

Strategies to Support Multi-Institutional, Cross-Conference Research Collaborations

Martha Cooper
Visiting Traumatic Brain Injury Project Coordinator
Big Ten/CIC-Ivy League TBI Research Collaboration
Committee on Institutional Cooperation

Nathan Meier
Director of Research Strategy
Office of Research and Economic Development
University of Nebraska-Lincoln

National Organization of Research Development Professionals
Annual Research Development Conference
April 30, 2015



Agenda

- **Why traumatic brain injury and sports-related concussion?**
- **Big Ten/CIC and Ivy League TBI Research Collaboration**
- **Collaborative activities**
- **Collaborative approaches**
- **Challenges and solutions**
- **Success indicators**
- **Future directions**
- **Keys to success**
- **Questions**

Why Focus on Traumatic Brain Injury?



Sports-related Concussion Crisis

- Dearth of rigorous, empirical evidence to inform current medical practice
- All clinical trials have failed
- 3 million sports- or recreation-related concussions annually
 - Leading cause of death for individuals 45 or younger
- Invisible, silent condition
- Media attention
 - NFL: 1 in 3 players more likely to suffer from dementia and/or Parkinson's
 - NCAA: Michigan example
- Major public health issue and burden
 - Treatment and rehabilitation costs \$30 billion annually

Big Ten/CIC-Ivy League TBI Research Collaboration

- 23 Big Ten/CIC and Ivy League member institutions
- 17,000+ student-athletes
- 500+ TBI researchers
- 600+ team physicians and athletics trainers
- **Goal:** improved prevention, detection, and treatment strategies



Big Ten/CIC-Ivy League TBI Research Collaboration

- Objectives
 - Improved student-athlete well-being by leveraging scientific resources across disciplines, institutions, and conferences
 - Improved TBI prevention, detection, and treatment strategies
 - Foster collaborations through shared data and focus on standardized research approaches
 - Larger sample sizes
 - Evidence-based clinical protocols

Big Ten/CIC-Ivy League TBI Research Collaboration

- Oversight by two athletic conferences; one academic consortium; and presidents/chancellors, provosts, and VPRs
- Nine-member project board
- Two advisors: research and research development
- Seven working groups:
 - Assessment
 - Data collection
 - Education and outreach
 - Funding
 - IRB
 - Protocol
 - Research

Committee on Institutional Cooperation (CIC)

- Brief CIC history
- New, two-year project coordinator position
- Financial support provided by athletic conferences
- Purpose:
 - Connect
 - Organize
 - Identify
 - Support
 - Facilitate

University of Nebraska-Lincoln

- Culture of collaboration
- Strong partnership between athletics and academics
- State-of-the-art facilities
- Strong institutional commitment

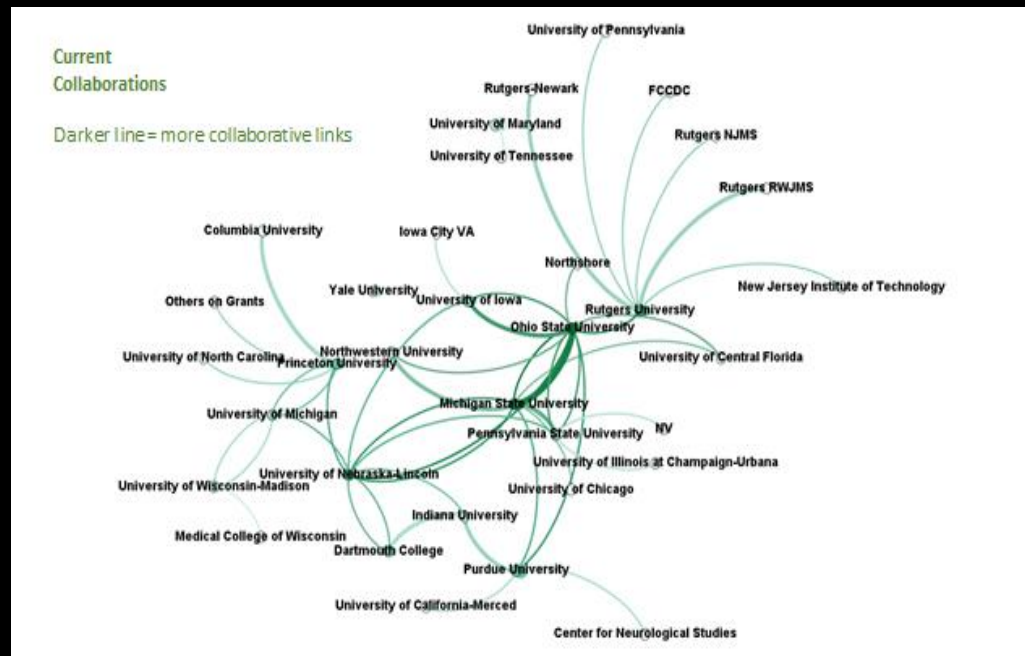


Collaborative Activities

- Design and implementation of three surveys
 - **Research Laboratory Survey**
 - Results show TBI tests, approaches, and research infrastructure vary widely
 - Most researchers focus on psychological/neurological responses to concussion and effects of multiple concussions
 - Collection/analysis of samples for biomarker ID uncommon
 - **Certified Athletics Trainer (ATC) survey**
 - Practices and approaches vary widely
 - Most ATCs conduct baseline concussion assessment for women's basketball, soccer, softball, and volleyball and men's basketball, football, baseball, and wrestling
 - Most ATCs also conduct baseline balance and neurocognitive testing, obtain symptom scores, and contribute to TBI research

Collaborative Activities

- **Partnership Survey**
 - Designed to inventory current research connection and funding status
 - Respondents identified 22 research collaboration, including 12 funded efforts (e.g., NCAA-DoD, GE-NFL Head Health Challenge, NIH, etc.)
 - Half of respondents indicated interest in developing new TBI research partnerships



Collaborative Approaches

- Annual TBI Summit
 - 2013 – Chicago (75 participants)
 - 2014 – Philadelphia (82 participants)
 - 2015 – Chicago (July 15th-16th)
 - TBI Collaboration listserv
 - Deliver updates, share funding opportunities, promote engagement opportunities
- Working group conference calls and webinars
- Interaction with public and private stakeholders
- Special issue of *Developmental Neuropsychology*

Challenges and Solutions

- Maintaining communication and coordination
- Fostering participation of and buy-in from athletics
- Obtaining funds for preliminary or proof-of-concept studies
- Increasing competition for limited federal funds
- Balancing tension between collaboration and competition
- Relationship building and networking

Success Indicators

- Teams pursuing research funding
 - **Biomarkers and Recovery in Sports-Related Concussions**
 - Includes Dartmouth, Indiana, Iowa, Michigan State, Nebraska, Penn State, and Princeton
 - Large-scale, multi-site R01 (resubmission in July, 2015)
 - Goal is to identify concussion biomarkers using imaging, electrophysiology, and neuropsychological testing and characterize post-injury recovery patterns across gender and race/ethnicities
 - **Concussion Neuroimaging Consortium**
 - Includes Michigan State, Nebraska, Northwestern, Ohio State, Penn State, and Purdue
 - Will use imaging data to develop three types of student-athlete and soldier treatment and rehabilitation protocols: 1) return-to-play or -duty, 2) return-to-play or -training, and 3) transition to workforce or civilian life

Success Indicators

- Teams conducting funded research
 - **Concussion Assessment, Research and Education (CARE) Consortium**
 - Includes Michigan, Nebraska, Princeton, and Wisconsin plus four military academies and four other athletic conferences
 - Funded through a \$30M initiative launched by NCAA and DoD
 - Provides a roadmap for comprehensive pre-season and post-injury concussion evaluation for *all* NCAA athletes
 - **Ivy League and Big Ten Concussion Surveillance Study**
 - Developed and deployed by Ivy League – expanded to Illinois, Indiana, Iowa, Maryland, and Nebraska
 - Conference provides financial support for data collection and entry
 - Tracks concussion incidence and characteristics of injury events
- Increased campus funding/support

Future Directions

- Capitalize on current and emerging Big Ten/CIC-Ivy collaborations
- Identify, document, and share evidence-based best practices
- Explore strategies to support research standardization
- Pursue TBI research funding from public and private sponsors
- Explore additional collaborative opportunities (e.g., international partnerships)

Keys to Success

- Do not underestimate the importance of relationship building
- Understand and respect cultural contexts and norms
- Robust stakeholder communication plan is key
- Create coherence through focus on common goals: avoid the noise
- Effective collaborative process result in better collaborative products

Questions?

Martha Cooper
Committee on Institutional Cooperation
217.300.2112
mlcooper@staff.cic.net

Nathan Meier
University of Nebraska-Lincoln
402.472.3902
nlm@unl.edu