Advocating for Funding.

Coordinating Research Efforts.

Strengthening Infrastructure.

Annual Report 2020
Advocating
FOR SUSTAINABLE RESEARCH FUNDING
COMMENSURATE WITH THE BURDEN OF DISEASE.

Coordinating
RESEARCH EFFORTS ACROSS PROFESSIONAL ORGANIZATIONS
SPANNING THE CONTINUUM OF INJURY CARE.

Strengthening
THE NATIONAL INFRASTRUCTURE FOR MULTICENTER INVESTIGATION.

CNTR’s MISSION

A MESSAGE FROM OUR CHAIR

Traumatic injury results in more than 5 million deaths per year worldwide and has a dramatic impact on our communities, with many survivors suffering life-long disability.

While people of all ages are impacted by traumatic injury, this is the most important public health problem facing our children and young people, resulting in a tremendous impact on their families and years of productive life lost to society.

Despite this impact, there has been a consistent lack of research funding at the federal level to support injury research—a fact that has been highlighted in every national report since the pivotal Accidental Death and Disability: the Neglected Disease of Modern Society in 1966. Fifty years later, the 2016 National Academies of Sciences, Engineering and Medicine report, A National Trauma Care System—Integrating Military and Civilian Trauma Systems to Achieve Zero Preventable Deaths After Injury, noted, "Investment in trauma research is not commensurate with the burden of traumatic injury. To address critical gaps in knowledge of optimal trauma care practices and delivery systems, the United States needs a coordinated trauma research program with defined objectives, a focus on high priority needs and adequate resources from both the military and civilian sectors."

Since its founding in 2014, the Coalition for National Trauma Research (CNTR) has brought the trauma community together with a unified focus to address the critical need to coordinate our efforts to achieve federal research funding commensurate with the burden of disease and to enhance the infrastructure supporting high-impact, multidisciplinary clinical trials.

Building on the legacy of the National Trauma Institute, the American Association for the Surgery of Trauma, the American College of Surgeons Committee on Trauma, the American Burn Association, the Eastern Association for the Surgery of Trauma and the Western Trauma Association have committed substantial support to this effort as CNTR core members to create a sustainable coalition continuing to advance this mission. This commitment allowed for the restructuring of CNTR in 2020 and the opportunity to engage an ever-growing community of trauma-related scholarly societies and non-profit organizations to strengthen the coalition.

In addition, we have established the infrastructure to support a wide variety of successful federal grant applications and offer mentorship to the next generation of clinical trauma researchers.

This report outlines our growing list of accomplishments, which speaks to the salience of this mission, the formidable commitment of our member organizations, countless volunteer hours from our senior investigators, and the expertise of our seasoned staff. We will forever be indebted to the leadership and vision of our founding executive committee, who provided the sturdy foundation upon which we continue to build.

We are grateful for the financial commitment of our Core and Stakeholder members, and the support of our Affiliates, as we work toward greater recognition of the public health impact of traumatic injury and sustainable federal funding and coordination to support this research.

EILEEN BURGER, MD, FACS
CHAIR Coalition for National Trauma Research
CHAIR American College of Surgeons Committee on Trauma
PROFESSOR OF SURGERY University of Washington
CHIEF OF TRAUMA Harborview Medical Center

1. Institute of Medicine, Committee on Trauma and Committee on Shock, and Division of Medical Sciences, Accidental death ... the neglected disease of modern society. 1966, National Academy of Sciences, National Research Council: Washington, D. C.

WE BELIEVE THAT TRAUMA RESEARCH CAN SAVE LIVES AND PREVENT DISABILITY.

Membership in CNTR isn’t transactional. While our member organizations and their constituents do see direct benefits from their involvement, as outlined below, organizations join CNTR because they believe in our mission. We know that research funding commensurate with the burden of traumatic injury in our society, coordinated through a federal institute for trauma research, is necessary to achieve the ultimate goal to eliminate preventable death and disability from injury across the globe.

If we are going to realize our mission, we must work in unison. Only together can we achieve an increased federal commitment to trauma research and support the multidisciplinary coordination to conduct multicenter studies across the continuum of trauma care.

JOIN US.

While advancing toward our sizable goals, members of participating organizations also reap these benefits:

- Opportunities and support for participation in trauma research—since CNTR’s founding, hundreds of trauma investigators and stakeholders have engaged in our studies, infrastructure projects, committee work, and advocacy activities.
- Research mentorship, especially for junior investigators and those from underrepresented groups—including collaboration with senior investigators, guidance through the grant application process, administrative support, technical expertise and national networking. Support is also targeted to mid-career investigators who seek to transition from K awards to R01 awards, from bench to bedside research, or from single-center to multicenter projects.
- Representation on CNTR’s Scientific Advisory Committee, supporting the evaluation of new proposals and innovative projects and opportunities for participation.
- Access to the National Trauma Research Repository (NTRR) for data sharing and secondary analysis.
- Access to the American College of Surgeons - Committee on Trauma (ACS-COT) Trauma Quality Improvement Program (TQIP) platform as a framework for data collection for funded projects.
- Participation in research development and advocacy training seminars.
- Assistance with knowledge translation and amplification of research publications and presentations on the CNTR blog and across social media accounts.

JOIN US.

While advancing toward our sizable goals, members of participating organizations also reap these benefits:

- Opportunities and support for participation in trauma research—since CNTR’s founding, hundreds of trauma investigators and stakeholders have engaged in our studies, infrastructure projects, committee work, and advocacy activities.
- Research mentorship, especially for junior investigators and those from underrepresented groups—including collaboration with senior investigators, guidance through the grant application process, administrative support, technical expertise and national networking. Support is also targeted to mid-career investigators who seek to transition from K awards to R01 awards, from bench to bedside research, or from single-center to multicenter projects.
- Representation on CNTR’s Scientific Advisory Committee, supporting the evaluation of new proposals and innovative projects and opportunities for participation.
- Access to the National Trauma Research Repository (NTRR) for data sharing and secondary analysis.
- Access to the American College of Surgeons - Committee on Trauma (ACS-COT) Trauma Quality Improvement Program (TQIP) platform as a framework for data collection for funded projects.
- Participation in research development and advocacy training seminars.
- Assistance with knowledge translation and amplification of research publications and presentations on the CNTR blog and across social media accounts.

JOIN US.

While advancing toward our sizable goals, members of participating organizations also reap these benefits:

- Opportunities and support for participation in trauma research—since CNTR’s founding, hundreds of trauma investigators and stakeholders have engaged in our studies, infrastructure projects, committee work, and advocacy activities.
- Research mentorship, especially for junior investigators and those from underrepresented groups—including collaboration with senior investigators, guidance through the grant application process, administrative support, technical expertise and national networking. Support is also targeted to mid-career investigators who seek to transition from K awards to R01 awards, from bench to bedside research, or from single-center to multicenter projects.
- Representation on CNTR’s Scientific Advisory Committee, supporting the evaluation of new proposals and innovative projects and opportunities for participation.
- Access to the National Trauma Research Repository (NTRR) for data sharing and secondary analysis.
- Access to the American College of Surgeons - Committee on Trauma (ACS-COT) Trauma Quality Improvement Program (TQIP) platform as a framework for data collection for funded projects.
- Participation in research development and advocacy training seminars.
- Assistance with knowledge translation and amplification of research publications and presentations on the CNTR blog and across social media accounts.

JOIN US.

While advancing toward our sizable goals, members of participating organizations also reap these benefits:

- Opportunities and support for participation in trauma research—since CNTR’s founding, hundreds of trauma investigators and stakeholders have engaged in our studies, infrastructure projects, committee work, and advocacy activities.
- Research mentorship, especially for junior investigators and those from underrepresented groups—including collaboration with senior investigators, guidance through the grant application process, administrative support, technical expertise and national networking. Support is also targeted to mid-career investigators who seek to transition from K awards to R01 awards, from bench to bedside research, or from single-center to multicenter projects.
- Representation on CNTR’s Scientific Advisory Committee, supporting the evaluation of new proposals and innovative projects and opportunities for participation.
- Access to the National Trauma Research Repository (NTRR) for data sharing and secondary analysis.
- Access to the American College of Surgeons - Committee on Trauma (ACS-COT) Trauma Quality Improvement Program (TQIP) platform as a framework for data collection for funded projects.
- Participation in research development and advocacy training seminars.
- Assistance with knowledge translation and amplification of research publications and presentations on the CNTR blog and across social media accounts.
**CNTR PROJECTS**

1. **National Trauma Research Repository (NTRR)**
   - **FUNDING:** $1.6 million, Department of Defense
   - **PI:** Donald Jenkins, MD, FACS
   
   The NTRR is a cloud-based central repository for clinical data resulting from both military and civilian federally funded trauma research, encompassing the continuum of care. Use of the NTRR enables investigators to replicate findings through secondary analyses of pooled data files, facilitates publication of new research using existing data, and expands the return on investments made in clinical trials. The repository also optimizes research participant contributions and data through the use of common data elements and harmonization across studies. Now built, with several legacy studies contributed, CNTR is seeking sustainment funding.

   www.NTRR-NTI.org

2. **Multi-Institutional Multidisciplinary Mortality Investigation in the Civilian Pre-Hospital Environment (MIMIC)**
   - **FUNDING:** $4 million, Department of Defense
   - **PI:** Brian Eastridge, MD, FACS
   
   MIMIC is a review of approximately 3,000 pre-hospital deaths in six areas of the country. Through the project, we are creating a framework and methodology for evaluating the causes and pathophysiologic mechanisms of pre-hospital deaths and determining the appropriateness of EMS response and care delivered and the potential for survivability under optimal clinical circumstances and within the context of each individual injury event. We aim to develop a more comprehensive understanding of the epidemiology of pre-hospital deaths, identify liabilities in the current trauma system, and improve survival overall.

3. **National Trauma Research Action Plan (NTRAP)**
   - **FUNDING:** $2.7 million, Department of Defense
   - **PI:** Eileen Bulger, MD, FACS
   
   The NTRAP project is a response to the 2016 National Academies of Sciences, Engineering, and Medicine (NASEM) Report on a National Trauma Care System, which called for development of a National Trauma Research plan to include a national research agenda. Engaging more than 400 experts across the continuum of trauma care, this project seeks to perform a gap analysis of military and civilian trauma research to identify research priorities and establish a comprehensive research agenda. Additional project aims include defining the optimal metrics to assess long-term functional outcomes in injured patients, to identify trauma regulatory barriers to research, to develop best practices for clinical investigators, and to collaborate with federal entities to define optimal endpoints for clinical trauma research.

---

**CNTR**

“CNTR staff members are relentless in their adherence to deadlines and pursuit of study objectives. The National Trauma Research Repository launched right on schedule and with impeccable timing—the month before new rules for data sharing were adopted by international medical journals.”

**DONALD JENKINS, MD, FACS**

Professor of Surgery
Uniformed Services University

Professor/Chief, Division of Trauma and Emergency Surgery
Vice Chair for Quality, Department of Surgery
Betty and Bob Kohr Distinguished Chair in Burn and Trauma Surgery
Associate Deputy Director, Military Health Institute
UT Health San Antonio

“Our study relies on the analytical power of advanced Geographic Information Systems (GIS). CNTR’s use of this technology introduces a whole universe of data related to demographics and spatial relationships, allowing for unique project designs to improve public health and safety through the advancement of trauma systems.”

**COL BRIAN EASTRIDGE, MD, FACS**

Professor, Department of Surgery
Division Chief, Trauma and Emergency General Surgery
Jocelyn and Joe Straus Endowed Chair Trauma Research
UT Health San Antonio

“The NTRAP project highlights the many gaps that currently exist in the evidence base to support the care we provide. This project will provide a roadmap for future investigators and guide the investment of resources to support this critical work.”

**EILEEN BULGER, MD, FACS**

Chair
Coalition for National Trauma Research
Chair
American College of Surgeons Committee on Trauma
Professor of Surgery
University of Washington
Chief of Trauma
Harborview Medical Center
4. Pathogenesis of Post-Traumatic Pulmonary Embolism: A Prospective Multicenter Investigation by the CLOTT Study Group
(Congress of Leaders in the Study of Post-Traumatic Thromboembolism) (CLOTT Parts 1 & 2)

**FUNDING:** $4.2 million, Department of Defense

**PI:** Mary Margaret Knudson, MD, FACS

CLOTT Part 1 examines the significance of incidentally discovered pulmonary thrombi after injury as well as the role of fibrinogen breakdown in the development of post-traumatic Pulmonary Embolism. CLOTT Part 2 investigates the role of platelet biology in post-traumatic pulmonary embolism—specifically, whether there are biologic phenotypes of how platelets behave after injury that are associated with bad outcomes.

5. Implementing Best Practice, Patient-Centered Venous Thromboembolism Prevention in Trauma Centers (CLOTT Part 3)

**FUNDING:** $1.4 million, Patient-Centered Outcomes Research Institute (PCORI)

**PI:** Elliott Haut, MD, PhD, FACS

The CLOTT Part 3 project focuses on implementing findings of a completed PCORI study that showed that a single, web-based nurse education module can have a dramatic effect on missed doses of VTE prophylaxis administration (blood clot prevention) in hospitalized patients. It also showed that a patient-centered education bundle delivered to hospitalized patients reduces missed doses by nearly 50%. These modules will be implemented in 10 trauma centers, with the primary objective to help nurses and patients make informed decisions regarding VTE prevention and reduce the occurrence of blood clots in injured patients.

6. ProSpective Observational Vascular Injury Trial - 2 (PROOVIT-2)

**FUNDING:** $0.7 million, Medical Technology Enterprise Consortium (MTEC)

**PI:** Todd Costantini, MD, FACS, and Joseph DuBose, MD, FACS, FCCM, FSVS

Working with tissue-engineering firm, Humacyte, CNTR is managing this multi-site study of vascular trauma using the PROOVIT (ProSpective Observational Vascular Injury Treatment) registry. Investigators are reviewing the medical records of patients who suffered life- or limb-threatening vascular trauma requiring surgical repair and evaluate for evidence of infection, thrombosis, re-intervention, or limb loss. The study demonstrates the utility of PROOVIT as a means to compare two approaches to traumatic vascular injury repair—arterial reconstruction with autologous vein and, conversely, with Humacyte’s Human Acellular Vessel (HAV).

7. Plasma Resuscitation without Lung Injury (PROPOLIS)

**FUNDING:** $2.5 million, Department of Defense

**PI:** Leopoldo Cancio, MD, FACS

Coordinated by CNTR, PROPOLIS evaluates pathogen-reduced plasma for the resuscitation of patients with shock secondary to extensive burns. The study is a prospective, randomized, controlled, multicenter trial of pathogen-reduced plasma vs. a standard-of-care therapy based on lactated Ringer’s solution, for the resuscitation of patients with acute burns > 20% of the total body surface area.
In order to strengthen the pipeline of prolific and effective researchers, CNTR prioritizes support for young investigators. The idea is to propel them to the next level in their careers by partnering with them on high impact, interdisciplinary, multicenter research projects.

To do this, CNTR combines the strengths and resources of its member organizations including a network of established investigators from a variety of disciplines, access to expertise in trauma system evaluation and geo-spatial mapping, and connections to trauma centers and trauma survivor communities.

Our member network includes nearly 157,000 medical professionals in diverse medical fields including trauma, burn, orthopedic and neurological surgeons; emergency physicians, trauma nurses and EMS providers; geriatric and rehabilitation specialists; and survivor and patient support communities. Drawing on this vast trauma stakeholder group, CNTR develops comprehensive, multidisciplinary, patient-centered clinical and translational study proposals that are attractive to funding agencies and deliver valuable insights.

CNTR’s newly seated Equity, Diversity & Inclusion (EDI) Committee will ensure that all aspects of EDI are considered in the development of research proposals and grant applications. The EDI Committee is collaborating with the board to develop a mentorship program for underrepresented minority investigators interested in clinical trauma research.

**Publications**


**Presentations**


The CNTR staff, who formerly managed the National Trauma Institute, have nearly two decades of experience securing and managing large, multicenter grants—from proposal writing to knowledge translation, and every step in between.

The investigators in our projects are all members of CNTR core, stakeholder and affiliate organizations, which means that the results of their work are showcased at the annual meetings and in the peer-reviewed scientific journals that are critical to advancing the entire trauma community. Uniquely, CNTR’s diverse member group fosters collaboration across disciplines and the entire spectrum of injury care, strengthening our proposals and propagating fruitful relationships among linked trauma care providers and patients.

CNTR staff work seamlessly with investigators to conduct all the work required along every step of the grant lifecycle. With 20 years of successful grant management experience, CNTR operates as a research coordinating center and is particularly adept at managing grants involving multiple institutions.
For every 2020 membership dollar, CNTR generated $31 that went to the trauma research community in new research awards.

**FINANCIALS**

**PROGRAM EXPENSES DETAIL 2020**

- Administrative Expenses: 14% (14% of $2,182,640 = $305,529.60)
- Wages & Fringe: 22% (22% of $2,182,640 = $480,180.80)
- Professional Services: 2% (2% of $2,182,640 = $43,652.80)
- Other: 1% (1% of $2,182,640 = $21,826.40)

**TOTAL EXPENSE 2020**

- Program Expenses: $1,865,870 (86%)
- Subawards: $316,770 (14%)
- Total Expenses: $2,182,640 (100%)

**SUBAWARDS**

- Brigham Women’s University: $175,756
- Christiana Care Health Services: $44,024
- Denver Health and Hospital Authority: $189,613
- Johns Hopkins University: $330,455
- Lancaster General Hospital: $13,826
- Maryland Medical Examiner: $6,160
- Massachusetts General Hospital: $4,761
- Medical College of Wisconsin: $48,003
- Medical University of South Carolina: $10,172
- Nationwide Children’s Hospital: $1,437
- Oregon Health & Science University: $229,374
- Sapient Governmental Services: $110,345
- Scripps Health: $31,255
- Stanford University: $42,586
- University of Arizona: $28,266
- University of California, San Diego: $55,836
- University of California, San Francisco: $199,134
- University of Florida, Gainesville: $65
- University of Florida, Jacksonville: $40,988
- University of Maryland, Baltimore: $42,763
- University of New Mexico: $96,594
- University of Pennsylvania: $824
- University of Texas Health Science Center at Houston: $220,496
- University of Texas Health Science Center at San Antonio: $184,246
- University of Washington: $95,663
- TOTAL: $2,182,640

**COALITION FOR NATIONAL TRAUMA RESEARCH**

**STATEMENTS OF ACTIVITIES**

**FOR THE YEAR ENDED DECEMBER 31, 2020**

*(With Comparative Totals for the Year Ended December 31, 2019)*

<table>
<thead>
<tr>
<th>OPERATING ACTIVITIES</th>
<th>TOTALS 2020</th>
<th>TOTALS 2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>REVENUES AND OTHER SUPPORT:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Government Grants</td>
<td>$3,102,863</td>
<td>$4,510,609</td>
</tr>
<tr>
<td>Nongovernment Grants - PCORI</td>
<td>$121,076</td>
<td>$0</td>
</tr>
<tr>
<td>Other Income</td>
<td>$338,684</td>
<td>$26,372</td>
</tr>
<tr>
<td><strong>TOTAL REVENUES AND OTHER SUPPORT</strong></td>
<td><strong>$3,562,623</strong></td>
<td><strong>$4,567,981</strong></td>
</tr>
<tr>
<td>EXPENSES:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Program Services</td>
<td>$2,987,436</td>
<td>$4,146,354</td>
</tr>
<tr>
<td>Management and General</td>
<td>$121,076</td>
<td>$0</td>
</tr>
<tr>
<td><strong>TOTAL EXPENSES</strong></td>
<td><strong>$3,108,512</strong></td>
<td><strong>$4,146,354</strong></td>
</tr>
<tr>
<td><strong>CHANGE IN NET ASSETS (PROFIT)</strong></td>
<td><strong>$87,304</strong></td>
<td><strong>$15,846</strong></td>
</tr>
<tr>
<td><strong>PAYMENT TO LINE OF CREDIT ($60,000)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>ADJUSTED CHANGE IN NET ASSETS (PROFIT)</strong></td>
<td><strong>$27,304</strong></td>
<td><strong>$15,846</strong></td>
</tr>
</tbody>
</table>

**CNTR MEMBERS - 2020**

**CORE MEMBERS** ($35,000 annual investment)
- American Association for the Surgery of Trauma (AAST)
- American Burn Association (ABA)
- American College of Surgeons Committee on Trauma (ACSCOT)
- Eastern Association for the Surgery of Trauma (EAST)
- Western Trauma Association (WTA)

**STAKEHOLDER MEMBERS** ($5,000 annual investment)
- American Trauma Society (ATS)
- Military Health System Strategic Partnership with the American College of Surgeons (MHSSPAC)
- Orthopaedic Trauma Association (OTA)
- Society of Trauma Nurses (STN)

**AFFILIATE MEMBERS** (no financial commitment)
- American Association of Neurological Surgeons/Congress of Neurological Surgeons (AANS/CNS)
- American College of Emergency Physicians (ACEP)
- American Geriatrics Society (AGS)
- National Association of Emergency Medical Technicians (NAEMT)
- National Blood Clot Alliance (NBCA)
- North American Thrombosis Foundation (NATF)
- Society of Critical Care Medicine (SCCM)
- Trauma Center Association of America (TCAA)
- Society of Trauma Nurses (STN)
ABOVE: Surgeons and trauma survivors meet with their legislators each year for Trauma Research Advocacy Day. In 2018, Boston Marathon bombing survivor Patrick Downes joined the group to request appropriations for a Trauma Clinical Research Program in the Department of Defense.

ABOVE: Orthopedic surgeon Dr. Jim Ficke serves as a panel leader for the National Trauma Research Action Plan, a multi-disciplinary CNTR project.

ABOVE: Founding executive committee members were presented with this keystone award, noting their foundational leadership in the coalition since 2014.
CNTR STAFF
Michelle A. Price, PhD
EXECUTIVE DIRECTOR
Michelle@nattrauma.org

Pam Bixby
DEPUTY DIRECTOR
Pam@nattrauma.org

Monica Phillips
SENIOR PROGRAM MANAGER
Monica@nattrauma.org

Lizette Villarreal
PROGRAM MANAGER
Lizette@nattrauma.org

Amy Flores
CONTROLLER
Amy@nattrauma.org

Nick Medrano
RESEARCH DATA ANALYST/
GIS SPECIALIST
Nick@nattrauma.org

Ana Guerrero
EXECUTIVE ASSISTANT
Ana@nattrauma.org

Maxwell Braverman, MD
RESEARCH FELLOW
Max@nattrauma.org

Edward Shipper, MD
RESEARCH FELLOW
Edward@nattrauma.org

HOW TO ENGAGE

EMAIL
INFO@NATTRAUMA.ORG

PHONE
(210) 455-8038

TWITTER
@NATTRAUMA

WEBSITE
WWW.NATTRAUMA.ORG