

**Civilian and military medicine
face many challenges**

52%

of nurses

20%

of physicians

plan to leave
clinical
practice
within 1 year



\$200,000,000

traveler staffing expenses in
2019 in Massachusetts

\$1,000,000,000+

traveler staffing expenses in
2022 in Massachusetts

Wartime Medical Lessons are Learned, Lost & Relearned Over Time: **The Walker Dip**



**Large Scale Combat Operations: World War 2 Scale
with Modern Lethality**

Lack of air superiority requires prolonged field

Complex triage and crisis standards of care

Overwhelming casualty numbers

Supply Chain shortfalls



**But we have an
opportunity to help each other.**

U.S. Navy photo by Mass Communication Specialist 2nd Class Sara Eshleman, courtesy of [U.S. Navy Medicine](#).

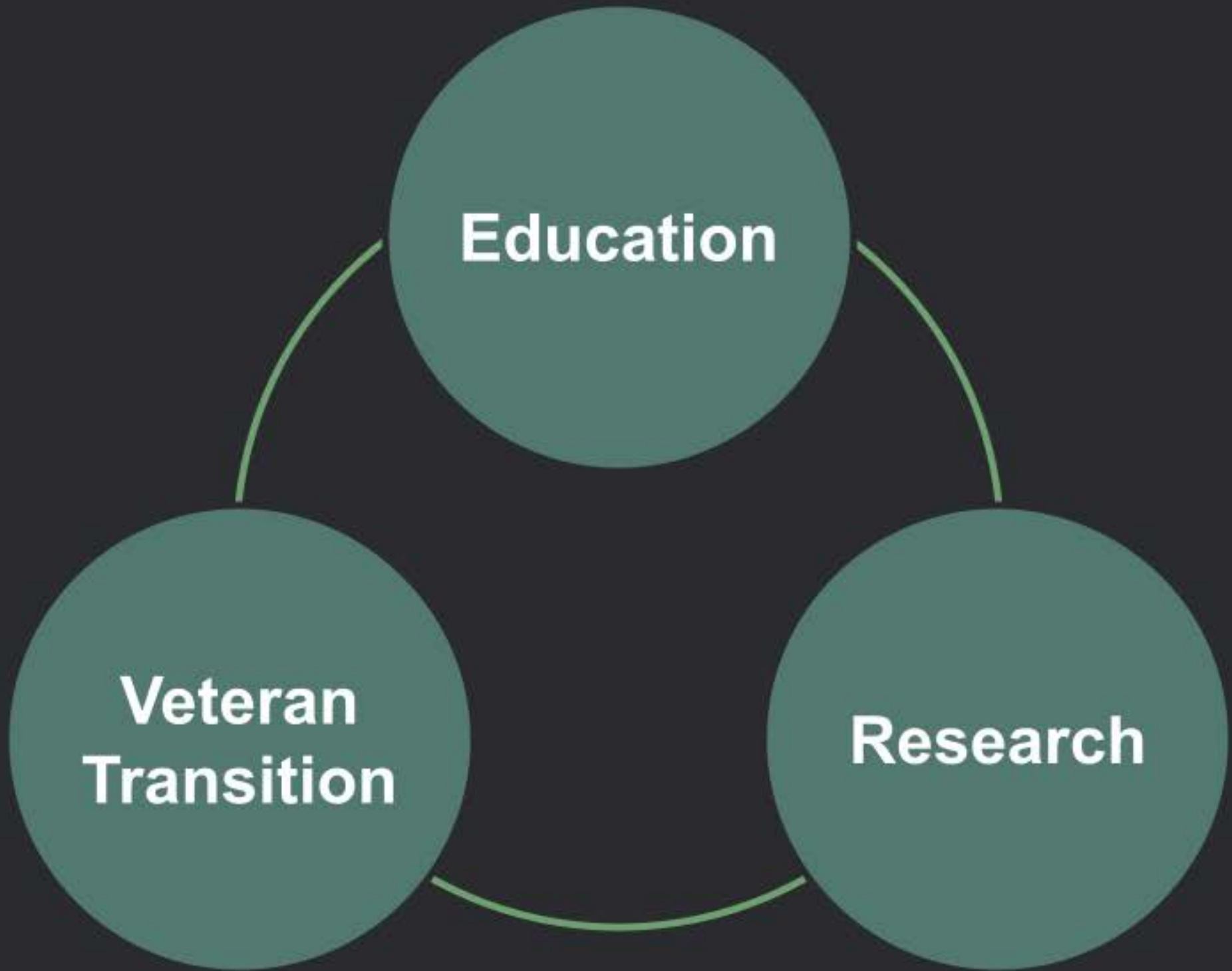


Mass General Brigham



HARVARD MEDICAL SCHOOL **AFFILIATE**

Military and Veterans Initiative



Education

**Veteran
Transition**

Research

Education

Sustain a ready military
medical force

Improve civilian care
through sharing of military
innovation

U.S. Army Reserve photo by Master Sgt. Michel Sauret. Courtesy of [U.S. Army
New England Recruiting Battalion](#).



Education

Develop
**clinical rotations,
fellowships, and
classroom courses**

U.S. Navy photo by Mass Communication Specialist 2nd Class Erwin Jacob Miciano. Courtesy of [U.S. Navy Medicine](#).



200,000

veterans transition out
of the military annually.

Many want to
continue to serve in
their communities.

<https://www.dol.gov/agencies/vets/programs/tap>

Photo by Benjamin Faust, courtesy of [Unsplash](#).



44%

reduction in preventable
deaths during the
Afghanistan and Iraq
conflicts

Howard JT, Kotwal RS, Stern CA, et al. Use of Combat Casualty Care Data to Assess the US Military Trauma System During the Afghanistan and Iraq Conflicts, 2001-2017. *JAMA Surg.* 2019;154(7):600–608. doi:10.1001/jamasurg.2019.0151

U.S. Army Reserve photo by Master Sgt. Michel Sauret, courtesy of [U.S. Army New England Recruiting Battalion](#).



Veteran Transition

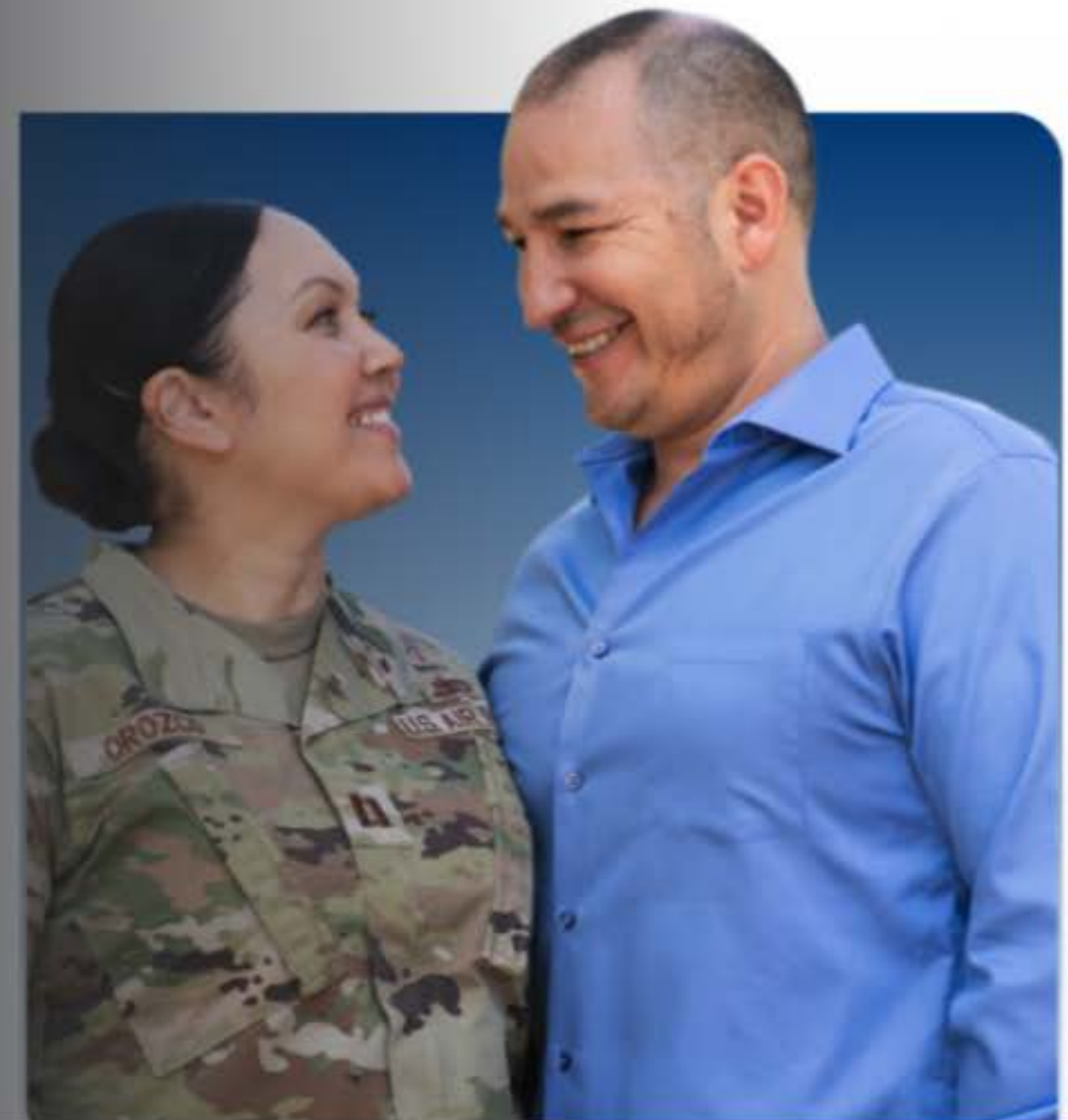
- Expose veterans & military families to civilian healthcare opportunities with Veteran Service Organizations
- Educate through assessment, counseling, & mentorship
- Build pathways with affiliate educational institutions and employers



Pilot Programs

First Pilot Program:
Skill Bridge

Second Pilot Program:
Military 2 Medicine



Research

Conduct
**actionable &
impactful research**

Advance
**health practice
& policy**

Photo by Michal Jarmoluk, courtesy of [Pixabay](#).



Research

\$2 billion

annual research budget
at MGB

#1 & #2

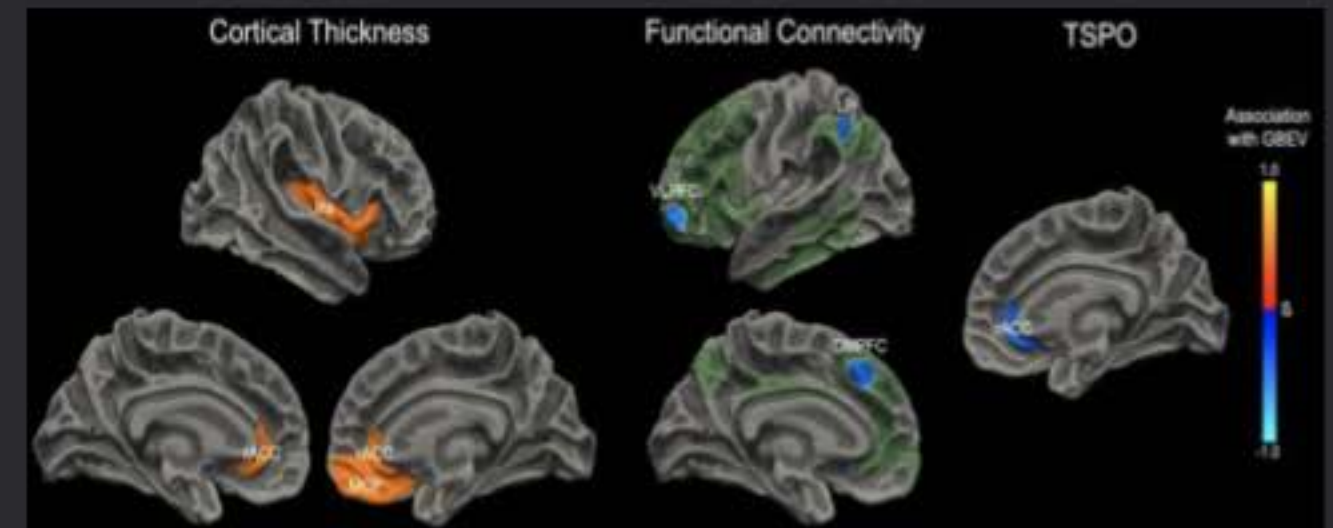
NIH-funded hospitals

Photo courtesy of [Brigham and Women's Hospital](#).



ReBlast: Identify Diagnostic Biomarkers of brain injury with repeated Blast Injury

- 30 Special Operations Personnel
- Higher Blast Exposure associated with:
 - Worse quality of life
 - Decreased signal in the right rostral anterior cingulate cortex, which modulates cognition and emotion

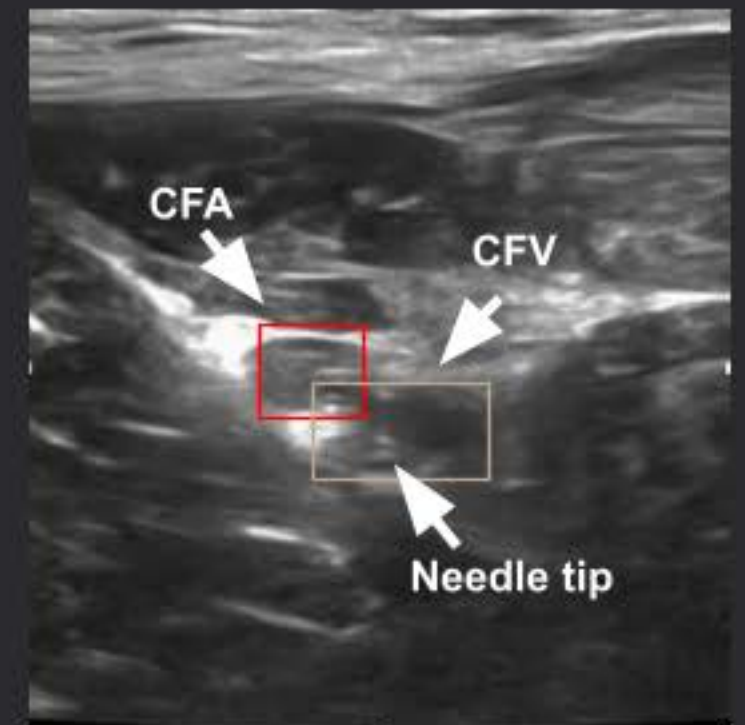
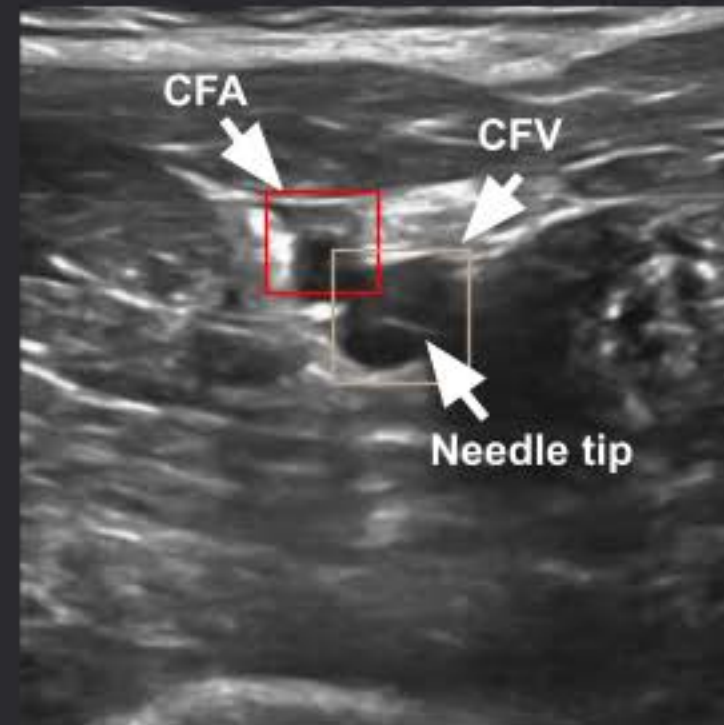


Gilmore N, Tseng CJ, Maffei C, Tromly SL, Deary KB, McKinney IR, Kelemen JN, Healy BC, Hu CG, Ramos-Llordén G, Masood M, Cali RJ, Guo J, Belanger HG, Yao EF, Baxter T, Fischl B, Foulkes AS, Polimeni JR, Rosen BR, Perl DP, Hooker JM, Zürcher NR, Huang SY, Kimberly WT, Greve DN, Mac Donald CL, Dams-O'Connor K, Bodien YG, Edlow BL. Impact of repeated blast exposure on active-duty United States Special Operations Forces. Proc Natl Acad Sci U S A. 2024 May 7;121(19):e2313568121. doi: 10.1073/pnas.2313568121. Epub 2024 Apr 22. PMID: 38648470; PMCID: PMC11087753.

Ultrasound Guided Handheld Device for Femoral Vascular Access: MGH & MIT LL

Expert Physician, Porcine Testing

- **Normotensive: 31/32 success rate**
 - 1 trial needed 2 attempts
 - 1 trial needed 3 attempts
 - 1 trial failed after 3 attempts
- **Hypotensive: 31/32 success rate**
 - 6 trials needed 2 attempts
 - 1 trial failed after 3 attempts



Initial data indicates needle placement accuracy requirement is met on high-fidelity preclinical model



What's next?

U.S. Army Reserve photo by Master Sgt. Michel Sauret, courtesy of [U.S. Army New England Recruiting Battalion](#).

Building Strategic Partnerships

- Uniformed Services University
- MIT Lincoln Labs
- UMASS Lowell

Photo by RODNAE Productions, courtesy of [Pexels](#).

Uniformed Services University, Mass General Brigham Sign Statement of Intent for Collaboration in Healthcare Innovations

The Uniformed Services University of the Health Sciences (USU) and Mass General Brigham (MGB) Health System have formalized a partnership to drive advancements in a number of healthcare domains.





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