President's request of \$325 million, but an increase above the current level of \$264 million. The Hatch Act is funded at \$236 million, making it equal to current funding and avoiding the President's proposed small cut.

The bill provides \$2.276 billion in budget authority for Rural Development, which effectively maintains loans and grants essential to small and remote rural communities. The single family housing loan level is steady at \$900 million, the water and waste water loan and grant program exceeds \$1.5 billion, and \$2 billion in loans is provided for essential community facilities.

The bill is now ready for full Senate for consideration. When that will come is unclear.

Senate Agriculture Panel Backs Five -Year Reauthorization of Farm Bill

The Senate Agriculture panel backed a five-year reauthorization and overhaul of farm, conservation and nutrition programs on April 26 that would cut spending by more than \$23 billion over 10 years, keeping a promise to achieve savings in mandatory programs. Every five years, Congress passes a bundle of legislation, typically referred to as the "Farm Bill" that sets national agriculture, nutrition, conservation, and forestry policy. The last Farm Bill was enacted in 2008, and is set to expire in September of 2012, so a new one must be patch-worked together between the House and Senate Committees this year. The bill's typical title is a gross oversimplification since far more than farms are affected; the farm bill decides things from Supplemental Nutrition Assistance Program (SNAP) benefits to research funding. The amended bill, now known as the Agriculture Reform, Food and Jobs Act of 2012, comes in at a mere 980 pages.

The Committee markup was originally scheduled for April 25, but was postponed as leaders worked to ensure that the bill could pass through the panel. There was a general consensus that disagreements about how rice, cotton, peanuts and wheat fared in the bill and concerns by Southern and Plains state senators representing those interests forced the delay. Some Senators on the Committee from those regions complained that the April 23 deadline for amendments provided insufficient time to have them properly written and vetted. After a day of scrambling, the markup

was rescheduled for the next morning.

Included in the amended bill are directions to Secretary Tom Vilsack to establish a Foundation for Food and Agriculture Research, a non-profit, non-governmental entity to foster public private partnerships within the research community including the Department of Agriculture, other agencies, non-governmental organizations, academia, corporations, private foundations, and wealthy donors. The directed purpose of the Foundation will be to advance the research mission of the Department by supporting agriculture research activities focused on addressing key problems of national and international significance. In the months leading up to this bill, COSSA joined with other concerned groups to fight for the inclusion of agriculture economics and rural communities in this new Foundation. The Senate Committee has seen fit to include these vital areas of research in the mission of the new Foundation. During the markup Chairwoman Deborah Stabenow (D-MI) made specific reference to the new Foundation calling it a "new non-profit research foundation with dollars.... to support cutting edge research." The National Institutes of Health have a similar Foundation arrangement.

Speaking on the Rural Development Title, VI, Stabenow said the Committee had "worked hard to remove duplicative programs, authorizations, to organize the title in a better way...[and] worked very hard to make it simpler both for farmers and for local community leaders to access the services that are available." She also touted that the bill would extend rural development initiatives to help rural communities, upgrade infrastructure, and create an environment for small businesses to grow.

A number of amendments were offered, mainly from Southern Senators. Nevertheless, the final committee vote to send the bill to the Senate floor was 12-4 of those present and 16-5, with the inclusion of proxy votes. Even with it through Committee, the bill's backers are on a tight timeframe. With the old farm bill set to expire on September 30, this new bill will need quick passage once it hits the floor. Stabenow has said of the rest of the process "we have some deadlines to meet. This is not over."

For more information on this bill, or to see the bill itself and all of the amendments, please go to the Agriculture Committee's website here">here.

House Agriculture Panel Holds Hearing on Rural Development as Part of Farm Bill Reauthorization

On April 25, the House Agriculture Subcommittee on Rural Development, Research, Biotechnology, and Foreign Agriculture held the first of eight hearings the House will hold on the 2012 Farm Bill, starting things off with a focus on rural development programs. The House begins this process considerably later than the Senate, who passed their Farm Bill out of Committee on April 26. Witnesses who represented various rural industries did their best to defend rural development programs while acknowledging the difficult economic situation.

The hearing was composed of two panels. The first panel included Charles Conner, President of the National Council of Farmer Cooperatives; Donald Larson, Commissioner of Brookings County, SD, present on behalf of the National Association of Counties; and Leanne Mazer, Executive Director of the Tri-County Council for Western Maryland, presenting on behalf of the National Association of Development Organizations. After opening statements that included calls for careful allocation of scarce funds from Subcommittee Chairman Rep. Tim Johnson (R-IL), Conner seemed to speak to the Chairman's heart when he said that "there are more than 88 programs administered by 16 different federal agencies specifically targeted at rural economic development. With a significant decrease in funding for the Farm Bill, it just makes sense to consolidate the programs." He added that Value Added Producer Grants, however, are "instrumental for cooperatives overcoming many barriers."

In addressing the grant application process, Conner repeated what many legislators and hearing witnesses have been saying in recent months regarding USDA's grant process-it's so complicated and

time consuming it can be a genuine deterrent. Larson pointed out a different issue when he discussed how rural economies are increasingly dynamic regional economies and yet programs are too often targeted at individual communities.

Subcommittee Ranking Member Rep. Jim Costa (D-CA) later brought up his desire to more carefully define the word "rural." He noted that many communities that deserve access to rural programs have trouble qualifying due to big cities in the vicinity, among other issues. Illinois Rural Water Association Executive Director Frank Dunmire, who sat on the second panel, commented that expanding USDA loan and grant eligibility to larger communities was problematic. He noted that, at least for his area of expertise-water- "we do not believe anything is to be gained by increasing the pool of eligible communities."

At the close of the hearing Johnson declared that "we're going to have to make some cuts, none of which are going to be painless. We're not going to balance the budget unless we all recognize that every single component of what the federal government does is going to have to be examined." He then asked all of the witnesses present, including those not on the second panel currently seated in front of the microphones, where they would make cuts. Larson stood up from the next row of seats and rather passionately defended programs intended to support rural economies. He declared that the money saved from cutting direct payments to farmers in the Farm Bill should be funneled toward rural development programs.

For more information about the hearing, please visit the Committee's website here.

NCS Advisory Committee Supports Geographic Based Probability Sample for Study?

The discussion at the April 24th meeting of the National Children's Study (NCS) Federal Advisory Committee centered on selecting the sampling strategy for the study which has been a source of consternation for many since Congress mandated the NCS via the Children's Health Act of 2000. The NCS Committee members and ex-officio member were in agreement that maintaining a probability sample over a convenience sample is essential. There was consensus that a convenience sample will not necessarily cost less. In addition, it would not have the scientific integrity of a probability sample for social and behavioral science researchers. The Advisory Committee members further noted that a probability sample would be more meaningful for policymakers.

Alan Guttmacher, director of the *Eunice Kennedy Shriver* National Institute of Child Health and Human Development, led off the meeting by asking "where are we in the process of the design of the Main Study?" Based on the experience of the Vanguard sites, they are looking at a primary recruitment strategy that is provider-based, although the details have not yet been determined. He noted the intense interest in health disparities and that a provider-based strategy will not include those without health care providers in the health disparities population.

Guttmacher stated that the hope for the meeting was to come out of the discussion with an exploration of the study's characteristics, factors of the various possible sample strategies, and the most thoughtful way to approach the design of the Main Study. He emphasized that the details had not been determined and the purpose of the meeting was to discuss the potential sampling strategies outlined in an April16, 2012 Draft 3.0 white paper, *Potential Sampling Strategies: Main Study*. The proposed sample strategies cited in the paper are intended as examples and "not an inclusive list of all options. Alternative proposals for sampling strategies are encouraged during this period of design evaluation."

The NCS is seeking the committee's input but will have additional meetings that will include the contractors, federal statisticians (a May 24th meeting is scheduled), federal partners of the NCS, including the National Institute for Environmental Health Sciences (NIEHS), the Centers for Disease Control and Prevention (CDC), and the Environmental Protection Agency (EPA). NCS Director Steven Hirschfeld, National Institutes of Health director Francis Collins, and Guttmacher intend to craft

request-for-proposals (RFPS) that once approved by the Office of Management and Budget (OMB) will be released to the public.

The controversy, however, begins with the President's FY 2013 budget request for the study of \$165 million, 15 percent below the FY 2012 budget request. The decrease reflects a "decision to streamline administrative components in an effort to reduce the costs of the study." The loss of a probability sample, the agency acknowledges in its congressional justification, will most affect the statistical generalizability of some relationships among psychosocial and economic parameters and outcomes. The budget request notes that the NIH is evaluating alternative sampling approaches.

Hirschfeld emphasized that they were not looking to select a study design at the NCS advisory meeting and explained that they have proposed models and have received input that cover a range of options that will allow NCS to explore a sampling frame and/or frames, examining the advantages and disadvantages of each. He stressed that the models were not ranked and all are being treated as equal. Reiterating Guttmacher, he stated that they are seeking characteristics of what must be included and asked people to be highly technical and specific. The hope, he said, was to get a set of reasons and some type of weighting, some sort of hierarchy of what would make an acceptable study design.

Guttmacher's and Hirschfeld's opening statements seemed to be at odds with a briefing document given to Senate Appropriations staff at a recent meeting regarding the NCS which states: "The Main Study will no longer construct a "national probability sample" or be "generalizable" in the way some epidemiologists use and will not be able to calculate definitively the incidence of a specific disorder, for example. However, constructing a national probability sample was only one suggested means to accomplish NCS' intended purpose and required scientific compromises and substantial extra costs. The provider-based recruitment model would have several advantages over the previous design in meeting NCS' intended purpose include characterizing enrollees more precisely, utilizing electronic health records, and building on previously collected data. Several alternative sampling strategies based on prenatal care providers are currently being evaluated. The NCS will also interface with other Federal, U.S.-based, and international datasets to leverage the value of each. The NIH believes that the new study design meets the legislative mandate in a scientifically compelling and fiscally sound manner."

Responding to an inquiry from *Nature's* Meredith Wideman regarding the seeming discrepancy, Guttmacher clarified in a <u>statement</u> that: "The Senate briefing document was only part of an hour long verbal briefing that ranged over many topics and provided more detailed information about these issues than could be summarized in a three-page document. The Senate briefing included discussion that the Main Study design is still being finalized; input regarding it from the Advisory Committee and other stakeholders will help determine the final design."

Convenient Sample: Would the Science Community Accept It?

Edward Sondik, an ex-officio member of the NCS and director of the CDC's National Center for Health Statistics (NCHS), led off the discussion of the advantages and disadvantages of the proposed sampling models of the NCS Main Study. Sondik declared that it was "extremely difficult" to discuss the advantages and disadvantages of the sampling methods without the details. He noted that the current sample is considered to be a good standard, one that represents children and various demographic and environmental factors associated with children. However, the environmental factors have not been proven. He noted he had an image of them clustered across the country but the sample was not chosen with regard to those factors.

Sondik stressed that in his "personal view, a convenient sample does not tell him what he needs to know." He is very leery of such a sample regardless of how convenient it may be. It reminds him, Sondik explained, of a clinical trial which is done not as the usual science. It is not going to be repeated which is different from science in small labs. The NCS will take place once. The question for him is how good the sample is. The question that is continually raised about the NCS is "what is the population being studied?" He noted that he needed something to relate the hypotheses and the factors. This raises the question, Sondik indicated: Given the sample how well can we relate the

hypotheses to the factors examined?

There are a few advantages and disadvantages of using providers, Sondik said. He questioned whether we know enough regarding the physicians and electronic health records (EHR). What would be the role of the physician, would they have an active role? He also questioned the quality of the information in the EHRs, which is fine for physicians, but is it fine for what the study needs over time? He acknowledged that over time it could be, but that will take work. It is a burden issue and a behavior issue on behalf of the doctors, he added. An advantage: the reason to look at providers is the "Willie Sutton" principle - because they are there. There is a strong argument that it is an efficient way to identify women. Pulled all together, however, Sondik expressed that it is hard to come up with a definitive conclusion, noting that he is greatly concerned about a convenient sample. Would the science community accept it in a study of this magnitude and complexity?

Sondik recommended that the NCS conduct a simulation of the study before launching it. Such a model would allow a look at the range of exposures and a look at the power of the selected sample, including the rate of variation in the sample.

White Paper: Sampling Strategy Options

NCS member Alma Kuby, a survey methodologist referred to the seven hypothetical examples in the white paper: Two Probability Designs - 1) a geographic based probability sample of prenatal care providers and 2) a geographic based probability sample of prenatal care providers supplemented by a second probability sample from an administrative list frame; Two Convenience Designs - 1) a convenience sample of prenatal health care providers, and 2) a convenience sample of prenatal health care providers supplemented by a second convenience sample; and Three Hybrid Designs - 1) a convenience sample of prenatal care providers with a supplemental geographic-based probability sample, 2) a probability-based prenatal care provider sample supplemented by a convenience sample, and 3) a prenatal care provider convenience sample with a nested geographic based probability sample, which could be supplemented by another convenience sample. Kuby noted that there were 16 advantages noted for the seven strategies and 19 disadvantages. The white paper is available here on the NCS' website.

A 2008 National Academies review of the NCS noted that one of strengths of the study is that the "enormous array of social, psychological, biological, chemical, and physical measures that will be generated under present plans will permit investigation of relationships that have not previously been studied." Noting that the NCS is a "well-designed national probability sample," the Panel emphasized that the use of established random selection methods at each sampling stage will ensure that the NCS samples of households, eligible women of childbearing age, and births are national probability samples. The Study's use of "probability sampling without oversampling any group is endorsed." The review Panel stressed, however, that it is "important to note that the sample size and sampling scheme of the study represent a compromise and are not designed to address any single hypothesis" (see Update, June 2, 2008).

Additionally, 28 of the 40 NCS Study Centers submitted recommendations from the field: A Cost-Effective and Feasible Design for the National Children's Study (NCS): Recommendations from the Field.

The paper synthesizes the recommendations of the Principal Investigators and responds to the NCS Program Office paper "Potential Sampling Strategies for the Main Study April 12, 2012." The Centers maintain that their paper presents "a feasible yet rigorous study design that utilizes existing infrastructure to achieve the original purpose of the NCS as outlined by Congress and endorsed by the Institute of Medicine." The document emphasizes a "series of collective observations by field investigators:"

1. Use of convenience rather than probability sampling in a large cohort study will dramatically impoverish the scientific value of the study. Their proposed design retains probability sampling.

- 2. Significant investment has established valuable infrastructure and investigator expertise which should be optimized in the final design for the Main Study. The retaining of the initial 105 counties as the Primary Sampling Units is urged by the Centers for the NCS Main Study.
- 3. Prenatal care providers constitute an efficient legitimate sampling frame that can generate a nationally representative probability sample.
- 4. A probability-based sample of 100,000 pregnancies can be recruited and followed within the annual level of funding that Congress has most recently appropriated.

A copy of the Study Centers' paper is available on Wideman's blog here.

PAA/APC President-Elect Christine Bachrach Comments

Christine Bachrach, President-elect of the Population Association of America, made a statement on behalf of PAA and the Association of Population Centers (APC) regarding the sampling frame for the NCS. Bachrach stated that the organizations' 3000 members and 40 research centers in the United States "include demographers, epidemiologists, economists, sociologists, and psychologists who study the health of populations, health disparities across population groups, and the development of health over the life course."

She pointed out that both PAA and APC have supported the NCS since its inception because of its outstanding potential for interdisciplinary research on the impact of environmental factors - including chemical/physical, economic, institutional, social, and familial and their interactions - on the development of health trajectories in children. This research is central to the scientific agendas of many PAA members and APC centers.

The NCS, Bachrach emphasized, can be of use to PAA/APC members only by meeting two essential standards in the design of its sample. The first is the development of a sampling frame or frames that will capture the U.S. population without prejudicing the inclusion of pregnancies and births to women in vulnerable populations. For vulnerable populations, the uninsured, rural populations, and, especially, immigrant populations including families with one or more undocumented members are specifically included. She pointed out that one in four U.S. births now occur to immigrant families, and one-third of these are undocumented. It is crucial that the sampling frame used for the NCS not under-represent such families, Bachrach argued. "Our members have most confidence in the ability of geographically defined frames to meet this goal, but will be convinced by the evidence. We recommend that, if a provider-based frame is adopted, the NCS devote substantial resources to documenting its ability to capture vulnerable populations," Bachrach stressed.

Second, according to the President-elect, PAA and APC's support for the NCS has always been contingent on the use of scientific probability sampling methods in drawing the sample, and remains so today. Other approaches, quite simply, do not meet the scientific standards of our fields for research on the determinants of population health. Scientists from many other fields have joined us in emphasizing the importance of probability sampling for minimizing the chances of selection biases and assuring that study results are valid, said Bachrach.

She concluded her remarks by underscoring that the members of PAA and APC have provided detailed scientific support for this criterion in many interactions with the NCS, as members of the Advisory Committee, as participants in working groups, and in specialized workshops.

AHRQ's National Advisory Council Meets

At the April 13th meeting of the National Advisory Council (NAC) for the Agency for Healthcare Research and Quality (AHRQ) director Carolyn Clancy updated the Council on the agency's recent activities: reducing disparities in health care, AHRQ's investments supported by the Patient Centered Outcomes Research Trust Fund, and a "big picture" overview of recent AHRQ

accomplishments.

She reviewed the agency's FY 2012 budget, which is \$369 million and \$3 million less than the FY 2011 funding level, plus \$12 million in Prevention and Public Health Funds (PPHF) and \$24 million from the Patient-Centered Outcomes Research Trust Fund (PCORTF) equaling a total FY 2012 AHRQ budget of \$405 million. Of this sum, \$16.6 million will go to Patient-Centered Outcomes Research along with the \$24 million from the PCORTF; \$15.9 million for Prevention Care/Management in addition to the \$14 million from the PPHF; \$3.7 million for Value Research; \$25.6 million for Health IT; \$65.6 million for Patient Safety, including \$34 million for Healthcare Associated Infections (HAI); and \$108.4 million for Crosscutting areas, including \$15.9 million for new grants.

She followed it with an overview of the President's FY 2013 budget request for AHRQ which includes \$334 million, \$34.7 million less than the FY 2012 funding level, plus \$12 million in PPHF and \$62.4 million from the PCORTF for a total funding level of \$408.8 million in FY 2013. The FY 2013 funding would provide \$10 million for Patient-Centered Outcomes Research in addition to the \$64.4 million from PCORTF; \$15.9 million for Prevention/Care Management plus the \$12 million from the PPHF; \$3.6 million for Value Research; \$25.6 million for Health IT; \$62.6 million for Patient Safety (\$34 million for HAI); and \$88.9 million for cross-cutting research (\$2.7 million to support new grants).

Clancy also announced that the AHRQ would be moving its offices to the newly renovated Parklawn Building, along with the operating divisions of the Health Research and Services Administration, Indian Health Service, and the Substance Abuse and Mental Health Services Administration, and components of the Program Support Center.

The AHRQ director highlighted recent accomplishments by the agency, including:

- The AHCPR (Agency for Health Care Research and Policy, the agency's prior name)-Funded Chronic Diseases Self-Management Program, a program that is now available in nearly all 50 states. The program, developed at Stanford in the early 1990s, is designed to help people gain self-confidence in their ability to control their symptoms and how their health problems affect their lives. It consists of small-group, highly interactive workshops that are six weeks long, with once a week meetings over two and a half hours, facilitated by a pair of leaders one or both of whom are non-health professionals with a chronic diseases themselves.
- The results of research around E-Prescribing. It is safe and efficient, reported the director, but barriers remain in realizing its full potential.
- Promotion of Spanish-Language Resources AHRQ recently launched the *Toma Las riendas* (Take the Reins) campaign to encourage Hispanics to take control of their own health and explore treatment options.
- An AHRQ-funded study which reveals that consumers choose high-value providers when given good data. When cost and quality data are combined, consumers more easily identify providers who deliver high-quality care at a lower cost. The study examined ways to present cost and quality information, such as symbols, specific figures, and labels. The research has implications for the design of public report cards.
- AHRQ's Health Literacy Universal Precautions Toolkit (Saint Louis University School of Medicine) which was incorporated into the curriculum on clear communication techniques. More than 1,200 students from seven professions took part in literacy seminars. Additionally, the toolkit was used during clinical rotation in outreach educational activities.
- AHRQ's Nursing Home Survey on Patient Safety Culture and TeamSTEPPSTM where results have informed best strategies to improve care in 62 nursing homes. The results showed improved communication and teamwork skills.
- AHRQ's Effective Health Care (EHC) program guides by StayWell Health Management (MN) which incorporated guides for consumers into a pool of organization's resources.

As part of her update on program activities, Clancy announced that AHRQ and the National Science Foundation are collaborating around Health IT research funding: Advancing Health Services through System Modeling Research. She also noted the external interest in a couple of AHRQ's Health IT funding opportunity announcements: (1) Understanding User Need and Context to Inform Consumer Health Information Technology Design; and (2) Understanding Clinical Information Needs and Health Care Decision Making Processes in the Context of Health Information Technology.

Clancy also highlighted the 2011 Institute of Medicine report on *Health IT and Patient Safety: Building Safer Systems for Better Care* which recommended that the AHRQ and the Department of Health and Human Services' Office of the National Coordinator for Health Information Technology (ONC) work together closely. AHRQ has been doing that and will continue to do so, Clancy reported. The report also recommended that the AHRQ fund more research on health IT and patient safety. AHRQ will do that, she informed the NAC.

She announced that the National Healthcare Quality and Disparities reports were nearing release (see related story). The highlights included in the reports are organized around National Quality Strategy priorities and includes new sections on: adolescent health, musculoskeletal diseases; health care safety net and transgender people. The 2012 reports will be the 10th in the series. The reports have added more of NQS measures reflecting population need, focus on long-term trends and focus on new Health and Human Services race and ethnicity standards, stated Clancy. She also reported that the NHQRDRnet (an online query system that allows you to access national and State data on the quality of, and access to, health care from scientifically credible measures and data sources) and State Snapshots are coming soon. In addition, the ability to generate customized graphics has been added to NHQRDRnet.

Noting that Healthcare-Associated Infections are a priority for the HHS Secretary, Clancy pointed out that a priority performance goal will be tracked by HHS and the Office of Management and Budget. Led by the Centers for Medicare and Medicare Services, it will be a collaborative effort of AHRQ, the Centers for Disease Control and Prevention, and the Office of the Assistant Secretary for Health. The goals include: a 25 percent reduction in hospital-acquired CLABSI (Central Line-Associated Bloodstream Infection), a 20 percent reduction in hospital-acquired CAUTI (Catheter-Associated Urinary Tract Infection), to be achieved by September 30, 2013 versus 2010 baseline, and aligned with goals of the HAI National Action Plan and Partnership for Patients (PfP). AHRQ's ongoing programs will contribute significantly to the effort, reported Clancy.

Place Matters: Reducing Disparities in Healthcare

The NAC heard a presentation from Brian Smedley, Joint Center for Political and Economic Studies, on the "Implications of the Affordable Care Act for Communities of Color." Smedley discussed the economic burden of health inequalities in the U.S., including direct medical costs, indirect costs, and the costs of premature death. He reported that between 2003 and 2006, 30.6 percent of direct medical care expenditures for African Americans, Asians, and Hispanics were excess costs due to health inequalities. Additionally, he reported that between 2003 and 2006 the combined costs of health inequities and premature death were \$1.24 trillion. Eliminating health inequalities for minorities would have reduced direct medical care expenditures by \$229.4 billion for the years 2003-2006, he informed the council.

Smedley also talked about the implication of the Affordable Care Act (ACA) for addressing health care, including those associated with insurance coverage expansion, improving access to health care, data collection and reporting, along with other provisions of the legislation including increasing investments in health disparities research and authorizing cultural competence education and organizational support. Regarding data collection and reporting, he pointed out that the law requires that population surveys collect and report data on race, ethnicity and primary language; collect and report disparities in Medicaid and CHIP; and monitor health disparities trends in federally-funded programs. He further pointed out that there is also a "treasure trove" of new data that can help in the understanding of where and when inequities occur.

More needs to be done, argued Smedley, underscoring that public health and health systems in partnership with communities can take steps to address the root causes of health inequities. The factors that contribute to these inequities include structural inequality which influences the known factors of socioeconomic position, residential segregation and environmental living condition, occupational risks and exposures, health risk and health-seeking behaviors, differences in access to health care, and differences in health care quality, he continued

According to Smedley, to move from science to policy and practice, the evidence suggests that: a focus on prevention, particularly on the conditions in which people live, work, play, and study; multiple strategies across sectors; sustained investment and a long-term policy agenda; place-based strategies (investments in communities); people based strategies (increasing housing mobility options) are needed. There is growing evidence that a focus on prevention is particularly important. It is not simply a case of health education for individuals and communities at risk. There is a need for a sustained investment in a long-term agenda, emphasizing that it is clear that these conditions did not emerge in a generation, he related to the NAC. He further cited the need for the creation of healthier communities: improved food and nutritional options; land use and zoning policy structured to reduce the concentration of health risks; and the institution of health impact assessments to determine the public health consequences of any new housing, transportation, labor and education policies.

As an example of moving science to practice, Smedley concluded his presentation by highlighting the Joint Center's *Place Matters* initiative. He noted that the *Place Matters*' teams are currently: identifying key social determinants and health outcomes that must be addressed at the community levels, building multi-sector alliances; engaging policymakers and other key stakeholders; and evaluating practices. Place determines so many things about the way we live. It is not just our geography but it is also our social place and where we are on the ladder of advancement, Smedley concluded.

AHRQ's Investment Supported Patient-Centered Outcomes Research Trust Fund

The NAC also discussed AHRQ's/HHS's relationship with the Patient-Centered Outcomes Research Institute (PCORI). Board member Sharon Levine (The Permanente Medical Group) and Ann C. Beal, PCORI's Chief Operating Officer, described the role and activities involved in this relationship. AHRQ is charged with focusing on disseminating the research from PCORI and other entities that support comparative effectiveness or patient-centered outcomes research and to assist with the incorporation of these findings and decision support systems. Ultimately, according to Clancy, AHRQ's focus is to fund projects and initiatives that are highly complementary to and consistent to PCORI activities.

Levine began by acknowledging AHRQ's efforts in this area and recognized that PCORI is "blessed and privileged" to actually build on the work that AHRQ has done through its effective healthcare program, having laid the groundwork around what dissemination means and what it means to think about different audiences and different channels, including measuring the impact in terms of discerning whether the information released ever gets taken up in practice. She noted that one of the first things that the PCORI Board of Governors' Chair, Gene Washington, did was establish a joint ARHQ workgroup to ensure that PCORI focused on a firm commitment to eliminate redundancy or the opportunity for redundancy and effort. Levine and Clancy are co-chairs of the workgroup.

Levine emphasized that PCORI's goal is to assist patients and clinicians and policy makers in making informed health decisions and to disseminate research findings, with respect to the relative health outcomes, clinical effectiveness and appropriateness of medical treatment. PCORI is not a public agency but a private not-for-profit 501(c)(3), meaning that some of the constraints on a federal agency do not apply to PCORI. She cited the use of survey methodology as an example.

She noted that the PCORI board has agreed upon a set of assumptions around dissemination. Patient outcomes is an objective measure of health status or measures of health status modified, modulated

and inclusive of patient reported outcomes - those things of value and importance to the patients, she explained. PCORI will disseminate the results of PCORI-funded research and will also fund research on dissemination, supplementing what AHRQ is doing. PCORI/AHRQ are requiring investigators, among a number of things, to think through the answers to questions about what it would take to identify the intended beneficiaries of the research. Not necessarily to make them responsible for dissemination, she clarified, because the individuals doing the research are necessarily the best people to do it.

The second piece, she noted, is to provide rapid follow-on funding for dissemination for selected studies where there is clear value. "Translating results and influencing is very context dependent," Levine explained. Success in doing that is going to be directly linked to how effective PCORI is at establishing partnerships early on with AHRQ, the National Institutes of Health (NIH), non-governmental organizations, and private sector actors, and clarifying how PCORI would support and contribute to their efforts in terms of reaching the intended beneficiaries of this work, she explained.

She shared that PCORI had a report from the Assistant Secretary for Planning and Evaluation (ASPE) Office looking at five case studies of failed dissemination. They are still looking at the results, Levine reported. There is a universal need and requirement by both clinicians and patients for unbiased and balance information which is recognized as such because of the source. They are also beginning to understand that disseminating new research is very different from disseminating systematic reviews, she explained.

Beal discussed PCORI and the issue of dissemination. She indicated that the Institute has operationalized this as a robust agenda around engagement and engaging providers and patients. There are three broad steps to research: 1) identifying the research questions; 2) conducting the research, and 3) disseminating the research. In terms of asking the question, PCORI spends a "lot of time" with engagement activities and helping to set its priorities, Beal explained. In addition to the focus groups, as part of its national agenda or national priorities, PCORI has started posting its research agenda on its webpage.

PCORI, according to Beal, thinks about dissemination as a three-pronged approach. It will be including dissemination requirements within all of the research projects it supports. Additionally, it will be doing research on dissemination itself: what are the best methods and best practices. PCORI is also looking at public health and pharmaceutical marketing and thinking about social media and Web 2.0. Lastly, as part of its engagement team, there is someone who is dedicated to communication.

PCORI Amends Draft Research Agenda

On April 25th the Patient-Centered Outcomes Research Institute (PCORI) Board of Governors voted to amend PCORI's draft Research Agenda, responding to public comments it received. The Board added or refined language to respond to the 15 major themes that emerged from more than 450 public comments (see Update, February 6, 2012). The Board, however, did not recommend changes in PCORI's National Priorities for Research, reflecting the lack of public comments identifying significant gaps in the five proposed priorities.

In addition, the PCORI Board also authorized \$30 million in funding over two years for a slate of 50 pilot projects that will address a broad range of questions about methods for engaging patients in various aspects of the research and dissemination process. A full final version of the National Priorities and Research Agenda, including accepted revisions, will be posted May 21 after final Board review and approval at its next public meeting which will be held in Denver.

2011 National Health Quality and Disparities Reports Released

Since 2003, the Agency for Healthcare Research and Quality has been congressionally-mandated to

report on the progress and opportunities for improving health care quality and reducing health care disparities. It does this through the release of two reports: the 2011 National Healthcare Quality Report (NHQR) which focuses on "national trends in the quality of health care provided to the American people" and the National Healthcare Disparities Report (NHDR) which focuses on "prevailing disparities in health care delivery as it relates to racial factors and socioeconomic factors in priority populations."

In 2010, AHRQ began producing a single summary chapter for both reports: The National Healthcare Reports Highlights which seeks to address three questions:

- What is the status of health care quality and disparities in the United States?
- How have health care quality and disparities changed over time?
- Where is the need to improve health care quality and reduce disparities greatest?

This year, the Highlights focus on national priorities identified in the National Strategy for Quality Improvement in Health Care (NQS) and the Health and Human Services Action Plan to Reduce Racial and Ethnic Health Disparities (Disparities Action Plan).

The NQS identified six national priorities for quality improvements which were matched with measures in the NHQR and NHDR.

According to the summary, four themes from the 2011 NHQR and NHDR emphasize the need to accelerate progress if the Nation is to achieve higher quality and more equitable health care in the near future:

- 1. Health care quality and access are suboptimal, especially for minority and low-income groups. Disparities in quality of care are common with poor people receiving worse care than high-income people for 47 percent of the measures. Disparities in access are common, especially among American Indian or Alaska Natives, Hispanics, and poor people. Poor people had worse access to care than high-income people for 89 percent of the measures.
- 2. Quality is improving; access and disparities are not improving. Improvement included all groups defined by age, race, ethnicity, and income. Across the measures of health care access tracked in the reports, about 50 percent did not show improvement and 40 percent were headed in the wrong direction. Almost no disparities in access to care are getting smaller.
- 3. Urgent attention is warranted to ensure continued improvements in quality and progress on reducing disparities with respect to certain services, geographic areas, and populations, including: diabetes care and adverse events; disparities in cancer screening and access to care; and states in the south. Measures of acute treatment are improving; other measures are lagging. About 60 percent of process measures and half of outcome measures showed improvement. Knowing where to focus efforts improves the efficiency of interventions. Delivering data that can be used for local benchmarking and improvement is a key step in raising awareness and driving quality improvement. At the State level, there is little relationship between overall quality of care and income-related disparities.
- 4. Progress is uneven with respect to national priorities identified in the NQS and Disparities Action Plan:
 - Improving quality: ensuring person- and family-centered care and promoting effective prevention and treatment for cardiovascular disease
 - Lagging: making care safer, promoting healthy living, and increasing data on racial and ethnic minority populations;
 - Lacking sufficient data to assess: promoting more effective care coordination and making care more affordable;
 - And disparities related to race, ethnicity, and socioeconomic status present in all priority areas.

BEA and Census Release County Level Data on Income and Other Variables

On April 25, the Bureau of Economic Analysis (BEA) released estimates of personal income at the county level for 2010. Among large counties (those with a population of at least 250,000), personal income grew 3.7 percent in 2010, equaling the growth rate for the nation. Personal income in small and medium-sized counties grew 3.9 percent and 3.6 percent respectively in 2010.

According to BEA, personal income in large counties represent 8 percent of the 3,113 counties in the U.S., but account for 68 percent of personal income for the nation. In these 261 counties for 2010:

- Net earnings (primarily wages and salaries, supplements, and proprietors' income, less contributions for government social insurance) comprised 66 percent of personal income, while property income (personal dividends, interest, and rent) contributed 17 percent and transfer receipts (including Social Security, Medicare, and unemployment insurance) made up 17 percent.
- Net earnings grew 3.0 percent, up from -5.5 percent in 2009. Property income grew 2.9 percent, up from -16.7 percent. Transfer receipts grew 7.3 percent, down from 14.1 percent.
- Personal income growth ranged from 8.7 percent in Loudoun, Virginia to -2.8 percent in St. Joseph, Indiana.
- Per capita personal income ranged from \$111,386 in New York (Manhattan), New York to \$20,946 in Hidalgo, Texas.

By contrast, personal income in small counties, those with populations less than 50,000, represent 69 percent of all U.S. counties, and account for 10 percent of personal income for the nation. In these 2,134 counties for 2010:

- Net earnings comprised 58 percent of personal income, while property income contributed 16 percent and transfer receipts made up 26 percent.
- Net earnings grew 3.8 percent, up from -5.0 percent in 2009. Property income grew 2.3 percent, up from -12.7 percent. Transfer receipts grew 5.2 percent, down from 12.4 percent.
- Personal income growth ranged from 51.6 percent in Hyde, South Dakota to -18.8 percent in Hand, South Dakota.
- Per capita personal income ranged from \$94,672 in Teton, Wyoming to \$16,299 in Crowley, Colorado.

Personal income is a comprehensive measure of the income of all persons from all sources. In addition to wages and salaries, it includes employer-provided health insurance, dividends and interest income, social security benefits, and other types of income. A partial sample of the data available is presented in the attached table for Maricopa County, Arizona. These estimates are the only comprehensive annual measure of economic activity for the nation's 3,113 counties. Go to www.bea.gov/iTable/index_regional.cfm to access these estimates.

In addition, the U.S. Census Bureau has updated its USA Counties data base. These files contain demographic, economic and governmental statistics from the Census Bureau and other federal agencies, presented for the purpose of multi-county comparisons or single county profiles. National-and state-level statistics are presented as well. The files cover topics such as agriculture, crime, education, health, retail trade and vital statistics. New in this update are additional statistics from the 2005-2009 American Community Survey for economic and housing characteristics and 2010 federal spending. Internet address: http://censtats.census.gov/usa/usa.shtml.

Education Department Awards Grants for Undergraduate STEM Education: Social/Behavioral Sciences Included

On April 27, he U.S. Department of Education announced the award of 14 grants worth more than \$3.1 million to promote long-range improvement in science and engineering education at predominantly minority institutions. The funds, under the Minority Science and Engineering Improvement Program, are aimed at increasing the participation of underrepresented ethnic minorities, particularly women, in scientific and technological careers.

"These grants will help support the expansion of America's scientific and technological capacity to build global competitiveness by increasing minority graduates in the STEM fields of science, technology, engineering and mathematics," said U.S. Secretary of Education Arne Duncan.

The grants will support:

- Student research in STEM fields.
- Stipends for eligible participants.
- Pre-college programs, K-12 (students and teachers).
- College programs (STEM).
- Faculty development (STEM).
- Curriculum development (STEM fields). And,
- Renovation of STEM labs/classrooms.

Unlike the recent report on Undergraduate STEM Education from the President's Council of Advisers on Science and Technology (PACAST) (see Update, <u>February 20, 2012</u>), the social and behavioral sciences are included in the definition of science for the purpose of these awards.

For more on the Minority Science and Engineering Improvement Program in the Office of Postsecondary Education, see http://www2.ed.gov/programs/iduesmsi/index.html.

NSF Seeks Proposals for Science Education Research

The National Science Foundation's (NSF) Education and Human Resources Directorate (EHR) seeks proposals for its Research and Evaluation on Education in Science and Engineering (REESE) program. The solicitation incorporates the Fostering Interdisciplinary Research on Education (FIRE) program into REESE. The proposals are due on July 17, 2012.

According to NSF, the REESE program seeks to advance research at the frontiers of STEM learning and education, and to provide the foundational knowledge necessary to improve STEM learning and education in current and emerging learning contexts, both formal and informal, from childhood through adulthood, for all groups, and from before school through to graduate school and beyond into the workforce.

The goals of the REESE program are: (1) to catalyze discovery and innovation at the frontiers of STEM learning and education; (2) to stimulate the field to produce high quality and robust research results through the progress of theory, method, and human resources; and (3) to coordinate and transform advances in education and learning research.

REESE supports research that seeks transformative and novel answers to foundational questions about what STEM concepts can be learned by whom, when, how, and where. The initial benefits of REESE proposals are primarily up-stream. They ought to have the potential to advance the relevant

research literatures. REESE pursues its mission by developing a research portfolio focusing on core scientific questions of STEM learning and education. REESE-supported research is often multi- and inter-disciplinary, drawing on the expertise of STEM content experts, STEM education researchers and evaluators, cognitive and social scientists, and experts from other areas of practice and scholarship. REESE projects may focus on any age range and any setting, including schools, homes, museums, and science centers.

REESE projects should employ research designs and methodologies that are appropriate to the goals of the research. Proposals should have a strong connection to a STEM content area and should indicate who the direct audiences are for the results (e.g., other communities of researchers, materials developers, teacher-educators, policy analysts, or policymakers) and whom the eventual beneficiaries of the research are, however indirectly and long-term.

REESE challenges scholarly communities to put forward groundbreaking ideas, concepts, theories, and measurement and methodological approaches that focus on one or more of the following topical strands. These strands do not constitute an exhaustive or mutually exclusive set of priorities or possibilities.

- 1. Neural bases of STEM learning;
- 2. Cognitive Underpinnings of STEM Learning;
- 3. STEM Learning in Formal and Informal Settings;
- 4. Educational Technologies;
- 5. Research on Diffusion;
- 6. Methods, models, and measures for STEM education and learning research;
- 7. Secondary Analysis of Large Datasets; and
- 8. Broadening participation research.

There are three types of proposals.

Synthesis proposals are small grants for the synthesis and/or meta-analysis of existing knowledge on a topic of critical importance to STEM learning and/or education or for the diffusion of research-based knowledge.

Empirical Research projects are designed to support the design and conduct of research projects including the collection of new empirical data or the use of secondary analyses from existing state, national, international or other databases. Three levels of Empirical Research are available: Small, Medium, and Large.

- * Small Empirical projects will have maximum total award size of \$500,000 for three years.
- * Medium Empirical projects will have maximum total award size of \$1.5 million for three years.
- * Large Empirical projects will have maximum total award size of \$2.5 million for five years.

Fostering Interdisciplinary Research in Education (FIRE) proposals facilitate scholars crossing disciplinary boundaries to acquire the skills and knowledge that would improve their abilities to conduct rigorous research on STEM learning and education. Proposals must have both a research and a professional development component. The primary goal of FIRE is to facilitate the development of innovative theoretical, methodological, and analytic approaches to understanding complex STEM education issues of national importance and, by so doing, make progress toward solving them. A secondary goal of FIRE is to broaden and deepen the pool of investigators engaged in STEM educational research, by bringing their communities into closer and more systematic interaction with another. To address this goal, investigators must pair with a mentoring scholar in the to-be-

learned field.

With anticipated funding of \$10 million, EHR estimates it will make between 20-30 new awards in FY 2012. Of these approximately 2-3 will be Synthesis, 7-10 Small Empirical, 7-10 Medium Empirical, 1-2 Large Empirical, and 3-5 FIRE awards will be funded.

For more information: REESE program officers, (703)292-8650, or DRLREESE@nsf.gov.

For the full solicitation go to:

http://www.nsf.gov/publications/pub summ.jsp?WT.z pims id=13667&ods key=nsf12552.

NSF Solicitation Called DIBBS Part of Cyberinfrastructure Initiative

The National Science Foundation (NSF) has posted a solicitation for a program they are calling Date Infrastructure Building Blocks (DIBBS). This is part of NSF's cross-directorate program dubbed Cyberinfrastructure Framework for 21st Century Science and Engineering (CIF21). The proposals are due July 26, 2012.

According to NSF, science and engineering research and education are increasingly digital and increasingly data-intensive. Digital data are not only the output of research since their analysis provide input to new hypotheses, enabling new scientific insights, driving innovation and informing education. Therein lies one of the major challenges of this scientific generation: how to develop, implement and support the new methods, management structures and technologies to store and manage the diversity, size, and complexity of current and future data sets and data streams.

DIBBS seeks to provide support for the following research activities:

Conceptualization: Conceptualization Awards are planning awards aimed at further developing disciplinary and interdisciplinary communities' understanding of their data storage and management requirements with the goal of developing an initial prototype. Any activity that brings the community together to address common problems, further refine requirements and avoid unnecessary and wasteful duplication of resources and efforts will be eligible for funding. Funded activities could include focused workshops, special sessions at professional meetings, focus groups, etc. Awards will be up to 1 year in duration. The output of a conceptualization award will be design specifications for creating a sustainable data infrastructure that will be discoverable, searchable, accessible, and usable to the entire research and education community.

Implementation: Implementation awards will support development and implementation of technologies addressing a subset of elements of the data preservation and access lifecycle, including acquisition; documentation; security and integrity; storage; access, analysis and dissemination; migration; and deaccession. These data preservation and access technologies will enable science and engineering research, such that the scientific and engineering problems serve as use cases for data technology development. Awards will be up to 5 years in duration.

Interoperability: Interoperability awards will develop frameworks that provide consistency or commonality of design across communities and implementation for data acquisition, management, preservation, sharing, dissemination, etc. This includes data and metadata format and content conventions, standardized constructs or protocols, taxonomies, or ontologies. The development of interoperability frameworks through community-based mechanisms provides a means for ensuring that existing conventions and practices are appropriately recognized and integrated, that implementation is made realistic and feasible, and, most importantly, that the real needs of the community are identified and met. Awards will be up to 3 years in duration.

The Directorate for Social, Behavioral and Economic Sciences (SBE) encourages its scientists to utilize DIBBS to follow-up on activities begun by its other CIF21 initiatives:

META-SSS (<u>www.nsf.gov/pubs/2011/nsf11583/nsf11583.htm</u>).

Translational Research to Improve Obesity and Diabetes Outcomes

It is well established that behavioral lifestyle interventions, with modest (5-7 percent) weight loss, can prevent or delay development of type 2 diabetes in individuals at high risk for the disorder (see Update, <u>April 16, 2012</u>). Additionally, large clinical trials have demonstrated that glycemic control and cardiovascular risk factor modification can reduce the risk of diabetes complications. At the same time, large controlled trials have also consistently demonstrated success in achieving weight loss through lifestyle approaches, although maintenance of weight loss remains a challenge.

Despite these advances, the efficacious interventions from these trials are rarely translated into widespread practice. Benefits of approaches proven efficacious in clinical trials for diabetes and obesity are often not fully realized because the therapies are not implemented in many healthcare settings or communities. Often this is because they lack adaptation and testing to be feasible, acceptable, cost effective and sustainable outside of tightly controlled research settings and populations. Closing the gap between clinical efficacy research and adoption and application of these approaches in community and healthcare settings is a complex challenge but an important focus of necessary research to improve the health of the nation.

The National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK), through the National Institutes of Health (NIH) Research Demonstration and Dissemination Project grant (R18), is seeking research applications (PAR-12-172) to test practical, sustainable, acceptable, and cost efficient adaptations of efficacious strategies or approaches that prevent and treat diabetes and/or obesity. The NIDDK requires that the research target the prevention or reversal of obesity, prevention of type 2 diabetes, improved care of type 1 and type 2 diabetes, or the prevention or delay of the complications of these conditions. In addition, the research must test sustainable, acceptable, and cost efficient adaptations of efficacious strategies or approaches prevent and treat diabetes and/or obesity. Areas of research include:

- Testing innovative strategies to promote the implementation of evidence-based health practices within applied practice or community settings.
- Testing novel adaptation, or translation, of evidence-based interventions to evaluate effectiveness within applied practice or community settings: such as behavioral lifestyle counseling for weight management in both children and adults or diabetes self-management approaches to improve adherence and tighten glucose control.
- Innovations in delivery frequency, intensity and/or modality are encouraged, particularly if they are aimed at overcoming barriers to wide implementation or unique barriers in high risk communities.
- Studies addressing diverse populations at disproportionate risk for obesity, diabetes, and diabetes complications.
- Research addressing high risk populations, particularly in American Indians and/or Alaskan Native populations residing on reservations or in more urban settings.

The primary outcomes in these studies should include objective endpoints such as improvement in glycemia, and/or weight change expressed as BMI, percent weight or body fat decrease, etc. Change in patient behavior is important but will best improve health if it also results in clinically meaningful outcomes related to obesity and/or diabetes.

In some cases behavior change would be acceptable as the primary outcome if it is objectively measured. Changes in healthcare provider assessment or intervention behavior are acceptable as a primary outcome if there is an objective endpoint such as chart or electronic health record review or pharmacy data. A self-reported outcome may not be included as the primary outcome. Also, changes in diet composition and/or physical activity patterns or knowledge acquisition may be included as secondary or intermediate outcomes but should not be used as primary outcome

measures.

Study design and the accompanying analysis plan must be linked to the research question. The research designs employed do not necessarily have to be randomized controlled trials. However, researchers should choose the most rigorous design that is still feasible and relevant to the questions posed.

There is also a companion funding opportunity, <u>PAR-12-173</u>, <u>R34</u> Planning Grants for Translational Research to Improve Obesity and Diabetes Outcomes.

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