Global Trauma Prevention Expert Consultation: Executive Summary

July 28–29, 2015
NIH Main Campus

In recognition of the prevalence and importance of injury as a cause of mortality, non-fatal trauma, health care utilization, and disability in low and middle income countries, the NICHD sponsored this expert meeting with generous support from the Office of the Director, NICHD. Investigators of Fogarty International Center (FIC) Collaborative Trauma and Injury Research Training Program were invited to share their research, discuss their experiences, and identify common themes. The specific purposes of the meeting were to provide a forum for investigators to (1) share their research and research training methods and findings; (2) identify key conditions, actions, and elements required for research success; and (3) identify principles to guide future research.

Meeting Format: Dr. Alan Guttmacher, Director of the NICHD, provided a welcome to the meeting, emphasizing the importance to the NICHD of injury and trauma prevention, both domestic and global. FIC investigators presented current research and research capacity development progress. Agency presentations focused on global injury prevention funding opportunities. Presenters and presentation topics are listed below. Facilitated discussions that followed each presentation were designed to bring out the unique and common findings, conditions, considerations, and difficulties of conducting traumatic injury research in low and middle income countries. In working groups, participants discussed the elements and activities essential for developing and sustaining injury research and identified ideas for future trauma-prevention research in low and middle developed countries. Discussions focused on the following areas: (1) data sources; (2) capacity development; and (3) success elements. Brief summaries of each group's deliberations and conclusions are provided in the following paragraphs.

PRESENTATIONS*

A. FIC Collaborative Trauma and Injury Research Training Program Investigator Presentations

Presentation Title: *Johns Hopkins University-Pakistan FIC Collaborative Trauma and Injury Research Training Program*
Presenters:
- Adnan A. Hyder, MD, MPH, PhD, Johns Hopkins Bloomberg School of Public Health

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- Junaid A. Razzak, MD, PhD, FACEP, Aga Khan University, Pakistan

Presentation Title: *Injury & Violence in Guatemala*
Presenters:
- Erwin Calgua, MD, University of Pennsylvania; Universidad de San Carlos de Guatemala
- Sergio Martinez, MD, Universidad Francisco Marroquin
- Therese S. Richmond, PhD, CRNP, University of Pennsylvania
- Charles Branas, PhD, University of Pennsylvania

Presentation Title: *Strengthening Injury Control Research in Ghana and West Africa*
Presenter: Charles Mock, MD, University of Washington

Presentation Title*: Collaborative Trauma and Injury Research in Bosnia-Herzegovina, Romania, Serbia, and The Gambia*
Presenters:
- Corinne Peek-Asa, PhD, University of Iowa
- Edrisa Sanyang, PhD Candidate, University of Iowa and Lecturer, University of The Gambia
- Nina Jovanovic, MD, MPH candidate, University of Iowa and Staff Physician, Clinical Hospital of Zenica

Presentation Title: *Collaborative Research in Trauma Training Program in South Africa*
Presenters:
- Gail Wyatt, PhD, UCLA
- Claire van der Westhuizen, PhD Candidate, University of Cape Town

Presentation Title: *Injury Prevention Research in Egypt and the Middle East*
Presenters:
- Jon Mark Hirshon, MD, MPH, PhD, University of Maryland at Baltimore
- Maged El-Setouhy, MBBCh, MPH, MD, Ain Shams University, Egypt
- Mohamed El Shinawi, MBBCh, MD, Ain Shams University

B. Agency Presentations

In addition to the formal presentations listed below, the following representatives served on a panel that focused on the state of injury prevention and trauma research and research funding mechanisms: Arlene Greenspan, Centers for Disease Control and Prevention (CDC); Troy Jacobs, United States Agency for International Development (USAID); Ralph Hingson, National Institute on Alcohol Abuse and Alcoholism (NIAAA); and Alison Cernich, Director, National Center for Medical Rehabilitation Research, NICHD.

Presentation Title: *NICHD Global Injury Prevention*

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Presenter: Valerie Maholmes, PhD, NICHD, NIH, HHS

Presentation Title: *Current Status and Opportunities for Global Injury Prevention Research*
Presenter: Margie Peden, MD, World Health Organization (WHO)

WORKING GROUPS

Working groups met several times during the meeting and prepared the reports below. The purpose of the working groups was to identify lessons learned across injury prevention studies that could guide future injury prevention research.

#1 Data Sources Working Group

Group Leaders: Jon Mark Hirshon, Terry Richmond
Recorder: Alison Cernich

Participants (part or all of discussion): Alison Cernich, Charles DiMaggio, Ralph Hingson, Jon Mark Hirshon, Troy Jacobs, Tara Leytham Powell, Amber Mehmoud, Margaret Peden, Therese (Terry) Richmond, Bruce Simons-Morton

Goals: The goal of this working group was to determine the essential data sources to identify priorities, attract attention, and obtain resources for the prevention and treatment of traumatic injury:
- Identify essential data sources.
- Discuss methods for improving data collection.
- Examine strategies to enhance access to data.
- Describe methods for using data to foster interest and resources for injury prevention research, including pediatric injury prevention.

Discussion Points: Essential Data Sources

1. Context of data acquisition. There was general agreement that any attempt to successfully acquire data would have to recognize the contextual nature of the data, the impact of culture and country resources on how the data would be collected, and the intended audience for the data. The primary consensus was that although data may be imperfect it is better to use data that are 'good enough' and continually strive to validate and improve these data. However, the group agreed that if multiple sources of data are collected the important piece would be to triangulate the data so that they could be meaningfully used and reveal trends across the systems developed.
2. Data types. The following were identified as essential:

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- Mortality/fatality
- Contributing factors
- Outcomes

3. Data Challenges: In addition to challenges with collecting data due to lack of infrastructure, data may also be protected by government or other entities for legal or other reasons.
   - Quality
   - Credibility
   - Access
   - Confidentiality

4. Data Sources: In addition to standard sources, data may be available from government and other sources, for example:
   - Mortality data
   - Admissions and other hospital/health sector data sources
   - Security and national disaster response data
   - police data,
   - National survey data

5. Conclusions
   - There is a need for essential common data elements across low and middle income countries to be standardized for flexible use and cross-country comparison. A matrix could be constructed that would identify basic questions and the potential use of those data for policy or public impact, for example:
     - Types of data
     - Types of risk
     - Audiences
     - Potential impact
   - Use the experience of the FIC studies as case reports that would identify the challenges and strengths related to data collection, important data components and definitions, and develop as possible the data matrix, depending on source, purpose, and restrictions.
     - Important lessons learned
     - Guidance for others to anticipate and circumvent problems
     - Develop products consistent with WHO documents, for example, for traffic fatalities and violence
     - Emphasize non-fatal injury data because they are prevalent and less is known about them

#2 Capacity Development Working Group Notes

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Leaders: Adnan Hyder, Gail Wyatt
Reporter: Maged El-Setouhy

Goals: The goals for the capacity developing working group were to identify approaches and metrics for success:
- Identify key target audience(s).
- Discuss training approaches.
- Identify priority areas.
- Identify indicators of success.

Discussion Points: Capacity Development

1. Key target audiences:
   - Injury prevention is a multifactorial process
   - Audiences should include all those targeted and support by the prevention program, including the following:
     - Academics
     - Policy makers (e.g., governors, ministers, mayors, local authorities, and media
     - Community representatives
     - Education leaders
   - The main challenges are developing the following:
     - Messages
     - Training programs
     - Interventions
2. Priority areas
   - Most prevalent injuries and violence
   - Prioritize according to cost and intervention efficacy
   - Sensitizing different groups, such as NGOs, about what is needed and provide them with the evidence.
   - Identify key players in different areas (tribal chief, local government, school teachers, sometimes/often it's not the gov't)
3. Providing reliable data from research
   - Open access is needed to allow sharing
   - Few reliable data-bases or registries
   - Training needed for medical, paramedical, data collection staff
   - Conceptual model needed to identify what data are needed
   - Mixed methods qualitative and quantitative research, including cost benefits
   - Goals and objectives for the national and local programs needed
   - Share data among different data "owners"
   - Conduct evaluation research to determine efficacy, provide evidence for decision making
4. Sustainability
   - Recruit, train, and retain local, potential researchers

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- Integrate training into other educational programs: public health, medicine, health care, social work, etc.
- Share curricula broadly
- Train trainers
- Develop institutional capacity for grant management, ethics committees, resource development

#3 Elements of Success Working Group

Group Leaders: Corinne Peek-Asa, Charlie Mock
Recorder: Corinne Peek-Asa

Goals: The working group goals focus on the following elements of success:
- Build project teams and partnerships that ensure all project needs are met from both a political and skills perspective.
- Identify and enlist key stake holders.
- Define shared goals and responsibilities for the team and project stakeholders.
- Identify elements of successful IP research programs, including pediatric injury prevention.

Discussion Points: Capacity Development

1. Build partner and stakeholder relationships during project planning; get "buy in."
2. Success elements are similar in international and national projects but have additional layers of complexity regarding cultural competence, partner building, communication, and political issues.
3. Working with multiple stakeholders can be challenging because they may not have worked together before and may have a history of competition/animosity. Build a relationship of trust by listening and staying neutral.
4. Develop inventory of skills needed.
5. Capitalize on human resources and keep resources in the country (encourage retention and opportunities for advancement).
6. Stay "aggressively neutral" and be clear that "no one owns you."
7. Stay focused on the shared goal and present your point based on evidence, science.
8. Retain long-term, sustainability focus.
9. Start with needs assessments involving community and stakeholders.
10. Identify who has done what.
11. Bring in as an equal partner someone from the culture or hire a cultural consultant.
12. Build practical skills in-country.
13. Find a broad group of mentors and colleagues for feedback.
14. Bring stakeholders into the process early.
15. Integrate research into the curricula and teaching process.

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16. Build relationships and champions.
17. Be ready for leadership changes.
18. Build capacity and implementation science.
19. Use components of community-based participatory research.
20. Understand the environment and local politics of agencies and the community.
21. Recognize not all potential stakeholders will be supportive.
22. Emphasize quality implementation.
23. Planning phase.
    - Identify and engage practitioners/stakeholders.
    - Ensure project is needed and that a clear vision of how the project fits into current evidence base is articulated
        - Environmental scan to see what other projects are going on/have been done
        - Complete literature review
    - Explore funding options for current and next-step projects.
    - Complete an inventory of the skills needed.
    - Identify mentoring plan.
    - Ensure buy-in from supervisors.
    - Identify the documents/assurances/approvals needed.
    - Create a timeline.
    - Create measurable research question that can feasibly be addressed and is of appropriate scope.
    - Consider the ethical issues and address concerns.
    - Discuss and set expectations for intellectual property, ownership, and authorship.
    - Create plans for overcoming likely problems.
    - Develop a dissemination plan.
    - Keep long-term goals in mind.
24. Operationalization Phase
    - Implement plans made above.
    - Seek input and listen to input and include feedback.
    - "Avoid making the same mistake with increasing confidence."
    - Pilot test and revise.
    - Stay on top of things.
    - Know who can help you and seek their help.
25. Dissemination Phase
    - Develop communication and dissemination plan.
    - Do not disseminate until the story is conceptualized and methods for communication are clear; mind the message.
    - Encourage practical questions and prepare responses.
    - Identify and engage key audiences .
    - Think through and be ready to communicate policy/prevention implications.
    - Use creative dissemination tools: video, infographics, social media.

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Planning Committee Members

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*The following meeting materials are available at
http://www.nichd.nih.gov/about/meetings/2015/Pages/072815.aspx:

- Meeting agenda
- Power Point presentations
- Meeting notes
- List of participants