

Department of Health and Human Services  
Public Health Service  
**BOARD OF SCIENTIFIC COUNSELORS**  
Fifth Meeting: February 24-25, 2011  
Centers for Disease Control and Prevention (CDC)  
National Center for Injury Prevention and Control (NCIPC)  
Atlanta Marriott Century Center  
2000 Century Boulevard  
Century East Conference Room  
Atlanta, Georgia 30345

## MINUTES

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**February 24, 2011**

### Welcome, Introductions, and Approval of January 2010 Minutes

**Carolyn Cumpsty Fowler, PhD**  
**Chairperson, Board of Scientific Counselors**  
**Assistant Professor and Evaluation Coordinator, Johns Hopkins School of Nursing**  
**Joint Appointed, Department of Health Policy and Management, Bloomberg SPH**

Dr. Fowler called the 5<sup>th</sup> meeting of the National Center for Injury Prevention and Control Board of Scientific Counselors (NCIPC BSC) meeting to order at 8:49 am, welcoming those in attendance and thanking them for their time and commitment to this committee. She indicated that a few of the members were joining them via teleconference, and requested that everyone in the room and on the telephone introduce themselves [please see Attendance Roster at the end of this document]. Following a review of housekeeping issues, Dr. Fowler requested approval of the January 2010 NCIPC BSC meeting minutes.

#### **Motion**

Dr. Bangdiwala made a motion to approve the January 2010 NCIPC BSC meeting minutes. No revisions were suggested. Dr. Heinemann seconded the motion. The motion carried unanimously.

## Opening Remarks

**Linda C. Degutis, DrPH, MSN**  
**Director, National Center for Injury Prevention and Control**  
**Centers for Disease Control and Prevention**

**Dr. Degutis** thanked everyone who joined the meeting in person and via telephone, expressing particular gratitude to those who joined from the West Coast where it was still dark.

She said she had been thinking about NCIPC's efforts and what had changed since the NCIPC BSC last met. Regarding the current CDC structure, Dr. Frieden made a number of changes in the structure and organization of CDC. The overall direction for CDC, which plays a role in how NCIPC needs to proceed, includes the following five strategic directions identified by Dr. Frieden, which are to:

- Improve surveillance, epidemiology, and laboratory services
- Strengthen support for state, tribal, local, and territorial public health
- Increase global health impact
- Use scientific and program expertise to advance policy change that promotes health
- Maximize health benefits by preventing / reducing illness, injury, disability, and death

The President's proposed budget reflects a decrease for the overall CDC budget. However, additional funds will be allocated through the Prevention and Public Health Fund, which is a component of Patient Protection and Affordable Care Act (PPACA). The President's proposed budget reflects a decrease in NCIPC's base budget of \$1.3 million; however, a \$20 million increase from PPACA for unintentional injury will result in a net increase for NCIPC if the proposed budget is approved.

Of Dr. Frieden's identified priority areas for 2011, Dr. Degutis highlighted those related to injury. There is an increase for the National Violent Death Reporting System (NVDRS) of \$1.5 million so that other states can be funded to implement this program. In terms of preventing the leading causes of death, the Prevention and Public Health Fund recognizes that community prevention is key to preventing disease and reducing long-run cost growth. To that end, this component of PPACA includes the following funding levels:

- Community Transformation Grants (\$221M)
- Chronic Disease State Grants (\$158M)
- Tobacco Control (\$79M)
- Immunization Support (\$62M)
- HIV / AIDS Prevention (\$30M)
- Unintentional Injury Prevention (\$20M)
- Baby Friendly (\$2.5M)

In addition to the \$20 million allocated directly to unintentional injury prevention, within some of the other Prevention and Public Health Fund opportunities there are places injury fits well, such as the community transformation grants allocated through the National Center for Chronic Disease Prevention and Health Promotion (NCCDPHP).

In order to build essential public health detection and response, the Prevention and Public Health Fund encompasses efforts that are critical to stop outbreaks and prepare for / stop natural or terrorist disasters, including the following allocations:

- Public Health Detection and Response Capacity Grant (\$40M)
- Epidemiology and Laboratory Capacity (\$40M)
- Public Health Workforce (\$25M)
- Healthcare Associated Infections (\$20M)
- Environmental Public Health Tracking Network (\$9M)

Within this area, NCIPC has been engaged in efforts related to bomb blasts and mass casualties / surge capacity. Therefore, this component of the Prevention and Public Health Fund ties in with some of the work in which NCIPC is engaged.

Dr. Frieden has also stressed the importance of focusing on CDC's strengths across all offices, divisions, programs. Such strengths include identifying problems, sounding the alarm, helping to implement solutions, and saving lives and money. He has also emphasized the importance of state and local support, pointing out that public health is implemented on the ground in communities. CDC was created to support state and local health agencies. While CDC provides guidance, technical assistance, and some funds, most of the work is done by states and localities. Continuing and strengthening CDC support for these efforts is critical to the health and well-being of the United States (US).

NCIPC convened a leadership retreat a few weeks prior to the BSC meeting to deliberate the center's current status and future direction. Dr. Degutis thought that they could be creative in some of their approaches, and that they already had a lot of tools that could be utilized to their advantage. It is really about exploring and figuring out what NCIPC can accomplish in the next decade. She noticed in reviewing the slides and materials NCIPC has that people were saying that injury prevention and control would be the public health success story of the 21<sup>st</sup> Century. She thought that would be waiting too long, given that most of them would not be around at the end of the 21<sup>st</sup> Century unless there was some miraculous medical or health finding. Thus, she thought it should be the next decade and thought they should ramp up to move toward that goal. With that in mind, she posed the following question to the NCIPC BSC: How can we get there and how can we truly make this a success story in the same way tobacco control and other public health initiatives have been success stories?

NCIPC has been fortunate to build a great leadership team. Many staff members were in acting positions when she first arrived. While there are still three acting positions, many positions are now filled with permanent staff members. In the Office of the Director, Dr. Greenspan began her position as the Associate Director for Science (ADS) just after the holidays, Amy Peoples is now the Deputy Director, Dr. Adele Childress is the Associate Director for Extramural Research,

and Dr. Rita Noonan is the Acting Associate Director for Program Development and Integration. Wendy Holmes is the Director of the Health Communication Science Office; Dia Taylor is the Director of the Office of Program Management and Operations; Sara Patterson is the Acting Director of the Office of Policy, Planning, and Evaluation; and Dr. Lee Annest is the Director of the Office of Statistics. At the division level, Dr. Richard Hunt is the Director of the Division of Injury Response (DIR), Dr. Grant Baldwin is the Director of the Division of Unintentional Injury Prevention (DUIP), and Dr. James Mercy is the Acting Director of the Division of Violence Prevention (DVP). An active search is underway for a new Director for DVP, given that Dr. Rodney Hammond was retiring after 16 years as Director. Dr. Degutis invited suggestions for potential candidates for this position.

NCIPC has several priorities that have been in place for a while: Child Maltreatment, Older Adult Falls Prevention, and Motor Vehicle Safety. These priorities were discussed during the leadership retreat, and were determined to be of continued interest as priorities for the center for a number of reasons. The rationale for prioritizing child maltreatment is that interventions must be implemented in the early stages of children's lives in order to prevent violence across the life cycle versus waiting to intervene at 16 or 17 years of age. Children must understand as they are growing up that violence is not the way to resolve issues or to deal with problems. It is known that child maltreatment contributes to many other problems and many other issues throughout the life span; therefore, it is critical to work upstream on this issue.

There have been a number of successes in the area of older adult falls prevention. It is important to scale up interventions that have been shown to be effective in preventing falls in older adults. NCIPC has the opportunity to engage in and / or support work with other federal agencies, such as the Centers for Medicare and Medicaid (CMS) and AARP to determine how to scale up effective interventions. There is an interesting model in Connecticut in which the hospital association has agreed to evaluate how to prevent elderly falls in the community.

Motor vehicle safety is one of the six Winnable Battles identified by Dr. Frieden. Motor vehicle safety is clearly a major issue, given that motor vehicle crashes remain one of the leading causes of death domestically and globally. In May 2011, the Decade of Action for Road Traffic Safety worldwide campaign will be launched [<http://ohsonline.com/articles/2011/01/10/decade-of-action-for-road-safety-kicks-off-soon.aspx>]. This initiative is sponsored by the United Nations (UN) and a number of other organizations. NCIPC will be participating in this effort.

In addition to NCIPC's priorities, there are a number of issues of emerging importance: Prescription Drug Overdose, Traumatic Brain Injury (TBI), Teen Dating Violence, Suicide, Trauma Systems, and Global Injury Work. TBI is known to be a major issue, particularly among those returning from Afghanistan and in sports settings (youth and professional). NCIPC would like to see some growth in the work in this area.

Prescription drug overdoses are receiving a lot of attention, given that there has been approximately a 30% to 40% increase in emergency department (ED) visits for prescription drug overdoses. This issue is being highlighted by Dr. Frieden and his office, and CDC is working with other federal agencies to determine what can be done on a broader scale to help address this problem, including the Food Drug Administration (FDA), the Office of National Drug Control

Policy (ONDCP), the Substance Abuse and Mental Health Services Administration (SAMHSA), and others agencies. CDC is also working on an agreement with the American College of Emergency Physicians (ACEP) to develop clinical guidelines for prescribing narcotics in the ED. The data show that approximately 50% of the prescriptions for long-acting narcotics are given in the ED, and are probably not necessary for most of the patients who are receiving them.

Suicide clearly is an issue of great importance, and trauma systems are emerging as greater issue as well. Many concerns are tied to trauma systems with respect to preparedness response. The threat of bomb blasts, improvised explosive device (IED), et cetera are often not thought about as being critical to address.

NCIPC has a number of efforts underway on a global scale. Dr. Arlene Greenspan and Dr. Sarah Patterson are members of a workgroup led by Dr. Henry Falk that is assessing opportunities for global work, as well as how to leverage work already being done. Some helmet vaccine initiatives have been implemented in Southeast Asia and Uganda. There are also efforts underway to address sexual violence against young girls in parts of Africa. NCIPC representatives traveled to India the previous week to inaugurate a new School of Transportation Safety and to work the faculty of that school on a project to address fleet safety. This project was in collaboration with National Institute for Occupational Safety and Health (NIOSH) to evaluate how truck drivers can be safer. In India this is an even greater challenge than in the US. There are many opportunities for injury surveillance, as well as to address trauma system, in India.

Dr. Degutis shared a photograph of President Obama's daughters who were not wearing ski helmets during their recent skiing trip. She emphasized that NCIPC has a long way to go, and that they had specific questions they would like the NCIPC BSC members to contemplate and discuss throughout the course of the day, including the following:

- What can be done to maximize the input from / involvement of the BSC in NCIPC's efforts?
- What would BSC members like to be engaged in?
- How can the BSC serve NCIPC in an advisory capacity versus merely voting on reports?
- Given the challenges of the current economic climate, how can NCIPC maximize its impact?
- What communication strategies are most effective for disseminating the work that NCIPC does into the field of injury and violence prevention, or for translating the research into practice?
- How can we make injury and violence prevention the public health success story for the next decade?

In conclusion, Dr. Degutis said she was looking forward to the discussions over the next two days, and expressed her gratitude to the BSC members.

## Science Update

**Arlene Greenspan, DrPH, MS, MPH**  
**Senior Scientist, Motor Vehicle Injury Prevention Team**  
**National Center for Injury Prevention and Control**  
**Centers for Disease Control and Prevention**

**Dr. Greenspan** expressed her pleasure to be in attendance, noting that she had been with NCIPC off and on even before it was a center. She has a long history in conducting research and working in unintentional injury and in the rehabilitation / disability area, and said that she really looked forward to being at NCIPC in this new capacity.

NCIPC is making changes and is moving in new directions as a result of Dr. Frieden's appointment. As Dr. Degutis pointed out, Dr. Frieden has posed five strategic directions for the agency in order to address the leading causes of morbidity and mortality, and has identified six Winnable Battles [[www.cdc.gov/winnablebattles](http://www.cdc.gov/winnablebattles)]. He assessed various areas in public health to determine which are ready to ramp up, which have major burdens, and which can have a major impact in a short amount of time. Each area is a leading cause of illness, injury, disability, or death, and / or represents enormous societal costs. Evidence-based, scalable interventions already exist and can be broadly implemented. NCIPC's efforts can make a difference, and results can be achieved within 1 to 4 years, although this will not be easy. The domains for the six Winnable Battles include: Tobacco; Healthcare-Associated Infections (HAIs); Teen Pregnancy, Nutrition, Physical Activity, Obesity, and Food Safety; Motor Vehicle Injuries, and HIV.

Dr. Frieden requested that NCIPC ramp up efforts in the domain of motor vehicle injuries. This is probably the first time that any injury topic has had this type of visibility by the agency. Motor vehicle injuries represent the leading cause of death, with 45,000 deaths and 4 million ED visits each year. They are the leading cause of death in first three decades of life. There are numerous interventions that could make a major difference if implemented. Dr. Frieden has a major interest in policy, and motor vehicle injury prevention is ripe for policy interventions. The Motor Vehicle Team is working on a number of efforts to increase the number of states that have primary safety belt laws; reduce impaired driving by moving policy toward installing interlocks on the first conviction; and support strong graduated driver's license (GDL) laws. Targeting 100% seat belt use can result in 4,000 fewer fatalities annually. Reducing impaired driving can result in 8,000 fewer fatalities annually. Supporting strong GDL policies has the potential to result in 350,000 fewer non-fatal injuries and 175 fewer deaths annually. NCIPC is one of many partners who work on motor vehicle injury prevention. The center has a long history of working with other agencies such as National Highway Traffic Safety Administration (NHTSA), non-governmental agencies like the Insurance Institute for Highway Safety, and many academics in the field.

Dr. Frieden has also instituted Grand Rounds, the purpose of which is to strengthen CDC's common science culture and foster discussion and debate on major public health issues. These presentations are held on a monthly basis and are archived for public viewing at the following link: <http://www.cdc.gov/about/grand-rounds/archives/index.htm>. Striking to Dr.

Greenspan was that as many as 10,000 people have viewed the Grand Rounds archives after they have been presented. This really increases visibility, and injury is playing a prominent role in Grand Rounds. In fact, NCIPC was invited to present the first Grand Rounds in 2009, the topic of which was road traffic safety. A recent topic was prescription drug overdoses, and NCIPC has two more Grand Rounds scheduled in 2011, one on child maltreatment (June 16, 2011) and one on TBI (September 15, 2011).

Dr. Frieden has also instituted CDC Vital Signs. Launched in July 2011, Vital Signs is a call to action each month concerning a single public health topic. Topics repeat each year to provide information on progress in each topic area. This is another means by which to increase visibility, letting the public and the scientific community know what CDC is doing and what still needs to be done. As with the Winnable Battles, the idea is that these are areas for which there are surveillance systems and for which progress could be made in a short amount of time. By highlighting topics each year, challenges and progress can be updated. Vital Signs is a multi-media release that includes a number of types of venues. First, a *Morbidity and Mortality Weekly Report (MMWR)* is released that reports the data and describes the vision. In addition, there is a fact sheet for consumer audiences, a press release, and announcements on Facebook and Twitter. Thus, Vital Signs is reaching a wide spectrum of audiences, including the public and the scientific community. Currently, motor vehicle prevention is the only domain included for NCIPC. The focus on this domain is that it needs to be data-driven. The hope is that in time, other areas of interest to NCIPC will be included as well.

Another of Dr. Frieden's efforts has been to develop a Center for Global Health (CGH) through which all global health is coordinated, although work will be done within various centers as well. There was also the recent formation of an Office of Non-Communicable Disease, Injury, and Environmental Health (ONDIEH) Global Work Group. This work group consists of all of the non-communicable disease centers, including NCIPC, National Center for Birth Defects and Developmental Disabilities (NCBDDD), National Center for Chronic Disease Prevention and Health Promotion (NCCDPHP), and the National Center for Environmental Health (NCEH). The workgroup also includes representatives from CGH who are helping to coordinate this effort. Also exciting for NCIPC is that transportation injuries is a Global Winnable Battle as well as a Domestic Winnable Battle. The center would like for the BSC to help think through how to leverage its resources so that its very small team can be as productive as possible. This is a major challenge for the center.

The collaboration to increase non-communicable disease (NCD) prevention globally includes CDC's four NCD centers as noted. Being spearheaded at CGH is the development of an NCD module for the Field Epidemiology Training Program (FETP). This training program is designed similar to the Epidemic Intelligence Service (EIS) program, although it has a long way to go to have the depth and breadth that EIS has. More injury visibility is needed in this area, and Ms. Yee, NCIPC's Senior Evaluation Scientist, was invited to help develop the module and two case studies. When she reported back that she wanted to include a case study on injury, she was told

that injury is not part of NCD. Clearly, education is needed within CDC about injury being included as an NCD. Depending upon the definition used, injury is sometimes included and sometimes not included in NCDs. As a major cause of death and disability throughout the world, visibility in that area must be increased. The work group is also developing an integrated NCD package, the goal of which is to provide technical assistance to 3 to 5 countries on the development of an NCD plan. The initial list of possible countries includes China, Colombia, Jordan, Tanzania, and Thailand. Injury is an important global burden, with a lot of work to be done in Asia and Africa.

NCIPC is building a global presence. The center has a cooperative agreement with World Health Organization (WHO) that has provided technical assistance to several countries and has helped especially in the areas of trauma systems and emergency medicine. Current projects include the Clinton Global Initiative to Address Sexual Violence Against Girls: Together For Girls that is being implemented in Kenya, Tanzania, Zimbabwe, and Swaziland; Global Helmet Vaccine Initiative being implemented in Cambodia and Uganda, which is modeled on the work done in Vietnam to increase motor cycle helmet use; and the Indo-US Collaboration on Injury Prevention and Control regarding trauma systems and fleet safety.

To promote the NCIPC research agenda, a collaboration was formed with the Society for the Advancement of Violence and Injury Research (SAVIR). This has been an extremely successful venture for very little money. Three work groups were established that represented priorities in each of the divisions: Youth Violence, Field Triage, and Pedestrian Injuries. There have been publications in each of these areas. Partnership meetings were convened to increase collaboration in those areas. During the SAVIR Safe States meeting April 6-8, 2011 in Iowa, there will be round tables for each of these areas.

In conclusion, Dr. Greenspan reported that the Web-based Injury Statistics Query and Reporting System (WISQARS<sup>TM</sup>) Cost of Injury Reports module was scheduled to go live and should be available to the public that day. The link is as follows: <http://www.cdc.gov/injury/wisqars>.

### **Discussion Points**

**Dr. Fowler** noted that while the National Highway Traffic Safety Administration (NHTSA) had been invited to appoint a liaison to the NCIPC BSC, one had not yet been appointed. She encouraged NHTSA to have their liaison in place as soon as possible.

**Dr. Degutis** reported that NCIPC had signed a memorandum of understanding (MOU) with NHTSA to work collaboratively on motor vehicle safety issues, so it is even more critical for them to assign a liaison as soon as possible.

## Research Portfolio Reviews

### Follow-Up on Portfolio Review

**Arlene Greenspan, DrPH, MS, MPH**  
**Senior Scientist, Motor Vehicle Injury Prevention Team**  
**National Center for Injury Prevention and Control**  
**Centers for Disease Control and Prevention**

**Dr. Greenspan** reminded everyone that NCIPC is charged by the agency to conduct portfolio reviews, which is a great way to assess and reflect upon how successful the center has been, what the gaps are, and what should be done in the future. Along with self-reflection, it is important to have outside panels evaluate the work with fresh eyes and various perspectives. She emphasized how much NCIPC values the BSC's assistance with this effort. Now that they are required to report back annually about their program reviews, the BSC's feedback is more important than ever. She invited BSC members to offer input on the following with respect to the portfolio reviews:

- Reflect on the recommendations:
  - Do they strike the right balance between depth and breadth?
  - How well might they resonate with the field if implemented?
  - What are some strategies for implementing the recommendations?
  - Are there any concerns about them?
  - What additional considerations are there?
  
- Suggest ideas for how best to utilize the portfolio reviews.
  
- Make recommendations for improving the review process.

## **Discussion of Recommendations from the ICRC Report**

**Ms. Sue Lin Yee**  
**Senior Evaluation Scientist**  
**Associate Director for Science Office**  
**National Center for Injury Prevention and Control**  
**Centers for Disease Control and Prevention**

**Ms. Yee** reminded everyone that for the January 2010 BSC meeting, the executive summary and recommendations from the Injury Control Research Centers (ICRC) portfolio review were disseminated to BSC members. A brief presentation was delivered regarding the findings of the evaluation, with a focus on discussion of the external panel's recommendations. Subsequently, the full report was shared with BSC members in the Spring of 2010, but no significant comments were submitted on the findings or recommendations.

The context of the panel's recommendations were that there was overall praise for the contributions of the ICRC program, ICRCs conduct and disseminate important injury research, ICRCs play a central role in training students and professionals, ICRCs make contributions to professional injury organizations (SAVIR, APHA), and ICRCs take leadership in editorial boards of injury journals. However, they also identified substantive areas for improvement.

Recommendation topics included the following: Training, Collaboration, Translational Research, Advocacy and Policy, Innovation, Global Efforts, Sustainability, Funding Process, Performance Expectations, Program Management, Products, and Future Evaluations.

### **Discussion Points**

**Dr. Redfern** requested clarification of what was meant by "recommendation topics."

**Ms. Yee** replied that those were the categories of the many recommendations NCIPC received from the external panel. Chapter 8 of the full review lists all of the categories, along with their subcategories. There were approximately 30 individual recommendations, but they fall under 12 major categories.

**Dr. Fowler** inquired as to whether any planning had begun for any response to these recommendations.

**Ms. Yee** responded that no planning had been done thus far, although they have a very modest contract with SAVIR to work on metrics related to research centers that is moving along quite well. Some ICRCs participated in the initial request for information on indicators and outcomes used at individual injury centers. SAVIR intends to convene some focus groups at the SAVIR meeting in April 2011. CDC staff will be involved in terms of providing input on the utility and feasibility of the measures that are identified as being significant.

**Dr. Childress** added that those comments and recommendations would be in addition to others. These recommendations as well as internal recommendations are being utilized to develop a new funding opportunity announcement (FOA).

Given that these recommendations were made in 2010, **Dr. Bangdiwala** wondered whether there would be a need for realignment with the Winnable Battles and new initiatives underway within CDC.

**Dr. Degutis** did not believe that there was a need to realign the recommendations, given that they already seem to mesh with the CDC priorities. There has been a significant amount of discussion in the context of developing the FOA, which also suggested that the recommendations align relatively well with CDC's initiatives.

**Dr. Fowler** reminded everyone that during the last BSC meeting, there was discussion about the ability to have a shared website where they could interact with one another, review documents, et cetera. She understood that there had been some technical issues and expressed her hope that those would be resolved, given that it would have been a very beneficial forum in which to assess and discuss the portfolio review.

### **Discussion of Recommendations from the Biomechanics Report**

**Dr. Adele Childress**  
**Director, Intramural Research Program**  
**National Center for Injury Prevention and Control**  
**Centers for Disease Control and Prevention**

Dr. Childress presented a recap of the Biomechanics Program. One thing she has found about the portfolio reviews is that often, the corporate history is lost. She found it very interesting to read how these programs were started, what partners were involved, and how well they have served the center. The history of the Biomechanics Program was another intriguing one because she did not know that it was started the same time that the Injury Center was started. It was in response to an Institute of Medicine (IOM) report titled *Injury in America* that was published in 1985, which identified biomechanics research as a key area the Injury Center should pursue. At that time, there was an \$11 million budget for the new Injury Center, with 80% of that funding to be allocated to extramural research. Again, biomechanics was identified as one of the key areas. In 1987, the Biomechanics Research Program was started. It is now over 20 years old. At that time and currently, it was envisioned that the program should identify and define mechanisms of injury, determine levels of injury response or thresholds of recovery, develop protective devices to reduce impact at levels below threshold, and test these devices and computer models that simulate human response to accurately evaluate protective systems that were developed.

The portfolio review for the biomechanics program was completed in September 2009. The goals of the review were to assess the focus, quality, and relevance of the research portfolio, identify gaps and redundancies in the program, and assess the outcomes of the research and the impact and translation of the findings. Over the 20 years, from 1987 to 2006, a number of grant mechanisms were reviewed. These included R01 investigator-initiated awards, new investigator

awards, and dissertations. The two key areas that had the most publications were the R01 investigator-initiated awards, with many publications from the ICRCs. There were some earmarks in addition to these that identified particular research area foci. With regard to some of the outcomes from the portfolio review, over 100 projects were supported. This included 66 principal investigators in 22 states and one Canadian province. Roughly \$50 million was spent on this program, with an average award of approximately \$500,000 per year. Impact, publications, partners, and a number of other criteria were assessed. There were over 470 publications in biomechanics research during this period, 40% of which were in peer-reviewed publications. That represents about 24 publications per year and about 4 per grant on average, which are nice numbers.

To recap some of the highlights, in the area of falls, research was conducted on hip protectors, task-specific training in older adults (Grabiner), environmental or ergonomics and their associated risk of slips and falls (Redfern), policy development for cervical spine injuries and the crash test dummies for both adults and children. Capacity-building grants included biomechanics research and improved head restraints.

Dr. Childress indicated that the portfolio was sent to the panel members, noting that Dr. Redfern served on a number of these. She expressed NCIPC's gratitude to him. There were a number of other researchers on that panel who had specific expertise in biomechanics, including Dr. Grabiner. The charge to this review panel was to evaluate the contribution of CDC's Biomechanics Program and the human health impact gained from the program, including relevance to the mission of the Injury Center, input on future directions of biomechanics research, integration / translation of biomechanics research into the public health arena, and ways to include more research focus for translation of these findings. The findings from the portfolio review were that projects were appropriate for the Injury Centers' focus and objectives, the research provided a foundation for other studies, numerous publications in peer-reviewed journal articles resulted from the research, and projects demonstrated solid outcomes and impacts.

One of the recommendations from the portfolio review panel was to take advantage of opportunities and gaps to advance the biomechanics research field. This aligns with many of NCIPC's current priority areas, including motor vehicle and child maltreatment. Some of them are validation and stimulation of crash test dummy development, helmet development, injuries from motor vehicles to vehicle occupants and pedestrians, whiplash, concussions, and TBI in sports. Another recommendation was to invite experts in the biomechanics research field to make presentations to NCIPC senior staff to increase awareness and spark additional research ideas, explore partnerships with the Department of Justice (DOJ) and similar groups to take advantage of fundamental research and injury biomechanics in the courts.

In conclusion, Dr. Childress reported that NCIPC currently has two projects that are in a no-cost extension phase and two that will end this year.

## **Discussion Points**

**Dr. Redfern** indicated that he was the chair of this portfolio review, and that he thought Dr. Childress presented a very good synopsis of what occurred. This program began over 20 years ago, and as reflected by the portfolio review, a tremendous amount of positive impact resulted from that program. It began with an assessment of the fundamental mechanisms of fracture, for example, in falls. That led to the design of various intervention techniques such as hip pads, various kinds of flooring that would absorb energy during impact, et cetera. Those types of intervention continue to be developed. He thought that engaging in this type of work required that kind of long-term vision, beginning with a goal to understand fundamental mechanisms, conveying that understanding to the public, and moving forward as necessary. It appeared that NCIPC no longer had a focus on mechanisms such as engineering interventions. Being an engineer, he thought this was a very useful approach.

Regarding the alignment question, **Dr. Tate** wondered how NCIPC saw the biomechanics recommendations aligning with Dr. Frieden's vision. More importantly, she thought it was hinted at that this program perhaps needed to move away from the center at this time. She wondered how that possibility aligned with the state of the science and the field of biomechanics, particularly in terms of the work being done by Department of Defense (DoD) in the area of injured soldiers in battlegrounds.

**Dr. Redfern** replied that biomechanics started in motor vehicles, and suddenly the topic of motor vehicles is popular again. Consideration must be given to whether NCIPC plays a role in biomechanics and fundamentals of motor vehicle injury. Perhaps it does not and other agencies have picked up on this already. In the motor vehicle realm, he believes biomechanics is going to continue to play a major role. In the larger context, biomechanics is a very different field than it was 20 to 25 years ago. When discussing biomechanics now, it is necessary to consider what kind of biomechanics is meant (e.g., tissue trauma biomechanics, fundamental tissue biomechanics, dynamics in motor vehicle accidents, et cetera). He thinks biomechanics has a very broad scope now that may have to be focused on particular mechanics of this area is to be included in the NCIPC portfolio.

**Dr. Childress** added that she had the opportunity to speak with a biomechanics researcher on another topic who told her that the work they have been engaged in over the years is now being used for prosthetic development for returning soldiers, which aligns greatly with what is needed. That is a great outcome story for this program.

## Update of 2010 Portfolio Reviews

### Motor Vehicle Safety

**Dr. Ann Dellinger**  
**Lead, Motor Vehicle Injury Prevention**  
**Division of Unintentional Injury Prevention**  
**National Center for Injury Prevention and Control**  
**Centers for Disease Control and Prevention**

**David Grossman, MD, MPH**  
**Chair, Expert Panel**  
**Director, Department of Preventive Care**  
**Group Health Cooperative; Seattle, Washington**

**Dr. Dellinger** announced the opening for Dr. Greenspan's former position and invited input from BSC members about potential candidates.

Showing a copy of the motor vehicle portfolio review report, Dr. Dellinger expressed her excitement about being able to present information about the review. She explained that the purpose of the portfolio review was three-fold, which was to assess the impact of the Motor Vehicle Injury Prevention (MVIP) portfolio, identify research gaps, and provide recommendations for improvement. As noted, CDC mandated portfolio reviews through the policy requiring that centers, institutes, and offices (CIOs) use external peer reviewers to assess the quality and impact of intramural and extramural research and programs every five years. The Division of Unintentional Injury Prevention (DUIP) may be somewhat non-compliant, given that their review spanned a 10-year period.

In addition to the three main purposes, four overarching questions were posed for review, including the following:

- Did NCIPC fund and conduct work in the most important areas of motor vehicle safety?
- Was the work relevant to improving public health practice and has it been translated for practice?
- Was the work of high quality?
- What should be done next to fill gaps in the field?

Essentially, three types of data collections were conducted. An electronic survey was developed to be completed by the principal investigators of each of the projects. Telephone interviews were conducted with CDC staff on the DUIP team and within the center. Telephone interviews were also conducted with selected principal investigators to gain a better sense of some of the success stories. Dr. Dellinger said that she struggled considerably with what eligibility criteria to use, given that she did not want to "cherry pick" the best projects and have the review merely serve as a cheerleading effort for the motor vehicle program. Ultimately, the only boundary was that a

project had to be completed between 2000 and 2009. That means that a couple of projects actually began in 1996, but if the project was completed after the year 2000, it could be included.

The electronic survey covered a number of topics, including the purpose of the project, where it fit in the four steps of the public health model, type of project (e.g., capacity-building, translation activities), study design, characteristics of the study population (e.g., gender, age group, location, et cetera). A significant amount of effort was also put into determining metrics for impact, which the following questions attempted to capture:

- How many publications, presentations, testimonies (local, state, federal levels) resulted from your projects?
- What kind of media coverage did you receive?
- What new products did you develop?
- Were you able to garner any additional funding for your work through this project?
- How many people did you train?
- Would you say that you influenced others in the field?

From that 10-year review period, 33 extramural and 29 intramural projects were included. There was a 100% return rate for the intramural surveys and an 85% return rate for the principal investigators. They tried to make this simple for principal investigators because they are no longer being funded, and were providing this information through their own generosity. The program made every effort to pre-fill the surveys with any information they could find from final reports submitted, the internet, et cetera. Dr. Dellinger surmised that this was one reason for the high response rate and limited amount of follow-up required. For five of the projects, DUIP had only its own information. Interestingly, one principal investigator emailed her from Kandahar to explain that he was working in the hospital there and that the internet was too slow to open the file. She decided that anyone working in a hospital in Kandahar deserved a free pass and gratitude for being so conscientious.

With regard to some selected results, Dr. Dellinger reported that half of the extramurally funded projects were cooperative agreements from DUIP funds. The goal was to utilize cooperative agreements to foster more collaboration between the principal investigators and DUIP staff. The range of funding for extramural projects was \$15,000 to \$1 million. The \$1 million project was an earmark that was allocated through DUIP. The average funding per project was about \$300,000. The average funding for an intramural project was essentially zero, given that these consist basically of time allocations.

In terms of project types during those 10 years, research or evaluation projects represented 69% of all projects included. There has been a shift over that 10-year period in that CDC has placed more focus on translational activities due to the intensity around widespread adoption of evidence-based practices, programs, and interventions. With regard to project impact, 50% of the principal investigators indicated that their projects were either extremely useful or very useful at improving scientific knowledge. Several questions were posed to determine usefulness: How useful was it in creating environmental changes to prevent injury, changing behavior conducive to reducing motor vehicle-related injuries, influencing other programs to take action,

influencing the thinking of other researchers in the area? Depending upon the project, these questions would be relevant for some and not for others.

Most of the projects produced 1 or 2 publications, while a few generated more than 5. Intramurally, CDC likes to lump all of the nice Behavioral Risk Factor Surveillance System (BRFSS) projects into one lump, and all of the *Community Guide* projects into one lump. Those are multi-year projects, so the fact that they might have 20 publications from the *Community Guide* is pretty impressive. However, that is over a 10-year period, not a 2-, 3-, or 4-year project period. More than half of all of the journal articles were published in peer-reviewed journals. Staff from all of the projects delivered 550 presentations at conferences, universities, and partner organizations. There were 177 publications, 60% of which were produced by 7 projects. Of the extramural projects, 3 accounted for half of the number of extramural publications, and 2 intramural projects accounted for half. Those were long-term efforts such as the National Institute for Health and Clinical Excellence (NICE), BRFSS, or *Community Guide* projects.

For media coverage, 50% of the extramural projects said that they garnered media coverage during the project and 28% of the intramural projects reported media coverage. Dr. Dellinger pointed out that intramurally, sometimes surveillance reports are not quite as interesting to the media as some of the externally-funded projects, so it was not surprising that not all of the intramural projects received media coverage. Of the extramural projects, 79% produced 92 new products, while 24% of the intramural projects produced 54 new products. The down side is that a lot of those are fact sheets versus books or manuals that will be used for years to come.

With respect to training and capacity-building, the extramural projects trained almost 900 people and intramural projects trained over 1100, many of whom were fellows and trainees with the *Community Guide*. Given the major focus on policy development currently, investigators were queried about policy-related efforts. The projects contributed to almost 100 different policy development activities pertaining to motor vehicle safety, which is pretty impressive.

**Dr. Grossman** presented the recommendations from the motor vehicle safety portfolio review. First he shared a few reflections on the process. He thought it was extremely well-organized and stressed that a lot of credit was due to Dr. Dellinger, her team, and the contractor (Kristie Pettibone) for the work that was done prior to the meeting of the expert team review. All of these individuals were extremely receptive to input and requests for additional data. He also recognized the other panelists who participated in the review, indicating that they represented a diverse set of fields and contributed an enormous amount to the recommendations.

Indicating that a motor vehicle injury prevention portfolio review summary was disseminated to participants prior to the meeting, Dr. Grossman emphasized that the PowerPoint presentation he and Dr. Dellinger were utilizing did not do justice to the recommendations and that the “meat” of the recommendations could be found in the executive summary. He also noted that these recommendations are setting the context for the overall recognition that the Motor Vehicle Injury Prevention Team has done spectacular work despite the meager amount of resources that have been allocated extramurally and intramurally. Considering the magnitude of the problem, the branch and team are considerably underfunded. Despite the low level of funding, they have actually managed to produce a significant amount of high quality research and have had major

policy impacts in a number of areas. This team has had an impact inside and outside of CDC, as well as inside and outside of the US.

In terms of recommendations, the panel thought that there should be more strategic planning in the program. Planning long-term will provide an opportunity to be well-prepared when there is a sudden influx of funding. This includes development of a specific multi-year plan beyond the research agenda that identifies long-term goals and clearly prioritizes the work that needs to be accomplished. That plan could then be used to allocate resources and measure progress relative to the plan. Limited goals were established to determine measures of success, and metrics were missing for the most part. This makes it difficult to be completely conclusive about the quantitative impact. The plan should be updated regularly to allow for incorporation of emerging issues.

The review panel noted the meager amount of funding that is allocated to this team, relative even to other divisions and teams within NCIPC and CDC. Thus, they felt emboldened to recommend a doubling of the existing resources to address the discrepancy, the burden, and current funding. There were hints at that time that Dr. Frieden was prioritizing this topic in a high manner, so the panel was hoping to capitalize on that. Doubling may be modest considering that the absolute amount of funding is still relatively low. The panel also thought that there should be a more standard process for decision-making that would help to channel funding toward projects that are likely to have the most significant impact. Now that this topic has been deemed a Winnable Battle, it is critical to identify specific gaps in research, prioritize those, and restrict RFAs to identify and address those gaps if necessary. The review panel also believed that there was an opportunity to improve coordination with other government agencies to avoid duplication of work and to be very clear regarding NCIPC's role versus another organization's roles, such as NHTSA. At that time, the MOU that was signed was under discussion. The review panel members would be interested in hearing whether that MOU addresses some of the issues that they considered.

In terms of intramural research, the motor vehicle team and staff should be strongly encouraged to publish scientific work in peer review journals. The panel members were surprised about publication productivity to some degree in the intramural group, and felt that there should be some clear expectations / metrics regarding the need to publish this information and bring it into the public domain. That would allow the staff to understand where they need to aim. The panel members also strongly encouraged the staff to engage in synthesis research as is done with the Community Guide. This is a great vehicle through which to disseminate policy recommendations. The convening power of NCIPC is very powerful, so the panel members encouraged continuation of that as well as the use of policy and implantation tools at the state, local, and national levels that would propagate, translate, and disseminate some of the research findings.

Regarding collaboration, coordination, and partnering, the panel felt there was an opportunity to engage in more work with the ICRCs. There seemed to be a gap between the ICRCs work and the work of intramural and extramural programs. In addition, the program needs to ensure that ICRCs are addressing key issues pertaining to motor vehicle research since this is a key lever for funding. The panelists also encouraged collaboration between transportation and public health,

given that they observed opportunities there, particularly at the state level where sometimes there is an artificial divide between government, highway safety representatives, and departments of health. CDC EIS officers and state staff could help to bridge some of the gaps and achieve some of the goals by using convening power and / or analytic capacity and surveillance abilities to assist the state highway traffic safety agencies in the work they do. The panel members also felt that some collaboration efforts could be encouraged and institutionalized through the specific requirements in grants and cooperative agreements. That is, mandate in a cooperative agreement or an FOA that collaboration is required. Providing a financial incentive would make this more likely to occur.

Regarding RFPs and the Extramural Research Programs Office (ERPO), the panel assessed the extramural research program and felt that there was some room for improvement. There is a need to include outcome and sustainability expectations in RFPs. It is not sufficient to conduct a demonstration project that cannot be scaled up and sustained. Clearer expectations should be outlined for investigators in terms of their ability to produce publications and project reports. Panelists also believed that there was an opportunity to improve the reviewers who work in this area, and that the team should work with ERPO to make sure that there is a good match in the proposals as well as the development of the RFP. RFPs, when possible, should include dissemination plans, training, a standardized approach, and provision of financial incentives to ensure that CDC gets what is needed from funded programs.

Measuring progress might be generalizable to other aspects of portfolio reviews. It was this panel's sense that in conducting portfolio reviews, it would be much easier for the review team if they understood the metrics for success so that they could measure the progress accrued against the metrics. Clear expectations should be set forth in advance for extramural and intramural projects. Similarly, a systematic approach should be taken to closing out a project that would include a database to capture all of this information in real-time and archive it to make it easier to find the information in an instant so that they do not have to wait 10 years to decide if anything has been accomplished. Perhaps future portfolio reviews should be more focused and exhaustive in their approach. Closeout reports are needed for every project. The panel was surprised to learn that these were not always completed. While the team tried to dig out what they could, it would have been much easier for everyone had there been a requirement to submit closeout reports. The panelists suggested that ERPO consider withholding funding if those were not completed, or consider financial or other incentives to make sure that people complete the work and submit their reports to NCIPC. NCIPC should have a mechanism to archive those reports for easy retrieval. Strong consideration should be made to make the reports available to the public, so that the public can see exactly what they have for their money.

The panel also encouraged NCIPC to include more success stories on the NCIPC website. Some of the work the panel members reviewed was very impressive, but was underplayed. There is an opportunity to garner greater attention for successes. The panel also recommended that the portfolio review be published. It might be worthwhile for CDC or NCIPC to publish such portfolio reviews so that the scientific community and the public can see what has been accomplished with this funding.

The panel also recommended that the BRFSS develop a motor vehicle injury prevention module to collect data at their discretion. This would provide a good opportunity to collect information through a public health mechanism rather than relying on end data like the Division of Adolescent and School Health (DASH) or data from the National Household Transportation Survey (NHTS), and to seek other opportunities for data collection at the state level.

NCIPC does not currently have a template. The panel encouraged the development of a template similar to what institutional review boards (IRBs) require when a project is closed out. The template needs to be filled out and completed for the extramural team and intramural staff. A standard method should be developed for collecting all citations and connecting publications so that people know what funding paid for what project. This will make it much easier for policy staff to avoid having to follow up with project investigators when a member of congress makes a request, for example.

Under biomechanics, the panel felt that one of the reasons that motor vehicle injuries is a Winnable Battle is in part because of the work that biomechanics and biomechanics engineers have done in the past. While they recognized that crash engineering made enormous contributions in the ability to save lives in motor vehicle injury, there was also a sense of sorrow and regret that the funding for biomechanics has dropped off considerably. There was a strong sense amongst panelists that biomechanics has become an orphan that needs a foster or adoptive parent to ensure that the field continues to grow, even if this is not done with CDC funds. CDC still can play an important role in working with other agencies to get this work funded through other mechanisms. As Dr. Greenspan noted earlier, the original IOM report suggesting the creation of NCIPC was very biomechanics focused. The panel believed that much of the progress made in motor vehicle injury was very much policy-based on biomechanics research. Much of the technology available today would not exist if not for that. Given the increasing private investment in this field, it becomes even more important.

In terms of future research, the panel felt that some areas were of particularly high yield with gap areas that should have a focus. Panelists agreed that policy interventions are not just natural experiments waiting to happen—they are occurring all of the time and there is not enough opportunity to take advantage of these natural experiments. HHS and other agencies are carefully considering allocating more funding toward understanding health care and how these natural experiments work. This is a great place for CDC to allocate some funding. Just as much can be learned from natural experiments as can be learned from experimental designs that are artificially developed. The panel also thought that including cost-effectiveness analyses is done more routinely in intervention studies, or that at least cost information is captured so that other studies can be conducted on cost-effectiveness when interventions are proven effective. This seems to be a gap and it will clearly be important in the future. It sounded like lessons learned from other countries on cross-national work is being addressed across CDC. The panel agreed that the program should continue to develop databases and conduct surveillance work, and that a greater emphasis should be placed on at risk populations. Notably, they recognized that some of the great work that has been done was with Latino and American Indian / Alaska Native (AI / AN) populations. Given the team's convening abilities, it is important to promote evidence-based policies and build consensus, particularly with states and partners.

## **Discussion Points**

**Dr. Redfern** asked Dr. Dellinger to define “product.”

**Dr. Dellinger** responded that various items could have been considered products, such as fact sheets, manuals, curricula, et cetera. There was a wide range.

**Dr. Fowler** suggested dividing projects into educational, capacity development, research products, et cetera so that they could have a sense of the types of projects. We all have our different missions of educating the next generation of scientists.

**Dr. Grossman** indicated that this was his first opportunity to be involved in a portfolio review, so he felt somewhat unclear about the role of the BSC in terms of whether the intent was for the BSC to review the full portfolio evaluations and offer additional suggestions / comments before the report became final. He felt that this was probably one of the more rewarding experiences of being a member of the BSC, given that it brought him into a level of detail that would permit them to make some important contributions.

**Dr. Greenspan** responded that NCIPC would like for the BSC members to reflect on the recommendations that were reported and offer input about overarching issues pertaining to the balance between the depth and breadth of the projects; how well projects would resonate with the field if implemented; ideas inspired by the recommendations; strategies for implementing the recommendations; concerns about the recommendations or additional considerations that have not been addressed by the portfolio reviews; how to best to utilize portfolio reviews; how to improve the review process.

**Dr. Redfern** agreed that working on these portfolio reviews was a great experience. Since motor vehicle safety had been prioritized as a Winnable Battle, he thought it would be beneficial to better understand the current status of the field in terms of other funding bodies and their priorities.

**Dr. Baldwin** indicated that in December 2010, there was a very productive meeting between CDC leadership and NHTSA leadership during which the two entities signed the MOU that was mentioned earlier and outlined key priority areas that intersect across CDC / NHTSA. NHTSA is CDC’s most closely tied partner at the federal level in the transportation safety community. As a result of that meeting / MOU, he thought they had a better sense of what CDC should be working on (e.g., seatbelts, alcohol, teen driving, tribes, older drivers, driving distractions).

**Dr. Dellinger** noted that from the team’s perspective, the recommendations were great. They left the room feeling completely comfortable with the panel making whatever recommendations they wanted, but their recommendations were largely well-aligned with recommendations the team would make. There were a few really interesting ones that the team had not thought of, such as developing a BRFSS module just in case states wanted to utilize that. Based on the recommendations, the team had an overall sense that they were “on the right path.”

**Dr. Stout** thought it would be interesting to see how the team decided to deal with these recommendations and whether they would try to respond to them in some sort of an action plan to move forward. Her division operates in much the same way as NCIPC in that they use the public health model as their framework for research. Basically this begins with surveillance data that drives priorities, followed by etiologic and epidemiologic research to assess risk factors, followed by identification / development / implementation / evaluation of control strategies, followed by translation. Without the engineering aspect, they are limited to identifying existing controls or developing administrative, policy, or behavior-based controls and the opportunity to develop or influence the development of engineering controls is eliminated. However, in her opinion, such controls should be at the top of the hierarchy of controls. If NCIPC does not conduct or fund biomechanics or engineering research for safety controls, she wondered how they would influence others to do that for them. Who is going to develop the helmets, seatbelts, and slip-resistant shoes and flooring? If this is not going to be part of the program that CDC funds or conducts, it is important to determine how they are going to directly influence those who can.

**Dr. Dellinger** called attention to the last bullet for the description of the Winnable Battles being areas in which impact could be made within 1 to 4 years. There is pressure to make a measurable impact in a very short amount of time, which is pushing them away from some engineering biomechanics activities. Policy change is so important because an impact can be made very quickly. In the 20-year history of the biomechanics program it was a long and steady road to some of the end products. In motor vehicle safety, states make policy—not the federal government. Everyone is trying to make major changes in a very short amount of time, despite the fact that their budgets have not changed much. Expectations have increased around what can actually be accomplished. They have done some great things and the portfolio reviews will illustrate this.

**Dr. Stout** acknowledged the great successes and said she did not mean to diminish them. While the Winnable Battles offer a great opportunity to move forward, she thought they must also recognize that if they do not think beyond the Winnable Battles (a small and immediate piece of the pie) it would seem as if they were doing a lot of things that are irrelevant at the “big picture” level.

**Dr. Fowler** said she wanted to add the issue of responding to the recommendations on the agenda with regard to whether the BSC members needed to think about a way to create a matrix of the recommendations, prioritize them based upon feasibility and importance, et cetera. In addition, she had been sitting there thinking about the definition of “public health,” which is what we as a society do collectively to ensure conditions in which people can be safe and healthy. She wondered whether it was the role of NCIPC always to be the people ensuring the conditions, or could they facilitate the discussions, interactions, and integration to get to a societal level response. Perhaps they need to think about this more strategically. It seems to her that they kept hearing discussions year after year about what the injury prevention field could do if they had more money and more resources. Unless there is a miracle, she did not think that was going to happen. Therefore, perhaps it was time to change their strategy in terms of mobilizing other resources.

With regard to reporting back about the recommendations, **Dr. Dellinger** clarified that some of the recommendations were not within their control, given that they were at the center level control.

**Dr. Bangdiwala** noted that one of the recommendations this group made was to have the staff synthesize the results and communicate this to communities and policy makers, describing the impact of the research in a way that people at the community level could act on it. That takes away from CDC having to act on it and address to some extent the issue of whether the agency has to have money in these areas. This also places the importance on where it should be—in local groups, communities, states, et cetera. He thought it was difficult to offer input or answer the questions posed, given that they were getting an overview of the recommendations versus the detailed information.

**Dr. Fowler** agrees. This is a major issue that they all need to discuss. It is not just what they do with individual reviews, but what they do collectively to interdigitate them to make them more powerful.

### **Core State Program**

**Dr. Lynn Jenkins**  
**Chief, Epidemiology, Etiology, and Surveillance Branch**  
**Division of Violence Prevention**  
**National Center for Injury Prevention and Control**  
**Centers for Disease Control and Prevention**

**Ms. Yee** indicated that for this core state program portfolio review, she would be presenting the purpose of the review and the evaluation framework and methodology, but would not be discussing the findings at this time. She also acknowledged those who worked on this project.

For the 2005-2010 cooperative agreements, 30 states were funded. For the purpose of the review, that time period was assessed. The focus was on the three primary charges in the FOA, which was to build a solid infrastructure for injury prevention and control; collect analyze, and use injury data; and implement and evaluate interventions. There is a slight variation in the focus of the RFA and what they hope to learn from the portfolio review when all was said and done. The purpose of this portfolio review was to guide future program development and refinement, inform CDC of state-level activity (e.g., implementation, successes, challenges), highlight leveraging and innovation, and emphasize fostering activity in policy and evaluation. No attempt was made to compare or rank states against each other.

With respect to the methods, a mixed mode design approach was utilized. Qualitatively, a content analysis was conducted of the states' annual progress reports and strategic plans. Information was collected on the core state grantees through interviews, from non-core programs, and analogous CDC programs. Quantitatively, the 2007 State of the State Survey was utilized. The evaluation framework was structured around the 2005 FOA. Specifically, indicators and measures were linked to the performance objectives stated in the 2005 FOA for the NCIPC Core State Program. To operationalize measures, AED proposed indicators and

working definitions, and CDC and Safe States Alliance (SSA) refined indicators / definitions. They had a set amount of time to complete the portfolio review (e.g., within a year) and had limited funds to collect much more data. These were some of the parameters they had to keep in mind as they moved forward. They were also keenly aware that the readily available data sources (e.g., existing data, tools, progress reports, state plans) were useful but were not created for this portfolio review. Thus, they had to “back into” the indicator or the outcome, and had to make some choices about what constituted a sufficient data source. It is also important to point out that the 2005 objectives did not focus on some of the new topics of interest at the center (e.g., policy changes, innovation, and leveraging of resources).

While an initial evaluation question focused on the contribution of NCIPC resources toward policy and environmental changes, they really did not have a single data source that could answer that question, so they had to make adjustments. However, additional data were collected through interviews. A total of 8 state representatives were interviewed to obtain additional information to triangulate the data they had and to address some of the gaps found once they reviewed the progress reports and state plans. The state representatives provided additional feedback on whether there were other things they knew about that were not in the preliminary findings. They also talked to CDC project officers to find out what kind of state programs they had, what strategies were used, what lessons were learned from their state programs / grantees, what their evaluation expectations were, and whether they advised on policy development and implementation. This was very valuable.

Regarding the quantitative data source, the 2007 State of the State Survey, Ms. Yee emphasized that this was unique in the sense that a confidentiality MOU was developed between AED and Safe States, so at no time did CDC actually view the raw data from the 2007 State of the State Survey. Amber Williams and her group from Safe States reviewed the evaluation framework for transparency to try to validate CDC’s indicators and definitions. It was determined through AED’s feedback that some measures had poor response rates, so clearly these could not be used. However, other data were very helpful, especially those that addressed policy considerations. The full dataset of 50 states was used, but they focused on the 30 CDC-funded states.

For the qualitative data analysis, they conducted three rounds of analysis using NVivo qualitative software for the coding. State injury plans were compared against the guidance in the 2005 FOA to assess the achievement of key activities in the state plans. They also tried to cull some success stories, which would likely be presented during the next BSC meeting.

Currently, there is a draft report that was written in September 2010. From September through October 2010, feedback was provided from Core State Injury Programs, the ADS Office, and SSA (which provided limited feedback).

The next step is to convene the external review panel for two days, which will tentatively be in June or July 2011. Those findings and recommendations will be presented during the next BSC meeting.

To that end, Ms. Yee invited recommendations for panel members and set forth the following criteria:

- Seeking 4-6 panelists with diverse backgrounds
- Knowledge of state and local injury programs
- Knowledge of translation of injury research to policy and practice
- Individuals from partnership organizations (e.g. ICRCs, possibly other federal agencies)
- Leadership from other public health programs with similar funding and stage of development

### **Discussion Points**

**Dr. Fowler** asked who recommendations should be submitted to, and the method by which they should be submitted.

**Ms. Yee** replied that she is working with Angela Marr and her Core State Team on the logistics and putting together the external panel. She said she would like suggestions emailed to her.

**Dr. Fowler** asked whether any data were collected about the relationship, synergy, and / or impact of having an ICRC and state injury programs in a state. That is, does having those two together give the program more for its funding? If these data were collected, she wondered whether they would be presented to the external panel.

**Mr. Inokuchi** responded that this was not the focus of their investigation, but they did discuss this with the 8 states they interviewed, particularly in terms of barriers to or facilitators of their successes. **Ms. Yee** added that the findings would be presented to the external panel.

**Dr. Bangdiwala** requested clarity about whether the indicators to evaluate each of the core state activities had already been developed. If they were developed, he wondered whether they could be evaluated for states that have an ICRC versus those that do not.

**Ms. Yee** responded that they were developed and were included in an assessment tool that was used to examine the progress reports.

**Dr. Fowler** indicated that a couple of years ago she conducted an investigation of some of the states that had staff visits. Something she was completely unaware of previously was the level of political influence on state programs. Some of them are positioned within the state administration in a way that gives them visibility and a voice, while others are buried so deep one would hardly be able to find them. She wondered whether this was being considered.

**Ms. Marr** responded that the State of the State Survey across all 50 states would not permit them to assess whether an ICRC was present in a state. However, they could determine whether a state received core funding and whether they were able to move forward in terms of policy activities, which was part of the primary quantitative analyses. Many of the questions in the follow-up survey focused on policy and evaluation issues more in-depth than the State of the State Survey or the progress reports did. Regarding the metrics used to determine whether programs had been successful, every FOA included measures of performance. They were held accountable for the metrics in the original FOA, but the program also wanted to capture how states addressed the shifting focus of the field in the last 5 years. They have been pushing states to be more active in informing and affecting public policy. The progress reports and follow-up interviews were used to inform that process. They wanted to be fair and only assess the original FOA requirements, but it was important to have the extra piece as well.

**Ms. Yee** indicated that they posted a broad question on their listservs and had core and non-core states respond. They did receive some responses from non-core states about policies.

**Ms. Marr** acknowledged their partner, Safe States, for allowing them to use that dataset. Without Safe States volunteering to partner with them in this endeavor, they would never have been able to complete the necessary data collection process. They were key to the success of this portfolio review.

**Dr. Childress** looked at the overlap between the ICRCs and the core programs. Although there are only 11 ICRCs and 38 core programs currently, there is considerable overlap and some areas are not covered. New ICRCs have been funded in those areas. It is going to be part of the FOA development to facilitate that collaboration. Although she did not think it was covered in the ICRC portfolio, she knew that there were a number of local and state interactions. However, she did not believe that was one of the original questions.

**Dr. Stout** asked whether anything was included in the RFA that directed the core state programs (which are primarily housed in health departments) and the ICRCs (which are primarily university-based) that directed them to work together collaboratively. If not, that should be strengthened.

**Ms. Marr** replied that the entire portfolio review process was very important to them. However, the 2011 FOA has been published and the applications have been submitted. Therefore, they had an expedited need to review what had occurred over the last 5 years and to make some changes in the funding announcement that was published in February 2011. They had some top line findings before they were able to go through the full expert panel and recommendation process. One of the findings from that was the need for better collaboration between the state health departments and the ICRCs. They have been talking to Dr. Childress about revising language in the current FOA that specifically guides Regional Network Leaders (RNLs) to help facilitate crossover between the state health departments and the ICRCs. There is also Adele an upcoming cooperative agreement in which they would like to provide some reflective language on the ICRC side, because it is not helpful if states are constantly going to the ICRCs.

**Dr. Fowler** said that speaking personally as somebody who is in an ICRC, one of the things that was interesting was that the RNL component of the RFA had almost no funding attached to it. Her ICRC received a call from their colleagues at the state injury program who said, “There is an RNL component and even though it does not have money, we need to be talking.” The leaders from these two programs met to figure out how to write the response for the RNL component. While limited funds are included for this component, it is still a catalyst for these relationships. They already have good relationships in her state, but it was exciting to see the enthusiasm it generated in the state program people because they thought this was an obvious opportunity to work together.

**Dr. Hunt** pointed out that there are state injury programs that have a bare minimum in terms of support that manage to creatively work through the challenges of where they are housed, their capacity, their ability to advance the challenge of decreasing morbidity and mortality from injuries, their ability to gain visibility, their ability to create planning groups, and their ability to make the changes needed. In terms of how to interdigitate with the ICRCs, he does not see China or India funding the injury programs in our states. They have the money and we do not. However, he also saw the opportunities to evaluate how it is that their position makes the opportunity for change and impact possible. The ICRCs have to decide where to “hook their wagon” to be able to do the kinds of things that will advance the issues that need to be advanced.

**Dr. Fowler** asked whether any thought had been given to some of the small print in the RFAs that might help them, such as having to have certain key state officials sign off on the application. She was looking at some of the stimulus-funded projects, which included a lot of language about the high level decision makers being required to commit as an eligibility criterion for these funds.

**Ms. Marr** responded that through the application process, they wanted to see stronger letters of support from the state health officer and any collaborating groups working in priority areas or Winnable Battles that align with CDC. There was also a requirement that the state plan that is created or updated through this funding cycle must go through signature authority for at least the state health officer. There was recommended language for it to also go through the Governor’s Office; however, they wanted to be realistic about potential reach.

**Ms. Yee** added that 6 years ago, when she was in the Division of Nutrition and Physical Activity at CDC, they encouraged coalitions and a state plan that had some weight to it.

## **National Violent Death Reporting System (NVDRS)**

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Professor, Department of Bioengineering  
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**Dr. Jenkins** expressed appreciation for the opportunity to be there. She presented an overview of the portfolio review that the Division of Violence Prevention (DVP) conducted for NVDRS. She emphasized that this was a team effort and acknowledged the team and Dr. Linda Dahlberg for her contributions, as well as Dr. Deb Karch who could not attend.

NVDRS is a population-based surveillance system that provides the most comprehensive information currently available on all violent deaths that occur in the states where there is funding. The key of this system is that it collects data from multiple sources and provides detailed information on incidents, victims, perpetrators, weapons, relationships, connections, and contextual information that is collected from these multiple sources. The data are collected by states and the system is coordinated by CDC.

The goal of NVDRS is to provide communities with a clearer understanding of violent deaths so they can be prevented by informing decision makers and program planners about the magnitude, trends, and characteristics of violent deaths so appropriate prevention efforts can be put into place; and to provide data to help monitor and evaluate state-based prevention programs and strategies. The four main objectives of NVDRS are to: 1) link records on violent deaths that occurred in the same incident to help identify risk factors for multiple homicides or homicides-suicides; 2) provide timely preliminary information on violent deaths (e.g., basic counts of murders and suicides) through faster data retrieval-currently, vital statistics data are not available until two years after a death; 3) describe in detail the circumstances that may have contributed to a violent death; and 4) better characterize perpetrators, including their relationships to victims.

The case types included in NVDRS are homicide (including legal intervention), suicide, undetermined intent, and unintentional firearm. The vast majority of cases captured in the system are homicides, including legal intervention, deaths, and suicides. Deaths of undetermined intent include poisonings in which the coroner or medical examiner simply did not have enough information to make a determination regarding whether it was an unintentional poisoning or a suicide. Also included in the undetermined cases are child maltreatment deaths. They may be child maltreatment deaths, but again, the coroner or medical examiner simply did not have enough information to make the determination regarding whether it was an unintentional death, a homicide, or a neglect case. Information is collected on all unintentional firearm deaths.

While the ultimate goal for the system is to have national coverage, it is currently implemented in 18 states, including: Alaska, Colorado, Georgia, Kentucky, Maryland, Massachusetts, Michigan, New Jersey, New Mexico, North Carolina, Ohio, Oklahoma, Oregon, Rhode Island, South Carolina, Utah, Virginia, and Wisconsin. Of these, 7 states began data collection in 2003, another 6 states in 2004, and another 3 states in 2005. There was a long period during which no new states were funded to collect data. Last year, DVP was very happy to be able to fund 2 new states to collect data beginning in 2010. California is a special case, given that they collected data in only 4 counties in the Los Angeles area from 2005 to 2009 and have not continued data collection after having explored some of the critical issues of collecting data in large states.

Each case in NVDRS requires information from at least three primary sources, including death certificates, a coroner or medical examiner report, and a law enforcement report. The states have the option to include data from a number of other sources, including crime lab data; supplementary homicide reports; hospital data; Alcohol Tobacco, Firearms and Explosives; Child Fatality Review Team data; and Intimate Partner Violence Review data. Some of the unique components of NVDRS is that the system includes multiple data sources and approximately 200 variables of information for every death; it links data sources for each death; it links multiple deaths in a single incident (e.g., homicide followed by suicide, multiple homicides, multiple suicides); it provides comprehensive circumstance data this is collected from the coroner / medical examiner report or the law enforcement report, and it includes an incident narrative for every case. DVP is currently engaged in various studies that allow them to collect and code information specifically from the incident narratives that go beyond the coded data that are available in the more than 200 other variables.

Regarding the way data flow through the system, once a death that meets the NVDRS case definition is identified, the state health department then works with all of the other resources and sources of information to obtain information from the three required data sources and other optional data sources as they can. The state health department pushes that data to CDC for compilation into the CDC aggregate dataset. It is worth noting that while the state health department has personally identifiable information and is able to link information from these various sources with personally identifiable information, the data that are forwarded to CDC for the aggregate dataset do not contain any personally identifiable information. Dr. Jenkins shared a table reflecting the funds that have been appropriated for NVDRS and the number of states that DVP has been able to fund over time. The number of CDC fulltime equivalents (FTEs) who support NVDRS has grown along with the system.

Turning specifically to the portfolio review, and why DVP thought it would be particularly useful to conduct a portfolio review of NVDRS at this time, the CDC policy was extended to cover programmatic and surveillance activities beyond just the research activities that were originally included in the CDC peer review policy. For DVP, another reason to conduct the review was because they had reached a point at which all of the states that were funded in the first three waves of data had five years or so of data collection and implementation experience. DVP felt that it was a particularly opportune time to review lessons learned. Keeping in mind the ultimate goal of national implementation, they also felt it was time to seek expert input on how to most effectively expand the system.

The methodology employed was to develop specific evaluation questions, develop a conceptual model of the system, identify potential stakeholders (e.g., state grantees, people who had used the data, researchers who had requested and used the data, and other stakeholders who have worked with these data over the life of the project and have played various roles in supporting the system). DVP worked with a contractor to conduct key informant interviews and document reviews. There had been other efforts over time to compile lessons learned and to make refinements to the system. An attempt was made to amass everything that had been done to date that allowed them to think about what the experience had been and how that might inform moving forward. They analyzed and reviewed all of that information and identified review panel members. Dr. Jenkins emphasized how fortunate they were to have Dr. Redfern agree to serve as the chair for this portfolio review. He did a fabulous job, particularly given that as with any group process like this, there can sometimes be challenges. Overall, this panel was comprised of a fabulous group of people who all participated with enthusiasm and genuine interest in how to improve and strengthen NVDRS. A conceptual model was developed to help think about the various inputs, activities, outputs, and intermediate and ultimate outcomes. The specific questions posed to the panel included the following:

- To what extent does NVDRS collect and analyze timely, high-quality data for monitoring the magnitude and characteristics of violent deaths at the national, state, and local levels?
- To what extent, and through what channels, are violent death data routinely and expeditiously disseminated to public health officials, law enforcement officials, policy makers and the public, in accordance with the CDC data re-release plan?
- To what extent have NVDRS data been analyzed and used to contribute to new insights and understandings of violent deaths in the peer-reviewed and grey literature?
- How well does NVDRS track and facilitate the use of NVDRS data for researching, developing, implementing, and evaluating strategies, programs, and policies designed to prevent violent deaths and injuries at the national, state, and local levels?
- How well does NVDRS build and strengthen partnerships at the national, state, and local levels to ensure that data collected are used to prevent violent deaths and injuries?
- By what strategies can NVDRS be expanded and sustained to operate in all 50 states, the District of Columbia, and US territories?

With regard to some of the key findings from the review, the panel specifically reviewed the state distribution of NVDRS data. While media requests were not very common, some states had engaged in media activities. States have delivered numerous presentations across and around their states, participating in stakeholder meetings and giving data back to the data providers. This is one of the activities about which the states have said they received a lot of positive feedback. The data providers find this to be a very useful contribution of participating in the system. The principal investigators participate in professional conferences in their states and nationally. DVP is currently developing success stories that are posted on its Veto Violence

website that capture how the states have been able to use the NVDRS data to inform policies and other activities in their states.

In terms of CDC's distribution of NVDRS data, DVP compiles an annual *MMWR* surveillance summary. These have been published for 2005 to 2007. Dr. Jenkins recently completed the first round of pre-clearance on the 2008 data. They also have a restricted access dataset (RAD) for which researchers can propose specific research ideas, and list the particular variables they would like to have from NVDRS. They have had 21 requests, all of which have been approved and the datasets shared with the requestors. As noted earlier, the cost model data have been added to WISQARS™ system. There is also an NVDRS module with WISQARS™, the web-based system for accessing data. In terms of research, at the time the evaluation report was compiled, there were 36 peer reviewed publications, 13 of which describe system implementation activities; 5 data validation studies; and 18 descriptive studies on various violence outcomes. As of the most recent count, there are 48 peer-reviewed publications from NVDRS data.

With regard to informing prevention programming, more than half of the NVDRS states reported that NVDRS data had informed the establishment or modification of some kind of prevention program. Of these, 8 were suicide prevention programs and 4 were homicide prevention programs. Regarding informing policy, many of the states have reported that NVDRS data have been used to support on-going policy change. For example, New Jersey is proposing legislation to standardize how gang-related activity are defined and measured within the state. One the surface, it seems like a fairly straightforward activity; however, given the various political implications if a death is considered gang-related and what that means for law enforcement and politicians in that community, DVP discovered that there were great difficulties in capturing information on gang-related deaths. Law enforcement reports were not routinely useful for doing that, so this was an important activity. After some very high profile deaths of women who were pregnant, North Carolina is proposing to charge homicide perpetrators with two deaths if a pregnant woman is murdered. NVDRS data were used in the support of that state-level legislation. Maryland is proposing to limit access of firearms to persons with protective orders against them. Again, NVDRS data were used in supporting that legislation. Utah is proposing legislation to increase the severity of charges filed against perpetrators of child homicide. The Virginia NVDRS program has been commissioned by their legislature to develop recommendations on the prevention of suicide across the lifespan.

In terms of leveraging funding, many states reported using NVDRS data to leverage funding for violence prevention. For example, three states (e.g., Colorado, Oregon, and Rhode Island) used NVDRS data to successfully compete for SAMSHA funding for state-based suicide prevention. Massachusetts secured internal state funding for suicide prevention. Wisconsin secured funding for a City of Milwaukee Homicide Review Commission, and Oklahoma secured National Institutes of Justice (NIJ) funding to examine intimate partner related homicides.

On-going planning and other activities that are underway concurrently with the portfolio review include development of a strategic software plan to reduce the complexity of data collection, reduce the complexity of data analyses, improve the accuracy and completeness of data, improve the timeliness of data, improve the general usability of the system, and prepare for conversion of the software to a web-based application. DVP is also exploring options for implementing NVDRS in large states. Concern has been raised about the ability of a large state to do this. A funding algorithm is being evaluated and a panel will be conducted with SSA to solicit feedback and ideas. The goal has always been to expand the system to all 50 states, US territories, and the District of Columbia by demonstrating the value of the system and nurturing partnerships.

The specific goals for the panel meeting convened in September 2010 were to identify the current strengths of NVDRS, identify the current weaknesses / challenges, and identify future opportunities. In terms of the strengths of NVDRS, the panel acknowledged that public health surveillance is an important niche for CDC. Thus, NVDRS clearly fills that niche and is uniquely placed as a CDC activity. As well, they recognized that along with the core states' program are building blocks for strengthening injury and violence epidemiologic capacity at the state level—one of the strategic directions for CDC. They also recognized that NVDRS is the only comprehensive source of information on violent deaths. None of the other sources taken in isolation provide the kind of details that NVDRS does by combining the information. As well, they identified that this system has relevance to a number of national public health priorities like addressing violence against women, child maltreatment, and suicide prevention. They also noted that it had very high preventive value for relatively low cost. There are also some challenges facing NVDRS, including the fact that it is one of many NCIPC programs and is often “lost in the shuffle” of all of the other activities underway. NVDRS is also under-funded and under-staffed at the state and CDC levels. Partnerships are critical, but are currently underutilized. There are also challenges related to automated data systems and data flow issues.

Regarding the specific recommendations included the following:

Champion NVDRS:

- Division and center leadership should actively promote the mission, goals, and implementation of NVDRS
- Within the agency, contribute to the agency priority of strengthening the capacity of state health departments
- NVDRS should be championed externally with diverse public and private partners

Develop and implement a strategic plan:

- Coordinated and well thought out plan for obtaining additional funds and how to use those funds to support and build the system
- Assess states with demonstrated capacity
- Identify and address “large state” issues

- ❑ Simplify and improve data entry process:
  - Reduce inefficiencies, consider a web-based system
  - Engage states in discussions regarding simplifications
  - Collaborate with partners (e.g., Census) to populate important variables such as Census tract and block group
  - Add variables / modules of interest to partners
  - Develop materials (e.g. pocket cards) for data providers
  
- ❑ Better demonstrate value of the system:
  - Expand and improve opportunities to generate research using NVDRS
  - Make data more user friendly; develop an analysis manual; training sessions at ICRCs, conferences—follow the model of other data systems at National Center for Health Statistics (NCHS) and DOJ
  - Develop a system to encourage and support evaluation of local and state interventions
  
- ❑ Improve the dissemination of information from NVDRS:
  - Emphasize the unique aspects of NVDRS
  - Regularly and more frequently provide estimates of key variables (e.g., homicide and suicide incidence rates)
  
- ❑ Strengthen partnerships and cultivate new ones:
  - Explore collaborative funding opportunities for research, evaluation, and dissemination
  - Explore opportunities to work with federal partners and with state-based criminal justice groups
  - Facilitate research partnerships on specific violence prevention topics (e.g., youth violence, suicide)

The next steps with regard to this portfolio review are to finalize the document; develop communications materials to convey the process engaged in as well as the recommendations in order to share those with state grantees, stakeholders, and partners; and strengthen NVDRS through the implementation of recommendations.

**Dr. Redfern**, chair of this portfolio review, emphasized that he learned a tremendous amount through this process and enjoyed it very much. He thought Dr. Jenkins did a great job of summarizing the key aspects of this review. He invited everyone to carefully review the final report. What stood out to him were the uniqueness of this surveillance tool, the fact that it has not yet reached the ultimate goal of implementation on a national level, and the issues pertaining to small versus large states. He wondered if they could not implement NVDRS on a national level whether it would still be of value to the constituencies. He thought it would be, but thought this would be an interesting discussion amongst the BSC members. Most importantly, these data are being used by the people in the states who are participating in this program.

## **Discussion Points**

**Dr. Jenkins** noted that the panel made a number of recommendations for modifications to the logic model. This is currently being addressed to more accurately reflect some of the activities in which DVP engages. She invited additional feedback on the logic model.

**Dr. Heinemann** commented that he was trying to comprehend the major components, working backwards from the ultimate outcome. Certainly, implementing NVDRS in 18 states is better than 0 states, although it is not as good as 50 states plus the territories. He seconded the feedback that the current system is very valuable and at least informs policy in 18 states. The important issue to address is how to bring on board the remaining states and territories.

**Dr. Fowler** thought that the data themselves from the different sources needed to be an input. It is wonderful that NVDRS includes quality and integration; however, this is a problem and opportunity for DVP. There are many death investigation jurisdictions in this country, there is no standard of practice, and there is no standard quality. Some places in this country do not have a medical examiner, and some have a coroner system. Some states have requirements one has to be 18 or have finished high school to be a coroner, so the quality of the death investigation data is not guaranteed. That may be the greatest barrier to replicating the system in 50 states. If they do not have excellent death investigation data in a state, then one of the key inputs is compromised. That is the bad news. The good news is that there is a major federal inquiry currently underway pertaining to death investigation in this country. There is some discussion about whether there should be an elimination of the coroner system and institution of the medically trained medical examiner system. A federal advisory panel is working in Washington, DC to assess this issue. National Public Television recently aired an exposé on the issue of death investigation. This is a major opportunity for which the stars are aligning.

**Dr. Jenkins** agreed that the stars were aligning in terms of death investigations, indicating that they had tried to be engaged in that conversation. However, thus far their involvement has only been at the edges. They should be much more integrally involved.

**Dr. Fowler** suggested reaching out to the National Association of Medical Examiners (NAME). She noted that they could speak off line.

**Dr. Jenkins** replied that NAME is one of their long-standing partners in conducting NVDRS. Dr. Deb Karch, the Lead Scientist for this project attended the NAME meeting last year and participated in an NIJ-sponsored panel about death investigation methods in June 2010. Dr. Jenkins agreed that they could be much more involved.

With Dr. Frieden's strong interest in CDC data for policy, **Dr. Stout** stated this could be a data for policy issue that he should be aware of.

**Dr. Bangdiwala** said he thought this was an excellent system. In terms of outputs and the fact that states are using or requesting this, he wondered whether there was a sense of whether those conducting research at the state or community levels were requesting it. He had the feeling that

it was a very large database that would be relatively difficult to handle by someone who does not have significant experience handling large databases. The possibility of user-friendly reports that are available on a automatic basis, that are provided to communities or to policy makers at the state level, that show the benefit of this information is a way to get the other states on board.

**Dr. Jenkins** responded that who requests data varies from state to state. In some states, it is probably the epidemiologist or someone who is on the NVDRS program staff who is reaching out to others (e.g., local / state health departments, local organizations) when they identify a problem. For example, NVDRS staff in Oregon noticed a major problem when they reviewed their suicide data. They had been targeting teen suicide, but found that they had a much larger problem among their older adults. Moreover, they found in the NVDRS data that many of the older adults who committed suicide had seen a health care provider in the previous 30 days. They were able to partner with healthcare and other professional associations in the state to launch an educational initiative in the state to encourage primary care physicians to ask their older patients about suicidal ideation so they could do a better job of screening older adults for these types of thoughts and behaviors.

**Dr. Tate** thought this was a very interesting report and that it spoke to the importance of this program. She seconded the recommendations to try to make this a national approach rather than having it in only 18 states. Given the number of events recently with firearms, she wondered whether there was an initiative for surveillance of mental health issues in the population.

**Dr. Jenkins** replied that for their suicide cases, they ask whether there was a diagnosed mental health problem, whether the individual was currently receiving mental health treatment, and any other indications in records or reports by the family members that the decedent was currently experiencing a depressed mood.

**Dr. Heinemann** thought the web-based data collection structure would go a long way toward reducing barriers.

**Dr. Li** inquired as to whether there were any plans to develop an RFA or funding opportunities for research communities to take advantage of this dataset and explore its potential.

Given the current budget situation, **Dr. Jenkins** did not anticipate any such efforts in the immediate future. However, the panel deliberated how to make funding available specifically for people to analyze these data.

**Dr. Redfern** emphasized that those who are working on NVDRS at CDC are doing a great job. While there has been a focus on the immediate problems at hand (e.g., how to obtain information, integrate information, build a great database, et cetera) limited thought has been given to the higher level questions (e.g., strategies to move forward, strategic planning, implementation, et cetera).

**Dr. Jenkins** emphasized that all the recommendations were extremely useful for staff in terms of thinking about how to address the bigger picture of having a national system within the next decade.

**Dr. Fowler** inquired as to whether there was any evidence about the extent to which implementing an NVDRS project in a state facilitates relationships and communications with key partners within that state.

**Dr. Jenkins** responded that the feedback they received from their states was that it had been beneficial toward such efforts. Those who conduct NVDRS in the state health departments had typically not worked routinely with their coroner, medical examiner, or law enforcement in their states. Certainly, the existence of the system has forged new partnerships at the state level that did not exist previously.

**Dr. Grossman** stressed that the states are using the data, and many of them are using the data to support policy-related initiatives. He did not, however, hear any discussion about how CDC uses the data or whether those data are being made available to the public.

**Dr. Jenkins** replied that CDC uses the data extensively to inform its activities in youth violence prevention, child maltreatment activities, suicide prevention activities, et cetera. In terms of the data being used publically, there are routes of access. The first is through the RAD, which can be requested by researchers. CDC will give researchers any number of the 200 variables that they believe are related to a specific research question, and will allow investigators to analyze those data for a research project. Separately, there is the web-based system that has simplified the data. Obviously, all 200 variables are not accessible in the web-based system. They have been highly simplified to a user-friendly format. By clicking a few radio buttons to make the selections of the kinds of cases of interest, the web-based system generates data tables.

**Dr. Grossman** asked whether they had any sense of how often the web-based system is being used for queries as opposed to the RAD route.

**Dr. Jenkins** responded that they track the number of hits to the web-based system. While she did not have that number readily available, it is included in the full report. They can provide this information if it is of interest to BSC members. The number of hits can be further broken down with respect to whether they are requesting suicide information or homicide information.

**Dr. Hammond** related an interesting story that occurred this year by way of an interagency request from the Department of Education to acquire information from the NVDRS dataset to help them address a problem of suicide related bullying. The concern that the experience of bullying in schools is contributing to suicides is a major national issue. This is escalating in public policy even though they know full well that the dataset is not national. When NCIPC shared some of their work, analyses, and details available in the NVDRS dataset about these types of incidents and the context for these deaths, it was very illuminating. The Department of Education has also asked them to evaluate the data in a qualitative sense to better understand the characteristics of these issues. This system has vast potential at the federal level in terms of the way CDC is perceived as adding value to national policy issues.

**Dr. Jenkins** added that they are assessing all suicides among children 10 to 17 years of age. The coded data will allow them to get to the level of granularity of an identified school problem; however, the incident narratives allow them to delve further into that to identify which incidents are bullying-related as opposed to grades, suspensions, or other issues. They are currently engaged in a process of reading all of the narratives for suicides among children 10 to 17 so that they can paint a more comprehensive picture about suicide in this population.

**Dr. Fowler** asked whether they were also picking up on suspected suicides labeled as being undetermined.

**Dr. Jenkins** responded that they do collect undetermined cases and have noticed that this varies in states depending upon who the chief medical examiner is and what the decision rules are about suicides.

**Dr. Bangdiwala** asked whether there were any plans by the director to go global with this system.

**Dr. Jenkins** indicated that there are no specific plans for CDC to go global with this system; however, she and Dr. Karch participated in an International Observatory on Crime in October 2010. They are very interested in using an NVDRS-like method for those types of activities, so they are trying to supply their methods. They do provide the software for data collection to anyone who wants it, regardless of whether they represent a funded state.

**Dr. Redfern** requested input about the cost of expansion.

**Dr. Jenkins** replied that it is not linear. Cost is really driven by the number of violent deaths. Obviously for a state like California to collect all violent deaths is orders of magnitude different than a smaller state like South Carolina or Utah where there are smaller populations and smaller numbers of violent deaths. To bring the large states on, of which there are currently not very many, will require much more funding than is currently available.

**Dr. Linares** wondered how many of the 200 variables in the database refer to the use of firearms and contextual information regarding where a firearm was purchased, how, et cetera.

**Dr. Jenkins** responded that she did not know the exact number, but there is a series of questions about firearms. Some states work with the Bureau of Alcohol, Tobacco, and Firearms (ATF) to obtain trace information so that they have more specific information, but that is not universally done by all of the states.

**Ms. Espitia-Hardeman** reported that there are many observatories already established in Latin America in the parent countries, especially in Columbia. That observatory is similar to the method use in NVDRS. Some were established many years ago, she thought before NVDRS was started. Perhaps the difference with NVDRS was that the observatories were established with support of local authorities, so they are using the data to develop some interventions. That observatory is more on a local level, like in cities, versus a state or country.

**Dr. Jenkins** said they heard reports at the conference she and Dr. Karch attended from a number of observatories that have been in place for quite some time that are thinking in terms of expanding them. The notion of multiple-source data systems is not unique, certainly not to NVDRS. However, to have a comprehensive picture, data typically have to be triangulated from multiple sources.



## Overview

**Arlene Greenspan, DrPH, MS, MPH**  
**Senior Scientist, Motor Vehicle Injury Prevention Team**  
**National Center for Injury Prevention and Control**  
**Centers for Disease Control and Prevention**

**Dr. Greenspan** thought they needed to engage in a broader discussion about the portfolio reviews in terms of the BSC's role and the use of the reports. In addition, NCIPC wanted to close out the 4 of the portfolio reviews reported on during this meeting. She requested that they begin with a discussion of the portfolio reviews.

## Biomechanics Portfolio Discussion

**Dr. Redfern** emphasized that biomechanics provides fundamental research that leads to the next level in the public health model. However, fundamental research no longer seemed to be a priority for CDC. It seemed to have been downgraded in order to elevate short-term, high-impact implementation studies. He thought it was inferred that the biomechanics program would no longer be pursued. With that in mind, he raised two questions to think about: Do we want to fund fundamental research that part of the continuum of research to be funded? How are we going to decide whether to fund / not fund fundamental research?

**Dr. Tate** requested a definition for "fundamental research."

**Dr. Redfern** responded that CDC has a model with 4 boxes, the first of which is fundamental. This is mechanistic in terms of what is occurring in a specific domain. The next level is translational, and then it moves into higher level implementation studies to determine efficacy. The fourth is implementation.

Speaking from his own experience as an applied researcher, **Dr. Li** indicated that he was involved in falls prevention several years ago. He reminded everyone that they had seen the public health model repeatedly during BSC meetings. He believes there must be an equal portion of distribution, including basic fundamental research. He is interested in gait analysis and assesses this in terms of evaluating efficacy all the way through dissemination. It is important to consider the hierarchy from the bottom (basic) all the way to dissemination. The portfolio reviews pointed out the basic need to understand the underpinnings. In the case of biomechanics, this means human movements. Information about this has to be generated,

applied, evaluated, and disseminated. He is a major supporter of fundamental research in this regard.

**Dr. Greenspan** indicated that about 20 years ago, when the center was first founded, they started out with a lot of work in basic epidemiology and gradually moved toward the right side of the model. As the demands from the agency have increased to show impact in the very near-term, they have felt forced into the right side. Certainly, this is necessary in order to engage in translational activities. Conversely, they do not to lose the work on the left side. While they may assume that someone will pick it up, that may not occur. The questions are: How do we maintain balance considering the pressure on the right side that we have to produce impact? Is maintaining a balanced portfolio an area in which BSC members could have more outside influence?

**Dr. Redfern** thought they must take a broader look. For example, when they plan to address an issue such as falls, they should evaluate what is already being done in the field and who is funding it. Then they can better evaluate whether CDC should play a role. It seems that currently, the automobile industry is engaged in a lot of work pertaining to motor vehicles in terms of developing innovative solutions to certain problems. However, they are not going to pay for basic research to facilitate what they do best. Perhaps this is an area where CDC could have an indirect impact in reducing injuries by conducting the fundamental research the automobile industry needs to develop solutions.

**Dr. Bangdiwala** thought the “big picture” issue was to identify gaps in the state of the science. The gaps could be in the fundamental / mechanistic aspect, understanding human behavior in a mechanistic way, the social / psychological components, individual or population level, et cetera. Moving science forward is an area on which CDC could focus or leverage itself to encourage another agency to focus on this. CDC cannot do everything alone.

**Dr. Stout** suggested continuing to include this type of research in the extramural RFA process so that it is not lost. There is an opportunity if strong proposals in important areas are submitted by investigators.

**Dr. Li** noted that NIH publishes announcements that have a general focus, but at the same time focus on an FOA. He just submitted a grant to assess the social / contextual aim on people’s health. There was also an emphasis on mechanisms that can explain the relationship. This kind of focus can be naturally built into a grant announcement. In this case it was to evaluate the general relationship, as well as the underlying mechanisms.

**Dr. Heinemann** said he was really torn because this is a very important topical area in which there is a long, rich tradition of bioengineering work. Given the scarcity of resources and the importance of having a thematic focus, he was concerned that resources would be spread too thin. There is not going to be a critical mass of intramural or extramural activity in this area. It appeared that making this a focus would be at the expense of other priorities.

**Dr. Li** thought this spoke to a need for cost-benefit analyses.

Following up on what Dr. Bangdiwala said, **Dr. Fowler** agreed that much of the investment the automobile industry is making in safety is because of the basic science done at CDC and because of the careful medial work that was done that resulted in consumers demanding safety. In other words, it drove the change of the social norm. Perhaps consideration should be given to issues in injury that are at an inertia point because basic science (e.g., the science that drives policy and drives the private sector to action) is lacking. In that case, it might be more tempting to invest because the investment is being made to unlock the inertia.

**Dr. Grossman** noted that while the discussion began with a focus on whether and how to support biomechanics, it had mutated somewhat to focus on whether CDC should be supporting fundamental research. He agreed that painting such broad strokes may not be as useful as thinking about the key questions that need to be addressed. To pursue specific strategies or specific problems, the gaps to solving the problem must be identified. The gaps may be translational issues, fundamental technology issues, or basic understanding of mechanisms. He thought NCIPC could and should play an important role in supporting biomechanics. Perhaps this could be done through the MOU with Department of Transportation to assess how the two agencies can work together to support a joint biomechanics agenda focused on critical areas that need to be solved.

**Dr. Li** said that NIA and the American Osteopathic Association (AOA) has published an announcement focused on community dissemination.

**Dr. Fowler** asked if anyone could offer input on whether the National Institute on Aging (NIA) is engaged in any basic research, for example, in the area falls.

**Dr. Redfern** replied that they do not have any money currently. Their payline is at 2.5% at this point. They have fundamental research in the effects of aging on locomotion systems, but they have such a large portfolio they are able to study the full spectrum.

**Dr. Tate** thought their emphasis had also been on cognitive processes, dementia, and physical activity. Much of their portfolio is related to those issues.

**Dr. Fowler** thought that was what she was hearing in terms of the move to establish the MOU with NHTSA and CDC. She wondered if there should not be more discussion of additional strategic MOUs. If NIA is conducting work that has immediate relevancy to falls in the elderly and NCIPC / CDC is doing such work as well, it would be more strategic to use the MOU route rather than feeling responsible for fully funding it.

**Dr. Degutis** explained that one of the reasons for the MOU with NHTSA was that it is not an HHS agency. NIA and other centers within NIH are still HHS agencies. Dealing with MOUs in that setting differs. That said, efforts are being made to collaborate with those other groups. In terms of publishing a joint FOA, there are issues of much money each agency will contribute. Sometimes, NCIPC cannot contribute much because they do not have a large a budget. This makes it difficult to support investigator-initiated projects. NCIPC has three priority areas, so they believe that the research they support should focus in those areas. They do not want to give the sense that they want investigator-initiated proposals are outside of those areas. There have

also been discussions about funding mechanisms in terms of whether they should take a cooperative agreement approach versus an R01 approach. If there are gaps, it seems that there should be a cooperative agreement with someone who is going to address those gaps.

**Dr. Childress** indicated that this was her fifth year at NCIPC. She came from NIOSH where she spent five years in extramural research. She noticed at NCIPC that many of the grants reflected in the portfolio evaluations that span 20 or more years were large R01s. This is a major investment for a center that has limited resources. In some areas, such as poisoning, NCIPC has moved to R21s. Now that this is more focused, there have been discussions about having one R01 to move the research forward in an area that they can direct. She thought planning and use of various mechanisms would help in certain areas. She believes that NCIPC needs to focus its FOAs in particular areas and allocate their resources to specific topic areas, especially now. Consideration must also be given to how to foster all of the really good ideas there are. They can direct to a certain extent, but consideration should be given to a designated pool to push major impact areas further.

**Dr. Tate** was a member of the IOM panels that used a format of expert panels assessing a particular topic, such as falls in the elderly or locomotion in the elderly. Particular agencies would present on what they had found. This could serve as a model for NCIPC through which agreement could be reached and collaboration could be fostered.

**Dr. Degutis** indicated that DUIP had recently convened a falls expert panel to deliberate the status of the issue and determine what type of research needs to be conducted. The expense of an IOM-time panel is fairly high (several hundred thousand) and it is not clear what the yield is, though often the yield is little. For example, the 2006 report on the future of emergency care is basically being used as doorstops now because little has come out of it. Given the limited funding resources, it is not clear what the ideal mechanism is. She emphasized that Dr. Frieden was not saying they had to start “looking at the molecules in the cellar.” He was saying that they need to identify the problems and figure out how to move things forward. They should find out who is funding biomechanics. Sometimes the private sector and foundations invest in this area. For example, the Insurance Institute for Highway Safety conducts a lot of the testing that has led to improvements to decrease injuries. Consideration should be given to which federal partners, private sector groups, and foundations they might collaborate with.

**Dr. Stout** that there could some areas that are important to NCIPC that are not well-funded by other organizations or the private sector, like falls in the elderly. In terms of the public health model, perhaps each focus area must be assessed to determine its status.

**Dr. Fowler** noted that since the Advisory Committee for Injury Prevention and Control (ACIPC) was sunsetted and the BSC model was instituted, they lost all of their high level practice partners. There has been an on-going discussion about how to regain some of that expertise in order to better help NCIPC. She suggested convening a strategic task force comprised of private sector and practice partners for a specific topic area.

**Dr. Stout** suggested that careful consideration be given to how NCIPC planned to utilize the recommendations from the portfolio reviews. Some recommendations may or may not be within NCIPC's niche. Some pertain to short-term priorities and others pertain to long-term priorities. Some of the recommendations regard the development of specific strategies that can be disseminated to all stakeholders.

**Dr. Bangdiwala** inquired as to whether there were plans for on-going evaluation of the various portfolios or whether these were on-time reviews.

**Dr. Greenspan** thought they were mandated to conduct these review every five years. Recently, they were also instructed to conduct program reviews twice a year. They have to present to Dr. Frieden's office what recommendations have been made and what NCIPC has done or plans to do to address them. There is an impetuosity to use the recommendations to move forward.

Having chaired a number of these reviews, what struck **Dr. Redfern** how much "bang for the buck" NCIPC has achieved over the years. The center has made significant impact with a relatively small amount of money. This comes through clearly in these portfolio reviews. This is a major credit to NCIPC that should not be lost. Given the limited funding, NCIPC must select its targets more strategically. That is also evident in the portfolio reviews. This review process can be used to continually retarget the funds the center has.

**Dr. Li** suggested prioritizing the recommendations by adding low priority, medium priority, and high priority to each category.

**Dr. Bangdiwala's** understanding was that each portfolio review is independent of the others, so they could rank the recommendations within a particular portfolio, but not across portfolios.

With regard to "bang for the buck," **Dr. Degutis** noted that of the six Winnable Battles, the only one where there has been any progress has been motor vehicle safety. Despite being the smallest center, they are having the most success. That is also what they are hearing back from Dr. Frieden's office.

#### Motion

Dr. Stout moved that the biomechanics portfolio review be closed out. Dr. Redfern seconded the motion. The motion carried unanimously.

## **ICRC Portfolio Review Discussion**

**Dr. Childress** emphasized that she could only discuss broad strokes because the FOA was in draft form, and this was an open session. In drafting the next round for the ICRC program, NCIPC has received input from a number of places (e.g., the BSC, the portfolio review, internal stakeholders such as divisions, and the director). This has been very helpful in terms of better focusing the announcement. They have been sensitive to the idea of whether to allocate funding toward a large project or whether ICRCs should serve as incubators for innovative research and to address emerging issues. In the past, the ICRCs have been given a broad leeway to identify and develop their own programs. Clearly, they need to think about priority areas (Winnable Battles, emerging issues, et cetera). The ICRCs have been successful in moving in and out of those areas, and they were pushed in the last round of funding to think more about the right side of the public health model. NCIPC is also sensitive to the need to work with state, local, tribal, and territorial public health departments. The ICRCs have a history doing this, some more than others. Some by their own initiative have move in that direction. More outreach is key, especially in relation to Dr. Frieden's initiatives. The ICRCs have also been successful in educating the next generation, which continues to be of interest to NCIPC. The portfolio review identified the need to capture all of the good work ICRCs they do (publications, training, products, et cetera). The global focus has also been identified as an important area for the future. NCIPC recently completed its Academic Centers of Excellence (ACE) peer review, and anticipates conducting a secondary review at the end of March or beginning of April 2011. She also invited BSC members to submit names of potential reviewers.

**Dr. Fowler** remembered something in the ICRC review about the difficulty in measuring the impact of ICRCs on policy and facilitating community- and / or state-level activities. She wondered if there were plans to develop metrics to assess ICRCs relationships, connections, political power, et cetera.

**Dr. Childress** responded that they are using the metrics from SAVIR to acquire some of that information. For established centers (funded or not), the FOA will require a description of their accomplishments / impact. New centers will be required to provide that information as well. An evaluative component will be included this year to assess issues of partnerships, community involvement, policy changes, et cetera. The reporting section has also been enhanced, which should result in obtaining more information to evaluate programs.

**Dr Bangdiwala** requested clarity regarding whether ICRC were permitted to engage in advocacy, given that they are situated on university campuses and are considered to be public employees.

**Dr. Degutis** replied that a 501(c)(3) permits a certain percentage of time to be spent conducting advocacy work, depending upon who is funding it. Advocacy cannot be done with federal funding.

**Dr. Fowler** indicated that in her center, two of the faculty members have been conducting policy and impact analyses for legislators. They are not testifying, but they are using their academic skills to inform policy decision-making. She wondered how they might capture that type of effort.

**Dr. Childress** noted that there have always been advisory groups, and there has been clearer guidance about who should be partners on those groups. That may address some of the advocacy issues.

### Motion

Dr. Heinemann moved that the ICRC portfolio review be closed out. Dr. Li seconded the motion. The motion carried unanimously.

### Motor Vehicle Portfolio Review Discussion

**Dr. Bangdiwala** pointed out that much of the work that has been done in motor vehicle injury prevention in the US has related primarily to protecting automobile occupants. The new emphasis globally is not on the car occupants, it is on the vulnerable road user. He wondered whether there had been any consideration about how to address both issues.

**Dr. Ballesteros** responded that until recently, the global and domestic of DUIP in terms of road safety has been somewhat separated. Some of the current DUIP global activities relate to motorcycle riders versus car occupants, specifically in Uganda and Cambodia. The new CGH is to support a project related to helmet use among motorcycle riders. In Uganda and Cambodia, that is a major issue. There are also legislative issues regarding law changes to require helmets.

**Dr. Greenspan** added that also being addressed in many developing countries is improvement of surveillance efforts, given that data gathering capabilities are poor. It is important to understand needs there as well.

**Dr. Tate** inquired as to whether any of this work was being coordinated with WHO.

**Dr. Greenspan** replied that NCIPC has five-year cooperative agreement with WHO, which will soon end but is expected to be renewed.

**Dr. Degutis** clarified that WHO is not necessarily involved in all of the activities. Some initiatives are implemented by CDC, perhaps in conjunction with the government or ministry in a particular area. She emphasized the importance of the data issue. The previous week when they were in India, every time someone reported on the number of traffic fatalities, a different number was stated. Sometimes the numbers were drastically different. This makes it difficult to clearly understand the magnitude of the problem.

**Dr. Greenspan** indicated that CDC has a presence in many countries. She thought NCIPC's work with CGH would give them entrée into some of those countries. With the emphasis on

non-communicable diseases, NCCDPHP has been engaged in a considerable amount of work abroad. NCIPC is trying to work with other mechanisms within CDC such as that as well. While this is great for visibility, they have a long way to go toward being more visible in terms of non-communicable diseases.

**Dr. Fowler** asked whether the Motor Vehicle Team was engaged in the on-going work in the country on Safe and Healthy Communities.

**Dr. Ballesteros** replied that they are involved along the edges. There is a workgroup in NCEH that is engaged in built environment work. This group is comprised of representatives from NCEH, NCIPC, and NCCDPHP. To his knowledge, NCIPC representatives have been involved in most of the NCEH discussions regarding that work, and they have agreed to be part of some proposals together.

**Dr. Bangdiwala** pointed out that they could win two Winnable Battles simultaneously by promoting healthier lifestyles. With the focus on the built environment, they can get people out of their vehicles to walk and use other modes of transportation. That should result in less motor vehicle accidents and healthier lifestyles.

#### Motion

Dr. Bangdiwala moved that the motor vehicle portfolio review be closed out. Dr. Tate seconded the motion. The motion carried unanimously.

#### NVDRS Portfolio Review Discussion

**Dr. Fowler** inquired as to whether Dr. Redfern was comfortable closing out the NVDRS portfolio review.

**Dr. Redfern** said he would be comfortable if they could close it out for NCIPC purposes, but also allow everyone on the committee to read / comment on the final report even if it was closed out.

Based on a discussion with Dr. Degutis, **Dr. Fowler** proposed setting a time-limit for reading and approving the NVDRS portfolio review.

**Dr. Redfern** thought a month would be sufficient. If they could vote via email or teleconference, he said he would feel more comfortable if everyone had an opportunity to review the report.

**Dr. Dahlberg** indicated that NCIPC could share the report with the BSC members, but they must adhere to the "Do Not Disseminate" instruction on the report and not share it outside the BSC. Once the process is complete, they certainly want to prepare communication materials to inform

the states that participate in NVDRS about the findings. However, they would prefer that the states learn about it through those materials rather than inadvertently.

**Dr. Greenspan** clarified that typically, they have not sent out the full report, with exception of the ICRC and biomechanics reports. Typically, the full reports have been used only for internal purposes. She inquired as to whether any of the division staff objected to dissemination of the full report to the BSC members. Based on discussions at some meetings, she just wanted to reflect that there has been some hesitation about sharing the full report.

**Dr. Fowler** acknowledged the need for discretion and confidentiality, but stressed that the BSC is NCIPC's advisory committee, and that they sign their lives away when they agree to serve on the committee—that includes confidentiality. In order to better serve NCIPC, she thought they should review the full report.

**Dr. Stout** suggested using SharePoint; however, **Dr. Cattledge** reported that this capability is not yet available to NCIPC. The centers are being phased in.

**Dr. Ballesteros** indicated that part of the hesitation about sharing the full report was that some of the documents released to the BSC may become public. **Dr. Fowler** suggested disclosing the document as part of a closed session, and **Dr. Greenspan** indicated that she would check this internally and report back to the BSC members.

**Dr. Stout** requested clarity about whether this is a BSC or NCIPC report and who the external peers were.

**Dr. Greenspan** replied that it is an NCIPC report, and that some BSC members have been on external panels.

It was not clear to **Dr. Stout** how the BSC could endorse something they could not see, and **Dr. Redfern** asked for clarity about whether they were endorsing the report or the recommendations.

**Dr. Greenspan** replied that they would be endorsing the recommendations at this point. She agreed that if they could not see the report, they could not endorse it.

**Dr. Dahlberg** said that these reports were intended to provide NCIPC with information to improve its programs. The BSC is one of the bodies which can provide input / guidance to the center. Just as there is confidentiality associated with the secondary review processes for NCIPCs FOAs and they know that the BSC members can maintain that confidentiality, the same should be true of the portfolio reviews. She thought to facilitate this process and reduce anxiety about making the report available for BSC members to review, they would be fine with sharing the full report with the caveat that BSC members hold it in their confidence.

**Dr. Fowler** noted that Dr. Cattledge suggested including a confidentiality form with the document to deal with this issue.

**Ms. Yee** suggested sending a hard copy of the ICRC report to each BSC member, along with a confidentiality form.

### **Motion**

Dr. Bangdiwala moved that within 30 days, BSC members will review and vote on the NVDRS report. Dr. Eastman seconded the motion. The motion carried unanimously.

### **Cross-Cutting Portfolio Issues Discussion**

**Dr. Greenspan** indicated that there were a number of issues that cross-cut through most of the portfolio reviews.

**Dr. Fowler** noted that developing appropriate metrics to be used during reviews and priority setting of recommendations were two issues that had arisen several times during their deliberations.

**Ms. Yee** reminded everyone that they have a modestly funded project with SAVIR that she has been working on since she returned from her detail in September 2010. Essentially, SAVIR has taken the lead to work with CDC-funded and non-CDC-funded injury centers, and to discuss with other types of research centers how they handle performance measurement and monitoring, what they use that information for, and what systems they have in place. At this time, SAVIR is working on dissemination of a Delphi survey to these various groups. There is a long list of about 100 metrics at this time that must be narrowed down to a more manageable number by identifying what is most important and what is feasible. The next step will be to talk to those in CDC programs who have backgrounds in monitoring and evaluation to gain further feedback about what metrics are important / feasible. They want to be realistic given the modest budget of the center.

**Dr. Fowler** asked whether the metrics cross research practice, education, and policy. She also wondered whether she understood correctly that SAVIR would convene focus groups during the conference, and whether only researchers would be included in the focus groups.

**Ms. Yee** responded that practice, education, and policy were among the topics of the metrics. SAVIR will be organizing the focus groups, though she was not certain who would be included.

**Dr. Fowler** thought it would be useful to convene separate focus groups for research metrics, policy metrics, and practice metrics since there would be a mix of stakeholders present at this joint meeting. She wondered how long they would walk parallel to one another before hooking up.

**Ms. Yee** indicated that the Core Team has hired an evaluator and now has an evaluation team within that program to begin considering what type of metrics and progress reports would result

in the best quality and most useful data. They will be attending the conference. Ms. Yee will speak with Carol Runyon, the principal investigator from SAVIR, to offer Dr. Fowler's suggestions.

**Dr. Fowler** thought Dr. Runyon would be very receptive to that. Related to metrics, there was some discussion about how to prioritize the recommendations. The term non-significant impact arose, but they also discussed gaps, opportunities to close gaps, opportunities to respond when the time is right, et cetera. The BSC needs to think about the decision criteria they would like to have considered when people review the recommendations. Some of the criteria will pertain to how pressing the recommendations are, the magnitude of the problems, feasibility to act, political will to act, et cetera. The question she was raising regarded whether BSC as a team should develop a set of criteria they could use.

It seemed to **Dr. Redfern** that the BSC as a body is intended to serve NCIPC, so it would be up to the center to request that the BSC do this if it is in the center's best interest. NCIPC has to decide how they want to use the BSC as a committee in the most effective way.

**Dr. Degutis** agreed, but pointed out that this would differ depending upon the program being reviewed. There will be different needs for prioritizing recommendations. It will not be "one size fits all."

**Dr. Bangdiwala** asked for clarity regarding whether they were talking about prioritizing across the different portfolios or within a portfolio.

**Dr. Greenspan** thought that it was within a portfolio. She thought they needed to treat each portfolio review separately. However, within each there is usually a laundry list of recommendations. Each may be a very good, but sometimes they may need feedback about how to prioritize those recommendations.

**Dr. Degutis** added that sometimes, specific recommendations may stand out to the BSC as being more important than the others.

**Dr. Fowler** noted that there were also issues that arose across the portfolios that were not about the topic per se: infrastructure, the ability to turn information into readily digestible communications to the public, the ability to use what is learned to inform debate or create accessible training materials, insufficient funding, et cetera. The three centers seem to have some shared limitations / frustrations that are more general. Others agreed. Dr. Fowler said she would like to hear more from the BSC members about the issue of communication with each other, between NCIPC and the BSC, to the field, to the public, et cetera. She posed the question: How is NCIPC perceived by people on the outside?

**Dr. Heinemann** said he thought too few people knew about NCIPC. It is a hidden jewel that should have much more light shone on it. In terms of information exchange, they can use a website to post information. However, the ability to dialogue is a listserv activity that can be moderated or un-moderated.

**Dr. Stout** stressed that it did not stop with communications and getting the right communications materials in people's hands. Also important is how to facilitate implementation, ownership, technology transfer, et cetera. NIOSH has a good model for this. The most impact is probably coming from the states because they are reaching out to NCIPC and the ICRCs.

**Dr. Degutis** reported that NCIPC has been engaged in social media efforts. For example, they now have three Facebook and a Veto Violence page that is being used to encourage people to think more about violence prevention. She also pointed out that there are many challenges to communications. Core States and ICRCs are not given a lot of funding compared to what they are required to do, and they are often over-extended. State injury programs are often hidden gems that even the Health Commissioner does not know exist. In addition, they often have small staffs making it difficult to mobilize and / or build partnerships.

**Dr. Greenspan** said that in her work on the Motor Vehicle Team, she has spent a lot of time in the past few years building state coalitions and mobilizing public health and transportation and non-governmental partners with respect to graduated drivers licensing. She has helped them to create / disseminate the data, garner media attention, et cetera. This has required a lot of effort and a lot of technical assistance.

**Dr. Stout** emphasized that the only way to move forward, regardless of how difficult, was going to be by demonstrating success.

**Dr. Greenspan** indicated that the Director of the Office for State, Tribal, Local and Territorial Support (OSTLTS), Dr. Judith Monroe, was formerly the Health Commissioner in Indiana. Her office is instrumental in getting information out to tribes and state, local, and territorial health departments. For example, she has created an orientation program for new health officers because there are 26 new ones this year. This includes specific fact sheets about their states, including information about injury. She is involved in the Vital Signs effort, and sending out a communication every Friday via listserv called "Did You Know?" which includes three facts related to Vital Signs topics. This is gaining additional visibility for NCIPC.

**Dr. Hunt** indicated that prior to being recruited to CDC, he often heard the observation that many federal documents are published that have no relevance. After coming to CDC, he tried to be responsive to that observation. In their field triage work, they have tried to be very responsive to Dr. MacKenzie's study showing the 25% decrease in deaths if severely injured individuals are treated in Level 1 trauma centers. DIR published an *MMWR* in 2009 and distributed just under 300,000 materials throughout the country. There are a million EMTs, and it was like they had C130s National Guard planes dropping materials across the nation. They convened a stakeholder meeting about a year ago to discuss challenges and successes in getting patients to the right place and whether this is being moved forward as an implementation. The partners, without question, uniformly said that DIR must get on the ground and talk about what has been done with this

science versus dropping materials out of planes with no dialogue. It is not the science alone that is going to be the call to action—it is the dialogue around it that will entice people to implement this. It is not enough to develop guidelines and disseminate them. It takes a lot of time and energy to disseminate the science and dialogue about it, but the time investment in translation actually results in saving lives.

**Dr. Greenspan** requested input about what NCIPC could do to facilitate communication so that science is translated.

**Dr. Heinemann** noted that the brain injury model systems and the spinal cord injury model systems funding from the National Institute on Disability and Rehabilitation Research are required to engage in knowledge translation in multi-formats. They cull information from other grantees and develop patient fact sheets, media releases, et cetera on a wide variety of topics.

**Dr. Linares** agreed that there are no shortcuts. Translation requires translators who speak part of two languages. In science, that means someone who understands the science and the field / providers. Messages must be tailored in such a way as to be heard. More bilingual science individuals are needed who can cross those worlds. Social sciences have failed tremendously in adopting product to new settings.

**Dr. Bangdiwala** suggested that they ought to be multi-lingual because there are many aspects: the science, the translation, the cost-benefit, and the dissemination.

**Dr. Fowler** asked whether NCIPC felt there was one small issue they could perhaps consider to be a demonstration project to determine how to get to this level of intensity in terms of communications.

**Dr. Degutis** replied that this is already being done with motor vehicle safety. Multiple strategies are being used (e.g., policy impact briefs, state coalitions, partnership development, et cetera). She was not sure that they could approach any other issue with that level of intensity at this time.

**Dr. Stout** suggested strong consideration of the translation component as they consider how to move forward on the recommendations from the portfolio reviews.

**Dr. Redfern** indicated that his school struggles with how to disseminate information / materials as well. They now develop a goal and a metric for each dissemination effort. The dissemination goals and metrics differ depending upon what they wish to accomplish.

**Dr. Tate** suggested incorporating a requirement in RFAs to address translation.

**Dr. Degutis** responded that they have assessed other RFAs that include disseminate language to determine what they might be able to incorporate. Dr. Childress has been working on this, and NCIPC recognizes that unless this is required at the outset, it will not necessarily be done.

**Dr. Mercy** emphasized that people on the outside do not know about NCIPC or its work. The BSC probably does not even know about some of the center's most exciting work. There is simply not enough time to convey this, which is a tremendous challenge. They have to let people know about the good work they do. He suggested perhaps convening themed BSC meeting to focus on just this issue. Perhaps some outside experts who are on the cutting edge of this type of work could be invited to help them think through how to better approach this issue.

**Dr. Redfern** asked whether NCIPC uses branding and marketing experts.

**Dr. Degutis** responded that they do, but this has pluses and minuses. She agreed about people on the outside not knowing NCIPC or its work, yet great things are happening.

**Dr. Bangdiwala** pointed out that an ultimate goal / objective should be to position CDC and NCIPC as the authoritative sources people go to when they need information. Consideration should be give to what steps must be taken to reach such a goal. The first thing most people do is go to Google. If someone types in "how to keep kids in my neighborhood from getting run over by cars," all of the results from the great research that has been done and CDC should show up. Media people know how to make this happen.

**Dr. Degutis** indicated that the people who work on the website have been doing some of that work to get them to the top of some of the lists when Google queries are made.

**Dr. Rita Noonan** indicated that she does a lot of work in translation. While she agreed that there are numerous modalities for communicating, a more important piece of what is known from implementation science is about building the infrastructure. There are workforce issues, training structures issues, motivational issues, et cetera. They Google all they want, but knowledge is not sufficient to change behavior. The basics are really about a lot of hard work, infrastructure building, and training.

**Dr. Stout** felt that they were intermingling two concepts. One is NCIPC recognition, reputation, how they are viewed, and how they are buried. The second is the issue of translation, transfer, implementation of results. Her division requires a plan for how to take the results of a project to the next level (e.g., name the recipient(s) of the results, name who is standing by willing and ready and excited about using the results, et cetera). It is not always successful, but the thought process forces people to engage partners in the research process and protocols. They prefer to obtain letters of agreement. This is something to think about at the conceptual phase of research.

**Dr. Noonan** said that the Canadian Institutes of Health does that. They have a knowledge transfer process that is very well-articulated. She thought this would be a good model.

Regarding the role that NCIPC can play, **Dr. Li** indicated that he is a grantee of one of the NIH agencies. NIH conducts a monthly webinar on the built environment for which they include transportation, urban planning, real estate, research, and other representatives. This is a very rapid means by which to disseminate information quickly. He is also an NCIPC grantee. NCIPC is planning to put all of the evidence-based program on-line. That includes technical support, material support, et cetera.

**Ms. Yee** reported that recently a CDC-wide meeting was convened with representatives from across CDC centers and divisions, where each had an opportunity to share information about their projects that address implementation of knowledge to practice and evaluating those types of efforts. They got a lot out of this and hope that there will be more meetings such as this in the future. There was an interest among this group to try to meet quarterly to address implementation science, and perhaps to have some working groups to move this forward.

**Dr. Noonan** added that these conversations are so stimulating, and they do not have them enough. There are really nice frameworks for this, once of which was developed in DVP that is the interactive systems framework. She said she would be happy to serve as a resource to provide further information about this.

**Dr. Fowler** said she was highly impressed with the systematic work NCIPC has done in motor vehicles. Thinking back to the early days of the Injury Center, there was very much an “us versus them” feel about it. The practitioners she knows felt marginalized. The level of engagement that NCIPC has with SSA and practitioners is really extraordinary. However, she was not sure that anyone outside that vibrant set of relationships knew about it. She wondered what efforts were being undertaken to document this exemplary effort. How did they do it? How did they get buy-in from the agency? How did they fund it? How did they get buy in from the partners?

**Dr. Greenspan** responded that the project includes an evaluator, so they are conducting process evaluation and capturing outcomes. They are now at the point of discussing dissemination. In fact, the principal investigator on this project is going to be presenting during the SAVIR / SSA meeting. They are strategizing about how to get the message out about the policy component and the process so that it can inform others. Much of the focus pertains to the process of building coalitions, obtaining buy-in from various partners, how to move forward in terms of policy, and lessons learned. One of the states (Iowa) where they are hoping the legislation will pass this year has an ICRC that has been involved in this process. She emphasized that CDC does not engage in direct lobbying.

### Public Comment Period

No public comments were offered during this NCIPC BSC meeting.

**February 25, 2011**

### **Opening Remarks**

**Carolyn Cumpsty Fowler, PhD**  
**Chairperson, Board of Scientific Counselors**  
**Assistant Professor and Evaluation Coordinator, Johns Hopkins School of Nursing**  
**Joint Appointed, Department of Health Policy and Management, Bloomberg SPH**

Dr. Fowler called the second day of the 5<sup>th</sup> meeting of the NCIPC BSC to order at 8:42 am, welcoming those in attendance. She indicated that a few of the members were joining them via teleconference, and encouraged those on the telephone to feel free to offer input or ask questions whenever they wished.

To update everyone on what occurred following adjournment of the meeting the previous day, Dr. Fowler reported that she, Dr. Degutis, and Dr. Greenspan met to discuss how the NCIPC BSC could best use its time the second day. They decided that there were several topics they would like addressed, including the following: 1) An update on what is currently occurring within NCIPC. Dr. Degutis offered to present a brief update pertaining to what has transpired since she became NCIPC's Director, as well as what key issues / interests have been identified; 2) A brief update from the Associate Directors of Science (ADSs) for each of the divisions to report briefly on division activities so that the NCIPC BSC membership would have a better understanding of the work of NCIPC; 3) A discussion regarding what NCIPC BSC should be reviewing, and how portfolios could be better designed and utilized; and 4) A discussion of communications in general and with the NCIPC BSC.

### **NCIPC Updates**

#### **NCIPC Director**

**Linda C. Degutis, DrPH, MSN**  
**Director, National Center for Injury Prevention and Control**  
**Centers for Disease Control and Prevention**

Dr. Degutis reported that during the leadership retreat several weeks previously, the leadership team members discussed the priorities for NCIPC (e.g., child maltreatment, falls, and motor vehicle safety). Two other issues rose to the top of the discussion, the first of which was childhood injury prevention. NCIPC has an expert workgroup, led by the Division of Unintentional Injury Prevention (DUIP), that has been developing an agenda focused on unintentional childhood injury prevention. They convened a meeting in August 2010 and have been writing a document for this initiative. They will likely convene their steering group to finalize this document and move this major effort forward. A final product is projected to be completed in the Spring or early Summer of 2011.

One of the initiatives of Division of Violence Prevention (DVP) is called Striving To Reduce Youth Violence Everywhere (STRYVE). STRYVE is a national initiative to prevent youth violence before it starts, which seeks to increase awareness that youth violence can and should be prevented and to promote the use of prevention strategies based on the best available evidence. A large partnership meeting is planned for March 16-17, 2011. The World Health Organization (WHO) injury group will also be visiting NCIPC, and the Division of Injury Response (DIR) is involved in one of their projects in a meeting in New York. The Surgeon General has expressed an interest in youth violence. Initially the thought was to write a report, but NCIPC continues to work with the Surgeon General's office to determine what product would have the most impact.

An agency-wide focus has been the development of partnerships and how partnerships are / can be used to support CDC's work and to move things forward in terms of dissemination of information about CDC's strengths and capabilities. There has been significant focus in Dr. Frieden's office regarding how to develop effective partnerships, not only with other federal agencies, but also with external partners who can talk to policy makers and the private sector to help CDC gain entrée to various places. For example, Coke was involved in the trip to India because they have an interest in doing something about their fleet. Coke has some operations in India and traffic safety is an issue for their employees. CDC has also been doing some work with the NFL on traumatic brain injury (TBI).

Cross-divisional work is also critical for NCIPC, and they would like to determine how this can be fostered better. An employee survey revealed that people do not always know what other divisions are working on, or even what everyone in their own division is working on. Thus, Dr. Degutis began convening an informal coffee and open discussion once a month. The previous week, half of the people in the room did not know half of the others in the room. Even though they all work in the same center, this was the first opportunity they had to interact with one another. In terms of communication, NCIPC probably has one of the better websites and communication initiatives within CDC, but there remains a lot of work to be done to make it more useful.

### **Division of Violence Prevention**

**Linda Dahlberg, PhD**  
**Division of Violence Prevention**  
**National Center for Injury Prevention and Control**  
**Centers for Disease Control and Prevention**

Dr. Dahlberg stressed that because DVP is engaged in so many activities, it was difficult for her to decide which to discuss. DVP is the largest within NCIPC, with a budget of approximately \$91 million and priority areas of child maltreatment, youth violence, intimate partner violence, sexual violence, and suicidal behavior. For each of those priority areas, DVP has an emphasis on primary prevention. Rather than focusing on victims, which is secondary / tertiary prevention, DVP focuses on perpetration. DVP follows the public health approach for all violence topics, and is at very different stages within each of those topics. There is an evidence base regarding what works in the areas of youth violence and child maltreatment. DVP's goal over the last

couple of years has been attempting to roll out the evidence base and get it adopted. This is where DVP faces the greatest challenge and struggle because there is not a prevention infrastructure with a skilled work force clearly established for these areas. DVP has also not traditionally worked closely with health departments, so they have increasingly been trying to work with health departments to build their capacities in these areas.

In the area of child maltreatment, one of DVP's large initiatives is the Public Health Leadership Initiative to work with state health departments. Through this initiative, DVP is developing capacity-related tools with a program titled "Essentials for Childhood." They are trying to steer state health departments in the direction of some of the evidence-based strategies in child maltreatment prevention, while simultaneously continuing to build that evidence base.

In the area of youth violence, there is a stronger evidence base. Many of the programs are individual-, family-, school-based types of programs. DVP wants to ensure that this evidence-base is adapted and adopted in communities. As mentioned by Dr. Degutis, STRYVE is DVP's national youth violence initiative that's goal is to encourage everyone to adopt the evidence base. There are a number of aspects of this initiative. There will be some pilot implementation sites, and DVP has been developing "STRYVE Online," which is an on-line resource tool with community workspaces so that communities can share with one another. There will be resources to help communities think through adoption / implementation of evidence-based programs. This work is supported in a variety of ways. For example, there is an Action Council and a Partnership Network.

Teen dating violence is a recent focus area for DVP. Unlike youth violence, there are not as many evidence-based programs. One program that does exist in the field, which is the result of DVP's cooperative agreement funding in 1993 that progressed through support with R01 funding, is the Safe Dates Program. While this program was tested in more rural communities, DVP would like to institute efforts in urban communities. One of DVP's initiatives is to adapt that program for urban communities and to evaluate it in this setting. There are some major gaps in the area of intimate partner and sexual violence. The bulk of DVP's budget is allocated to support its rape prevention education program, which is being implemented in all 50 states in the US and its territories. There are not a lot of effective interventions in this area to roll out; therefore, DVP has been working with these grantees to build prevention infrastructure such that when there are interventions available, they can be delivered efficiently. The lessons learned from this effort are helping DVP to work with communities where there is an evidence base. Some basic core-capacity elements have been identified, which DVP has been thinking through.

There are major gaps in the area of suicide prevention in terms of primary prevention. DVP recently engaged in a strategic direction process for each of its areas. In the area of suicide, DVP wants to promote the notion of social connectedness and recently funded two rigorous evaluation trials to build an evidence base, one of which targets the younger adolescent / young adult population and one that is targeted to older adults.

The takeaway message is that DVP is working diligently to ensure that where there is an evidence base it is adopted, and where there is not an evidence base they continue working to build one.

## **Division of Unintentional Injury Prevention**

**Michael (Mick) Ballesteros, PhD, MS, EIS Officer**  
**Division of Unintentional Injury Prevention**  
**National Center for Injury Prevention and Control**  
**Centers for Disease Control and Prevention**

Dr. Ballesteros said that while he did not know the precise amount of DUIP's budget, it was probably about a 10<sup>th</sup> of DVP's budget, and he would argue that DUIP is one of the smallest divisions within all of CDC. For example, there are just 6 or 7 people on the Motor Vehicle Injury Prevention Team.

Organizationally, DUIP has a Motor Vehicle Injury Prevention Team and a Home and Recreation Injury Prevention Team. The portfolio presented the previous day represented a review of the organizational unit of the Motor Vehicle Injury Prevention Team, including occupants, pedestrians, and a range of other topics. The priorities within DUIP include motor vehicle injury prevention, poisoning (e.g., drug overdoses), and older adult falls. Other activities occur within the Home and Recreation Injury Prevention Team in terms of sports-related injuries, drownings, and residential fires.

To highlight a couple of efforts, within the Motor Vehicle Injury Prevention Team there are activities underway to promote state level graduated drivers license (GDL) laws. In addition, 8 tribes are being funded to implement evidence-based strategies for prevention. The first round of funding included 5 tribes, and an additional 3 were added during this funding cycle. The "Decade of Action" will be launched on May 11, 2011. The Motor Vehicle Injury Prevention Team is involved in some of the activities that will occur in the US. Specifically, the plan is to release state level cost estimates at that time. The details of this launch are still being fleshed out, but it will likely be associated with the National Traffic Highway Safety Administration (NHTSA) or FIA Foundation activities in Washington, DC.

The Motor Vehicle Injury Prevention Team is also engaged in a number of global activities. Last year, they began working on the "Global Helmet Vaccine Initiative" in Uganda and Cambodia, which is based on a model utilized in Vietnam. CDC's role in this initiative is to evaluate the programmatic activities, and this year is collecting baseline data for the activities that will be implemented later. Additional data collection will be built in as this initiative moves forward.

The Home and Recreation Injury Prevention Team is fortunate because more is known about what works in terms of older adult falls. One of the highlights this year is that there will be a supplement to the core state funding pertaining to older adult falls. Given that this FOA had not yet been published at the time of this NCIPC BSC meeting, Dr. Ballesteros refrained from offering any specific details.

The Home and Recreation Injury Prevention Team also addresses poisons and drug overdoses, which are very important issues that have attracted a significant amount of attention. The agency

held Grand Rounds on this topic the previous week, and is working to build a partnership with the Food and Drug Administration (FDA). Consideration is being given to the development of clinical guidelines for prescribing narcotics in emergency departments (EDs). CDC has funded evaluations of other strategies such as prescription drug monitoring programs. The paper based on that evaluation has been submitted, and has been published previously. The Home and Recreation Injury Prevention Team also planned to convene an expert panel meeting the week following the NCIPC BSC meeting regarding drowning. Experts from the field have been invited to deliberate the best way to move forward in drowning prevention.

Regarding the child maltreatment injury prevention plan that Dr. Degutis mentioned, Dr. Ballesteros clarified that it was actually less a research agenda and more a call to action. The hope is to release this document in the late Spring or early Summer of 2011. The good news for DUIP is that there is a lot of attention on their topics of interest, particularly given that this topic is one of Dr. Frieden's winnable battles; however, it is highly challenging given the small size of the of the Motor Vehicle Injury Prevention Team. He emphasized that the successes DUIP has had stem from the leadership of the teams within the division. With the added attention, the challenge for DUIP is to manage the expectations with the level of staff and resources available.

### **Discussion Points**

Regarding the funding that has come available, **Dr. Greenspan** clarified that this came through the PPACA legislation. A request was submitted to NCIPC for proposals. DUIP submitted 4 proposals, 2 on poisoning prevention, 1 on motor vehicle injury prevention, and 1 on falls in the elderly. They are expecting to receive a response soon, and are hoping to receive additional funding. The proposals are on the order of about \$1 million each. This could result in a lot of good research in these areas; however, one of the challenges is that as they receive more funding, they cannot build up their FTEs. With limited staff, it is difficult to allocate those funds and continue to do good work on existing efforts.

**Dr. Fowler** requested further information about the plans to disseminate the findings of the expert panels to the field. Given the priorities / focus on poisoning, she also wondered what if any was DUIP's response to the fact that the Poison Control Center's budget was just zeroed out.

**Dr. Ballesteros** responded that in truth, DUIP does not utilize Poison Control Center data very much, given that the recent increases in fatalities for the most part include a population who are not calling Poison Control Centers. For DUIP, the primary data of interest are traditional ED visits and deaths. While it is unfortunate that the Poison Control Center's budget was zeroed out, it is unlikely to affect DUIP's work. With respect to disseminating results from expert panels, it depends upon the products that result from these meetings. In the past, they have released papers that resulted from these panels that reflected the discussions and proposed way forward.

**Dr. Eastman** said an observation he has made in poisoning and primary prevention that seems to have been overlooked is that the prescription take-back programs are very effective. Their trauma center has one of these programs in conjunction with the San Diego Sheriff's Department. Literally tons of prescription medicines are recovered that people have sitting in their cupboards at home. These do become a source of unacceptable drugs for children and

teenagers in the home, or for polluting the population when flushed down toilets. With that in mind, Dr. Eastman wondered whether DUIP was doing anything about drug take-back programs.

**Dr. Degutis** replied that this has been discussed a lot, and she thought there were two aspects to drug take-back programs. One is the issue regarding whether such programs are preventing overdoses of prescription opioids, such as OxyContin®. The evidence suggests that they really are not an effective strategy for decreasing the opioid overdose problem. One reason for addressing this problem is that there has been a 30% to 40% increase in ED visits for prescription opioid overdoses in the past 5 years. In terms of disposal of prescription drugs to remove risk from children or to keep them out of the environment, such programs may be much more effective.

In terms of poisoning work, **Dr. Ballesteros** added that DUIP is more to the left side of the public model. The current approach the division is taking is to better understand what works.

**Dr. Tate** inquired as to whether poisoning included alcohol use / abuse, given that it seems to be related.

**Dr. Ballesteros** responded that for most of the prescription drug issues DUIP is addressing, alcohol is often found in the system. It is unclear what the division's role is in that specific substance. There is an alcohol group within the National Center for Chronic Disease Prevention and Health Promotion (NCCDPHP) with which DUIP is communicating.

**Dr. Greenspan** indicated that there are some individual efforts underway in terms of alcohol in the Motor Vehicle Injury Prevention Team. Some work is being done on impaired driving, and there is a new contract that is addressing the use of alcohol interlocks. There is also some work being done in DIR with brief alcohol interventions in EDs.

**Dr. Degutis** said that one of the surprises for her was finding out how little was being done to address alcohol as a cross-cutting issue and risk factor for injury. While work is being done in DIR related to screening and brief intervention, that is not the "be all and end all" to the problem. Some people believe it is a magic bullet, but she does not concur. Instead, she believes that using policy is a better strategy (e.g., interlock device). In terms of poisonings, there is difficulty sometimes in assessing alcohol given the way it is coded in the data. One of the databases that could be very valuable, the Drug Abuse Warning Network (DAWN), only codes alcohol alone in people who are under the minimum legal drinking age of 21. Otherwise, it only codes it if it is used in conjunction with another drug.

Regarding falls and the elderly, **Dr. Eastman** reported that he just presented a paper at Pacifica Surgical about the incredible rise in the elderly population as the percentage of patients being admitted to their trauma center as well as other trauma centers. Falls from the standing position are the leading cause of death. He wondered whether anyone was cross-linking data, given that the subgroup of elderly individuals with falls who die or experience serious complications are those on anti-coagulants (e.g., Coumadin®, Plavix®, Aspirin).

**Dr. Ballesteros** responded that this is on DUIP's "To Do List," although he was not certain how far along this effort was. They do have data from CMS on Medicare patients. That includes data on falls and information on all of the types of medications they have been prescribed and Medicare has reimbursed. One task on their list is to further evaluate those data more. This is a very complicated database, so assessing it is very difficult and there are few results thus far.

**Dr. Dahlberg** reported that in terms of DVP, NVDRS includes a significant amount of information pertaining to alcohol. This database includes all toxicology testing, which can be assessed in relationship to mental health status, different manners of death, circumstances, et cetera. In terms of all of the other work, this is a small amount of work. DVP's Health Economics Team also conducts policy evaluation. This team has been evaluating a broad range of alcohol policies with respect to certain types of violence. DVP anticipates assembling and publishing those results in the coming year.

### **Division of Injury Response**

**Richard C. Hunt, MD, FACEP**  
**Director, Division of Injury Response**  
**National Center for Injury Prevention and Control**  
**Centers for Disease Control and Prevention**

**Dr. Hunt** indicated that he was filling in for the ADS position under recruitment. DIR had a stellar ADS who made huge contributions to the division, Vikas Kapil, who was promoted to Chief Medical Officer for the National Center for Environmental Health (NCEH). In the spirit of success management, DIR is actively working toward recruitment of somebody to fill those very big shoes.

Regarding the brief alcohol intervention activity within DIR, Dr. Hunt had great positive reactions to some initial conversations Dr. Degutis and his staff had regarding brief alcohol interventions and the expansion of alcohol throughout the entire center. Effectively, DIR has had only one person leading the charge on brief alcohol intervention, Dan Hungerford. He has done a great job in that role. As a division, DIR truly wants to be collaborative with the other divisions on the issue of alcohol and how that impacts the entire issue of injuries.

DIR's mission is very straightforward, "Decrease injuries and their adverse health effects," including death. DIR has basically two domains, one of which is the state injury programs. This is indeed a true core for building injury capacity within states, and is a core for NCIPC as a whole. One thing they have felt very positive about is how, over the past year and a half, collaboration with the other divisions to ensure that their activities are incorporated into the state program activities has been a major contribution.

The second domain is response in terms of what happens after injuries occur. Indeed they want to "move the dial" to where there are no injuries in the first place, but they do occur. All of the deaths do not occur instantly. People actually "get dead" from the time of their injuries—some are instantaneously dead. However, many have a period of time during which the curve can be moved. In that spirit, DIR thinks a lot about the entire spectrum of trauma systems (e.g., primary

prevention, surveillance, EMS, emergency medicine, trauma surgery, rehabilitation, and return to community) and how to support these systems. As a small division, DIR must really focus its activities in order to have the most impact. They have chosen to study field triage of injury patients, given that this really matters. His understanding is that the largest funded study out of NCIPC by Dr. Ellen MacKenzie, demonstrated a 25% decrease in mortality if severely injured patients are cared for at Level 1 trauma centers. In medicine, in public health, there are not many 25% numbers. DIR has taken this to heart and really strives to tackle the issue of making sure that the right patient gets to the right place in the right amount of time.

Toward that end, DIR has worked on the development of field triage guidelines in collaboration with the American College of Surgeons Committee on Trauma and the National Highway Traffic Safety Administration. It was not just dialogue. The National Highway Traffic Safety Administration provided dollars for programs to support this activity because it is important. Those guidelines were published with the endorsement of 17 national organizations ranging from the National Ski Patrol to the Joint Commission and everything in between. It is nice to have guidelines, but in terms of impact, DIR conducted a web-based search of state health department websites in April 2010 about 15 months after the guidelines were promoted. Based on that surrogate, it appears that about 30% of the population was covered by these guidelines as of about 10 months ago. There is a lot more work to do, but they are making major dents.

In January 2011, a paper was published that further demonstrates impact in a way that Dr. Hunt could not have predicted. In a study of 11,000 patients in 3 different trauma systems, if the 2006 guidelines that were published in January 2009 were actually implemented in those systems, there would be a 12% decrease in numbers of patients going to trauma centers. That has major cost implications. DIR's analysis of cost implications suggests a cost savings to the country of \$200 million to \$600 million per year based on assumptions. Those are not small numbers. A great deal has been learned about this, and enough research has been conducted since the 2006 guidelines that DIR plans to update the guidelines. Those meetings are going to take place in the next few months. Some issues that were touched on earlier in the morning will be incorporated in the updated guidelines, such as falls and anticoagulants. Independently of many gaps in field triage, there is a paucity of research on falls / triage. The best study available is from Turkey, and the field triage guidelines on falls will be founded on this study from Turkey.

As an outgrowth of DIR's work in field triage, the Expert Panel on Field Triage noted new technologies entitled, "Automatic Crash Notification Could be the Holy Grail" for the issue of who in a motor vehicle crash needs to go to a trauma center and who does not. At the moment of a crash, a vehicle with this technology can predict, with engineering accuracy, the severity of injury of the occupants. DIR is working very hard with numerous auto companies to figure out how to work with them and NHTSA to advance automatic crash notification in a way that all citizens have the benefit of this technology.

DIR also works in the domain of traumatic brain injury. Many people ask, "Why traumatic brain injury?" There was a moment in Dr. Degutis's office before she arrived when it suddenly hit Dr. Hunt that this is the only place in NCIPC that he was aware of that actually works in a specific organ system. Part of this relates to the Congressional mandate pertaining to brain injury. DIR is working in two domains with regard to traumatic brain injury, the first of which is sports

concussions. It is difficult to not see a media story on sports concussions. DIR has “ridden that wave” very successfully. There has been significant push from the outside to do more in this area. The NFL has come to them. He had a conference call earlier with the Pittsburgh Penguins Hockey Team. People are begging for DIR’s materials about this issue. It is a thrill to be engaged with this. At this juncture, there is awareness. However, solutions are still lacking in terms of how to assess and care for these people. DIR knows that this is a major gap.

The second area is mild traumatic brain injury guidelines. Mild traumatic brain injury is a major issue on which DIR collaborated with the American College of Emergency Physicians on the development of mild traumatic brain injury guidelines for care of emergency patients. For the first time that Dr. Hunt ever saw in his career, they also worked with them to develop model uniform discharge guidelines so that throughout the country there is one set of guidelines. DIR is also acutely aware of the challenges with the perception and utilization of the word “concussion.” There are many stakeholders engaged with the issue of that word (e.g., public, coders, billers, clinicians, lobbyists, et cetera) so DIR is working toward development of a new set of concussion definition guidelines.

In addition to everyday injuries, DIR is also interested in extraordinary numbers of injuries. As the Institute of Medicine (IOM) report “The Future of Emergency Care in the United States” stated, the most common form of terrorist attacks in the world are bombings. It turns out that DIR’s little division is pretty much it when it comes to civilian terrorist bombings in the federal government. DIR has been very fortunate to have worked with a number of non-governmental organizations (NGOs) on the challenge of civilian terrorist bombings. These organizations (e.g., ACEP, ACS, and others) realize that civilian terrorist bombings could occur and they have invested significantly beyond the funds DIR has given them in helping to develop solid knowledge pertaining to this issue.

DIR has developed clinical guidelines for care of terrorist bombing victims. They have also developed surge capacity guidelines, not like anthrax or smallpox, but in a moment’s notice. For example, as in occurred in Madrid, if 272 patients arrive in the ED in 2.5 hours, how are you going to tackle that from a surge capacity standpoint? DIR had an “aha” moment where they realized that waiting for papers to be published on civilian terrorist bombings was not sufficient. They realized that they needed to acquire input from their international colleagues who have had this happen. Bombs go off every day, so they have built very strong partnerships with those who have led responses in India, Israel, London, Madrid, and Pakistan. Representatives involved in these responses were brought to the US to speak with leaders in various cities. DIR developed what has euphemistically been called a “Tale of Cities” meetings. The reason this euphemism was used is that when a sign is placed in a hotel that says “Terrorist Bombs” with a picture of a bomb going off, it does not work very well. The next meeting will be in New York City for 1000 people in Times Square. This effort was funded with \$500,000 from the Assistant Secretary for Preparedness and Response (ASPR).

For the past 5 years, DIR has worked collaboratively with WHO in the development of trauma systems internationally. This had led to a WHO Assembly statement on emergency care and disasters, and some guidance that has had much greater impact that Dr. Hunt would have ever imagined. A concrete example of this is that Romania has passed national emergency care

legislation. The US does not have this, so it has been phenomenal to see that kind of advance. The other international area in which DIR is working is in India through an MOU between the two governments. DIR is most appreciative of its consultants, like Drs. Ellen MacKenzie and Brent Eastman, who have been supportive of that initiative. In the past 4 years, Dr. Hunt has witnessed tremendous strides made in India in the development of trauma systems. The trauma center he and Dr. Degutis visited the previous week once had no patients, and is now doing phenomenal work.

### **Discussion Points**

**Dr. Redfern** asked Dr. Hunt whether Homeland Security had anything in the area of civilian terrorist bombings.

**Dr. Hunt** responded that Homeland Security has done little in this area. For example, he has been asked to co-host something with Homeland Security to put this on their agenda. In terms of the development of knowledge in this area, DIR is pretty much all there is. Other agencies have recognized this and have been very supportive. It is not an us / them issues at all, but they have been very supportive of DIR's work.

**Dr. Eastman** said he thought that from the point of view of the American College of Surgeons, the work DIR is doing is recognized as blazing trails and opening doors in all of the areas to which Dr. Hunt alluded. He personally acknowledged that Dr. Hunt has been the link historically and currently with the American College of Surgeons. While Dr. Hunt referred to Dr. MacKenzie's *New England Journal of Medicine* paper that showed a 25% improvement in survival rates in major trauma patients if they go to a Level 1 trauma center, what he did not say (which is one of the dichotomies of that paper) is that the same 25% reduction did not reach statistical significance with the elderly population. Dr. Eastman has never fully understood this. He spoke with Dr. MacKenzie about this when they were en route to India and thought that it required further investigation. He requested that Dr. Hunt offer his opinion about the elderly not showing the same improvement. As a trauma surgeon, this was disconcerting to Dr. Eastman.

**Dr. Hunt** responded agreed that this was very disconcerting. He also discussed this with Dr. MacKenzie during a BSC meeting she was leading a few years ago. There are a couple of things that are known for sure. Since Dr. MacKenzie's paper was published, there have been other papers that have documented that older adults who meet criteria for going to Level 1 trauma centers are not getting to them. The other issue regards to the falls piece and anticoagulants. The criteria include a category for falls, for which there is a paucity of research as noted earlier. There is also an anticoagulant criterion, but it is not connected to falls. An EMT who responds to a patient once every 6 weeks is not going to put those two together necessarily. He also wondered what factors older adults have that does not make their survival as good in trauma centers. He also discussed this with Dr. Mackenzie. They talked about geriatricians coming to trauma centers to help manage those patients as a concept. It is known to be an issue, but frankly the reasons are just speculated. He emphasized that they could not ignore where the demographics are headed. Falls and older adults have to be tackled and balanced with the same challenges pertaining to pediatric patients. He has heard a lot about pediatric patients getting to

the right place at the right time as well. There seem to be problems with the extremes of age that must be further addressed.

As a non-CDC employee, **Dr. Eastman** said he wished the entire NCIPC BSC could have been with them in India. It was a very proud moment for CDC and the United States when Dr. Degutis presented the inaugural address at the establishment of a new College of Road Traffic Safety, which is huge given that India has the highest death rate on the planet in road traffic deaths.

**Dr. Redfern** said it seemed like there is a disconnect between all of the things DIR says it is doing and the resources they say they have. The strategy seemed to be to disseminate what is known, get involved, bring people together, and try to make things happen because they do not have the money to hit anything really hard. He stressed that they are doing a great job, but do not have enough funding to address any area in-depth.

**Dr. Hunt** responded that DIR has had the opportunity to plot out support for the civilian terrorist bombing work against other threats. It is quite fascinating. The response to Dr. Redfern's comment, with which Dr. Hunt felt very comfortable, was that the partnerships DIR has developed has given them some level of credibility where there was none before. This has allowed them to achieve things that people wanted CDC to accomplish for quite some time. If he could speak to one thing that has enabled DIR to make a difference and make health impact in the spirit of public health, that would be the single thing to which he would point.

**Dr. Degutis** agreed that there is some cachet to having the CDC name and some ability to serve as a neutral party that does not have a "dog in the fight." Because CDC is not competing with these partners, it makes it easier to convene and work together.

**Dr. Redfern** thought this was a great strategy. A significant amount of money is being allocated to the area of terrorist attacks. Pittsburgh has a Center for National Preparedness, and there is a lot of funding to assess systems-oriented responses to various issues. There is also a lot of work underway in sports concussion, with significant funding being allocated from various areas. The strategy of bringing CDC to the table to be engaged is a great one, because CDC can guide that conversation and other forces to some extent.

**Dr. Tate** observed that a lot of the priorities in the areas in many aspects interdigitate. She encouraged them to think about how to capture this better in order to gain more focus and obtain more funding versus going in so many different directions. Conversely, partnerships represent a major resource in terms of areas that are currently "hot," and she thought that they should engage with these partners to work on such areas. This should further increase visibility and branding of CDC. Access to firearms is another underpinning issue, although she had not heard a lot about this topic. It certainly is the "elephant in the room."

**Dr. Hunt** responded that no matter what the "priority of the month, year, or administration" may be, all of DIR's work in response after injuries occur cross-cut each one of the criteria. The primary prevention work that has been done by the other divisions is wonderful, and DIR

interdigitates with that after the injuries occur for each one of those priority areas. That makes total sense to him.

Regarding guns, **Dr. Degutis** said it is not that guns are never mentioned. Information is included in NVDRS about whether someone is killed with a firearm and whether it is a homicide or a suicide. The epidemiology of this is collected, but certain things have more sensitivity than others. This has simply been part of the data. Dr. Dahlberg probably has some of the longest history in this area. *MMWR* reports have been published on firearm-related mortality, whether these were the result of suicide or homicide, the age groups at risk, et cetera. CDC merely tries to report the data versus getting into the policy-related issues.

**Dr. Fowler** suggested stimulating discussion and response with other key partners about the issue of access to guns. Regarding the other end of the spectrum for trauma centers, for many years there was a lot of advocacy in the trauma community to have Level 1 trauma centers do something about primary prevention. They were successful in achieving the mandate that Level 1 Trauma centers engage in primary prevention. What is not successful is the primary prevention that is being done. There are a lot of enthusiastic, scare them straight, entertain them with gore type of programs. It strikes Dr. Fowler as a missed opportunity. While recognizing anticoagulation and falls is not primary prevention, using programs to raise awareness about that issue with EMTs, or engaging in more elder activities as opposed to spending so much time with youth in high schools. She requested that Dr. Hunt indicate whether he thought DIR has a collaborative role with the American College of Surgeons or with the trauma surgery community to increase the quality of the primary prevention being done in trauma systems.

**Dr. Hunt** responded that within the community on trauma is an entire committee devoted to primary prevention activities. The energy that committee has is extraordinary. One of the challenges is with the limitations and sheer numbers of individuals in DIR. When he attends the Committee on Trauma meeting, he will have to take a couple of people to actually interdigitate. They started making touch points last year, but there is just not enough to go around at this juncture. This is a very important bridge that DIR should have, which is frustrating.

**Dr. Fowler** agreed, but pointed out that the conversations about building capacity in state health department injury programs and about resources and training seemed to present obvious opportunities to say that DIR is not just dealing with state health departments, but is also dealing with partners in trauma centers.

**Brent Eastman** thought Dr. Fowler's question was incredibly propitious. He would say that the leverage between the partnership with CDC and the American College of Surgeons is that there is a robust program for the verification of Level 1, 2, 3, and 4 trauma centers. There is also a commitment and learning that has occurred in the trauma community that trauma / injury is a public health problem. To approach the problem that Dr. Fowler raised directly, he said that during the Committee on Trauma meeting, he would try to help deliver this message. He tried to deliver it in his trauma lecture a couple of years ago. His key point was that injury is the major, number one public health problem. To that end, the approach in the partnership is that when a team goes in to verify a trauma center, if they do not have the public health model built into what they are doing, that would be a criterion deficiency and they would not be identified as a trauma

center. They have the capacity to do it, and should do it. He suggested that he and Dr. Hunt emphasize that point at the Committee on Trauma meeting. Dr. Hunt agreed.

**Dr. Degutis** thought that would be very helpful. In addition, there is already evidence that a number of primary prevention programs do work. A lot of materials are available to help people implement those programs. Perhaps consideration should also be given to how people in trauma centers can be convinced to use what has already been developed and is available through NCIPC. Plenty of work has been done in each of the divisions in various areas that may be affecting a community. This has probably not been promoted as much as it could be.



**Linda C. Degutis, DrPH, MSN**  
**Director, National Center for Injury Prevention and Control**  
**Centers for Disease Control and Prevention**

**Arlene Greenspan, DrPH, MS, MPH**  
**Senior Scientist, Motor Vehicle Injury Prevention Team**  
**National Center for Injury Prevention and Control**  
**Centers for Disease Control and Prevention**

**Dr. Degutis** expressed her appreciation for the discussion that had taken place, and indicated that it was helpful for everyone to hear more from the divisions about some of the work being done. Regarding the portfolio review process, one of the goals pertains to how to improve the science, advance the science, work on translation / moving the science into practice, and the quality improvement process. This should be viewed as a quality improvement process for NCIPC and the science. It is not something that should be stagnant, and clearly portfolio review reports should be used to move forward. These reports include recommendations that should be implemented. She wondered whether there should be standard methods / template instituted for conducting portfolio reviews so that there will be some consistency in the way these reviews are conducted. Related to that is that while a number of issues in the review reports are internally focused, based on the discussions the previous day, it was clear that much of the learning reflected in the reports could be used more broadly. This is particularly true with regard to the motor vehicle area, given that some information might be highly valuable to partners outside of NCIPC. Given that the reviews are internal, consideration must be given to how to disseminate some of that information. This would have to be determined at the beginning of a review. Some topics are very specific (e.g., ICRCs, NVDRS, core programs, et cetera), but perhaps there are opportunities for cross-cutting efforts across the center (e.g., What is being done to build the workforce? What is being done to build partnerships?).

**Dr. Redfern** indicated that he was involved in the first portfolio review, as well as a couple of others. It was very much an evolutionary process, given that they were not sure how to structure the reviews. There was a significant amount of discussion at the beginning regarding who the target audience is for the review and how the review will be used. Early on, this was not clear.

He thought it had ultimately evolved into a fairly reasonable model, and it was not clear to him whether it should be standardized.

**Dr. Fowler** inquired as to whether they meant standardizing the exact process or the development of the process. Instead of saying “Do X” were they saying, “Determine the audience and the products related to that audience?” so that each portfolio can be tailored to that audience based on the response to those questions. What could be standardized might be to ask some rigorous utilization-focused questions before beginning the evaluation.

**Dr. Bangdiwala** thought they were talking more about the latter—standardized criteria which various portfolios would utilize. He did not think they would want to make them exactly the same, given that each of the areas are completely different. Related to that, the portfolio reviews basically focus upon reviewing a particular activity or series of activities. During the morning, there was discussion about gaps and building the evidence base. He wondered whether there was an element of reviewing of the science involved in the activities. This is an issue beyond the activities in which CDC is engaged, and is more a systematic review of the literature even to the extent of conducting a meta-analysis for a specific domain (e.g., violence prevention, poisoning prevention, medication misuse, why being treated in trauma centers is not as effective for older adults, et cetera). Perhaps that would not be part of the portfolio review per se, but could be an element that cuts across divisions.

**Dr. Linares** thought it would be key to build on some of the members’ expertise. For example, if a BSC member knows the literature on child maltreatment and has some idea about the evidence-based programs in child maltreatment, this would be beneficial to share to help better understand the state of the science.

**Dr. Fowler** pointed out that it was all very well to state that there is evidence and there are model programs; however, they are often not implemented. Stewardship of the implementation process and learning from that are very important.

**Dr. Linares** emphasized that one struggle the field deals with is that there may be 100 CPT-based interventions to reduce conduct problems in young children. One question is to decide which may be adopted and why so many of these programs actually fail. To develop one more academic-based program that is likely to fail is not acceptable. Unlike NIH, CDC is in a prime position to understand how it is these programs are likely to fail based on the understanding of the status of communities. For example, if a program takes 6 months to reach the criterion for a trained clinician to deliver a program, in the field no organization is going to be able to pay for this.

**Dr. Tate** requested more information about the audience for the portfolio reviews and what these will be used for. Establishment of partnerships and dissemination of information interdigitate and seem to be part of the infrastructure for the center. These should be part of the requirements for the reviews in terms of the criteria that should be addressed.

**Dr. Dahlberg** responded that on the peer science side, NCIPC has a research agenda. For the top tier priorities such as child maltreatment and youth violence, it is dissemination /

implementation research that are needed. On the programmatic capacity side, NCIPC is trying to understand from a practice sense what is occurring and what the prevention infrastructure is. They try to encompass both of those in NCIPC portfolio reviews (e.g., science, practice, and the interface between them).

**Dr. Bangdiwala** noted that in addition to the movement of evidence-based practice, a recent concept is practiced-based evidence. He agreed that CDC was in a good position to address this and to conduct a review of the science of dissemination.

With that in mind, **Dr. Greenspan** wondered whether it would make sense to conduct a review of dissemination science across the division to determine the status and what type of workforce development may be needed, as opposed to assessing one topic area and going from science through implementation.

**Dr. Li** inquired as to whether it would be possible to conduct an overall portfolio review of all of the reviews that have been conducted to identify gaps / overlaps.

**Dr. Dahlberg** responded that all things are possible. It depends upon the depth and breadth question. The broader a review, the less depth, the more expense, the more time, et cetera.

**Ms. Yee** agreed that this would be possible and that the notion had been raised previously by others who have conducted portfolio reviews in terms of assessing all of the reviews to determine which similar recommendations and strategies arise repeatedly. Consideration would have to be given to the use of such an exercise by the center, given that it is an exchange in time and resources. Because the ICRC portfolio review was the first in which she was involved when she arrived at NCIPC four years ago, she was seeking guidance. Certainly, some of her colleagues in the room were very helpful in telling her about how previous reviews were conducted. Having worked in other areas within CDC and with other evaluators, she formed a workgroup that included individuals from public health preparedness who had worked in research centers in that field, and evaluators with an injury background who then worked elsewhere within CDC. The workgroup for that particular portfolio review was broader than the following two portfolio reviews on which she worked.

**Dr. Ballesteros** noted that about three years ago, this was considered on an agency level, and he thought there was a report published regarding how various centers conducted portfolio reviews. Perhaps it would be worthwhile to review this report.

Regarding the audience, **Dr. Degutis** acknowledged that the audience would differ from review to review. There is a requirement for them to conduct these reviews, so one audience is Dr. Frieden's office. For certain reviews, there may be other audiences. This will depend upon the list of questions. Defining the audience ahead of time in addition to what they are required to do would help to inform the review and the review process.

**Dr. Fowler** indicated that there was a similar conversation the previous evening. She thought that if CDC requires portfolio reviews to be conducted, that is basically mandating process evaluation. NCIPC can still do what they have been mandated to do, but if the reviews are

approached from a CQI perspective, the evaluation would be designed differently than a process evaluation. Thus, it may be possible to satisfy the mandate but achieve something that is more worth NCIPC's time and effort. There was also some discussion about the idea of perhaps using strategic reviews to demonstrate reach and impact. Some of that pertains to a resiliency focus versus a gaps focus. For example, there has been a significant amount of discussion about the public health workforce and training of the next generation of scientists. Perhaps a review could be conducted of education in terms of the impact NCIPC has had directly and indirectly on the education of the next generation. That could be stratified by type of preparation (e.g., PhD, Masters, workforce development, et cetera). In the last 12 years, her institution has trained over 700 people through their Summer Institute that is part of their ICRC grant. There is a considerable amount of work that has been a consequence either of NCIPC's direct action, of its funding, or of its mandate to act. She thought NCIPC would be stunned at its impact on the field if they evaluated this. Given the on-going debate about the failure to do something about the workforce, for NCIPC to be able to state that with a relatively limited amount of funding it is had X impact on the field could be truly important for the center.

**Dr. Dahlberg** responded that the youth violence review focused on the research, this was included. This may have also been the case in some of the other reviews. However, this information is somewhat buried and hidden and is not necessarily pulled out and considered in conjunction with other types of training activities that NCIPC does. The center has other efforts underway that fall outside of its research lines.

**Dr. Bangdiwala** noted that the reviews Dr. Fowler was suggesting would be cross-cutting across the various divisions, which would be a benefit. The current portfolio reviews were within a particular program of a division, so the breadth is limited.

**Dr. Greenspan** indicated that education was assessed in the ICRC portfolio review, and she thought that each of the centers defined this very differently. Therefore, she thought it would make sense to evaluate this across divisions and more broadly and develop some common metrics for this. This is part of what the SAVIR project is doing. To do this in any one area will involve more work, but one of the challenges is that everyone talks about this somewhat differently.

**Dr. Fowler** thought it was a challenge for mobilizing the addition of the injury centers. Some of these centers have a very clear commitment to taking the education role outside the doors of the university and others do not because some would say that it is an unfunded mandate. If they can demonstrate what people do with their unfunded mandate, and benefits were accrued to them as well, it might be a form of encouragement for other ICRCs to do more in that respect.

**Dr. Li** emphasized the importance of determining how to disseminate the portfolio outcomes. The falls prevention portfolio review was published in the *Journal of Safety*, which was quite beneficial to him as a researcher because he can use this information for grant writing for continuing a line of work in the field.

**Dr. Greenspan** indicated that for the motor vehicle portfolio review, NCIPC has been waiting for the process to be finished because they also plan to publish the results of that review.

**Dr. Redfern** pointed out that there is also value in maintaining the portfolio reviews in the same sectors that they are and perhaps conducting other initiatives to assess cross-cutting themes. The work has been done and they now have a baseline for some topics, now they have to focus on whether there was improvement over the 5-year period following the review. He cautioned them not to make changes every year. He also noted that one question which arose during the portfolio reviews was: What are the metrics by which we are going to measure all of this? In the end, they knew the metrics they wanted to measure. NCIPC needs to put systems in place that can measure those items aggressively. This will make the next portfolio review easier. He also wondered whether any mechanism had been established to track the papers / journal articles that are published each week from the various NCIPC grants.

**Dr. Degutis** did not think they were talking about changing, but instead were interested in adding some components to evaluate cross-cutting issues.

**Ms. Yee** agreed about the measures. With the ICRC review and the ICRC metrics project she described the previous day, the ultimate goal is to have a set of metrics that can help to assess what the ICRCs have achieved and monitor them over time programmatically. That requires resources, including staff with background in measurement monitoring and evaluation. She did not believe there were currently such staff members across NCIPC. This will require building of infrastructure internally.

Regarding whether NCIPC was tracking publications, **Dr. Degutis** noted that this led into one of the other questions they raised about how to better communicate with the NCIPC BSC, even about publications from NCIPC itself. She said that Dr. Greenspan has a vision for and is working on this.

**Dr. Greenspan** responded that there is a lot she is still thinking through, having been in this position maybe a month. It is clear that better lines of communication are needed. Some mechanisms are in place that have been used internally. The question regards how to disseminate this more broadly (e.g., website, SharePoint, two-way communication). This should not be that difficult with the current state of technology.

**Dr. Holmes** added that with regard to SharePoint, the agency has been grappling with the security issues related to having an external facing SharePoint system. They have now figured out how to do that, so NCIPC is moving forward to implement this. Having never done this before, it is not clear how long this process will take. Many steps must be taken internally to acquire approval related to the security issues. She anticipates that something will be available within a few months. Last year they developed a system called SiteCatalyst®, which she realized is not ideal to use. However, all of that capability and more will be transitioned to SharePoint.

Regarding SharePoint or whatever system is put in place, **Dr. Bangdiwala** reminded everyone that they “signed their lives away” to be Special Government Employees (SGEs) for CDC, so there should probably be no bureaucratic hassle with the BSC members being able to access

CDC's system. If it takes a while to launch SharePoint, there are multiple other ways for informal communications, such as protected chat places.

**Dr. Greenspan** indicated that a weekly update is published by NCIPC that highlights the divisions' work on a weekly basis. Not everything would be of interest to the BSC members, but there has been discussion about culling that information on perhaps a monthly basis to share with the BSC members. This could be disseminated via email.

**Dr. Degutis** added that this also raised the issue of not losing continuity and the ability to communicate between face-to-face meetings with the BSC. One suggestion was to convene a monthly call that could be placed on everyone's schedule. If they do not need the call, it could be cancelled, but at least the time would be set aside.

**Dr. Cattledge** pointed out that they must keep in mind that there are Federal Advisory Committee Act (FACA) regulations to which they must adhere when convening meetings or teleconferences. A smaller group convening to discuss a particular topic, such as the evaluation process, would probably pass the Sunshine Act.

**Dr. Degutis** said she thought there was a way to have more regular communications with the BSC. It would be valuable for the BSC members to receive updates when something new emerges, there is an important initiative, recommendations from portfolio reviews are made and how those are being addressed, input is needed on a particular issue, et cetera. There is a way to sign up for updates on the NCIPC website as well.

**Dr. Tate** indicated that she receives updates from Melissa Gipson sometimes, which is very helpful.

**Drs. Bangdiwala and Redfern** supported informally convening monthly calls without a quorum.

**Dr. Degutis** agreed that it would be very helpful to have continued engagement, and she invited additional suggestions or ideas about how NCIPC could better communicate to BSC members or in general. Suggestions included: higher level distance communications, video conferencing, webinars, more than one in-person meeting per year. She also indicated that the other area in which the BSC could be useful is in participating in secondary reviews and suggesting reviewers. NCIPC is seeking reviewers who understand what it means to submit an application, can critically review the applications, and provide good input. One of the major secondary reviews will be for the ICRCs, so it is important to begin immediately to submit names / CVs to Dr. Childress.

In terms of communications, **Dr. Greenspan** pointed out that because funds are not changing, consideration must be given to what makes the most sense. If they convene smaller workgroups and do more by phone, it will be easier for them to have more on-going conversations. She would still envision an in-person meeting once per year. Consideration could be given to convening two in-person meetings, but perhaps two are not necessary. The best use of

everyone's time and resources must be assessed, and they must think differently than they have in the past.

**Dr. Tate** reiterated that point. The idea of having more communications is important, but she did not want everyone to leave there thinking that they have to have monthly calls.

**Dr. Degutis** reported that National Public Health Week, which is the first full week in April each year, is focused on injury in 2011. This is an opportunity to disseminate information. NCIPC's communications staff and the Office of Policy, Planning, and Evaluation staff have been working very hard on this. This is also the same week of the Safe States SAVIR meeting in Iowa, vacation week in Georgia, the National Youth Violence Forum that the White House is sponsoring in DC early that week, and there is a Congressional briefing on Tuesday of that week that focuses on injury that Dr. Degutis will take part in. NCIPC is receiving multiple requests to present because it is National Public Health Week. NCIPC has recently participated in several Congressional briefings, with topics such as healthy lifestyles and injury, violence, et cetera. They have had meetings with Congressional staff on topics such as TBI and the development of football helmets, reuse of helmets, what is being used in high school and college sports, concussion, et cetera. They are using a lot of the materials NCIPC already developed.

Regarding partnerships, **Dr. Bangdiwala** inquired about working with other agencies in terms of older adults and falls and overdoses.

**Dr. Degutis** responded that regarding the prescription drug abuse issue, the National Institute on Drug Abuse (NIDA) is funding some research. They are not an active partner. They attended the ONDCP meeting in which NCIPC and other federal agencies were involved (e.g., FDA, NIDA, VA, Indian Health Service, DoD, Vice President's Office, HRSA, SAMSHA). ONDCP is releasing a strategy to address prescription drug overdoses.

**Dr. Ballesteros** added that they have not given up on working with CMS, although they are a "tough nut to crack." They are still trying to work with two other federal agencies on falls.

**Dr. Degutis** noted that one opportunity NCIPC may have with CMS is that Dr. Mary E. Tinetti is currently there on a one-year assignment as a Gerontology Fellow.

**Dr. Redfern** said he is funded by NIH and it seemed to him that it was a more open loop in that NIH allocates a grant, the grantee conducts the work, but if they do not publish, they do not receive the next grant. However, they do not really assess the efficacy of the research. He wondered whether NCIPC could play a role with NIH in that process, such that it was perceived as a benefit versus a threat to NIH.

**Dr. Degutis** replied that this piece was part of the translational in dissemination science.

**Dr. Linares** thought this would make a lot of sense. The National Institute of Mental Health (NIMH) funds some child maltreatment efficacy trials. It is true that they are published and they move on. Perhaps CDC could pick up on that, accumulate the evidence, and move into the dissemination science. There is a role for each of the funding agencies.

**Dr. Ballesteros** noted that they may not be able to do this as a partnership, because other agencies may view this as threatening. If NCIPC conducted systematic reviews on particular topics from the standpoint of dissemination and implementation science in child maltreatment, assessing projects funded by CDC and other agencies, it would be less threatening.

**Dr. Greenspan** indicated that they have played that role with NHTSA with a number of *Community Guide* reports and NHTSA found this to be very valuable. While NIH is a different agency and culture, the center can certainly think about this.

**Dr. Degutis** indicated that NHTSA pointed out to NCIPC that a strength of working with CDC is the level of credibility when interventions are included in the *Community Guide*.

**Dr. Fowler** wondered whether a cost analyses could be done to assess the effect of investing substantial funding in research, but little in translation. What successes and cost savings that would accrue if greater investments were made in translation?

**Dr. Bangdiwala** added that this would highlight the opportunities that would be lost by not investing in translation of prior scientific work.

**Dr. Hunt** reported that his division had assessed the cost-benefit of implementation of severe TBI guidelines. In terms of the translation piece, it sounded as if a cost-benefit analysis would focus on the cost of not translating the research that was funded. At a young age, he said he was very naïve about the issue of how much it actually costs to work on implementation. Guideline development, dissemination, and evaluation have very different costs. His observation now with triage is that implementation is the most costly component. He was amazed by the cost of implementation because it included much more work and effort than he originally anticipated. Within NCIPC they could evaluate how much it cost for each phase, as well as what the outcome would have been if they had completed only the study and not dissemination and evaluation.

**Dr. Fowler** said Nancy Thompson often states that the more evaluation that is conducted and the earlier it is done, the less costly it is. While evaluation of implementation / cost of implementation may seem to be an unnecessary component of the work at the beginning of a project, addressing this early has the potential to save time and dollars down the line. Planning this early also carries with it the potential for identifying partners and other resources early.

**Dr. Li** thought it would be beneficial for future funding opportunities, especially those with a focus on translation / dissemination to include requirements that one of the applicants' aims must focus on the cost-effectiveness and cost-benefit of the project they proposed to undertake.

**Dr. Fowler** pointed out that the challenge with cost analysis with community work is that if that is just done with dollars in and cost savings out; it does not really reflect the field. Much of the work in this field is possible due to partnerships, in-kind resources, linking to pre-existing structures, et cetera. This makes it appear as if a lot can be done with insufficient funding. Conversely, a lot of time is being invested in finding in-kind resources, partners, et cetera.

Perhaps NCIPC does itself a disservice by measuring only the dollars. Others agreed that they must measure the whole picture.

**Dr. Dahlberg** commented that when they have published dissemination and implementation research priorities, they have also included cost-effectiveness. This is also included in research cooperative agreements. The problem is that grantees often do not have that type of expertise (e.g., health economists). Therefore, they have great difficulty being able to address that important aspect of the research. NCIPC has provided some technical assistance in the form of providing their health economists, but this is not moving them where they need to go. They have to consider the broader issue in the field of how to build up this expertise and make sure that it is considered along with the other types of research questions being addressed, particularly in terms of dissemination and implementation research. They have great difficulty getting applicants to submit proposals for dissemination and implementation research. This priority has been included in R0-1s for a number of years, but she did not believe more than 6 applications had been submitted, let alone compete well and rise to the top. Thus, there are some larger issues that must be addressed.

**Dr. Fowler** emphasized that it is not just the cost. Speaking with people throughout the country, she increasingly hears that CDC wants grant recipients to act and that they do not have the time or money to engage in the formative work. Sometimes formative work is strategic action. Perhaps they need to get to the point of making it clear in announcements that rigorous formative work is acceptable. Then more people might be prepared to think about the challenges of dissemination and implementation.

**Dr. Linares** indicated that she had considered applying one of the dissemination grants, but this is very expensive to do and the funding that CDC offered on those announcements was not sufficient for the type of work that would be required.

**Dr. Haegerich** commented that the resource issue is a real barrier. In order to study types of technical assistance that works, various types of dissemination strategies that work, et cetera, a sufficient number of agencies / communities must be working on this. Therefore, they have been trying to give more thought to how partnerships can be built to access additional resources to leverage what is being done in programmatic areas to conduct some dissemination and implementation research to complement this. That is, assess where capacity building and technical assistance to communities is already being supported by NCIPC and determine whether additional resources can be garnered for implementation / dissemination research within those programs. NCIPC does not have those resources. Through its partnership with SAVIR, they have reached out to the William T. Grant Foundation because of their interest in youth programming and the use of evidence in the field to find out whether they would be willing to engage in some collaborative funding with NCIPC to support some of the research to complement the STRYVE initiative in which they are trying to implement evidence-based programs. She believes the more they think creatively about how to build these things together, the more effective they can be.

It occurred to **Dr. Degutis** that the Clinical and Translational Science Awards (CTSAs) include a community component that requires community translation. She wondered if there was a way to discuss this with NIH or consider approaching a CTSA center in a university where there is an ICRC to think about how to conduct some community-based dissemination / translation research, focusing on injury—an area that the CTSAs have not addressed.

**Dr. Redfern** thought this was a great idea. There is a fairly new association of all of the groups that have CTSA funding, which he suggested contacting.

**Dr. Bangdiwala** inquired as to how the CTSAs differ from the Centers for Health Promotion and Disease Prevention (CHPDPs) at CDC. The CHPDPs have special interest projects (SIPs) that include targeted funding. This year, there were 14 areas, only one of which had anything to do with injury. He suggested getting involved with them because they have a lot of community-based participatory research (CBPR) efforts underway.

**Dr. Degutis** indicated that the CTSAs are NIH-funded, and **Dr. Redfern** thought they were \$20 million to \$40 million for 5 years. Dr. Degutis added that some of the Prevention Research Centers (PRCs) have been more interested than others when NCIPC has approached them. Much of the work conducted within the PRCs is driven by what the community identifies as priorities.

**Dr. Tate** said they tried to reach out to their CTSA, and they already had a full agenda. Therefore, she thought the earlier they could begin a dialogue with them the better because they also have limited resources to reach out.

**Dr. Fowler** said she kept hearing about how their our own colleagues in public health do not understand injury. While that was not a surprise to anyone sitting at the table, they spend a significant amount of time in injury trying to persuade everyone of the magnitude of the problem. She wondered whether there was something NCIPC could do with all of its expertise to reframe how that is said so that it is not focused on injury being a major issue, but instead focuses on injury being a cross-cutting risk factor. Someone might not even think of what they are doing as being related to injury issues. For example, someone may be focused on Tai Chi and physical activity but not thinking about the relationship of injury. There must be a way for NCIPC to highlight the connections such that it is easier for people to understand the relevance of injury and other efforts.

**Dr. Dahlberg** responded that NCIPC has engaged in some efforts along these lines. One effort to reframe injury was the publication titled *Adding Power to Our Voices: A Framing Guide for Communicating About Injury* incorporates framing theory, message development techniques, and vehicles for explaining public health statistics [<http://www.cdc.gov/injury/CDCFramingGuide-a.pdf>].

**Dr. Holmes** added that NCIPC continually seeks ways to leverage other topics and insert or integrate injury as appropriate. They have found that in applying the framing as they executed technical assistance with the states, it is difficult to work horizontally. That is, with injury they began with the intent to unify the field with a consistent message about the injury field, so they

learned that this is very difficult to execute when thinking about applying this throughout a community or reaching a specific audience to do something. Now they are considering how to apply framing vertically to specific topics. As they move toward this focus, perhaps NCIPC can more specifically link its issues with other specific topics: physical activity and pedestrian safety, physical activity and helmet use, et cetera.

It seemed to **Dr. Fowler** that the idea of the audience is too generic. Decision makers do not make decisions the same way. The injury message seems to be too “one size fits all” and, therefore, it fits nobody.

**Dr. Degutis** pointed out that no one would think about anticoagulants and falls as an injury issue necessarily. However, preventing such falls will also prevent morbidity and mortality related to these. Most people will think about this more as an anticoagulant issue when the real issue is fall prevention.

**Dr. Fowler** said she was also thinking about it in another way. When medications are provided for patients, certain indications for or against use are considered. The idea of the risk for falls must be locked into someone’s mind when prescribing anticoagulants. Part of the counseling and teaching has to be done by the prescriber. It does not always have to be up to the injury field to implement the prevention. She remembered that when Carl Soderstrom said that the earliest clinical manifestation of alcoholism is trauma, that began to help trauma surgeons think differently about what they were observing. She thought they must be more strategic. Choking labeling used to say “not for children under 3 years of age,” but no one thought it pertained to their child. However, when this was changed to “small parts; choking hazard” the public perceived it very differently. Therefore, if anticoagulant labeling said “fall hazard” or “hip fracture” rather than “vertigo,” perhaps it would be addressed differently. Labels that state “may cause drowsiness; don’t drive” never mention “increased risk of crashing your car.”

**Dr. Degutis** thought labeling design might be interesting to approach with FDA. The FDA is changing messaging for tobacco, with much stronger messages required on cigarette packages as the FDA takes over this regulation. There probably are some opportunities for assessing how labeling of prescription and over-the-counter (OTCs) drug labels reflect risks. There has also been discussion about doing this for alcohol, and Dr. Redfern assumed that there was a psychological science behind this.

**Dr. Holmes** added that their colleagues in tobacco control learned about labeling. This also pertains to the discussion they had earlier about evaluation in terms of the earlier the evaluation the cheaper it is going to be. She encouraged identifying stakeholders and conducting early evaluation to understand the barriers.

**Dr. Greenspan** invited everyone to feel free to contact her with any further ideas they may have about any issues that arose during the meeting. She indicated that email contacts would be circulated to everyone.

No public comments were offered during this NCIPC BSC meeting.

### **Announcements, Dates for Future Meetings, and Adjournment**

**Carolyn Cumpsty Fowler, PhD**  
**Chairperson, Board of Scientific Counselors**  
**Assistant Professor and Evaluation Coordinator, Johns Hopkins School of Nursing**  
**Joint Appointed, Department of Health Policy and Management, Bloomberg SPH**

During this session, **Dr. Fowler** reported that Dr. Nancy Stout would be retiring in April 2011. She requested that the minutes reflect how much Dr. Stout's active participation in the NCIPC BSC meetings and her insights were appreciated. She has been an extraordinarily valuable member of the discussion.

With regard to plans for future meetings, Dr. Fowler indicated that consideration was being given to a secondary review via teleconference in late March or April 2011, although no dates had been confirmed at this time. She requested that everyone determine their availability and respond as soon as possible to the email sent out from Dianne Clapp pertaining to the secondary review. She also requested that those on the phone email Dianne Clapp to report their attendance at this meeting.

In closing, Dr. Fowler offered gratitude to all of those who helped to plan and organize the meeting. As someone who has to read the minutes before they are disseminated, she offered a personal thank you to Amy Johnson, their Writer / Editor from Cambridge Communications & Training Institute, and to Jim Evans, their Audio Technician from Sound on Site for keeping them ready for sound. She emphasized what a pleasure it is to serve on this committee, and she thanked CDC staff for their attendance and receptiveness to the BSC's questions.

With no further business raised or questions posed, Dr. Fowler officially adjourned the 5<sup>th</sup> meeting of the NCIPC BSC at 11:39 AM EST, wishing everyone safe travels and a good weekend.



**Certification**

I hereby certify that to the best of my knowledge, the foregoing minutes of the February 24-25, 2011 NCIPC BSC meeting are accurate and complete:

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Date

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Carolyn Cumpsty Fowler, PhD  
Chairperson, Board of Scientific Counselors  
National Center for Injury Prevention and Control

## Appendix A: Attendance

### **Committee Members Present**

Shrikant I. Bangdiwala, PhD  
Brent Eastman, MD, FACS (phone)  
Carolyn Cumpsty Fowler, PhD, MPH  
David Grossman, MD, MPH (phone)  
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## Appendix B: Acronyms Utilized in this Document

ACEP	American College of Emergency Physicians
ADS	Associate Director for Science
AI / AN	American Indian / Alaska Native
APHA	American Public Health Association
ASPR	Assistant Secretary for Preparedness and Response
ATF	Bureau of Alcohol, Tobacco, Firearms, and Explosives
BRFSS	Behavioral Risk Factor Surveillance System
BSC	Board of Scientific Counselors
CBPR	Community-Based Participatory Research
CDC	Centers for Disease Control and Prevention
CGH	Center for Global Health
CHPDPs	Centers for Health Promotion and Disease Prevention
CIOs	Centers, Institutes, and Offices
CMS	Centers for Medicare & Medicaid Services
CTSAs	Clinical and Translational Science Awards
DASH	Division of Adolescent and School Health
DAWN	Drug Abuse Warning Network
DIR	Division of Injury Response
DoD	Department of Defense
DOJ	Department of Justice
DUIP	Division of Unintentional Injury Prevention
DVP	Division of Violence Prevention
EIS	Epidemic Intelligence Service
ED	Emergency Department
ERPO	Extramural Research Programs Office
FACA	Federal Advisory Committee Act
FDA	Food Drug Administration
FETP	Field Epidemiology Training Program
FOA	Funding Opportunity Announcement
FTEs	Fulltime Equivalents
GDL	Graduated Drivers License
HAIs	Healthcare-Associated Infections
HHS	(Department of) Health and Human Services
ICRC	Injury Control Research Centers
IED	improvised explosive device
IOM	Institute of Medicine
IRB	Institutional Review Board
MASO	Management Analysis and Services Office
MMWR	<i>Morbidity and Mortality Weekly Report</i>
MOU	Memorandum of Understanding
MVIP	Motor Vehicle Injury Prevention

NAME	National Association of Medical Examiners
NCBDDD	National Center for Birth Defects and Developmental Disabilities
NCCDPHP	National Center for Chronic Disease Prevention and Health Promotion
NCD	Non-Communicable Disease
NCEH	National Center for Environmental Health
NCHS	National Center for Health Statistics
NCIPC	National Center for Injury Prevention and Control
NGOs	Non-Governmental Organizations
NHTS	National Household Transportation Survey
NHTSA	National Highway Traffic Safety Administration
NICE	National Institute for Health and Clinical Excellence
NIDA	National Institute on Drug Abuse
NIH	National Institutes of Health
NIJ	National Institutes of Justice
NIMH	National Institute of Mental Health
NIOSH	National Institute for Occupational Safety and Health
NVDRS	National Violent Death Reporting System
ONDCP	Office of National Drug Control Policy
ONDIEH	Office of Non-Communicable Disease, Injury, and Environmental Health
OTCs	Over-the-Counter
PPACA	Patient Protection and Affordable Care Act
PI	Principal Investigator
PRCs	Prevention Research Centers
RAD	Restricted Access Dataset
RFP	Request for Proposals
RNL	Regional Network Leader
SAMHSA	Substance Abuse and Mental Health Services Administration
SAVIR	Society for Advancement of Violence and Injury Research
SGEs	Special Government Employees
SIPs	Special Interest Projects
SSA	Safe States Alliance
STIPDA	State and Territorial Injury Prevention Directors Association
STRYVE	Striving To Reduce Youth Violence Everywhere
TBI	Traumatic Brain Injury
UN	United Nations
US	United States
WHO	World Health Organization
WISQARS™	Web-based Injury Statistics Query and Reporting System