

# WRIISC *Advantage*

SPRING 2021

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This edition of WRIISC Advantage celebrates our 20th Anniversary! We hope you will enjoy reading interviews of past WRIISC directors, hearing from Veterans who have utilized our services, and a snapshot of our accomplishments over the years.

## DIRECTORS' CORNER

As the Veteran's Health Administration (VHA) commemorates 75 years of excellence in service to Veterans, the War Related Illness and Injury Study Center (WRIISC) also celebrates its 20th year of offering services to Veterans with complex health concerns related to deployment and their providers. Since our inception in 2001, there have been several past directors at both the NJ and DC WRIISC locations (see below). The CA WRIISC was added in 2007 to expand services to Veterans living in the west of the country. As WRIISC directors, we remain united in our efforts toward bettering the health of deployed Veterans and supporting their providers in their care. We continue to focus on our three-pronged mission of clinical care, research, and education.

As the only director of the CA WRIISC, I have been honored to have been a part of the development, continuation and growth of the program. From the beginning, we directed efforts toward reaching more Veterans living in the West, and the WRIISC program has had great successes in supporting Veterans and the clinicians who care for them."

*Helena Chandler PhD*

Acting Director, NJ WRIISC

*Matt Reinhard, PsyD*

Director, DC WRIISC

*Wes Ashford, MD, PhD*

Director, CA WRIISC

## OUR STORY

Back in 2001, the WRIISC, known then as the Center for the Study of War Related Illness (CSWRI), was established and we were given the opportunity to be on the forefront of care for a very special population, our deployed Veterans. While initially it was thought that the WRIISC would only be needed for a few years, it has been clear that advancing the care for Veterans post deployment would be a journey. Looking back on the past twenty years, it is astonishing to see the level of development and so many significant changes in our focus and accomplishments in clinical care, research, and education.

### CLINICAL CARE

Twenty years ago, we evaluated our very first WRIISC Veteran through our comprehensive evaluation program. Since then, WRIISC has seen in excess of **4,100** Veterans for comprehensive evaluations. We have specifically focused

*Since 2001:*

- ✓ **4,104** VETERANS SEEN FOR COMPREHENSIVE EVALUATION.
- ✓ **1,937** VETERANS EVALUATED FOR EXPOSURE CONCERNS.
- ✓ **3,568** VETERANS RECEIVED A WRIISC E-CONSULT SINCE 2019 WHEN THE PROCESS BEGAN.
- ✓ INCREASED USE OF TELEHEALTH SERVICES AND EVALUATIONS IN LIGHT OF THE COVID-19 PANDEMIC.

on evaluating and assisting deployed Veterans of all eras with chronic, difficult to diagnose medical symptoms, also known as medically unexplained symptoms (MUS) or more recently chronic multi-symptom illness (CMI). The Veterans who came to us often had seen multiple providers, had no clear diagnosis, and continued to suffer with a

variety of symptoms. These Veterans came to us with a lot of hope but also the frustration from the previous "lack of answers". They left us with new hope and a renewed energy in moving forward (read some of our Veteran feedback on page 9).

At the end of a WRIISC evaluation, Veterans may have received a new diagnosis and most times we were able to help them in implementing new and different treatment suggestions. We focused on the big picture of a Veteran's health and how one area of health would impact another. Importantly, we were able to provide concrete steps

**"It's all about TEAM WORK. Knowing what patients' understandings and expectations are upfront makes it easier for both the patient and the staff to communicate."**

**Joseph Cheng, MD, Clinical Neurologist, CA**

and recommendations, thus enabling the Veterans we saw to improve their overall functioning. Integrative medicine often played a role in their health and wellness among other things (see sidebar on page 5 for details).

We knew along the way that communication and education with Veterans who have unexplained symptoms and multiple health issues were important aspects of care. Our clinicians displayed genuine empathy and dedication in wanting to help each Veteran. I think these are key

**"I'm proud to say we have made communication a cornerstone of our program and each of the services we provide. Good communication means listening – and seeking to understand our Veterans and stakeholder concerns and information needs. Communication matters!"**

**Susan Santos, PhD, Education Director, NJ**

components to the type of care we offered at the WRIISC. We treated each Veteran's case with utmost importance, and they knew it.

In the past ten years, the concern of airborne hazard exposure has been addressed by both the VA and the WRIISC. Historically, we have offered Veterans exposure consultations in-person and over the phone for any and all exposure concerns. When the concern of airborne hazards became prominent in the VA, we focused our clinical services on addressing them. Veteran concerns over airborne hazards in the VA community only continued to grow, but so did the WRIISC response.

Discoveries made through research help refine the clinical care services that Veterans with post-deployment health concerns need most! Read on to find more information about WRIISC research focus areas.

**The Airborne Hazards Center of Excellence at the NJ WRIISC established in 2013 was officially recognized by Congress and the President in Public Law 115-929 as a VA Center of Excellence.** Designated as the Airborne Hazards and Burn Pits Center of Excellence (AHBPCE) in May 2019, the Center has successfully offered clinical care to over **140** Veterans thus far receiving positive reviews including praise from a NJ WRIISC staff psychologist, Dr. Kelly McCarron. "The airborne hazards team did an excellent job with our comprehensive evaluation patient led by Dr. Anays Sotolongo, Co-Director of AHBPCE. Because of Dr. Sotolongo's excellent understanding and communication, I believe the Veteran was able to feel empowered. Dr. Sotolongo was able to respond to the patient's questions with direct answers and pull together a

**"Being a clinician who also served in the military is especially helpful in understanding and assessing Veterans exposure concerns. It was also useful in the process of refining our assessments to better document and discuss these concerns."**

**Michelle Prisco, MSN, ANP-C, Environmental Exposure Specialist, DC**

clear synthesis of the information the Veteran had been provided with by other medical doctors.” Excited about the future, Dr. Sotolongo explains, “Next year we will be assuming a greater role in the daily operations of the VA’s Airborne Hazards and Open Burn Pits Registry (AHOBPR). Working with the AHOBPR, we can make some hypotheses regarding Veterans’ exposures and health. In addition, we will also be focusing on implementation to increase Veteran access to appropriate airborne hazard clinical examinations.”

## EDUCATION

Educating providers to best meet the needs of Veterans with all deployment-related concerns, especially those without a medical diagnosis, is vital as it directly impacts the type of care a Veteran receives. We also realized that



being able to reach providers more broadly was one of our goals. The WRIISC educated over **10,000** providers in fiscal year 2020 alone through several different means. We started out in the early days with in-person conferences, but as technology advanced, we created a virtual environment where providers were able to access learning nationally. A webinar series for providers was developed,

“One of the **pillars** or mandates we have at the WRIISC is to **educate**- that includes our **Veterans** and other interested **stakeholders** but importantly it means our **VA provider community** and, increasingly community providers as well.”

Paulette Brower, LPC, NBCC, MBA, Education Analyst, NJ

and the WRIISC has held 12 webinars each year for the past almost 10 years. In recent years, we have taken the initiative to develop five on demand e-learning modules in our areas of expertise including Gulf War illness, CMI and environmental exposures. These accredited

trainings have been well-appreciated by Veteran providers and most importantly, our evaluations show that these providers have learned new skills that assist them in caring for Veterans successfully. Veteran education has also been central to our goals from the early days. We felt that if Veterans had the most reliable and up-to-date information, they would be better able to self-manage their symptoms and take better care of themselves. In addition to the individual patient education we offered to Veterans in our clinical program,

we offered group classes on environmental exposures of concern. These classes started off as small in-person classes and are now offered nationally and virtually. Our last two classes about agent orange and airborne hazards exposure EACH reached nearly 500 Veterans across the country! Our recent

podcast series was created as a means to inform providers and those in the Veteran community with accurate and timely information about issues important to Veterans Health. Providers (and Veterans) can get educational information in various formats and in real time.

## RESEARCH

Since day one, our research team was dedicated to finding out more about war-related health problems and understanding and developing better treatments for Veterans. In FY20 alone, there were **16** funded research projects totaling over **\$14,500,000** in research funding. Several research initiatives stand out. The three WRIISC locations joined together early on for a study of soldiers deploying to Iraq and Afghanistan to better understand how the deployment experience affects post-deployment health.



We also have a variety of ongoing current research projects that are focused on the treatment of MUS. Specific research interests cover a wide range of topics including environmental exposures and post-deployment health, long-term health effects of combat, memory and mood difficulties, traumatic brain injuries, neurological diseases, integrative health and wellness approaches, disabilities resulting from deployment illnesses or injuries, women Veterans’ health, and risk communication of deployment-related concerns. An overview of our research publications over a 20-year span is provided on page 10 of this newsletter.

## A Special Thank You to Our Research Collaborators of the Past Two Decades!

Research projects led by AHBPCE have also been just as impressive as the clinical care the Center has offered. Studies to date include findings that have shown that traditional lung function screening (spirometry) is sub-optimal in deployed Veterans with airborne hazards exposure and respiratory symptoms and in addition to airborne hazard exposures, non-inhalational exposures during deployment – such as exposure to a blast – contribute to respiratory symptoms.



## THE FUTURE

Twenty years ago was only the beginning and we exceeded our own expectations. Offering Veterans the world-class healthcare they deserve is our dream come true and will continue to be!

## WRIISC INTEGRATIVE MEDICINE BLOOMS

Each WRIISC facility has developed and maintained integrative medicine educational programs for Veterans. Importantly for the population we serve, integrative medicine practices have been shown to help improve unexplained symptoms such as pain and fatigue and even enhance emotional well-being. The DC WRIISC began its integrative medicine program in 2006. A number of different interventions including acupuncture, yoga and meditation were offered throughout different time periods over the years. In 2010, the CA WRIISC followed by adding a yoga program, which included different types of yoga that any Veterans could practice (read about the evolution of the CA WRIISC yoga program in detail on page 11). The NJ WRIISC followed shortly thereafter with development of a web-based toolkit for learning about wellness practices and integrative medicine tools for Veterans (called the STAR-Well Kit) and mindful meditation sessions. The integrative medicine program at the WRIISC continues to expand as new classes are continuing to this day. Veterans have reported that they appreciate having these services available to them and are “highly satisfied customers.”

“Dr. Andy Lincoln (an injury epidemiologist at that time and former DC WRIISC employee) and I looked at the Institute of Medicine report that validated the VA plan for the National Defense Authorization Act language for a special center. We looked at the acronym, CSWRI, and said “this doesn’t cut it. One, you can’t pronounce it (Cassowary? A vicious bird of the southern hemisphere with a bony crown? Not a winning mascot!) and two, it only fits half the story – it’s not all illness – injury is a driver of disability and illness.” We proposed the name change and brought that to the DC and NJ WRIISC leaders! After some debate among the team and paperwork to make it official, we became the WRIISC.”

Aaron Schneiderman, PhD, former employee. DC WRIISC

# THEN AND NOW: PERSPECTIVES OF WRIISC PAST DIRECTORS

## DR. BENJAMIN NATELSON NJ WRIISC 2001-2004



**Can you tell us how the CSWRI, now known as the WRIISC, was established and why?**

Another researcher, Dr. John Ottenweller, and I had gotten a Gulf War Research Center grant from the VA in the late 1990's- 1998 or 1999. Then in around 2000, there was a call for applications for what would eventually be the WRIISC, a Center dedicated to address unexplained health concerns for Veterans including 'Gulf War Syndrome'. We applied with success! The focus on Gulf War Veterans and their

health concerns paired nicely with my long time focus on medically unexplained pain and fatigue.

**What would you say was the most important thing accomplished during your tenure?**

Setting up a biomedical electric lab in collaboration with New Jersey Institute of Technology (NJIT). It was wonderful having Scott Soldan and Michael Bergen heading up that effort. We had a steady flow of undergraduate and Master's students throughout the years. Robert Demarco, Florence Chua and Jose Chua were the last I had been involved in hiring and they continue important work in the field of biomedical engineering. Biomedical engineers were essential in running all of our research labs so we could ensure equipment was up-to-date and using the latest technology.

**What are your thoughts about how the WRIISC has continued to grow throughout the years and on who we are today?**

I am very happy to see the WRIISC continue to thrive... I would urge leadership to keep research as a priority and wish all the best of luck in going forward.

## DR. GUDRUN LANGE NJ WRIISC 2004-2011



**Tell us how the WRIISC clinical program and services changed/expanded (including a greater focus on deployment exposures) during your time as WRIISC director?**

In addition to our physiological research focus, we expanded our research into the behavioral medicine and alternative medicine arenas. Clinically, we further streamlined our clinical intake and evaluation

procedures under the direction of Dr. Ron Teichman. With the help of our stellar education and risk communication team, we developed "mobile" presentations --- road trips --- to educate providers as well as Veterans about the WRIISC and its usefulness for our stakeholders, Veterans, family members of Veterans and providers alike.

**Tell us about incorporating social work as a part of the WRIISC clinical evaluation and the importance of recognizing reintegration issues.**

While I felt that we were doing a great job providing comprehensive medical assessments to our Veterans, our job did not stop there. There was a need to touch

Veterans beyond their one-time appointment at the WRIISC to make sure that they were assisted in their everyday lives as well to further promote reintegration and wellness. The incorporation of social workers in the WRIISC team and their work with Transition Care Managers [to support Veterans] remains so important.

**During your tenure you also focused on the military culture and making sure that WRIISC providers were more aware of military culture as part of a deployment health/WRIISC clinical evaluation. Why was this important to you/the WRIISC?**

It was important to me to hone in on the cultural differences that exist when an individual is "brought up" in a military environment. We owe our Veterans so much, so I thought that learning about military culture, the pluses and minuses, would help health care providers better understand some of the reasoning and perceptions that our Veterans hold dear and maintain, long after any deployment.

**Share any other educational or research growth at the WRIISC under your leadership that you feel should be recognized. We know that there was so much.**

I was very proud of the research we did on women Veterans' health, as well as the research we did outside of the VA walls.

*"I LOVED working with WRIISC friends... good and sometimes vigorous discussions led to good programs and a lot of camaraderie. Thanks NJ WRIISC for a meaningful time working with you!!"*

## DR. DREW HELMER NJ WRIISC 2011-2019



### **How did the WRIISC evolve under your leadership as the WRIISC Director?**

During my tenure, the three WRIISC sites became much more coordinated and harmonized as a program. We made substantial progress toward standardizing clinical services and evaluation across the three sites, to the extent differences in staffing and expertise allowed. We also integrated more completely within the VHA and demonstrated more clearly our role as a specialty evaluation and consultation center. I'm also pleased to note that our research funding and productivity increased!

### **In the early days at the WRIISC as the Clinical Director, you helped stress the importance of good patient-provider communication (along with our Risk Communication expert Dr. Susan Santos) and trademarked it as a part of all WRIISC interactions. You put it to practice at the WRIISC, especially as a lead physician. In your own words, why was this so important?**

Dr. Santos, the single WRIISC team member still present from the very beginning, baked risk communication into the culture and function of the WRIISC program. Her expertise and leadership ensured the highest standard for all communications and education products and services. She recognized the inherent challenges of communicating about deployment-related health concerns: the low trust, high uncertainty, and high stakes nature of these concerns and care decisions related to them and taught me and other WRIISC clinicians how to use risk communication principles successfully in our patient encounters. Early on, she challenged existing norms about patient engagement and specific language used in the delivery and documentation of health care, insisting on a patient-focused framing.

When I started as clinical director in 2001, we talked about the "Chief Complaint" of the patient, that is, the main reason for being evaluated by the health care team. Dr. Santos rightly pointed out the negative connotation of that term and thereafter we used "Chief Concern."

We also remember Dr. Thomas Findley as the first Clinical Director of the NJ WRIISC and longtime Colleague...

The Leadership from 2001 to 2019 of past WRIISC Directors was instrumental to our growth throughout the last 20 years. Here are some snippets of interview responses from these leaders about the WRIISC during their tenure and the importance of the Center's work.

Since then, health care has evolved to be much more patient-centered, in general. Dr. Santos ensured that the WRIISC was at the forefront of that shift and promoted Veteran-centric care. This approach is important with every patient, but especially with patients concerned about deployment-related health and exposure concerns.

### **Even as the WRIISC Director, you devoted a lot of time at the WRIISC educating providers on topics such as CMI, GWI, Exposures, and the list goes on... Why did provider training matter so much to you?**

The worst thing I heard from Veterans was, "my doctor said it was all in my head." My heart sinks when I hear that; it's so damaging and unnecessary. Education is central to the WRIISC mission and we invested heavily in raising awareness about CMI and exposure concerns and effects, and the need to listen to and respect patients and their concerns. We heard from providers that they didn't know about these conditions and concerns and didn't know what to do to help patients with these conditions and concerns. We tried to address these needs through very high quality, enduring and accessible educational materials. Unfortunately, I still hear about patient encounters with providers and from providers who don't know about GWI or deployment-related exposures. I recognize there is still much work to be done for the WRIISC, and the entire VHA organization to demonstrate and share its expertise in these areas as we are uniquely positioned to lead the world in military exposure research, care, and education.

### **You served the WRIISC for many years and in many positions- Director, Clinical Director, Clinician, Researcher, etc. What are your words about the WRIISC today given your experiences over the past decades?**

The WRIISC mission is as important today as it was in 2001 when it began. Our service members put their lives on the line KNOWING that we, as a society, will be there when they are injured or in need. The WRIISC is here, focused on the most fundamental purpose of the VA- "To care for him who shall have borne the battle." The experiences of our service members during deployment will continue to evolve and the injuries and exposure concerns requiring our attention will also evolve. The WRIISC approach to these issues- through research, education, clinical care and risk communication- will ensure its importance and success in optimizing the health and function of deployed Veterans.

## DR. HAN KANG DC WRIISC 2001-2009



### How did the Center start?

Soon after service men and women returned from the Persian Gulf War (PGW) in 1991, many became concerned about multiple unexplained health problems. Extensive research and clinical care programs were instituted by the Federal government, however, the need for more coordinated efforts to integrate research, clinical care and health risk communication became apparent after almost 10 years after the PGW. The subject began to

be raised during Congressional hearings and a consensus was reached within VA leadership to implement the concept with establishing two specialty centers to start. A request for proposals was issued by the VHA. Almost two dozen VA Medical Centers competed for the award and two VA Medical Centers [Washington DC and East Orange, NJ] were selected for the privilege of implementing the proposed plans after a peer reviewed selection process.

### What was my vision(s) for the WRIISC program during those development years?

In 2001, the Washington DC VA Medical Center was already serving as one of the VA clinical referral centers under the leadership of Dr. Mitch Wallin. As such, the Center had the valuable experience of evaluating and coordinating medical care for Gulf War Veterans with chronic multiple

unexplained physical and cognitive symptoms. The VA Environmental Epidemiology Service, of which I was the Director, had considerable research experience, knowledge and resources to bring to bear in researching the cause of post-deployment health issues among Veterans. One missing piece of the integrated center program was the expertise in effective education/risk communication of VA clinicians with Veterans and their families concerning the nature and extent of post-deployment health problems. To that end, I approached and successfully recruited the help of some faculty members at the Johns Hopkins School of Public Health who specialized in health risk communication.

### You were already deeply engaged in epidemiological research, why did you think it was important to establish a study center that included clinical, education, and research services?

Numerous population-based epidemiological studies of the health consequences of military deployment to war zones had been conducted and were on-going within the VA, DOD, Center for Disease Control (CDC) and universities. The structure of the proposed WRIISC consisting of a multi-disciplinary team of experts would provide a unique setting to conduct hospital-based research on possible cause of medically unexplained symptoms and other deployment-related health conditions and to evaluate and develop various treatment and management options to improve their quality of life. Patient's exposures of concern in the theater could also be assessed and incorporated into the clinical care and research, and the results could be communicated to the patient to recognize or diminish their health concerns.

*"I appreciate WRIISCs continued commitment and dedication in serving the Nation's Veterans. My hat is off to all WRIISC staff for keeping the Center going and continuing to provide care and service to Veterans."*

## DR. BONNIE BENETATO DC WRIISC 2009-2010



### How did working at the WRIISC change your perspective on caring for Veterans?

Working at the WRIISC gave me the opportunity to work and learn about specific conditions related to combat and about the role of risk communication when discussing deployment health concerns. We strived to teach VA health care providers about how to use risk communication when giving information and discussing war-related conditions. The increased knowledge of war-related illnesses and environmental exposures along with a risk communication skill set truly changed, for the better, my perspective and ability to care for Veterans of all conflicts.

### What was (one or two) most important things you accomplished or oversaw during your time in leadership at WRIISC?

I think establishing an alternative therapy for Veterans was what I'm most grateful for and proud to have been a part of the team that first established the program. We were able to provide acupuncture, gentle guided imagery with yoga known as iRest yoga established by Dr. Richard Miller, and the purchase of a quality portable labyrinth on which one could find stress relief or for walking meditation. This was done at a time, one year after Operation Enduring Freedom/Operation Iraqi Freedom (OEF/OIF) began, when cognitive behavioral therapy was almost all we could offer Veterans who needed to hear that VA cared for them, and to experience that care.

### Do you have any additional comments about the WRIISC's standard of care?

The three WRIISC centers always exhibited extraordinary service to Veterans that stemmed from our authentic love, admiration, and caring for all Veterans, but particularly the combat Veterans who needed our help at a vulnerable time in their lives. The three WRIISC centers integrated this customer service focus through our shared values and the result was a natural expression of exceeding the Veteran's expectations.

# VETERAN WORDS ILLUMINATE WRIISC'S SUCCESS

A heartfelt thank you to each and every Veteran who has trusted us with their care. The following are some comments we have received from Veterans after using our services. We regularly circulate these messages among our clinical teams to inspire our experts to continue to deliver the finest care.

✓ I arrived at the WRIISC optimistic and excited for the chance that your team might have the insight and wisdom to deal with my Gulf War Illness. I had received great care through the VA system, but no one was truly identifying the cause of my illness, but rather, only treating my symptoms. Your team exceeded my expectations of professionalism, thoroughness, and empathy. I was just an old worn out soldier, but your team took care of me as if I was the most important person on earth. The nightmare of my illness slowly became a dream of recovery, all thanks to a wonderful team of doctors who changed my destiny. I am looking forward to the results that your teams' input will have on the rest of my life.

**“Creating an environment where Veterans with complex health issues are both comfortable and highly satisfied made all the difference in the type of care we delivered over the years.”**

**Deborah Jewell,  
Program Manager, NJ**

✓ The level of expertise you all presented and the compassion you showed us were amazing. As we said during our meeting, it exceeded anything we were expecting, and we felt that our concerns were being acknowledged and addressed comprehensively for the first time. We have a better knowledge of what is happening and what we can do to ease the impact and support ourselves.

✓ My life is completely and utterly changed for the good due to your work! Not that I'm healed - but I never would have thought I could have improved this much.

✓ I want to reiterate how much I truly appreciate what you all did for me. The professional advice and help/guidance was so appreciated. I came down broken and left broken but with knowledge! I'm a year into this and I'm so much better than a year ago. I have the courage to keep advocating for me. I now have an exceptional team of doctors in my corner. I was truly blessed to have had the opportunity to

come down and you all gave me a second chance in life. I can't thank you all enough. You all are very special and will always hold a spot in my heart.

✓ Your office and my medical team from the WRIISC is OUTSTANDING and have already helped me IMMENSELY. I just want to have my conditions properly diagnosed and proper treatment and YOUR team is the ONLY team that has been able to do that for me. For that THANK YOU!!!!!!

✓ The Doctor [I saw] was outstanding- have not had an interview like that and really hit home. She hit all the right buttons.

✓ Coming to WRIISC program was a 'life changer' for me. I had waited 10 years for this.

✓ It [WRIISC evaluation] has been a blessing; I am on the right path with my treatment and have seen big improvement.

✓ I am in a happier place [after WRIISC evaluation] because my pain is not as strong.

In the past we have written and videoed several good news stories that captured a Veterans' journey and experience as a WRIISC patient. These include the story from a Gulf War Veteran and a recently returned Veteran who is adjusting to civilian life again. Please visit the website below to read these wonderful stories in full: [www.warrelatedillness.va.gov/WARRELATEDILLNESS/Veteran\\_viewpoints/index.asp](http://www.warrelatedillness.va.gov/WARRELATEDILLNESS/Veteran_viewpoints/index.asp)

The first edition of this Newsletter was in 2005 and sent to just 45 Veterans.

Now, over 27,000 Veterans, VA providers, and community members receive it and this number only continues to grow! If you have any ideas for topics to cover email us at: [NJWRIISCEDETEAM@va.gov](mailto:NJWRIISCEDETEAM@va.gov).



# WRIISC SPREADS LESSONS LEARNED THROUGH RESEARCH

The WRIISC's research program is designed to advance clinical care of Veterans by applying research findings to it, demonstrating a synergistic, conjoined relationship between the two fields. An important aspect of accomplishing this goal is dissemination of our research findings to the broader scientific community. We conducted a search for WRIISC publications and found over 300 publications between 2001-2021. More than 80% of these publications have been since 2011 in the second decade of the WRIISC. One of the major areas of growth for research has focused on Veteran concerns for airborne hazard exposures during deployment. The WRIISC first detailed these health and exposure concerns amongst Veterans evaluated at the Center and noted the increase in respiratory concerns. This set the foundation for our current efforts and collaborations as well as the development of the Airborne Hazards and Burn Pits Center of Excellence.

To illustrate this growth, this figure was created using the most common words pulled from the titles of 40

different WRIISC publications focused on deployment-related exposures. Each bubble represents one of these common words and word bubbles of the same color tended to be found in the same publication titles together. What this graph illustrates is four distinct but interconnected themes of trending research:

- deployment exposures,
- airborne hazards,
- conflict and stress, and
- Veterans' health

Overall, this diverse research helps to inform how deployment exposures impact Veterans' health. Current and upcoming studies and collaborations continue to address these issues, such as the development of non-invasive approaches to assess the lungs as well as problem-solving therapy to improve Veterans' health and quality of life.

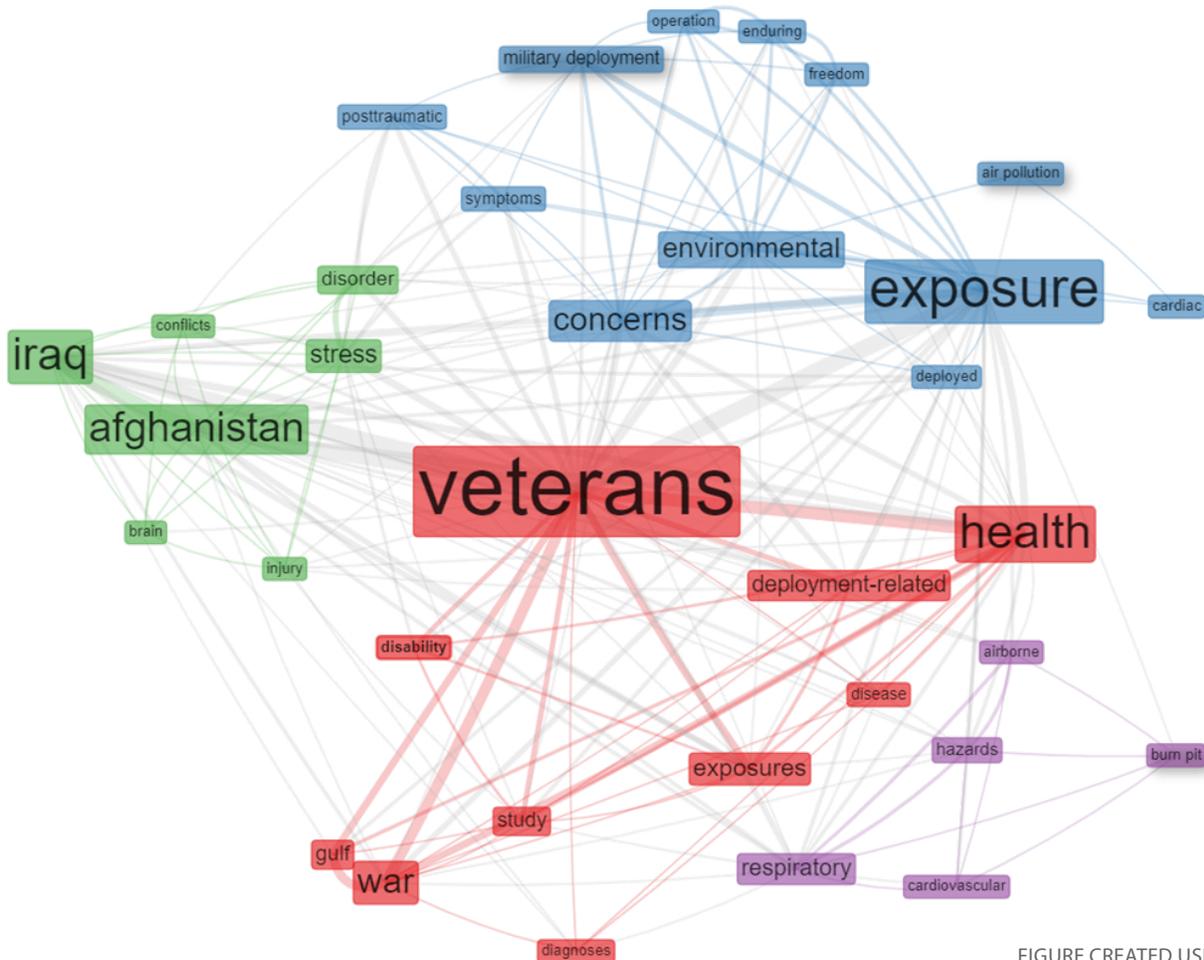


FIGURE CREATED USING THE BIBLIOMETRIX PACKAGE IN R. ARIA, M. & CUCCURULLO, C. (2017). BIBLIOMETRIX: AN R-TOOL FOR COMPREHENSIVE SCIENCE MAPPING ANALYSIS, JOURNAL OF INFORMETRICS, 11(4), PP 959-975.

## HIGHLIGHT: CA WRIISC YOGA



The CA WRIISC clinical yoga program grew under the dedicated and passionate direction of the former WRIISC Education Director Louise Mahoney. She shared some thoughts on the inception and growth of the yoga program saying it “started as a research project and initially we didn’t know if anyone would be interested.” From humble beginnings with 60 Veterans referred into the program in 2010, the CA WRIISC yoga program now averages over 800 referrals a year as more VA providers seek to share the evidence-based benefits of yoga and meditation with their patients. Indeed, the program has provided over 33,000 yoga and mindfulness encounters to over 3,500 Veterans, with participants reporting benefits ranging from decreased pain to increased sense of calm, from improved mobility and balance to a stronger feeling of being connected to others.

When the program first began over 10 years ago, Louise Mahoney spent countless hours advocating the power of yoga to heal and strengthen the mind and body, educating providers, recruiting participants, and finding the physical spaces for the classes to take place in. She worked tirelessly to broaden the reach of the program. From a nomadic yoga program, bouncing from conference room to conference room, the CA WRIISC yoga program found its home in 2019 in the newly renovated wellness building at the Palo Alto VA. Ever nimble on its toes, within weeks of the COVID-19 shutdown, CA WRIISC was offering phone-based yoga classes and working towards video options.

The CA WRIISC and its team of five yoga facilitators working remotely currently offer six yoga classes per week open to Veterans nationwide through VA Video Connect including one class specifically for female Veterans. In addition, they offer one phone-based guided meditation class and three live-streamed yoga classes for Veterans to join from their individual hospital rooms and residential hospital programs for some gentle movement, socialization, and meditation.

For WRIISC long term employees one of the most rewarding aspects has been to work in an environment suited for kindness. Several WRIISC employees even left for another job but then resurfaced in future years to work at WRIISC again. Others have been with us the full 20 years.

One forever employee, Christina Ramage-Miller, MSPH, explains, “Taking a job at the NJ WRIISC changed everything about my entire life for the past two decades. I have gotten to work with the KINDEST, SMARTEST people, doing the MOST rewarding job=serving our Veterans.”

The Celebration of Our 20th Anniversary is a true milestone for WRIISC staff. We thank everyone in the Veteran Community for their support in making our visions a reality.

# WRIISC Advantage

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War Related Illness & Injury Study Center

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[www.warrelatedillness.va.gov](http://www.warrelatedillness.va.gov)

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