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The National Center for Disaster Medicine and Public Health

Empowering scientists and educators to protect our nation's health from disasters

2020 ANNUAL REPORT

NCDMPH



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In coordination with the Uniformed Services University of the Health Sciences (USUHS), this report fulfills the requirements between USU and the Assistant Secretary of Defense for Health Affairs. The views within this report are solely those of the authors and do not reflect the views of USU or the U.S. Department of Defense.

Report Design

Henry M. Jackson Foundation for the Advancement of Military Medicine (hjf.org)





About the National Center for Disaster Medicine and Public Health

MISSION: The mission of the National Center for Disaster Medicine and Public Health (NCDMPH) is to improve our nation's disaster health readiness through education and science.

VISION: NCDMPH will be the nation's academic center of excellence leading domestic and international disaster health education and research efforts. In collaboration with our partners, we create and translate science and education to improve readiness.

As a bridge between federal agencies and academia, NCDMPH is well-positioned to perform this role:

- The National Center was established to serve five federal agency partners: Department of Health and Human Services (HHS), Department of Defense (DoD), Department of Homeland Security (DHS), Department of Transportation (DOT), and Department of Veterans Affairs (VA).
- Both a federal organization and an academic center, the National Center is based at the Uniformed Services University of the Health Sciences (USUHS), which is an academic health institution.

Focus Areas:

- **Lead and collaborate** with governmental and nongovernmental partners to advance disaster medicine and public health education and research agendas.
- **Act** as a neutral coordinator across federal, state, tribal and local governments; academia and non-government associations; and non-governmental organizations.
- **Convene** experts from diverse professional backgrounds to define disaster health issues and recommend policy solutions.
- **Provide** consultations to partners both inside and outside the federal government regarding disaster health education, training, and science.

Federal Government Directives Related to NCDMPH:

- National Defense Authorization Act 2020: NCDMPH is leading DoD efforts to meet the requirements of Sec. 740.
- National Health Security Strategy 2019-22: NCDMPH is defined as, "strategically situated within the federal interagency to help advance the readiness of the public health and medical workforce through enhanced collaborative efforts in disaster health, research, and education. NCDMPH leads federal efforts to develop and propagate core curricula, training, and research related to medicine and public health in disasters."
- Pandemic and All-Hazards Preparedness and Advancing Innovation Act (2019), Pandemic and All Hazards Reauthorization Act (2013), Pandemic and All Hazards Preparedness Act (2006): These laws outline the tactics and tools NCDMPH implements to prepare our nation.
- Homeland Security Presidential Directive 21 (HSPD-21): Established NCDMPH in October 2007 to be "...an academic center of excellence in disaster medicine and public health...."



Letter from the Director/Major Accomplishments



The National Center for Disaster Medicine and Public Health (NCDMPH or “National Center”) has leapt into a new area of health system preparedness even while building upon our prior successes. We have greatly expanded our activities and staff to meet the urgent health and public health needs exposed by COVID-19. In presenting this latest Annual Report, I am delighted to highlight our accomplishments and share some of our next fiscal year’s aspirations.

Despite the COVID-19 restrictions on travel and gatherings, the National Center continued operations remotely. We received additional grant funding, new research projects came online, conducted webinars, authored and published scientific papers and healthcare guidelines, and increased our social media presence. We continue to attract high profile Visiting Scholars and students. Key activities include:

Education Activities

The NCDMPH education mission is to: identify educational needs and create content to better prepare our nation. This year, we updated the “Disaster Behavioral Health Curriculum Recommendations” with our partners at the Center for the Study of Traumatic Stress and maintained CE for our Disaster Health Core Curriculum. Additionally, we pivoted to support healthcare providers with new curriculum tools and webinars addressing some of the significant needs exposed by the COVID-19 pandemic. The Center also:

- Coordinated with partners to develop educational products.
- Expanded Stop the Bleed training initiative by providing a mobile application (available on Google and iTunes App stores).
- Published on the gaps and overlaps in disaster health education nationwide.
- Conducted multiple national webinars and educational presentations.

Research and Science Activities

The NCDMPH scientific strategic mission is to: conduct, translate, and propagate research that changes readiness practice and policy. Our research portfolio has expanded greatly to include health system and mass casualty preparedness. The Center published 16 peer-reviewed papers, three editorials, two book chapters and brought in five grants this year. Additionally, the Center:

- Continued building the science and education evidence base to improve the nation’s preparedness.
- Translated research into practice and policy solutions for U.S. federal, state, tribal, and local partners.

Healthcare System Preparedness and Response Activities

NCDMPH is the designated lead to conduct the Military Civilian NDMS Interoperability Study (MCNIS), described in Section 740 of the FY20 National Defense Authorization Act (NDAA).

- Phase-I of the DoD National Disaster Medical System (NDMS) Pilot Program builds partnerships and strengthens interoperability,
- Assesses medical surge capacity at five sites over two years,
- Is led by Project Director, CAPT Eric Deussing.

COVID 19 Response and USU Contributions

As a leader in disaster health, the Center provided guidance to DoD efforts, in addition to developing products for the public:

- Collaboratively developed A Guide to Support the Well-being of Healthcare Personnel during a Time of Crisis.
- Published multiple peer-reviewed papers and editorials regarding the pandemic's impact on healthcare workers and the healthcare system.
- Held three well-attended COVID-19 focused webinars in the spring, summer and fall of 2020.
- Lead disaster education efforts at the Uniformed Services University of the Health Sciences (USUHS), directing two courses and lecturing in others at the USU School of Medicine.

Stop the Bleed Initiative

The Center expanded a number of projects to promote life-saving bleeding control efforts.

- Conducted research, in collaboration with the American Red Cross and the University of Virginia, related to the lay public's ability to use hemostatic dressings to stop life-threatening bleeding.
- Developed a trauma training course for high school students and teachers. The team demonstrated the course to more than 1,000 teachers and students this year.

Grants Funded

NCDMPH saw significant increases in grant funding during FY2020.

- \$3.1 million for the Military-Civilian NDMS Interoperability Study (MCNIS) from the DoD Department of Health Affairs.
- \$2.5 million School Age Trauma Training grant from the Department of Homeland Security.
- \$2.0 million from the DoD Transforming Technology for the Warfighter grant to develop a novel tourniquet.
- \$1.3 million DoD core funding through the Uniformed Services University of the Health Sciences.
- \$75,000 from the Department of Transportation for ongoing support of the trauma training.

As we commence 2021, we eagerly anticipate new opportunities to build on our accomplishments and embrace further collaboration with existing and new partners. Thank you for your support of the National Center, and please continue to stay in touch with us via our website www.usuhs.edu/ncdmp and social media: Twitter, Facebook, LinkedIn, Listserv, or YouTube.

Sincerely,



Thomas D. Kirsch, MD, MPH, FACEP
Professor and Director, NCDMPH



Staff

Welcome to our new staff members on the MCNIS team!

Thomas Kirsch, MD, MPH, FACEP, Director



Email: thomas.kirsch@usuhs.edu
Dr. Kirsch brings over 30 years of domestic and global disaster health and public health response, research, and education experience to the National Center, which he draws upon to strategically build partnerships and advance the NCDMPH vision and mission.

Lieutenant Colonel Jeffrey Brown, PhD, Chief-of Staff



Email: jeffrey.brown@usuhs.edu
LTC Jeffrey Brown currently serves on the DoD COVID-19 Task Team under Line of Effort 7, Diagnostics and Testing, in which he is the lead for Pooled Diagnostic, Screening and Surveillance Testing.

Captain Eric Deussing, MD, MPH, FACPM, MC, US Navy, MCNIS Director



Email: eric.deussing@usuhs.edu
CAPT Deussing leads the MCNIS Team and strategically guides the DoD's NDMS Pilot Program. He has served in both operational and strategic leadership roles, overseeing enterprise-wide medical preparedness, global health security, and public health response programs. He most recently served as the DoD Liaison to the US Centers for Disease Control (CDC).

Craig Goolsby, MD, MEd, FACEP, Science Director



Email: craig.goolsby@usuhs.edu
Dr. Goolsby is an Air Force combat veteran who brings extensive experience in battlefield medicine, field training and medical education. He leads the Stop the Bleed portfolio, positioning NCDMPH as a key leader in the field.

Kelly Harrison Gulley, MPH, Senior Program Manager, Henry M. Jackson Foundation



Email: kelly.gulley.ctr@usuhs.edu
Ms. Gulley provides administrative project oversight and is responsible for budgeting/accounting, space management, personnel management, contracts, and purchasing.

Kandra Strauss-Riggs, MPH, Education Director, Henry M. Jackson Foundation



Email: kandra.trauss-riggs.ctr@usuhs.edu
Ms. Strauss-Riggs brings years of public health teaching and curriculum development experience to advance the NCDMPH education portfolio.

Petula Alvaradous-Phillander MPH CHES, CPRP, Health Education Implementation Specialist, Henry M. Jackson Foundation



Email: petula.alvaradous-phillander.ctr@usuhs.edu
Ms. Alvaradous-Phillander brings ten years of healthcare experience to her role creating and executing an implementation plan for the First Aid for Severe Trauma (FAST™) program.

Nicholas Cagliuso, Sr, PhD, MPH, MCNIS Deputy Director, Henry M. Jackson Foundation



Email: nicholas.cagliuso.ctr@usuhs.edu
Dr. Cagliuso brings nearly 30 years of experience as an emergency management leader and scholar to provide overall research direction, planning, and execution of MCNIS. His focus on the MCNIS Team is research design, conduct, and evaluation, and developing evidence-based tools and recommendations for the NDMS Pilot Program.

Nicole Dacuyan-Faucher, MPH, Program Manager, Henry M. Jackson Foundation



Email: nicole.dacuyan.ctr@usuhs.edu
Ms. Dacuyan-Faucher continues to support activities to develop a research-informed novel hemorrhage control device. Nicole came from the Center for the Study of Traumatic Stress where she worked in research focused on military mental health.

Ronnie Djoukeng, MCNIS Disaster Exercise Planner, Henry M. Jackson Foundation



Email: ronnie.djoukeng.ctr@usuhs.edu
Ms. Djoukeng brings over 15 years of experience in public health and national security to her work with the MCNIS Team. Ms. Djoukeng carries out detailed analyses that inform insights and strategies for the MCNIS study including the comprehensive design, implementation, and evaluation of federal exercise architecture to propel the NDMS Pilot Program.

Aaron Hinton, Administrative Assistant, Henry M. Jackson Foundation



Email: aaron.hinton.ctr@usuhs.edu
Mr. Hinton provides programmatic and administrative support to the Center Directors and other senior technical and professional staff.

Michelle Kimball, MS, CEM, MCNIS Hospital and Healthcare Preparedness Expert, Henry M. Jackson Foundation



Email: michelle.kimball.ctr@usuhs.edu
Ms. Kimball has years of experience in civilian healthcare emergency preparedness, international disaster response and public health emergency preparedness, which she brings to the MCNIS Team. In addition to her civilian healthcare expertise, she draws on her experience working with the Puget Sound Federal Coordinating Center to guide the NDMS Pilot Program.

Victoria Klimczak, Program Manager, Henry M. Jackson Foundation



Email: victoria.klimczak.ctr@usuhs.edu
Ms. Klimczak has contributed to numerous National Center projects including Crisis Symposium, Stop the Bleed Initiative and is now Program Manager on the MCNIS Team. As the MCNIS Program Manager, she provides administrative oversight and is responsible for finance, personnel management, and contracts supporting the NDMS Pilot Program.

Norma Quintanilla, Project Assistant, Henry M. Jackson Foundation



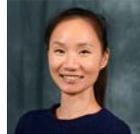
Email: norma.quintanilla.ctr@usuhs.edu
Ms. Quintanilla has years of experience working in healthcare administration. She continues to support the advancement of Disaster Health education and the Critical Healthcare Infrastructure and Operational Modeling project at NCDMPH. Ms. Quintanilla is also the liaison for arranging CME with APHA.

Raphaelle Rodzik, MPH, Project Manager, Henry M. Jackson Foundation



Email: raphaelle.rodzik.ctr@usuhs.edu
Ms. Rodzik continues to support our health and public health research efforts focused on the School Age Trauma Training (FAST™) project.

Keke Schuler, PhD, Research Manager, Henry M. Jackson Foundation



Email: keke.schuler.ctr@usuhs.edu
Dr. Schuler joined NCDMPH as a Research Manager. Her research is multidisciplinary and employs advanced quantitative modeling approach to study public health questions.

Allyson Sison, MA, MCNIS Special Project Administrator II, Henry M. Jackson Foundation



Email: allyson.sison.ctr@usuhs.edu
Ms. Sison brings local-level public health emergency preparedness experience with program coordination and response to her role on the MCNIS Team. She provides a wide range of administrative duties and programmatic support for the NDMS Pilot Program.

Kimberly Stoudt, Ed.D., LAT, ATC, EMT, EMT-T, Instructional Design & Assessment Specialist, Henry M. Jackson Foundation



Email: kimberly.stoudt.ctr@usuhs.edu
Ms. Stoudt is responsible for research and development of educational tools and curricula supporting the First Aid for Severe Trauma (FAST™) program.



Visiting Scholars and Students

The National Center’s education efforts include the Visiting Scholars program and the Disaster Science Student Rotation (DSSR). Both programs provide opportunities to collaborate and engage with professionals in training, recent graduates and mid-career professionals.

The National Center provides an academic home for disaster health scientists within the federal environment by welcoming diverse and respected scholars from a variety of disciplines. Each year NCDMPH hosts Visiting Scholars to collaborate on critical disaster science and education projects.

The 2019/2020 Visiting Scholars are:



Dan Barnett, MD, MPH is an Associate Professor in the Department of Environmental Health and Engineering at the Johns Hopkins Bloomberg School of Public Health, where he has a joint appointment in the Department of Health Policy and Management and is on the core faculty of the Office of Public Health Practice and Training. Dr. Barnett will use his expertise to meet the objectives identified in the Research Program to Enhance Interoperability and Medical Surge Capability and Capacity of the National Disaster Medical System. Dr. Barnett will use a mixed methodology to assess current civilian healthcare staffing levels and future demands for large mass casualty events.



Matthew Levy, DO, MSc is an Associate Professor of Emergency Medicine at the Johns Hopkins University School of Medicine with leadership roles with the Johns Hopkins Emergency Medicine’s Division of Special Operations, as well as the Johns Hopkins EMS Fellowship, and the Johns Hopkins Center for Law Enforcement Medicine. Dr. Levy is also a Clinical Associate Professor and the Medical Director of the UMBC Department of Emergency Health Services. Dr. Levy brings to NCDMPH his experiences with multiple local, state, federal and international elements related to emergency medical, tactical and disaster medicine.



Joelle Simpson, MD, MPH is a nationally recognized expert in pediatric disaster preparedness and pediatric emergency medicine. As Interim Chief of Emergency Medicine at Children’s National Hospital in Washington, DC, she provides strategic leadership for disaster preparedness, response, and community outreach efforts. She is an Assistant Professor of Pediatrics and Emergency Medicine at George Washington University School of Medicine and Health Sciences.



Michael Walsh, MA is a Ph.D. Student at the University of London. His research explores the interface between bio surveillance and national security. Mr. Walsh currently is serving as the Academic Chair of the Expert Roundtable Series on Bio Preparedness at the Walter Reed National Military Medical Center. He also recently served as a member of the Expert Work Group on the INDOPACOM Theater Design Study at the U.S. Army War College.

The DSSR educational rotation is designed for individuals currently attending (or recently graduated from) an accredited graduate education program in the fields of medicine, public health or social sciences, and who are interested in future careers in disaster health. During 2019-2020 NCDMPH welcomed the participation of two students in the education rotation:



LCDR Amanda R. Self assisted the National Center with assembling literature and developing grant proposals. She is an experienced Navy officer, board-certified in Internal Medicine and is now completing a second residency in Preventive Medicine at the Uniformed Services University.



LCDR Aliye Z. Sanou has served as a physician in the U.S. Navy for eight years. LCDR Sanou assembled the emerging COVID-19 literature in support of NCDMPH projects.

For further information about the DSSR and our Visiting Scholars, see: <https://www.usuhs.edu/ncdmp/research-education>.



Education Activities

The NCDMPH mission for disaster education is to identify educational needs in disaster medicine and public health preparedness and create content to better prepare the nation. This includes:

- Lead the national disaster health and public health education agenda by creating evidence-based curricula objectives and content with academic partners and validating training activities.
- Create collaborative and coordinated activities with academic partners, professional organizations and the private sector.
- Integrate NCDMPH educational activities into the greater national health care preparedness and response framework.

Tools and Courses

Behavioral Health Curriculum Recommendations for Disaster Health Professionals (2nd Edition)

NCDMPH collaborated with the Center for the Study of Traumatic Stress (CSTS) to update a resource tool for educators and trainers working with health professionals and others concerned with the psychosocial consequences of extreme events. This new edition includes a section on COVID-19: <https://bit.ly/3kMgauM>

Disaster Health Core Curriculum

The NCDMPH Disaster Health Core Curriculum is a cornerstone of our education portfolio. It is widely accessed, both domestically and internationally. Particularly during the onset of COVID-19 in the spring of 2020, professionals sought out this free resource to enhance their disaster health knowledge.



To learn more about the Disaster Health Core Curriculum, watch the introduction at: <http://bit.ly/2mAwYbT> and visit <https://www.usuhs.edu/ncdmp/core-curriculum>.

Selected Presentations

“What Are We Doing Anyway? Using Evidence to Improve Disaster Response”

– January 2020, International Preparedness & Response to Emergencies & Disasters in Tel Aviv, Israel
Presenter: Thomas Kirsch

“COVID-19 Emergency Medicine Perspectives”

– April 2020, The Department of Defense COVID-19 Clinical Case Conference
Presenter: Craig Goolsby

“The Limitations of Current AAR Practice and Implications for COVID-19 Era”

– August 2020, Preparedness Summit
Presenter: Kandra Strauss-Riggs

“First Aid for Severe Trauma: Empowering High Schoolers to Respond to Traumatic Injuries”

– August 2020, Preparedness Summit
Presenter: Raphaelle Rodzik

“Training in Hurricane Impacted Communities: Before, During and After the Storm”

– October 2020, American Public Health Association, Virtual
Presenters: Kandra Strauss-Riggs and Norma Quintanilla

“Characterizing the Current State of Training Courses Available to U.S. Disaster Professionals”

– November 2019, American Public Health Association
Presenters: Kandra Strauss-Riggs and Norma Quintanilla

“Stop the Bleed: Training the Community to Stop Life Threatening Bleeding”

– December 2019, The Association of Military Surgeons of the United States
Presenters: Victoria Klimczak and Norma Quintanilla

“Stop the Bleed: Science & Practice to Save Lives”

– November 2019, The International Trauma Life Support Conference
Presenter: Craig Goolsby

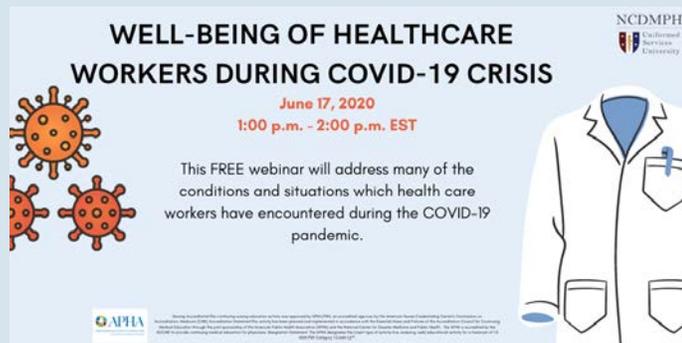
Webinars

Well-Being of Health Care Workers during COVID-19 Crisis – June 17

This webinar addressed many of the conditions and situations which health care workers have encountered during this pandemic. <https://youtu.be/2VSRemNpeWw>

“Being sensitive to the stress of COVID on my staff and how the stressors change as the trajectory of the response changes.”

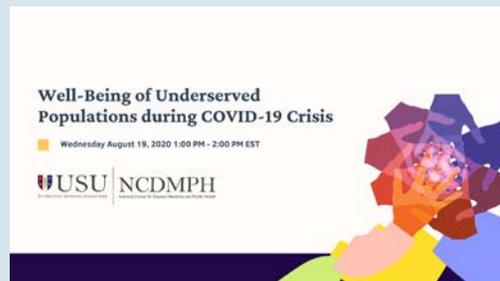
“Sent the information to the COVID-19 Unit in my facility.”



Well-Being of Underserved Populations during COVID-19 Crisis – August 19

This webinar was a dynamic conversation on the complex situation of underserved populations during COVID-19. <https://youtu.be/ECYZ6pBWPPh>

“I can implement the learning acquired from this webinar by understanding indigenous communities in depth and helping them more efficiently.”



New Behavioral Health Tool for the COVID-19 Era – September 23

NCDMPH in collaboration with the Center for Study in Traumatic Stress (CSTS) discusses the recently published 2nd edition of "Curriculum Recommendations for Disaster Health and its Application." <https://youtu.be/uP75rgbVQSw>

“It is useful to have access to the various topics in an easy and searchable collection, I will likely use it to compile guidelines.”





Research and Science Activities

Research is at the core of all NCDMPH activities, as the Center continues to collaboratively build the evidence base in disaster health. This year, the Center's publishing focused on disaster response measurement, COVID-19 and expanding the bleeding control literature.

Publications

Barnett, D.J., Rosenblum, A.J., **Strauss-Riggs, K., Kirsch, T.D.** Ready for a Post-COVID-19 World, *Journal of Public Health Management and Practice*: July/August 2020 - Volume 26 - Issue 4 - p 310-313, DOI: 10.1097/PHH.0000000000001199

Strauss-Riggs, K., Kirsch, T. D., Prytz, E., Hunt, R. C., Jonson, C., Krohmer, J., . . . **Goolsby, C.** (2020). Recommended Process Outcome Measures for Stop the Bleed Education Programs. *AEM Education and Training*. DOI:10.1002/aet2.10443

Barnett, D.J., **Strauss-Riggs, K., Klimczak, V.,** Rosenblum, A.J., **Kirsch, T.D.** An Analysis of After Action Reports from Texas Hurricanes in 2005 and 2017. *Journal of Public Health Management and Practice*. January, 2020. DOI: 10.1097/phh.0000000000001120

Pellegrino, J., Charlton, N., Carlson, J., **Goolsby, C.,** Hoover, A., Kule, A., Magid, D., Orkin, A., Singletary, E., Slater, T., Swain, J. 2020 American Heart Association/American Red Cross First Aid Focused Update. *Circulation*. Accepted for publication.

Pellegrino, J., Charlton, N., **Goolsby, C.** "Stop the Bleed" Education Assessment Tool (SBEAT): Development and Validation. *Cureus*. September, 2020; 12(9): e10567.

Schrager, J., **Schuler, K.,** Wright, D., Isakov, A. Yaffee, A., Parker, R., Jacobson, K., **Goolsby, C.** Development and Usability Testing of a Web-based COVID-19 Self-triage Platform. *Western Journal of Emergency Medicine*. e-Pub August 19, 2020.

Goolsby, C., Rojas, L., Andersen, M., Charlton, N., Tilley, L., Pasley, J., Rasmussen, T., Levy, M. Potentially Survivable Fatal Vascular Access Hemorrhage with Tourniquet Use: A Post-Mortem Analysis. *Journal of the American College of Emergency Physicians Open*. August 17, 2020; 1-6.

Goolsby, C. A Light in the Dark. *Annals of Emergency Medicine*. August, 2020; 76 (2): 242-243.

Goralnick, E., Chibuike, E., Chaudhary, M., McCarty, J., Herrera-Escobar, J., Andriotti, T., De Jager, E., Ospina-Delgado, D., **Goolsby, C.,** Hunt, R., Weissman, J., Haider, A., Jacobs, L. Defining a Research Agenda for Layperson Prehospital Hemorrhage Control: A Consensus Statement. *JAMA Network Open*. July 6, 2020.

Goolsby, C., Rojas, L., Rodzik, R., Gausche-Hill, M., Neal, M., Levy, M. High-School Students Can Stop the Bleed: A Randomized, Controlled Educational Trial. *Academic Pediatrics*. E-pub ahead of print May 27, 2020.

Humar, P., **Goolsby, C.,** Forsythe, R., Reynolds, B., Murray, K., Bertoy, D., Peitzman, A., Neal, M. Educating the Public on Hemorrhage Control: Methods and Challenges of a Public Health Initiative. *Current Surgery Reports*. E-pub ahead of print April 9, 2020.

Montgomery, HR, Hammesfahr, R., Fisher, A., Cain, J., Greydanus, D., Butler, F., **Goolsby, C.,** Eastman, A. 2019 Recommended Limb Tourniquets in Tactical Combat Casualty Care. *Journal of Special Operations Medicine*. December, 2019; 19 (4): 27-50.

Charlton, N., Pellegrino, J., Kule, A., Slater, T., Epstein, J. Flores, G., **Goolsby, C.,** Orkin, A., Singletary, E., Swain, J. 2019 American Heart Association and American Red Cross Focused Update for First Aid: Presyncope. *Circulation*. December 10, 2019; 140: e931-e938.



Goolsby, C., Rojas, L., Moore, K., Kretz, E., Singletary, E., Klimczak, V., Charlton, N. Layperson Ability and Willingness to Use Hemostatic Dressings: A Randomized, Controlled Trial. *Prehospital Emergency Care*. November/December, 2019; 23(6): 795-801.

Reed P, Laib J, **Strauss-Riggs K, Kirsch TD.** Humanitarian Assistance and Disaster Relief Competencies and Training Pertinent to the Military Health System. *Journal of Military Learning*. April 2020

Reed P and **Kirsch TD.** Military Health System Preparedness in Humanitarian Action. *Joint Forces Quarterly*. January 2020.

Upon publication citations will be posted to the NCDMPH website and social media. To learn more about NCDMPH’s research efforts or view links to previously published articles visit <https://www.usuhs.edu/ncdmp/research>

Editorials

Goolsby C, Rodzik RH, Dacuyan-Faucher N, Schuler K, Kirsch TD. COVID-19: Will the disease or the cure cause more death? KevinMD.com (4/6/20). <https://www.kevinmd.com/blog/post-author/craig-goolsby-raphaelle-h-rodzik-nicole-dacuyan-faucher-keke-schuler-thomas-kirsch>

Kellermann A, **Goolsby C, Kirsch TD.** Everyone Is Talking About Testing, But They’re Thinking about It All Wrong. *Health Affairs* (5/5/2020). doi: 10.1377/hblog20200430.49873. <https://www.healthaffairs.org/doi/10.1377/hblog20200430.49873/full/>

Bodas M, **Kirsch TD,** Peleg K. Top Hazards Approach – Rethinking the Appropriateness of the All-Hazards Approach in Disaster Management. *Intl J Risk Management*, 2020;47. doi: 10.1016/j.ijdr.2020.101559.





Healthcare Systems Preparedness and Response Activities

The DoD National Disaster Medical System (NDMS) Pilot Program

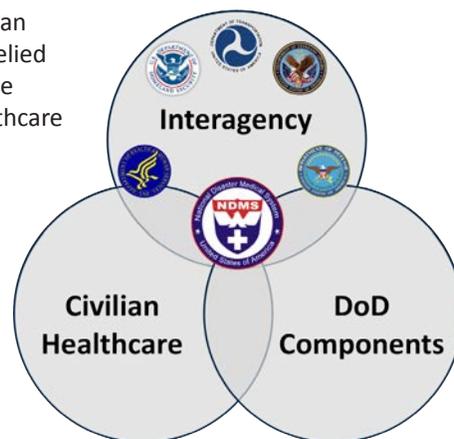
The Department of Defense faces critical questions related to the U.S. healthcare system:

- Is the National Disaster Medical System ready to care for casualties from a large overseas military conflict?
- Are there enough staff? Enough beds? Is there adequate military and civilian healthcare interoperability?
- What changes are needed to improve NDMS interoperability and health system preparedness?

The current pandemic has shown the medical surge capacity constraints of civilian healthcare systems. Many of these civilian systems, as NDMS partners, will be relied on to help care for the high volume of combat casualties anticipated from a large overseas conflict. This expected medical surge requirement of our nation’s healthcare system has received increased attention given the challenges of the current pandemic response.

To address this potential security threat, the National Center was designated by the Office of the Assistant Secretary of Defense for Health Affairs as the Department of Defense (DoD) lead for the DoD NDMS Pilot Program.

Phase-I of the NDMS Pilot Program is the Military-Civilian NDMS Interoperability Study (MCNIS). MCNIS will inform the Pilot of immediate and long-term changes needed to strengthen the NDMS in order to provide definitive care for combat casualties.



Four Key Elements: The DoD NDMS Pilot

1. Will strengthen interoperable NDMS partnerships to care for combat casualties
2. Will be conducted over five years at five sites
3. Is in partnership with civilian NDMS healthcare organizations
4. Is in collaboration with the secretaries of Veteran Affairs, Health and Human Services, Homeland Security, and Transportation

MCNIS | Military-Civilian NDMS Interoperability Study

COVID 19 Response and USU Contributions

NCDMPH continued a robust publishing and virtual presentation schedule throughout the pandemic. The Center provided guidance to DoD COVID-19 efforts, in addition to developing products for the public:

- Collaboratively developed *A Guide to Support the Well-being of Healthcare Personnel during a Time of Crisis*.
- Published multiple peer-reviewed papers and editorials regarding the pandemic's impact on healthcare workers and the healthcare system.
- Held three well-attended COVID-19 focused webinars in the spring, summer and fall of 2020.

NCDMPH staff contribute to the University through service on committees, leadership councils, departmental activities and teaching. Disaster health curricula are also incorporated by other USU programs. Specific activities include:

- Dr. Craig Goolsby helps guide Military Emergency Medicine's (MEM) four-year longitudinal curriculum as the department's Vice Chair, and chair of MEM's Education Committee. Dr. Goolsby also served on the Student Promotions Committee, and chaired an MEM Faculty Search Committee.
- Kandra Strauss-Riggs directs "Domestic Disaster Management and Response" (PMO 1009) in the Preventive Medicine and Biostatistics Department.
- Dr. Thomas Kirsch contributes to the "Public Health Issues of Disaster in Developing Countries" (PMO 613) which tackles broad issues of policy, strategy and operations associated with complex humanitarian crises and disaster. Dr Kirsch serves on the Executive Faculty Committee, the Student Promotion Committee, the Council of Center Directors Committee, and the IPRAMM Committee.





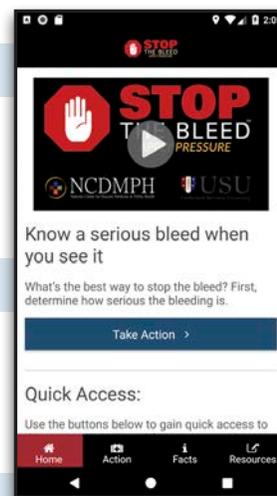
Stop the Bleed Initiative

The Stop the Bleed work cuts across all areas of the NCDMPH and relies on a network of collaborators. The effort to save lives through dissemination of bleeding control techniques includes education, research and preparedness activities.

Key accomplishments and activities include:

Stop the Bleed Mobile Application

The National Center launched the free Stop the Bleed (STB) app in May 2018. The app provides action steps to take during a bleeding emergency and is available at: <https://play.google.com/store/apps/details?id=edu.usuhs.stb>
<https://itunes.apple.com/us/app/stb/id1336173602?mt=8>



Stop the Bleed Education Consortium

NCDMPH continued to lead the Stop the Bleed Education Consortium (SBEC), which consists of an international group of subject matter experts that published the first national education standards for hemorrhage control training. The consortium is working on a series of projects related to STB policy, assessment tools, and research planning.

Transforming Technology for the Warfighter (TTW) Initiative

In the upcoming year, a larger layperson usability study and a functionality study are planned. NCDMPH received a \$2 million TTW Grant to develop novel hemorrhage control technology, and the research continues in partnership with Harvard-Brigham and Women's Hospital, Mayo Clinic, Linköping University in Sweden, and InnoVital Systems to develop a novel tourniquet design. The team executed a highly successful pilot usability study of its prototype device at a health and fitness exposition in Washington, DC in January.



First Aid for Severe Trauma (FAST™)

In collaboration with the American National Red Cross, the National Center is creating a bleeding control curriculum for high school students. Three course formats are in development. Educational research demonstrated that multiple educational modalities are effective to teach hemorrhage control to high school students. During the virtual HOSA International Leadership conference in 2020, the National Center held a successful demonstration of the FAST™ instructor course to nearly 250 HOSA teachers from across the United States. FAST™ is a registered trademark of The American National Red Cross and is used with its permission.

NCDMPH has demonstrated the FAST™ course to nearly 1,000 teachers and students in 2020.

NCDMPH Stakeholders

Interagency collaboration is a foundational aspect of the NCDMPH mission. The following depicts a snapshot of the National Center's collaborators. Partnerships will continue to evolve and expand over time.

INTERNAL

Uniformed Services University

- Department of Military and Emergency Medicine (MEM)
- Department of Preventive Medicine and Biostatistics (PMB)
- Center for Health Professions Education (HPE)
- Center for Human and Military Performance (CHAMP)
- Center for the Study of Traumatic Stress (CSTS)
- Leadership Education and Development Program (LEAD)

EXTERNAL

Federal government

Department of Defense (DoD)

- Office of the Assistant Secretary of Defense for Health Affairs
- Office of the Assistant Secretary of Defense for Homeland Defense and Global Security
- Combatant Commands
- Defense Health Agency (DHA)
- Services: Army, Navy and Air Force Offices of the Surgeons General
- National Guard Bureau

Department of Health and Human Services (HHS)

- Office of the Assistant Secretary for Preparedness and Response (ASPR)
- National Institutes of Health (NIH)
- National Library of Medicine (NLM)

Department of Veterans Affairs (VA)

- Veterans Emergency Management Evaluation Center (VEMEC)
- Veterans Health Administration (VHA)

Office of Employee Education

- VA Office of Emergency Management

Department of Homeland Security (DHS)

- Office of Science and Technology

Department of Transportation (DOT)

- National Highway Traffic Safety Administration (NHTSA)

Department of Commerce

- National Institute of Standards and Technology (NIST)

Academic institutions

- Arizona State University (ASU) Public Health Law and Policy Program, Phoenix, AZ
- Aultman College, Survival Behaviors Lab, Canton, OH

Brigham and Women's Hospital, Department of Emergency Medicine, Boston, MA

Cedars Sinai Medical Center, Los Angeles, CA

Children's National Hospital, Washington, DC

Columbia University, National Center for Disaster Preparedness, NY, NY

George Washington University, Department of Emergency Medicine, Washington, DC

Johns Hopkins School of Public Health, Center for Humanitarian Health, Baltimore, MD

Johns Hopkins Applied Physics Laboratory, Baltimore, MD

Linköping University, Linköping, Sweden

Mayo Clinic, Rochester, MN

National Center for Trauma and Emergency Medicine Research, Gertner Institute for Epidemiology & Health Policy Research, Tel-Hashomer, Israel

University of Colorado, Natural Hazards Center, Boulder, CO

University of Delaware, Disaster Research Center, Newark, DE

University of Virginia, Department of Emergency Medicine, Charlottesville, VA

Professional associations

American Academy of Pediatrics (AAP)

American College of Emergency Physicians (ACEP)

American Red Cross

American College of Surgeons (ACS)

American Geophysical Union (AGU)

American Public Health Association (APHA)

Association of State and Territorial Health Officials (ASTHO)

HOSA: Future Health Professionals

National Association of County and City Health Officials (NACCHO)

North American Alliance of Hazards and Disaster Research Institutes (NAAHDRI)

Other partners

Henry M. Jackson Foundation for the Advancement of Military Medicine

InnoVital Systems, Inc.

Kern Center for the Science of Health Care Delivery

National Academies of Sciences, Engineering, and Medicine (NASEM)

Trust for America's Health

NCDMPH FY2020 Highlights



Grant Awards
Received by NCDMPH

Nearly
\$6M
million

App impressions:

119,878

Website views:

57,240

YouTube video views:

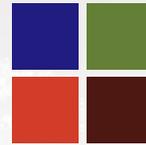
77,590

Events/Webinars:

Audience exceeded

15,000

Over 5,000 views of webinar titled
“Well-Being of Healthcare Workers
During COVID-19 Crisis.”



NCDMPH Disaster Health
Core Curriculum

More than

8,000
page views

Increased social media engagement and following significantly:

2020	3,223 Twitter followers 2,781 LinkedIn connections 584 Facebook followers 388 YouTube subscribers; 90,601 views
2019	3,000 Twitter followers 1,000 LinkedIn connections/over 1,000 followers 504 Facebook followers/likes 240 YouTube subscribers; 49,000+ views
2018	2,386 Twitter followers 596 LinkedIn connections/602 followers 504 Facebook followers/likes 117 YouTube subscribers; 18,000+ views
2017	2,093 Twitter followers 224 LinkedIn connections/300 followers 180 Facebook followers/likes 90 YouTube subscribers; approximately 16,000 views
2016	71 Twitter followers



3,000+ Twitter followers



Nearly 3,000 LinkedIn connections



Over 500 Facebook followers and 5,500 views



388 YouTube subscribers and 90,601 video views

For more information about NCDMPH see, www.usuhs.edu/ncdmp or follow us on social media or subscribe to our listserv: Twitter, Facebook, LinkedIn, Listserv or YouTube

[Twitter.com/ncdmp](https://twitter.com/ncdmp)

<https://www.linkedin.com/in/ncdmp/>

<https://www.facebook.com/NCDMPH1>

Looking Forward: 2021 Priorities

As we move into 2021, we will continue to focus and plan activities and projects that fall under the National Center's mandate set under HSPD 21. We are extremely excited about the start of the MCNIS pilot study and very much look forward to strengthening our relationships with our interagency and academic partners. Our team continues to grow, our mission continues to evolve and our knowledge continues to expand. We look forward to the next set of challenges.

Education

- Continue to lead the Stop the Bleed Education Consortium and educate lay people on how to stop bleeding and how to use a tourniquet.
- Engage with graduate students, directing and teaching two disaster health courses at the USU School of Medicine, as well as assisting with teaching other courses across the university.
- Identify and host Disaster Science Student Rotation and Visiting Scholars to provide opportunities to collaborate and engage with recent graduates and practicing professionals.
- Publish strategically for the benefit of the field.
- Pursue grant opportunities and collaborations.

Research and Science

- Use the \$2 million Transforming Technology for the Warfighter Grant to develop a novel hemorrhage control device with partners from Harvard-Brigham and Women's Hospital, Mayo Clinic, Linkoping University in Sweden, and InnoVital Systems.
- The Center received phase 2 and 3 grants to design and develop First Aid for Severe Trauma (FAST™) for mass casualty events. The training will focus on enhancing the ability of students to take action to assist victims with injuries and ultimately help save lives.
- Pursue grant opportunities to further conduct research and develop tools for disaster science and education as well as related public health efforts.
- Continue to research and publish scientific articles related to disaster science, public health and education.

Healthcare Systems Preparedness and Response

- Coordinate interagency effort to strengthen partnerships across the National Disaster Medical System.
- Conduct MCNIS pilot study, analyze and report data.
- Pursue additional partnerships and collaborative opportunities.





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