

**Minutes**  
**Health Research Advisory Committee**  
**September 27, 2011**  
**Pennsylvania Health Care Cost Containment Council**  
**225 Market Street, Suite 400**  
**Harrisburg, Pennsylvania**

**Committee Members Present:**

Dwight Davis, MD, Professor, Pennsylvania State University College of Medicine and Director of Cardiac Rehabilitation, Hershey Medical Center  
Donna Gentile O'Donnell, PhD, President and CEO, TargetBiotics (afternoon only)  
Arthur Levine, MD, Senior Vice Chancellor for Health Sciences and Dean of the School of Medicine, University of Pittsburgh  
Lewis Kuller, MD, DrPH, Professor of Epidemiology and University Professor of Public Health, Graduate School of Public Health, University of Pittsburgh  
Michael Parmacek, MD, Herbert C. Rorer Professor of Medical Sciences and Director of the Penn Cardiovascular Institute, University of Pennsylvania School of Medicine  
Michael V. Seiden, MD, PhD, President and Chief Executive Officer, Fox Chase Cancer Center  
Kim Smith-Whitley, MD, Assistant Professor, Department of Hematology, The Children's Hospital of Philadelphia (via teleconference)  
Lisa Staiano-Coico, PhD, President, The City College of New York (via teleconference)

**Department of Health (DOH) Staff:**

Anne Baker, Deputy Secretary for Administration  
Caryn Carr, MSLS, Policy Specialist, Policy Office  
Keith Fickel, Esq., Senior Counsel, Office of Legal Counsel  
Diane Kirsch, RHIA, CTR, Health Research Program Manager, Bureau of Health Statistics and Research  
John Koch, Program Analyst, Health Research Program, Bureau of Health Statistics and Research  
Marina Matthew, RHIA, Director, Bureau of Health Statistics and Research  
Stephanie Suran, MHA, Public Health Program Administrator, Health Research Program, Bureau of Health Statistics and Research  
Allison Taylor, Esq., Chief Legal Counsel

**Others in Attendance:**

John T. Anthony, Project Associate, Pennsylvania State University  
David A. Brent, MD, Academic Chief, Child Psychiatry and Professor of Psychiatry, Pediatrics, Epidemiology, and Clinical and Translational Science, University of Pittsburgh  
Juan Celedon, MD, DrPH, Professor of Pediatrics and Chief, Division of Pediatric Pulmonology, Allergy and Immunology, Children's Hospital of Pittsburgh of UPMC

Henry J. Donahue, PhD, Professor and Vice Chair of Research, Pennsylvania State College of Medicine  
Judith Fradkin, MD, Director, Division of Diabetes, Endocrinology & Metabolic Diseases, National Institute of Diabetes and Digestive and Kidney Diseases  
Robert Gabbay, MD, PhD, Director, Pennsylvania State University Diabetes and Obesity Institute, Pennsylvania State University College of Medicine  
Tilo Grosser, MD, Research Assistant Professor of Pharmacology, University of Pennsylvania  
Julia A. Haller, MD, Ophthalmologist-in-Chief and Professor and Chair, Department of Ophthalmology, Wills Eye Health System, Thomas Jefferson University  
Lisa Hark, PhD, RD, Research Director, Wills Eye Institute  
Mitchell A. Lazar, MD, PhD, Director, Institute for Diabetes, Obesity, & Metabolism and Director, Diabetes & Endocrinology Research Center, University of Pennsylvania  
Carl Marrara, Government Relations Manager, Pennsylvania Pharmacists Association  
Joshua Metlay, MD, PhD, Professor of Medicine and Epidemiology, University of Pennsylvania  
Ana Núñez, MD, Associate Professor of Medicine, Women's Health Education Program, Drexel University College of Medicine  
Elizabeth O'Brien, Vice President, Legal and External Affairs, The Wistar Institute  
Candace Robertson, MPH, Research Manager, Women's Health Education Program, Drexel University College of Medicine  
Linda Siminerio, RN, PhD, Executive Director, University of Pittsburgh Diabetes Institute  
Joy Soleiman, MPA, Clinical Administrator, Jefferson Kimmel Cancer Center  
Andrew F. Stewart, MD, Professor of Medicine and Chief, Division of Endocrinology and Metabolism, University of Pittsburgh School of Medicine  
Massimo Trucco, MD, Director, Division of Immunogenetics and Hillman Professor of Pediatric Immunology, Rangos Research Center, Children's Hospital of Pittsburgh

### **Call to Order**

Deputy Secretary Anne Baker called the meeting to order at 9:11 a.m. on Wednesday, September 27, 2011 in the 4<sup>th</sup> floor conference room of the Pennsylvania Health Care Cost Containment Council in Harrisburg, Pennsylvania. A quorum of members was present in person or via telephone. Ms. Baker welcomed Committee members and others to the meeting and stated that she had been designated by the Secretary to chair the meeting and represent the Secretary in the Secretary's absence. She announced that the purpose of the meeting was to hear recommendations from invited speakers regarding potential health research priorities and to discuss and determine the areas of research to be considered for the 2012-13 research priorities.

### **Minutes of the December 12, 2008 Meeting**

A motion was made by Dr. Levine and seconded by Dr. Kuller to accept the minutes of the meeting held on December 8, 2010. The minutes were unanimously approved.

### **Program Update**

Ms. Baker stated that handouts summarizing program accomplishments during the past year and measures of success were emailed to the Committee prior to the meeting, and to contact program staff if there were any questions on the handouts.

## **Invited Public Testimony on Research Priorities for State Fiscal Year 2012-2013**

Ms. Baker introduced the session by describing the process of selecting the invited presenters. First, the Department issued an invitation for written testimony on health research priorities for 2012-2013. Six persons of the 34 who submitted written testimony were selected by the Committee members to provide testimony at this meeting.

The names of the presenters, a brief description of the research priority presented, and responses to questions raised by the Committee are summarized below.

- Dr. Tilo Grosser, University of Pennsylvania, discussed the personalization of medicine with a specific focus on the personalization of risk and efficacy of pharmacotherapy. He emphasized that the field cannot rely solely on genomics; rather there is a need to identify markers to predict drug response, markers to predict risk and markers to determine if practice is having the intended effect. Dr. Levine commented that there is a current solicitation for research on translational genomics and that this proposal would appear to be consistent with the scope of that RFA.
- Dr. David Brent, University of Pittsburgh, addressed the need for research to better understand the impact and sequelae of sports-concussion injury in youth. He emphasized four gaps in knowledge to be addressed - who is at most risk for post-concussion syndrome (PCS), empirical data to validate which treatments work best, understanding of the neurobiology of concussion and disparities that exist in the evaluation and treatment of minority athletes. In response to questions, Dr. Brent stated that they plan to study both boys and girls, and that, although most studies are in boys and adult males, girls are actually at higher risk for PCS. It was also noted that by the time most youth are in high school they have already participated in sports for years so, while baseline measures would rely on taking a careful clinical history, there is the risk of prior occult concussion. Further discussion addressed the need for FDA approval for off-label use of drugs in youth, the prevalence of concussion in children under age 18 (5-12%), the variability in the diagnosis of PCS, and the potential advantages of including younger pediatric populations in studies of PCS.
- Dr. Joshua Metlay, University of Pennsylvania, indicated he asked his colleague Rick Shannon to join him and that he would speak to the work being done in quality improvement and patient safety. He noted there are three trends that support this area of research: first there has been a rapid rise in attention to quality and safety in the healthcare system; second there has been an emergence of rigorous disciplines to study advances on this area; and finally, changes in the healthcare financing system are aligning the goals of optimal healthcare with researchable questions. The remainder of the discussion focused on the types of proposals that may be submitted should this area of research be selected as a research priority. When asked what organizations currently fund research in the proposed domain, Dr. Metlay indicated that the Agency for Healthcare Research and Quality (AHRQ) funds this type of research; however, the agency has limited funding and the National Institutes of Health (NIH) has been pulling away from this type of research. Additionally insurers have some interest, as well as some smaller funding organizations, but those would have difficulty funding the type of large-scale study being proposed here. Dr. Kuller questioned whether this research should focus on individuals before they come in contact with the healthcare system rather than waiting until they are already in the hospital. Dr. Shannon stated that the

healthcare system is focused on treatment, not prevention and that since the majority of healthcare expenditures are in hospitals, if we do not recoup value from that point in the system, it will not be available to invest in prevention.

- Dr. Juan Celedon, University of Pittsburgh, spoke to the need to reduce disparities in the incidence of asthma. He discussed the hypothesis that key environmental or lifestyle exposures could impact on key genes leading to the development of asthma and recommended funding of interventions at the community level, either in schools or private care practices, to improve the diagnosis and management of asthma in minority populations. In response to Dr. Davis' question regarding anti-IgE therapy, it was explained that anti-IgE was first used in the treatment of allergic asthma 5-6 years ago but it has not been determined who will best respond to this therapy. A recently published study showed astounding response rates in a primarily African American population, which may be due to indications that asthma in African Americans tends to be a much more allergic IgE-mediated disease. Dr. Parmacek asked how many of the proposed research questions are being addressed by NIH, to which Dr. Celedon stated that there are no more than five articles in the literature and IgE therapy targeted to populations of a specific race, has not been supported through national funding.
- Dr. Núñez, Drexel University, presented on community-based participatory research (CBPR) to inform and improve health outcomes in the elderly. She discussed the research needs to identify resources and cost effective implementations for healthy aging and disease prevention and develop community appropriate interventions to allow seniors to “live in place.” In response to a request to discuss research infrastructure in the community setting, Dr. Núñez described several projects, including a health education intervention to get seniors into care at an earlier stage, reducing their overall healthcare costs.
- Dr. Henry Donahue, Pennsylvania State University, raised tissue engineering approaches to musculoskeletal disease and injury as a potential area for CURE funding. He further discussed the wide-range of diseases that could be addressed by the priority including osteoporosis, arthritis, musculoskeletal injury, and fracture healing. When asked what makes Pennsylvania unique in this research area, Dr. Donahue stated that Pennsylvania's institutions are uniquely strong in engineering and materials science. In response to Dr. Levine's comment that regenerative medicine was a funded priority area in 2007-2008, Dr. Donahue noted that priority was perceived as focusing on the use of adult stem cells in tissue engineering and he is suggesting an engineering approach to address musculoskeletal disease.

## **Diabetes Workshop**

Ms. Marina Matthew, Director, Bureau of Health Statistics and Research, stated that the Department organized a workshop on diabetes in response to the Committee's request. Presenters were asked to focus their presentations on diabetes research questions, not on the cost or impact of diabetes on society. Additionally, the speakers were asked to address those areas of research that provide the most promise for development of effective approaches to prevent or delay development of diabetes and to identify studies needed to develop effective, sustainable and cost effective methods for prevention and treatment of diabetes.

## Presentations

- Dr. Judith Fradkin, National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK), discussed the growing prevalence of diabetes in the United States, with 79 million people living with pre-diabetes. She indicated that three areas to focus diabetes research funding include (1) greater understanding of the disease at a molecular level, (2) prevention through the identification of individuals at greatest risk and methods to eliminate or delay onset of the disease, and (3) reduction of disease burden by identifying strategies to delay disease progression and treat complications. To address the problem NIDDK has developed a series of multi-institutional clinical trials to address every step in the continuum from preventative measures in healthy individuals through treatment of diabetes and its complications. Dr. Fradkin described several NIDDK-funded initiatives in which Pennsylvania researchers are involved, indicating that not only is Pennsylvania at the forefront of the problem but also at the forefront of the solution.  
Discussion: In response to a question from the Committee about the one or two questions that might be best addressed with the limited funding available under the program, Dr. Fradkin indicated understanding the link between adiposity and diabetes, and gestational diabetes. When asked why she had not mentioned viral etiology in type 1 diabetes, Dr. Fradkin stated that NIDDK has a number of ongoing studies in that area, but there is less focus on the nexus of inflammation, obesity and diabetes. Dr. Kuller mentioned findings that diabetes resolves after bariatric surgery. Dr. Fradkin stated that some researchers believe this phenomenon is related to how nutrients are delivered to the gut and there are ongoing animal studies to better understand the reasons at the molecular level.
- Dr. Robert Gabbay, Pennsylvania State University, spoke about the opportunity to study better systems of care for the treatment of chronic diseases such as diabetes. He proposed funding research to identify new treatment models that will reduce morbidity, mortality and costs by improving primary care delivery. Dr. Gabbay indicated that Pennsylvania researchers are involved in a number of promising interventions and research is needed to understand how to expand the use of the most promising interventions, the impact of these interventions on outcomes, cost and patient satisfaction, and the biologic factors that influence patient behaviour and adherence to treatment.
- Dr. Mitchell Lazar, University of Pennsylvania, addressed the relationship between the diabetes epidemic and cardiovascular disease. He described a number of promising studies to identify better treatments, but stated that thus far the promise of the treatments has not been fully realized and additional research is needed to understand the metabolic pathways associated with the disease. Dr. Lazar recommended funding research to elucidate the relationship between insulin resistance and obesity, the impact of various diabetes treatments on cardiovascular complications and how personalized medicine based on genetics and other factors impact outcomes.
- Dr. Andrew Stewart, University of Pittsburgh, discussed the promise of beta cell regeneration and summarized the results of a number of studies showing the promise of beta cell treatments to resolve or control diabetes. He explained that a number of Pennsylvania universities and biotechnology companies are national and international leaders in the field of beta cell regeneration so funding such research holds promise for successful outcomes. Dr. Stewart suggested a number of research questions focused on beta cell survival, regeneration and replacement and insulin resistance.
- Dr. Linda Siminerio, University of Pittsburgh, indicated that education is crucial to ensure individuals make appropriate lifestyle choices that affect their health and may prevent

chronic diseases such as diabetes. She described studies examining the role of patient education in primary care and results showing the effectiveness of educational approaches on disease management cost savings. Dr. Siminerio discussed various translational research questions that could be addressed, including research on how to ensure long-term maintenance of the successful interventions.

- Dr. Massimo Trucco, Children’s Hospital of Pittsburgh, focused on the promise of islet cell transplant for the treatment of pediatric type 1 diabetes. He explained that research has demonstrated safety but further research is needed to prove efficacy. Dr. Trucco recommended funding research that will focus on safe means to block autoimmunity, safer means to limit transplant tissue rejection, alternative sources of functional islet cells and more appropriate animal models for type 1 diabetes.
- Dr. Julia Haller, Thomas Jefferson University, stated that diabetes is the number one cause of decreased vision in working Americans and disproportionately affects the poor. She discussed new therapeutic options for the treatment of diabetic eye disease but noted that there is a disconnect between what is known and what is being applied in the community. Dr. Haller focused on clinical research questions including identification of effective strategies to increase the proportion of diabetic patients undergoing annual eye screening, strategies to target underserved populations disproportionately affected by diabetic eye disease and interventions to improve quality of life and decrease complications in patients with diabetic retinopathy.

The meeting was recessed for lunch at 12:45 p.m. and resumed at 1:15 p.m.

### **Act 2001-77 Requirements and Guiding Principles for Selecting Research Priorities**

Ms. Matthew reviewed the requirements in Act 2001-77 for revising the research priorities. According to the Act, the Department has the responsibility to establish, in conjunction with the Committee, the research priorities. The priorities must be reviewed annually and revised, as needed. The priorities must include the identification of critical research areas, disparities in health status among various Commonwealth populations, expected research outcomes and benefits, and disease prevention and treatment methodologies. The Act also stipulates that in developing research priorities, the national health promotion and disease prevention objectives be considered.

Ms. Matthew also reviewed the five principles adopted by the Committee to guide the selection of the priority. According to these principles, research priorities should:

1. Address a health-related issue that has significant impact on the health of Pennsylvanians.
2. Place emphasis on a health-related issue that disproportionately affects vulnerable segments of the population.
3. Be inclusive of all populations that are at high risk for the health-related issue.
4. Focus on studies with the potential for prevention and control including the identification of risks and etiology for the health-related issue.
5. Promote collaboration among Pennsylvania institutions including smaller colleges and universities and other non-academic medical centers as well as major research institutions.

## **Formula Research Priorities for State Fiscal Year 2012-13**

Ms. Baker opened the discussion of priorities for formula funds. Dr. Levine moved, followed by a second from Dr. Seiden, that the formula priorities remain the same as in past years. With Dr. Gentile-O'Donnell abstaining from the vote, all remaining Committee members voted in favor of the motion. The research priorities for the formula funds for SFY 2012-13 are:

Research priorities shall include the identification of critical research areas, disparities in health status among various Commonwealth populations, expected research outcomes and benefits and disease prevention and treatment methodologies.

The research priorities are clinical, health services, and/or biomedical research as defined in Act 2001-77. The ultimate goal of the research should be to improve health status and access. The Department should encourage, through the application process and accountability requirements, research that:

- emphasizes collaboration
- promotes business and community involvement
- increases infrastructure and research capacity
- increases the number of new investigators, new grants, new discoveries and new products
- leverages new and existing research funds, and
- leads to population-based applications that address disparities in health status among various Commonwealth populations.

An institution that receives \$400,000 or more in formula funds shall also comply with the requirements of Section 908 (c) of Act 2001-77.

Institutions receiving grants under Section 909 of Act 2001-77 shall also comply with the requirements of Section 910 of Act 2001-77.

## **Discussion of Nonformula Research Priorities for State Fiscal Year 2012-13**

Ms. Baker asked each Committee member to recommend and discuss the research focus they recommend for consideration for the 2012-13 nonformula research priorities. Committee members then made the following suggestions and comments:

Dr. Kuller stated support for two research topics, head injury and diabetes. He proposed the head injury priority include the entire age spectrum, not just in children and adolescents, as there is growing recognition that head injury is an important contributor to Alzheimer's disease. Dr. Kuller further recommended that the diabetes priority focus on the gastrointestinal (GI) tract as an endocrine organ and also expressed interest in the autoimmune aspects of diabetes; however, since there are sufficient ongoing efforts in the latter area he indicated a preference to a focus on the diabetes and GI-endocrine relationship.

Dr. Levine agreed with Dr. Kuller's proposal for a focus on the diabetes-GI tract relationship and explained there may be opportunity for significant contribution if the funded research could break the link between obesity and type 2 diabetes. Dr. Levine also proposed research on organizational strategies to improve the delivery of healthcare, stating that this is an area of great need that is underfunded.

Dr. Staiano-Coico stated her support for diabetes and healthcare delivery as the nonformula priorities, explaining that Pennsylvania has expertise in the latter topic and could contribute to the national issues.

Dr. Parmacek concurred with Drs. Levine and Staiano-Coico, recommending, however, that the diabetes priority, while generally focused on the obesity-diabetes relationship, be more narrowly defined. He further expressed interest in gestational diabetes and indicated consideration of including gestational diabetes in the diabetes-obesity relationship. Regarding the systems approach to healthcare delivery topic, Dr. Parmacek indicated that the funded projects have the potential to realize considerable monetary savings for the Commonwealth and nation if ways to reduce hospitalizations and successfully treat patients with chronic conditions in the home can be identified and implemented.

Dr. Seiden voiced his support for diabetes and commented on the need to narrow the focus of the healthcare delivery system priority, proposing a focus on building optimal healthcare delivery systems for the elderly.

Dr. Davis expressed his concerns about the healthcare disparities in the elderly and how the Committee might focus the proposed priorities to address this growing and increasingly vulnerable population. Therefore, he concurred with Dr. Seiden's recommendation that the healthcare delivery priority be focused toward the elderly population. Dr. Davis also noted his support for the diabetes priority as it represents a huge healthcare burden and it is clear that Pennsylvania has the expertise in this area.

Dr. Smith-Whitley agreed with the diabetes and healthcare systems priorities as there are many research institutions, as well as community hospitals, with interest in these topics; however, she expressed concerns regarding sustainability and recommended the priorities include language to encourage applicants to address ways these efforts can be sustained once nonformula funding ends. Dr. Smith-Whitley further communicated her desire that the priorities address healthcare disparities and, while the elderly may qualify, the priorities should be inclusive of other high-risk populations.

Dr. Gentile-O'Donnell expressed her general agreement with the focus on diabetes, but recommended the priority include studies to examine nutritional factors and the relationship between 'bad' food and obesity. On the healthcare delivery priority, Dr. Gentile-O'Donnell concurred with previous speakers that if this is a priority it may be most effective to focus on a specific population or condition, but questioned the timing of a priority to focus on healthcare delivery systems in light of the challenges to recent federal healthcare legislation and the fact that there will undoubtedly be additional forthcoming changes impacting delivery systems.

Following each Committee members' initial comments there was a lengthy discussion on how the proposed nonformula priorities should be focused, with the following issues highlighted.

**Diabetes priority:** Dr. Levine commented that the relationship between hunger, obesity and junk food was addressed by the previous nonformula obesity priority, and he recommends a focus on the biologic link between diabetes and obesity.

**Healthcare delivery priority:** Dr. Kuller expressed concerns with a general approach for the healthcare delivery research suggesting practice is driven by factors not easily controlled such as physician behavior and reimbursement. In response to Dr. Parmacek's request to detail those concerns, Dr. Kuller indicated his support if the priority is focused on a known disparate population or chronic disease, such as congestive heart failure (CHF), indicating that CHF is the most expensive disease to treat and occurs disproportionately in minority populations. Dr. Levine proposed language to encourage collaboration with an insurance entity and/or a self-contained health system be included in the priority. It was further agreed that the priority include a requirement to include specific outcome measures.

At the conclusion of the discussion, Ms. Baker reviewed the priorities on the table – head injury, diabetes and systems approaches to healthcare delivery improvement – and asked the Committee if there were topics to be eliminated or added for consideration. Dr. Gentile-O'Donnell indicated future support for pancreatic cancer and lung cancer but did not recommend consideration for the 2012-13 priorities. Ms. Baker stated that, if there is interest, a workshop on pancreatic cancer could be organized for a future meeting. In response to Ms. Baker's question whether the Committee has entertained environmental-based research several members cited the 2007-2008 gene-environment priority. Dr. Davis commented he believed it was the consensus of the Committee that there were two broad areas, efficiencies of healthcare delivery and the link between diabetes and obesity, under consideration and that concussion syndrome was to be parked for future consideration.

### **Call for Volunteers to Write White Papers**

Ms. Baker requested volunteers to write the white papers on the two topics discussed and requested white papers be submitted to Health Research Program staff by October 21, 2011 so they can be circulated to Committee members prior to the next meeting. Dr. Parmacek volunteered to write the white paper on healthcare delivery improvement and Dr. Kuller agreed to write the white paper on the biologic link between diabetes and obesity.

### **Next Meeting**

Ms. Baker stated that the next meeting will be held on November 9, 2011 in Harrisburg. In response to Dr. Levine's request that the next meeting be conducted via teleconference, Ms. Matthew stated that the meetings are open to the public so a meeting room will be available; however, arrangements will be made for Committee members to participate in the November meeting by teleconference.

### **Adjournment**

The meeting adjourned at 3:17 p.m.