

INSIGHTS INFORMING THE CONCERNS OF POST- 9/11 VETERANS AND FAMILIES

Case Study:

Steven & Alexandra Cohen Military Family Clinic



SYRACUSE UNIVERSITY'S INSTITUTE FOR VETERANS AND MILITARY FAMILIES (IVMF) HAS BEEN CONTRACTED TO SUPPORT THE GEORGE W. BUSH INSTITUTE'S RESEARCH TO EFFECTIVELY SERVE AND EMPOWER OUR POST-9/11 VETERANS AND MILITARY FAMILIES.



GEORGE W. BUSH INSTITUTE



THE STEVEN & ALEXANDRA COHEN MILITARY FAMILY CLINIC CASE STUDY

1. Organizational Overview

History

In 2012, the NYU Langone Medical Center established the Military Family Medical Center with a founding gift from the Robin Hood Foundation, of which Steven Cohen is a trustee. In December of that year, Mr. Cohen's foundation, the Steven and Alexandra Cohen Foundation, provided the center with a \$17 million gift to begin a wide-ranging study of post-traumatic stress and traumatic brain injury. The following year, the foundation provided an additional \$6.8 million to the center, also naming it the Steven & Alexandra Cohen Military Family Clinic ("Cohen Clinic"). "We cannot understate the importance of this project," Steven Cohen said, "Every veteran deserves access to treatment for the trauma he or she experienced while defending our country."

The Center was founded by Dr. Charles Marmar, who is currently its Director and Principal Investigator. Regarding the need that led Dr. Charles Marmar to start the program, he states:

I developed this program to close two gaps...I wanted to fill, on the clinical side, the gap in veterans' healthcare, which is primarily capacity for veterans themselves, timeliness for veterans, high quality care for veterans and, most importantly, to care for their families; not in a cosmetic way, but in a thorough way...

The gap I wanted to fill on the research side was, initially, to advance diagnostics for PTS and TBI. Actually, nobody knows what the rates of PTS and TBI really are. Nobody knows who really has PTS or TBI...You'll get a lot of people telling you things, but nobody knows really when a veteran definitely does or does not have these disorders...People are well meaning and they do the best they can, and they use the tools they have available, but until we have objective ways to diagnose these disorders and objective ways to know when someone is getting better or not getting better from care, we'll be relying on impressions...

Since the clinic's founding, further studies have been undertaken in addition to the Cohen-funded study, with the support of the Department of Defense and other funders.

Mission Statement

The mission of the Steven and Alexandra Cohen Military Family Clinic is:

...to accelerate the discovery of measurable medical characteristics, known as biomarkers, which would allow health care professionals to objectively diagnose post-traumatic stress (PTS) and traumatic brain injury (TBI) in veterans. Our team is dedicated to lessening the burden of these conditions on service members, veterans, and their families. We aim to improve the detection and treatment of PTS and TBI through cutting-edge research.

Organizational Structure

The organization's dual focus – research and treatment – allows for two pathways of entry for veterans and their families. Participants may begin in either the study of PTS and TBI (“the Study”) or the Military Family Clinic (“the Clinic”), and later choose to join the other. According to Sonya Dougal, Program Director, the Cohen team has found it more common for participants in the Study to choose later to seek treatment at the Clinic, rather than the other way around.

The Study of PTS and TBI is overseen by the Chair of Psychiatry, Dr. Charles Marmar, and is supported by a clinical staff, outreach staff and administrative staff. The clinical staff consists of an adult psychiatrist, a child and adolescent psychiatrist, psychologists, social workers, and a child social worker. The outreach staff consists of the Director of Veteran Outreach, a VA Liaison, and an Outreach Coordinator. The administrative staff consists of a Managing Director, Program Coordinator, Program Manager and Senior Database Analyst.

Several staff members share clinical and research responsibilities. Currently, one psychologist works part-time as a clinician and part-time as a research psychologist on the research team. The outreach staff conducts outreach activities for both the Clinic and the Study.

Programming

Programming related to the Study:

To date, research efforts of the Cohen Clinic have consisted of three studies: the biomarkers study, the Cohen study and the Fort Campbell study. All three of the studies have the common goal of identifying bio-markers for PTS and TBI. Dr. Marmar has said that ultimately, his goal is to create an inexpensive test for PTS and TBI, akin to a home pregnancy test. Through these tests and the identification of biomarkers for these conditions, he hopes that mental health conditions can be treated in a less subjective manner than today, but rather more objectively as physical health conditions are. He believes this will reduce stigma and increase the prevalence of service members and veterans seeking treatment.

The biomarkers project, funded with \$3.5 million from the Department of Defense, is a study of 200 male and 80 female Iraq and Afghanistan veterans, several years after serving in the war zone. This study is limited to the identification of biological differences between individuals suffering from PTS and controls using highly symptomatic cases and control cases. This study includes a validation phase in which 35 cases and 50 controls are recalled one to two years after initial assessment for repeat biomarker testing. To date, 224 individuals have participated.

Dr. Charles Marmar, PI and Cohen Clinic Director, explains the goals of the biomarkers study:

I think it's a little scary at first to think that the invisible wounds of war could be made confirmable by laboratory testing, because it would adjudicate things that people feel are more under their control right now. On the other hand, I think if they're tied to better treatment — to take your playful analogy, if my amygdala is running away and I can see that, and I can talk to you about it or give you some medicine, or give you a trans-cranial magnetic stimulation session that will calm your amygdala down, and I can give you another test that shows it's better, I think people would feel more reassured about it.

...It helps to bridge [two very different cultures]. Admitting that you have PTS or depression within the military, in war, what the military culture is, so many times I hear in the office that you can't say it because you're a weak link. You cannot be that person. All of a sudden, you're a civilian and then you can. It doesn't work that way for them. I think functioning — this functional amygdala gives you a language to talk about these very valid issues...I think a big piece of [what we do] in therapy is just psycho-education, how the mind works and how it responds to trauma. I find that's a way in. It reduces some of the shame.

Dr. Steve Flanagan, Co-Director of the research team, further explains the issues that the team is trying to address:

Our veterans coming back just don't have one thing. It's not just PTS. It's not just traumatic brain injury. There are all sorts of things that are coming together, and if we are to be effective in advancing our understanding of what the heck is going on with these guys and girls from a biological perspective, physiological perspective, functional status, realizing there are many inputs, as you mentioned, and lots of outputs. This has to be a collaborative effort. It's not just psychiatry. It's not just rehab. It's radiology. It's neurology. It's neuro-ophthalmology. The list goes on and on and on. It really takes everybody coming together to make a difference.

Once we understand that basic biology and physiology, that helps lead to more specific treatments for the individual problems, which we believe will probably be better than the symptomatic approaches that we're taking now. I think we're very successful in the symptomatic approach; don't get me wrong. But we can do better than that. We should never be satisfied with where we are, and that's where we're going with this.

In contrast to the Bio-Markers Study, the Cohen study, with a \$17 million dollar grant from the Cohen Foundation, had more inclusive criteria for those who could participate. Where the Bio-Marker Study looked at two groups—PTS and TBI, the Cohen study includes five groups: PTSD, TBI, PTSD plus TBI, depression without PTSD or TBI and three levels of controls. Therefore, in the Bio-Markers Study, if a person had PTS and depression they were not accepted into the study, but in the Cohen study they would be accepted.

The Cohen study also adds additional types of data collection, including all procedures from the Biomarker Study along with additional procedures that include task-based functional brain imaging, TMS guided EEG, fear conditioning, startle testing, an expanded array of blood markers, and ocular

coherence tomography. The Cohen study will recruit 1,500 Iraq and Afghanistan veterans over five years. To date, 158 individuals have participated.

The Fort Campbell Study, funded by the Cohen Foundation for approximately \$3 million, adds a longitudinal dimension and a larger sample group. The Fort Campbell study focuses on active-duty military personnel in the Army's 101st Airborne Division, with data collected before deployment, and 72 hours after return from the theater and, once more, 3 to 6 months after return from the theater. To date, 1,033 individuals have participated. As Sonya Dougal, Program Director, explains, "It's a huge advance from the original Cohen research study, where we're just looking at veterans in one snapshot in time after they've separated from the military." While getting access to such a large cohort of active duty personnel is challenging, as Dr. Marmar says, "Sometimes you strike gold."

Programming related to the Military Family Clinic:

The Military Family Clinic provides psychological and psychiatric care to veterans, active duty service members, and their families, free of charge. While there are other organizations that provide psychological services for veterans, the Military Family Clinic also provides services for family members of veterans, and not just the veterans themselves. The Clinic's definition of "family" is broad – as long as an individual is affected by the deployment or service-related stresses or experiences of a loved one (including a close friend), the Cohen Clinic will provide services to that individual. Additionally, the confidential nature of the services provided allows veterans to avoid any stigma that comes with seeking services through the military health system or at the VA and having any behavioral health information recorded in their records. This makes the Clinic more attractive to a certain segment of the veteran and military population.

Second, the Clinic allows patients to get psychological services without it being recorded in federal records. Vincent DelSignore, Senior Program Officer at Single Stop USA, a multi-purpose referral agency for veterans, says, "Particularly for behavioral health services a lot of veterans don't want to receive behavioral health services through the VA, because it's going to go on their record." The Clinic, by not being part of the VA, provides treatment that doesn't go on a veteran's record.

The Clinic treatments use the following modalities:

- Individual (adult) (Total enrolled = 180, percentage of total enrolled = 67.92% in Jan-Jun 2014)
- Individual (child) (14 / 5.28%)
- Couples therapy (54 / 20.38%)
- Group therapy (11 / 4.15%)
- Medication management (20 / 17.55%)

These services are used to address the following ailments:

- Trauma and stress
- Post-traumatic stress disorder
- Anxiety
- Depression
- Military sexual trauma

- Grief and loss
- Re-adjustment problems
- Alcohol and substance abuse
- Parenting concerns
- Family/relationship conflicts
- Children’s behavioral or academic problems

Sonya Dougal, Ph.D., Program Director, says, “It’s not just talk therapy. I think a lot of data has shown that talk therapy combined with some psychopharmacology is the most effective form of treatment, and we try to do that.” Additionally, the Cohen Clinic utilizes evidence-based therapies in its treatment of PTS. Dr. Irina Komarovskaya, Interim Clinical Director and Licensed Clinical Psychologist, explains:

...What the evidence-based treatment term means is a set of special models of treatment that were developed to treat specific conditions. Because we deal with a veteran population, obviously we deal a lot with anxiety disorders, post-traumatic stress, depression, but also couples work and relationship work. These are the models that guide clinical work, guide our clinicians in approaching a case. Evidence-based treatment, these are primarily treatment models that were studied in a research setting, so they’re quite specific. They’re also oftentimes manualized, so it’s not “anything goes” in a session. There are very different ways to approach a counseling situation, but usually we talk about a cognitive behavioral model. We talk about changing people’s beliefs as a result of certain situations that happened, beliefs about themselves or others, cognitions, and also their behavior. In treatment of depression, anxiety disorders, obsessive — a range of concerns, including of course post-traumatic stress disorder.

Dr. Komarovskaya, goes on to specify what evidence based treatment looks like specifically for post-traumatic stress:

For post-traumatic stress, I mean, when we talk about evidence-based, we talk about cognitive processing therapy for veterans, prolonged exposure. When we go over a traumatic event together with the veterans again and again, until it kind of loses its grip. Then that leads to decreased symptoms or flashbacks, nightmares, and so on. Overall we’re very much guided by evidence-based approaches, and whenever appropriate we use them. They oftentimes can be used on a more time-limited basis, but as we know from actual clinical reality, a lot of people who come in cannot be treated in 12 sessions, for example, or 13 sessions. So we have some flexibility in how long we see them.

With its specialization in therapeutic and psychiatric help for psychological issues of veterans and their families, what the Cohen Clinic *doesn’t* offer are services related to acute substance abuse problems, housing and employment counseling. In these cases, according to Komarovskaya, Center staff typically refer the client to a network of other treatment centers, including the VA, while maintaining “parallel treatment” at the Cohen Clinic.

The Clinic’s treatment model is intended to be “short term,” with a maximum of 16 weeks of treatment, but the program finds ways to accommodate those who need longer care, a group that currently makes

up about 20% of their patients. This is discussed in greater detail in the section titled *Veteran Program Differentiation*.

To date, the Military Family Clinic has conducted 464 intakes and consultations, and served 284 patients, with the others referred to agencies more suited for their needs. Since opening, their outreach efforts have doubled their first year's monthly average of 100 patients per month.

Veteran Populations Served

The Military Family Clinic serves veterans and active duty service members from all generations, regardless of discharge status, as well as their family and friends. Dr. Charles Marmar explains the need for services for veterans' family members:

I don't have to tell any of you, when someone is deployed to war, their family is deployed. In some ways, war fighters are better prepared to deal with the brutal realities of war than family members. I think if you ask Admiral Mullen who takes the greater hit on deployment, is it the war fighter or the family, he thinks it's the family. It's harder for the family to process the experience. We started this as military family clinic and said, "If your best friend is suffering because of your military experience, we'll consult and see what we can do." It's mostly veterans and spouses, and children that we see.

Dr. Marmar later explained that the Clinic tries to maintain a broad and flexible definition of "family," saying that if a veteran's best friend came in with issues related to their relationship s/he would be accepted for treatment.

Those who come for an intake and consultation but are not accepted are typically those who need in-patient psychiatric services or are at high risk for substance abuse problems. In these cases, the individual is referred to a more suitable agency.

Funding Sources and Strategies

In 2012, before the Cohen Center existed, NYU's Langone Medical Center received a \$500,000 grant from the Robin Hood Foundation, of which, notably, Steven A. Cohen is a Trustee, to begin the Military Family Clinic. Following this, in December of 2012, the Steven and Alexandra Cohen Foundation gave the Langone Medical Center \$17 million to begin the study of PTS and TBI, followed by an additional five-year, \$6.8 million grant, at which time the Cohen Center was named. Under the terms of this gift, the Cohen Foundation required that the Clinic raise 33% of that gift in matching funds, something that Sonya Dougal, Program Director, says they are currently working on with the help of the Development Office at NYU. The Robin Hood Foundation continues to support the Cohen Clinic, giving \$375,000 last year and pledging \$340,000 this year.

Total funding over the life of the Cohen Clinic is around \$50 million including gifts or grants from the Department of Defense and other agencies.

2. Measurement and Data Supporting Effectiveness & Impact

Types of Data Routinely Collected

When discussing the uses of data at the Cohen Clinic, one must consider both the collection and use of data by the Study and the collection and use of data by the Clinic.

Data collection in the Study

Data collected for the biomarkers study include structural brain imaging, resting state functional brain imaging, blood markers, and voice markers. The PTS cases from this study who are being recruited at NYU are also invited to participate in the Cohen protocol (See below).

Data collected from the Cohen study includes all procedures from the DoD biomarker study and additional procedures including task-based functional brain imaging, TMS guided EEG, fear conditioning, startle testing, an expanded array of blood markers, and ocular coherence tomography.

The Fort Campbell study of 1,033 active-duty Army personnel uses data from clinical screening interviews, neurocognitive testing and 13 tubes for blood markers on three occasions, prior to deployment, 72 hours after return from the theater and 3 to 6 months after return from the theater. As Sonya Dougal explained:

Cohen Clinic staff received permission to embed in the Soldier Readiness Process (SRP) so that as the personnel were completing all SRP stations the Cohen Clinic staff were able to give a short pitch about the study, and to draw blood as part of the blood draw that is already done for HIV. This blood is now being tested for genetic, genomic, metabolomic, and endocrine factors that might predict a risk or resilience for PTS and TBI. At the time of data collection, they also administered a short computer-based clinical self-report battery that assessed people for stress, anxiety, trauma, depression, and TBI symptoms, as well as some neurocognitive tests to measure attention, working memory, and emotion regulation.

Data collection at the Clinic

Certain types of data (e.g., demographic information, presenting problem, military service, etc.) are collected for all patients who contact the Clinic. At their initial appointments, all patients are evaluated by the assigned therapist through a clinical interview to clarify their presenting problem, diagnosis, and history.

At times, if a need arises, the Cohen Clinic refers patients for neurological assessment to other agencies (e.g., Rusk Institute at NYU Langone Medical Center, or the Manhattan VA). If a patient takes medications that require routine blood work, he/she is referred to the primary care physician and then a copy of the blood work is requested.

Regarding longitudinal data on a patient's progress, the clinic regularly collects data from the patient, which is then compared to data given by the clinician. Irina Komarovskaya explained in an email:

We closely monitor the quality of the services provided at the Military Family Clinic by administering well-validated self-report measures to the patients receiving treatment at the Clinic. The measures assess patients' symptoms of posttraumatic stress, depression, anxiety, relationship problems (for couples), and behavioral problems (for children). The measures are administered at the onset of treatment and then re-administered every 6 weeks throughout the course of treatment. A Treatment Satisfaction Survey is also given at the end of treatment. The data collected from the measures is analyzed to determine the effectiveness of treatment.

After patients leave the program, the clinic periodically conducts follow-up surveys, although in some cases they lose contact. In rare cases, patients have returned for follow up treatment, although that number is small so far, according to Dr. Komarovskaya.

Data Analysis and Reporting

Data analysis and reporting for the Study

Recently, the access to active duty personnel at Fort Campbell has yielded a whole new kind of data for the study of PTS and TBI, analysis of which seeks to paint a picture of the effect of combat on a population over time. Dr. Dougal points out that this sort of study is a significant advance from the original Cohen research study, where they were just looking at veterans in one snapshot in time after they separated from the military.

For the Bio-marker Study the Department of Defense requires quarterly, annual and final reports. For the Cohen Study and the Fort Campbell Study, the Cohen Foundation receives quarterly reports. The Robin Hood Foundation requires an annual report at which time a request for renewal is also submitted.

Data analysis and reporting at the Cohen Clinic

As part of NYU's Langone Medical Center, the Cohen Clinic has moved all patient data to an integrated electronic record keeping system called Epic. Within the Cohen Clinic itself, the emphasis on evidence-based treatment allows periodic review to see whether patients are making progress, and which of their practices seem to be most effective for which diagnoses.

One of the challenges regarding data collection that the Interim Clinical Director says that they—and other organizations that serve veterans—face is that patients may fear losing services if they indicate that their condition has improved, affecting how they respond to surveys. Regarding this issue, Irina Komarovskaya says:

I'm hoping that our research at the Military Family Clinic, NYU and all of our collaborators in the whole worldwide effort to do this will result in objective ways to know if someone is suffering from these conditions. Objective ways to know if they should receive Drug A, B or C. Objective ways to know if they should start with psychotherapy or pharmacotherapy, or maybe they shouldn't have either. Maybe they should have TMS or something else. I plan very big studies to try to study that.

How data are used for getting to impact

Aside from the treatment of veterans, service members, and their families, the primary reason for the existence of the Cohen clinic is the collection and analysis of data to understand diagnoses and improve

treatment of PTS and TBI. As such, on-going analysis sits at the core of both the Study and the Clinic. In its most recent progress report for the period from Jan. 1-June 30, 2014, the Clinic reports the following:

- *For those who have completed both pre and post treatment measures (n=39), the average depression score at the beginning of therapy was 22.38, a score that represents moderate depression (according to the established cut-off scores). However, at the end of treatment, the BDI-II scores decreased to 11.68, a score with minimal depression. Thus our patients only had minimal symptoms of depression following treatment.*
- *Significant improvements in PTS were seen pre- versus post-treatment by an average of 10 points (n=37). This change is clinically meaningful according to the National Center for PTS guidelines indicating a positive and robust response to treatment.*
- *Patients reported a decrease in perceived stress (n=35), which decreased on average by 6.91 points from pre- to post-treatment assessment. This is both a clinically and statistically significant change.*
- *Scores of quality of life significantly increased following treatment (n=32).*
- *The Treatment Satisfaction scores were exceptionally high, with averages close to 5 (the maximum score), indicating a high level of patients' satisfaction with services they received at MFC. (n, not listed).*

Formal Evaluation Activities (internal and external)

The activities of the Cohen Clinic are reviewed at a monthly Program Management Meeting to make sure that the organization is meeting all of its contractual agreements with funders and any other constituency groups to whom they have obligations, as well as adherence to laws governing their activities. Those meetings are led by the COO, and attended by the Comptroller and Director of Programs and Services.

Additionally, there are monthly in-progress report meetings, led by Annette Farmer, Staff Counsel and Director of Contracting and attended by the Program and Services Team.

3. Strategic Themes

Independent Sector Involvement

As a non-profit clinic, funded by private philanthropy, situated within a traditional for-profit healthcare system, tied to a research university, partnering extensively with VA medical centers and the Department of Defense for both research and referrals, the Cohen Military clinic itself is an example of broad and effective independent sector involvement and collaboration in veterans' affairs.

The Clinic collaborates with DoD and the VA both to receive patient referrals – both for treatment and as participants in the various studies – and as a source for the extensive data that each organization possesses. Dr. Marmar sees the Clinic as being more nimble than the military and VA medical system in its ability to conduct and respond to research, but sees these agencies as critical partners in the clinic's work. As such, he not only partners with these agencies, but has some of their leading doctors on his staff, such as one of the Clinic's neuroscientists, a Co-Director of the research team, and Chief of Neurosurgery at the New York Harbor Health Care System Uzma Samadani. Through her relationships with both the VA and the Clinic, Dr. Samadani has been able to facilitate the sharing of data – such as VA CT scan records on 10,351 deceased veterans. Again, this collaboration between a private hospital –

funded by private philanthropy – and the public sector is a notable example of the independent sector’s involvement in veteran’s affairs facilitating cutting edge care.

Dr. Marmar noted that his strongest relationships with VA hospitals around the country were as follows, most notably those VA hospitals which were linked to research universities:

- San Francisco VA
- San Diego VA
- West Los Angeles VA
- Palo Alto VA at Stanford
- Palo Alto Menlo Park VA
- San Francisco VA
- Puget Sound Healthcare System in Seattle
- Manhattan VA
- West Haven VA (Yale-affiliated)
- The Boston VA (BU-affiliated)

While both Dr. Marmar at the Cohen Clinic and his counterpart at the local VA speak enthusiastically about their collaboration, Dr. Marmar also says that establishing that referral pipeline has not always been easy:

We get [our referrals] through a broad outreach: the veterans service organizations, Vet Centers, VAs, active duty sites, [advertisements on] Craigslist...The truth is, in a perfect world, we would get the majority from the VA, if there were a more seamless way to do this. It took us a year almost of running the Military Family Clinic before we got a single referral of a patient or family member from the Manhattan or Brooklyn VA, and now we get the majority of our referrals from the VA.

When asked about similar models of collaboration, and similar clinics around the country, Dr. Marmar noted the Clinic’s work with the McCormick Foundation, which he says, “has the best developing network of private sector military family clinics.” While he says that the two groups are “learning from each other,” he says the Cohen Foundation has far more resources, and has been considering expanding their investment in the Cohen Clinic to build a network of clinics across the country. Dr. Marmar says, “If Mr. Cohen decides to build these 20 clinics around the country, which is a big decision, it will be the largest network.”

Along with the connections of their strategic vision to the McCormick Foundation, the Cohen Clinic also has working partnerships with researchers in Israel, Australia, and the Netherlands. Marmar explains:

I have a very strong Israeli partnership. I did that by recruiting Israel’s best PTS researcher here to NYU, Ari Shalev. He was the chair at Hadassah Hospital and a professor at Hebrew University. He was the leader in PTS research in Israel. He’s now a Cohen Veteran Center family member...There are good centers everywhere and we need to work with them. For example, Shalev is working with two major medical centers in Israel and he has NIH funding through the Cohen Veteran Center to study acute stress

disorders in one hospital in Jerusalem and one in Tel Aviv. He actually has teams on the ground there doing the leading.

We've been developing a partnership in Australia with Australia's leading PTS and TBI research, Richard Bryant. He's been a consultant to our program and we're now writing a big grant proposal with him, so we have an Australian collaboration. I am building a collaboration with Colonel Vermetten in Holland. He's done a great deal of work on biomarkers for PTS and TBI, so we've established a collaboration with him.

In addition to these more active working relationships, Marmar also has worked with those in the UK, Japan, the Occupied Territories, Sri Lanka, and China.

Veteran Programming Differentiation

The Military Family Clinic offers all of its treatment modalities to all cohorts of veterans and military families – that is to say, it does not differentiate specific programming within various sub-cohorts of the veteran or military family community. However, in that the Clinic's treatment side specifically focuses on the mental health needs of veterans and their families using Evidence Based Treatments, providers must differentiate the strategies for treatment based on each individual client's situation, and at times the veteran's exhibiting conditions or demographics (single versus married, for example), may drive what modality the clinic chooses.

Likewise, the staff must also be flexible about the timelines they keep, despite the general focus on Evidence-Based Treatments, which typically follow a specified timeline. In general, treatments last around 12-16 sessions, but the Director of the Clinical program says, "Oftentimes it's hard to stick to a specific number of sessions, because it really depends on what the person comes in with." Clinicians also note that sometimes the indicated Evidence-Based Treatments don't work, even after extended use, and they need to continue with other kinds of treatments. Irina Komarovskaya explains:

It really depends. If a person comes in here through the door and clearly exhibits symptoms of PTS, for example, and that's the primary concern, we would of course lean towards relying on one of those approved Evidence-Based Models. Now, I have cases when they didn't work. We did the model, 12 sessions, and I still see the patient two years later, because some cases are very difficult...I think there inherently has to be a degree of flexibility for sure and just clinical judgment. Then you have to adjust and try other things. It's a lot about not only rebuilding ways of interpreting situations or the world, but it's also balancing again the nervous system. A lot of trauma lives in the body. It's a lot of work with teaching relaxation strategies and so on, balancing that.

When asked about other factors that affect treatment of PTS, Irina Komarovskaya explains:

What we know definitely, and something that we see here quite a bit, is that if a person comes in with also a background of trauma in childhood, that definitely puts them at a much higher risk of having symptoms now that are more persistent, much harder to treat, and they will be with us longer for sure. Because it's not just things that they've seen in combat there, but also childhood abuse or neglect or some sort of hardships earlier on.

Regarding generational differences in the veterans they see, Komarovskaya says that they tend to see the same symptoms of PTS in the older veterans, with the main difference being that they have been living with their symptoms longer and tend to not label them as PTS and/or cover them up through alcohol or use of other substances. Other times, she says, with the older veterans, the PTS doesn't manifest itself for a long time until it is triggered by some additional stressors, at which time, it can begin to "snowball." Lately, as Vietnam veterans have begun to retire, they have seen an increase in their referrals.

Discussing additional differentiators in serving veterans versus the broader civilian population, Komarovskaya, notes that clinicians must be aware that veterans often have multiple, confounding issues facing them rather than just the issues being discussed in therapy:

I think how actively you want to be engaged in terms of helping out in terms of case management, not seeing your role just as a therapist who talks in the room but also is able to give a phone call to about housing, maybe try to connect to other services that are part of a person's need and so on.

Women Veteran Efforts

The clients of the Cohen Clinic are 40% female and 60% male, according to Sonya Dougal, Program Director, with most female clients being spouses of male veterans. Currently, she says there are "only a few" female veterans under their care.

Along with the usual issues that the Clinic addresses, clinicians also treat women (and some men) who have experienced Military Sexual Trauma (MST). Irina Komarovskaya, Clinical Director, says that these women, "because of MST, have tremendous mistrust of the military and also the VA, and they would not go for any services anywhere else [besides the Cohen Clinic]."

Regarding recruitment of research subjects, the Military Family Clinic has a female employee to reach out to female veterans while recruiting. Brian Murphy, also a recruiter for the study, says that while the research subjects typically represent the wide ethnic diversity of Manhattan, they are predominantly male. They are currently investigating why this might be the case and seeking new ways to reach out to women.

Reintegration with Family

The Military Family Clinic is uniquely positioned to support veterans' reintegration with family insofar as they offer services not just to the veteran as an individual, but to them as a spouse, a non-married partner, or as a parent, while also offering services to the constellation of individuals in their loosely-defined "family." The Clinic will see widows of veterans, grandchildren, uncles, and, even close friends who have been affected by the service member or veteran's experiences. Irina Komarovskaya, Clinical Director, explains their loose definition of the term family:

Mostly it's an immediate connection. It's either a spouse, a parent, or a child. We actually define families broadly, so we see girlfriends as family or boyfriends, if it's actually a couples unit that comes in—or not even coming together. They might come separately. It's our discretion.

Dr. Komarovskaya explained that a great deal of the work that the Military Family Clinic does is with couples or families:

Part of what we do is educating the couple about PTS and how it plays out for the person and for the relationship. Just having the knowledge of it helps ease it. For example, the husband may be prone to anger or high intensity emotions. The wife may take it personally. But as a result of understanding more about PTS it may soften this, and then the relationship and the connection can improve. Instead of her thinking that he's against her she may see herself as on the same team. That may help improve communication and connection.

Dr. Komarovskaya describes the work at the Clinic is done in an integrative and flexible way—a couple might begin work with a clinician, and then, if, for example, the husband needed to do individual work around PTS, he might begin to see another clinician on the team on an individual basis. Other times, a veteran may come in for individual treatment and then realize that he and his spouse should do couples work. What is important, Dr. Komarovskaya says, is for the team to be in communication and to work collaboratively. She says, “We would like to expand so that we can help more of them in-house. It always works better when we can do it within one agency so that I we can talk within the team. It’s a very collaborative approach.”

Data on changes in patients’ relationships with their families are encouraging. In the Cohen Clinic’s most recent Progress Report for the period from Jan. 1-June 30, 2014, patients’ responses to a question regarding whether there had been positive changes in their relationship with their partner/spouse the mean score was were 4.13 out of 5 with 1 meaning “strongly disagree” and 5 meaning “strongly agree”. For patients’ responses regarding whether there had been positive changes in their relationship with their children the mean was 3.76 out of 5 using the same scale. No patient rated the change in any of the domains lower than 3, “indicating very little variance/very high agreement in perceived positive changes as the result of treatment at MFC.”

Data regarding positive changes in patients’ relationship family

(1 = “strongly disagree” and 5 = “strongly agree” that there have been positive changes)

Life domain	Mean	Std. Deviation	Min	Max	Median
Relationship with partner/spouse	4.13	.79	3	5	4
Relationship with children	3.76	.87	3	5	3

Therapy involving the children of veterans

The staff of the Clinic includes Lauren Rocheleau, a clinical social worker, whose background is specifically in working with children who have experienced trauma. Ms. Rocheleau conducts outreach to the Fort Hamilton Elementary School, which she finds is ill-equipped to serve the military children in its population, as it only has one social worker for the 1,200 students in the school, let alone someone to focus on this specific cohort. A common issue for military children, Rocheleau explains, is teachers and administrators who have difficulty building connections with children who are used to moving every three years, and sometimes respond to such efforts with an attitude of “I can’t talk to you, I’m going to be leaving soon.”

While Rocheleau is a dedicated resource at the school specifically intended to bridge this divide and work with the community of military children, she encounters this same challenge:

I think the one thing I find, even for the families and the children that see me here, when they come to the office, is the trust issue from the moving around, the transitions that a lot of these children experience. I see that particularly at the school for the children of actively duty military...When they have someone new coming in — and I'm not military — it's just a matter of wondering if I'm staying around. Is this someone that I really should speak to? There's certainly less trust than I see in the non-military population whose general propensity is to engage more with me.

As a social worker, Rocheleau's role can include bringing the military families together with all of the resources at their disposal, and uniting all those who are charged with caring for their child and their service member. For families who have become fractured through repeated deployments or the long-term effects from trauma, or even families of children with learning disabilities, the Cohen Clinic can help build strategies to heal the family dynamic, support the service member or veteran's health, and support the child's education. Ms. Rocheleau describes:

It's really about education. Speaking about my role, speaking about what we do here at the clinic, and then really trying to bring in the families to sit down for meetings to give them something tangible to do to help work with their children...I had one family...The father came in, in his Army garb, and sat down. I gave him a plan to work with his daughter who is in special education in kindergarten. I think they really need that. Talking about that tangible piece that they can hold onto and say, "Here, you can take this." How do you work with your child and communicate? How do you bridge the gap between teachers, the base, parents, siblings, administrators? That's what we can do. We can kind of streamline that for them.

Through the provision of services to military families, the Cohen Clinic clearly fills a gap in services left by the Department of Veterans Affairs, and due to its partnership with the VA, can often work in parallel to ensure holistic care of the veteran and their family.

Community Connectedness

The Cohen Clinic both receives veterans who have been referred to them, and, less frequently, refers veterans to other organizations, mostly those who are in crisis for substance abuse or who need inpatient psychiatric care.

In addition to its collaboration with the VA Harbor Healthcare system (with Manhattan and Brooklyn sites) the Clinic has created strong partnerships with Fort Hamilton Elementary Schools (PS/IS 104), Syracuse University's Institute for Veterans and Military Families, and 70 other organizations and schools for referrals in New York, New Jersey and Connecticut. While the Clinic is no longer lacking for clients, the Study needs to actively recruit and use financial incentives to find participants.

Collaborative relationships include:

Collaboration with VA Harbor Healthcare System (Manhattan & Brooklyn locations)

The Military Family Clinic formed a referral partnership with the VA Harbor Healthcare System so that patients waiting for services at the VA will be offered treatment at the Military Family Clinic immediately. To date, this partnership has resulted in 149 referrals. According to Sonya Dougal, the success of this partnership can be attributed to the VA Liaison. This individual is trusted by both the VA and the Military Family Clinic, and has a strong relationship with the patients.

From the point of view of Adam Wolkin, the lead from the VA in collaboration with the Cohen Clinic, the relationship also seems to be a positive one:

In our VA, the opportunity to be able to expand the services that we offered veterans was something that was immediately attractive to us. It wasn't seen as competitive. It wasn't seen as a challenge. It was seen as just a vital necessity. In fact, it wasn't necessarily present. I think very much around the same time the VA and Congress and other advocates were certainly leaning toward the notion that we all needed to be in the sandbox together and there needed to be much greater collaboration with community partners. So this was very much in that spirit, although maybe just a little bit ahead of the curve in terms of setting that up. We began to have discussions. What would it look like to have a military family clinic here at NYU in terms of the relationship with the VA?

As Dr. Wolkin tells it, Marmar's experience in the VA and understanding of its strengths and challenges is a key part of what has made their collaboration work:

About five years ago Doctor Marmar came in, who I didn't know was going to be good or bad...He had been the Chief of Psychiatry at the San Francisco VA, and I didn't know if he was going to know too much about the VA, and there goes a little bit of our autonomy, or where he would be extraordinarily sympathetic knowing it full well. Of course it turned out to be the latter. As I said, he's sort of a kindred spirit, having run a very similar program and understanding very much what the strengths, issues, benefits, and challenges would be at the VA so was very quick to further embrace the VA's involvement in the department and to look for ways to build collaborations...

The collaboration with the VA comes through a VA Liaison, Amanda Spray, who splits her time there and at Bellevue Hospital. Irina Komarovskaya, makes the point that in a large organization such as the VA, having a specific point person is key, where that individual can break through inherent institutional mistrust and build personal relationships in both organizations to bridge any divides. She says that the Clinic gets two main types of clients referred from the VA: first, family members (who the VA does not treat), and second, those who require additional support beyond what the VA can help them with, or in some cases, those who need support sooner than they can be accommodated at the VA. In cases when a veteran needs services beyond what the VA offers, such as couples counseling (which the VA does not offer), these veterans often receive parallel treatment, while continuing to receive treatment at the VA.

The Institute for Veterans and Military Families' NYC4RVETS Initiative

The Cohen Center has joined with the VA medical system as well as nearly 50 other service providers across New York City, to participate in the New York City For Our Vets Initiative (NYC4RVETS), a structured collaboration to increase and formalize referrals between agencies of varied specialties to ensure that veterans get comprehensive and holistic care, regardless of which service provider they

initially seek services from. In this way, any of the service providers in the network can refer their veterans through a formal process to the Cohen Clinic. Likewise, should the Cohen Clinic have a client who is in need of employment, legal, housing, or financial services, for example, the Clinic has a formalized network through which to refer their client to any number of organizations which provide these types of services.

Collaboration with the Fort Hamilton Elementary Schools

The partnership with Fort Hamilton Elementary Schools is also a referral arrangement. The school guidance counselor and principal refer children of military families who are having behavioral or learning problems in the classroom to a clinician who spends one day per week there. To date, this partnership has resulted in 13 referrals and is another example of the Military Family Clinic filling health care services as the school has a limited capacity for serving the needs of military family children.

Recruitment to the Cohen Clinic Study

Recruitment of subjects for the Cohen Clinic's study of PTS and TBI is handled by Brian Murphy. Participants in the study may earn \$530 for completing all segments of the study. Murphy says that he does his recruiting through the following networks: veterans' events such as MegaMusters or Civilian Military Combines (a CrossFit athletic competition), the Mayor's office, the New York City Police Department, Employment Offices of the Department of Labor, and Craigslist.

Recruitment via CUNY

Program Director, Sonya Dougal, reports that City University of New York has the highest number of student veterans in the area, and as such, serves as an invaluable source of referrals.

Social Connectedness

To aid in increasing its presence among the public, the Military Family Clinic supports community-training programs to educate veteran and non-veteran groups about veteran needs, understanding post-traumatic stress and traumatic brain injuries, and how their organizations can support veterans. Looking ahead, Susan Dougal says that she is working with the medical center department of marketing and communications to develop print ads and online media advertisements. However, the clinic's focus is primarily on treatment and research, rather than on advocacy and public education.

Transition to Civilian Life

The Military Family Clinic works with veterans and their families through counseling to help them adjust to civilian life, and the issues of PTS and TBI are the primary focus of the Clinic's treatment mission. Along with the host of reintegration issues which come along with these two wounds of war, Dr. Irina Komarovskaya discusses how another key issue in the transition to civilian life is transitioning from the unique and close-knit culture of military service to the often insular culture of civilian life:

I think a big [transition] is kind of the social transition, because in the military people are very, very closely knit together, and you have a really strong support system. You have your buddies, and you know people are going to be there for you no matter what. I think when a lot of vets come out, we hear a lot that they feel very alone and sort of isolated in the way we interact together [as civilians]; there's a lot more personal distance. I think that is a big one that comes up for them—it's a different culture. And it can never be

replaced really. A lot of times, time after time it's just this longing for that connection, but it really can never be replaced.

One indicator of the Cohen Clinic's impact on veteran transition is data on changes in patients' relationships with work and friends, which is encouraging. In the Cohen Clinic's Life Domains survey of the Progress Report for the period from Jan. 1-June 30, 2014, the mean score regarding whether there had been positive changes in their functioning at work was 3.93 out of 5 on a range from 1 to 5, from "strongly disagree" to "strongly agree". The mean score for whether there had been positive changes in their relationship friends was 3.88 out of 5 using the same scale. No patient rated the change in any of the domains lower than 3, indicating very little variance/very high agreement in perceived positive changes as the result of treatment at MFC.

Data regarding positive changes in patients' relationship at work and with friends

(1 = "strongly disagree" and 5 = "strongly agree" that there have been positive changes)

Life domain	Mean	Std Deviation	Min	Max	Median
Functioning at work	3.93	0.83	3	5	4
Relationship with friends	3.88	.85	2	5	4

Media

The Military Family Clinic utilizes print and online media to increase brand awareness and to market services. Regarding the use of the Internet and social media, Susan Dougal, says that they are beginning to invest in Google Display Network and Google Search, that they've recently redesigned their Facebook page, that they are currently redesigning their website to make it more "patient-centric," and they are using the Langone Center Twitter feed to announce activities of the Cohen Clinic. They have received permission from the VA through the release of names and addresses request to mail brochures and fliers to 70,000 veterans in the Tri-State area.

Employment and Education

The focus of the Cohen Clinic is on psychological and psychiatric treatment for veterans and their families. When issues of employment and/or education come up, the Clinic refers clients to other services that special in these areas.

4. Key Learnings and Reflections

Catalysts of Impact

Referral Network. The Military Family Clinic has a relatively high number of patients for a young organization because of the organization's strength in creating partnerships for referrals. As of their recent quarter, May to July 2014, patient referrals doubled to 18 per month compared to its first quarter of operation, July to September 2012, when the organization received nine referrals per month. The top referral source is from the Manhattan VA followed by Internet search/ads, Military Family Clinic, Borden Avenue Veterans Shelter, Single Stop, IAVA, Fort Hamilton School, and CUNY and local colleges.

Efficiency in Service Delivery and Standard of Care. The Military Family Clinic demonstrates excellence in the delivery of mental health care services because they are a non-bureaucratic, not-for-profit health

care provider based on a private-sector model. Their standard for prompt reply to inquiries is within two hours.

Strong synergisms between research and treatment. Whether in their clinical programs or research, the Cohen Clinic lives with tension between standardization and individualization. For example, they emphasize Evidence Based Practices and aim for short-term results, but maintain flexibility to accommodate patients when that doesn't work out. Similarly, on the research side, they seek bio-markers for PTS, but are quick to point out how these could be misused to avoid treating individuals by "adjudicating" treatment.

Partnerships. The Military Family Clinic is successful because it leverages resources of all its partners. Each partner has its own strengths and weaknesses, but a collaborative relationship allows for resources to be leveraged at the benefit of the veteran. For example, the VA has the veteran contacts, the Military Family Clinic has the capacity to treat veterans still on the VA waiting list, and NYU Langone Medical Center has broader medical resources.

Inclusivity. The Military Family Clinic treats veterans from all eras, active duty service members, and veterans who were dishonorably discharged. Additionally, the Military Family Clinic treats family members with a broadly inclusive definition. Friends, non-married partners and extended family members are also eligible for treatment.

Learning from programmatic practices that prove effective. The organization has found that there are certain best programmatic practices necessary for success. As the Military Family Clinic is dependent on community partnerships, the organization has found that the key to the success of these partnerships is to have a point-person within each organization. For example, building a successful relationship with the Manhattan VA was difficult until Dr. Amanda Spray joined the Military Family Clinic team. She serves as the VA Liaison and specifically works to connect veterans between the two organizations. This type of individual is vital to successful partnerships because it allows for a key influencer to create connections, and it proves to both parties that the relationship in place is for the greater good of the veterans and not just a surface relationship.

The Military Family Clinic also refers patients to other institutions if the needs of the veterans cannot be met by the organization, for example severe alcohol and drug abuse issues. This is an important programmatic practice because the Military Family Clinic recognizes its limitations of care and has created a network of partners so that veterans and their families can receive the support needed. The Military Family Clinic has created a referral case management Excel document as a resource of its employees so patients can be properly referred.

The organization has also found that it is helpful to provide patients with an action plan. For example, the social worker at the Fort Hamilton Elementary Schools provides parents with a step-by-step plan so that parents can work with their child on any pressing issues. Through this programmatic practice veterans feel that there is a tangible solution to problems.

The Military Family Clinic is also conscious of the fact that its own team is in need of a support network. The caregivers of these veterans have a large responsibility and the organization provides its own team with a support system.

In terms of the research study, the organization has found it helpful to reach out to veterans and active duty service members on a one-on-one basis to recruit study participants. The organization has also found success in recruiting study participants through Craigslist ads, government organizations, private organizations and athletic events.

Barriers to Impact

The Military Family Clinic is faced with a number of challenges.

Recruitment challenges for the Study. In terms of the research study supported by the organization, there is a major challenge in recruiting veterans and active duty service members to participate in the Study. Obstacles range from lack of access to military bases, disinterest from service members, stigma associated with mental health issues, and difficulty communicating the importance of the research study. In cases where they have been given access to active duty forces at a military base, they were given one hour with each veteran when the research requires 10-20 hours. While one solution would be to gain greater time with individuals, those we interviewed pointed out that another solution would be to find a way to make the testing go faster. Another approach that they plan to use in the meantime is to triage groups at military bases and give greater attention to those with the greatest symptoms or the highest signs of resilience.

Forming relationships with active duty military personnel. Military commanders are the gatekeepers to access to getting active duty personnel to participate in studies. An example of what access to can yield is the Cohen Clinic's recent relationship with the command at Fort Campbell in Kentucky that resulted in the enrollment of 1,033 deploying service members in its longitudinal study. This relationship is valuable because advocates at bases can inform service members of the organization's services and help decrease the stigma associated with mental health. Although the Military Family Clinic has a strong referral network, it still has difficulty in reaching military spouses and families. There is an overarching general challenge of the stigma in the military community associated with being treated for mental health issues. Charles Marmar, Program Director and PI, said that he often finds top management and rank-and-file of the military to be very supportive, but that collaborative relationships get killed by middle management.

Winning veterans' trust as civilians. Non-veteran clinicians at the Military Family Clinic have faced the challenge of a barrier between themselves and the veterans. In some cases, veterans are hesitant to confide in a non-veteran due to the perception of a lack of shared experiences. However, to overcome this obstacle, clinicians work to be flexible and maintain open lines of communications so that the veteran can express their reservations and engage in counseling.

Ongoing Efforts to Enhance Impact

While the Cohen Clinic's current programs are impressive in many respects, its leaders have an expansive vision for taking its programs to scale. The following are key points in their plans for widening their impact on PSI and TBI among veterans and their families:

Replicating the Military Family Clinic Model. A long-term expansion goal of Mr. Steven Cohen is to replicate the Military Family Clinic model nationwide. Charles Marmar's vision is that by gathering data

at the NYU Cohen Clinic on the implementation of Evidence Based Treatment for PTS and TBI they would develop a proof of concept for a clinic serving veterans and members of their families. Next, they would replicate and refine the model at 10-20 twenty top academic medical centers that have a positive, collaborative relationship with the local VA. “We would knit them together into a collaborative network,” Marmar says, “and that network would further advance diagnostics and treatments, and prognostics by quickly studying these in the network. We would move everything. We would translate everything we’re learning in the Cohen Veterans Research Center that’s being learned around the world about TBI and PTS, and move them into this clinic structure.” In this way, they would carry out clinical trials to develop what Marmar calls “the next generation of diagnostics and therapeutics.”

Identifying biomarkers for PSI and TBI. On the research side of the Military Family Clinic, a long-term goal is to master the diagnostic science of post-traumatic stress and traumatic brain injuries, by identifying bio-markers for these diagnoses. The hope is that this will lead to a blood test for TBI and PTS, allowing for a diagnosis that is faster, clearer, and helps overcome cultural resistance by those who are uncomfortable with the subjectivity of a psychological diagnosis.

Increasing recruitment for their research. One goal is to increase recruitment and outreach for the study of PTS and TBI. According to Sonya Dougal, Program Director, their plan is to build and strengthen partnerships in their referral network, improving their reputation as the “go-to location” for mental health services for military families in the New York City area. In addition, they plan to do begin mailings to a list of 70,000 veterans in the area of New York City using a list provided to them by the VA.

Increasing the capacity of the Clinic to serve more patients. The Military Family Clinic is looking to increase patient recruitment so that by 2019 they serve 300 patients each year. In order to serve the increase in patients, the organization also has a goal to increase staff so that these 300 patients can be seen simultaneously. Currently they can see 80 patients at a time. Discussions are taking place with the Cohen Foundation that approves the Clinic’s budget each year.

Expanding the types of therapeutic services offered at the Clinic. The Clinic has begun expanding therapy services to include group therapy, as well as groups of spouses, and other holistic approaches such as service dogs and yoga. Included in the Clinical Director’s vision for improving services is to include services that they are currently outsourcing. As she puts it, “As much as I’m a true believer in evidence-based treatment and how important it is, I think recovery and healing happens not only in the office. Oftentimes it happens outside actually by trying to connect veterans to other veterans, to community, to employment, to outside, to really just engaging them in a full life.”