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FORUM ON HEALTH AND NATIONAL SECURITY

# MILITARY FAMILIES IN TRANSITION: STRESS, RESILIENCE, AND WELL-BEING

EDITED BY

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A CONFERENCE SPONSORED BY:

Center for the Study of Traumatic Stress  
Department of Psychiatry  
Uniformed Services University of the Health Sciences



*From the Conference Series:*

FORUM ON HEALTH AND NATIONAL SECURITY

**MILITARY FAMILIES IN TRANSITION:  
STRESS, RESILIENCE, AND WELL-BEING**

Editor's Note: This transcript has been edited, however, as in most transcripts some errors may have been missed. The editors are responsible for any errors of content or editing that remain.

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## PREFACE

The health and well-being of military families is a key part of sustaining the health and readiness of our military forces. The Forum on Health and National Security, sponsored by the Center for the Study of Traumatic Stress, addressed interventions to mitigate the effects of stressors confronted by military families and strategies to enhance the resilience and well-being of these families, as wartime transitions to peace, garrison, and small group deployments. Participants represented military and civilian leaders, and health care and family services educators, researchers, planners, and providers. The goal of the Forum was to share knowledge across disciplinary boundaries, and to develop new perspectives and vantage points, in order to better understand the needs of military families.

Participants considered the challenges as well as potential solutions at different levels, from the individual to the family to the larger systems in which soldiers and families are embedded, including both military and civilian communities. In the coming years, additional transitions, and new challenges, will confront military families. Fewer resources will be available to mitigate the effects of the challenges, requiring even greater consideration of cost-effective solutions. To facilitate difficult decisions by leadership in a challenging transitional time, the group developed a set of recommendations addressing: (1) leadership; (2) training and education; (3) programs and interventions; and (4) research.

*The health and well-being of military families is a key part of sustaining the health and readiness of our military forces.*



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## EXECUTIVE SUMMARY AND RECOMMENDATIONS

Our nation's recent conflicts have brought unparalleled challenges for military families. The high operational tempo of a decade of conflict has required frequent deployments, with limited recovery, reset, and restoration time for service members and their families. Many returning service members and veterans suffer the effects of invisible wounds such as posttraumatic stress and concussions with resulting mild to moderate traumatic brain injury. These wartime wounds can greatly impact families: injured soldier, injured family. Further, the recent conflict has relied heavily on Guard and Reserve troops, for whom the unpredictability of military service imposes additional and unique challenges. Amplifying the effects of these circumstances, the recent period of conflict has overlapped substantially with a significant economic downturn. Against this backdrop, military families face new challenges going forward, as the force adapts to the changing circumstances.

The military is committed to ensuring the well-being of the soldier and the soldier's family, and members of the force depend on this commitment. How individuals transition into, within, and out of service, and more broadly, how they feel about their military experience, impacts the future of the force. A service member's evaluation of their service experience, and that of her or his family, affects the likelihood of reenlistment and even how the military is conveyed to the next generation. To sustain a promise and to promote national security, the military maintains a sharp focus on the families of its members. In the coming years, fewer resources will be available to mitigate the effects of challenges faced by these families, requiring leaders to identify cost-effective interventions.

To facilitate difficult decisions in a challenging transitional time, the Center for the Study of Traumatic Stress (CSTS) of the Department of Psychiatry at the Uniformed Services University convened a two-day forum, *Military Families in Transition: Stress, Resilience, and Well-being*. Participants in the forum, the most recent in a series on health and national security sponsored by the CSTS, included nationally recognized military and civilian leaders, educators, researchers, and health care planners and providers. In confronting challenges that will be faced by military families in the coming decades, the forum addressed Strategic Goal 2 in the FY 2012-2016 Strategic Plan: *To strengthen individual and mission readiness and family support, and promote well-being.*

The discussion identified a broad spectrum of challenges faced by military

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*Capitalizing on existing interventions with demonstrated efficacy, the effects of which are often cascading, can facilitate cost-effective and sustainable solutions.*

families, including deployment-related burdens on spouses and children, economic concerns, finding services for family members wounded in service, inadequacies in the dissemination of information necessary to navigate existing services, and unpredictability. These challenges may be exacerbated as the force changes.

These stresses and challenges notwithstanding, most military families are coping well and even thriving. The families are resilient and, like all families, are capable of becoming more resilient as they face future challenges. Sustaining and enhancing this capacity for resilience is a priority, and is accomplished by reducing specific stress and exposure to risk when possible, providing access to positive assets, and harnessing the power of human adaptive systems, including the family and the military and civilian community. Capitalizing on existing interventions with demonstrated efficacy, the effects of which are often cascading, can facilitate cost-effective and sustainable solutions.

The forum developed four areas of recommendations that serve these overarching goals. These recommendations relate to: (1) leadership considerations to facilitate the well-being of the soldiers and their families; (2) training and education; (3) design, implementation, and evaluation of cost-effective programs and interventions to address the challenges facing military families; and (4) research to provide action-oriented knowledge on stress and resilience in military families to aid decision-making by the leadership.

### **Leadership**

- Recognize the changing characteristics of military (and civilian) families. For the military of 2025, it is important to utilize a flexible definition of the family. Whereas families are diverse and evolving, the functions families serve are relatively constant. However, how those functions are implemented may change over time. Defining the family in a flexible way facilitates efforts to apply a wide range of knowledge about families as well as those to harness the adaptive power of families.
- During the downsizing, maximize predictability for service members and their families. Knowing what is up ahead is extremely valuable to families, reducing their stress level and increasing their capacity for resilience.
- Identifying family risk and resilience factors can inform policy and direct research, training, education, and programs to prepare for unknown future engagements.
- As is well known, and remains critical to future planning, identifying and implementing the optimal frequency and duration of deployments and dwell time substantially impacts service member and family function. To the extent that the nature and character of deployments change, the issues of frequency, length, and recovery time need to be reconsidered.
- Implement programs by first integrating existing capabilities, as this is cost-effective and associated with greater sustainability. Partnering with civilian communities to provide services to Reserve as well as Active components may provide additional advantages.
- When allocating resources, determine the most important problems, and how resources can be used to impact the greatest number of people.



- Consider cascading effects in cost-benefit analyses. Longer-term outcomes and cost-benefit considerations are often lost in the need to address downsizing and cost efficiency, but failure to take these into account can actually increase costs in the out years.
- Now, and as a part of sustained operations in the future, invest in program evaluation at the outset to more successfully identify cost-effective programs.
- Support the development of historical reviews and leadership lessons learned in order to capture the lessons on family support, family stressors, family resilience, and program operations. Manuals for family programs based on the experience of the past ten years can facilitate the ramp-up to responding in the next conflict. Consideration of where and how to house these lessons learned and how to sustain them is important to future engagements.
- Include the Guard and Reserve when planning for transitions facing military families, as they face unique challenges such as relative isolation and greater unpredictability regarding their service.

*Identifying family risk and resilience factors can inform policy and direct research, training, education, and programs to prepare for unknown future engagements.*

### **Training and Education**

- Maintain/enhance a leadership education group specifically at the Command and General Staff College and at the War College, that teaches lessons learned from the recent and past conflicts on the soldier-family interrelationship to sustain the fighting force. Development of this curriculum should include specific leadership questions and tools for solutions in future conflict times.
- Enhance methods and materials for communicating the issues of downsizing with military families, in order to promote trust and manage expectations of the service member and their family.
- Train and maintain the core competency to deal with soldier and family issues in order to be prepared and to sustain the force. In particular, train interventionists to deal with posttraumatic stress disorder (PTSD), traumatic brain injury (TBI), family violence, and child neglect, which are an ongoing part of service life and which will be an important part of future wars.
- For family service providers, review and consider training in the following intervention skills, which are now part of many family and individual interventions for stress-related exposures: emotion-regulation skills; problem-solving skills; risk, safety, and motivational communication skills; goal-setting skills; management of trauma and loss reminders; deployment separation reminders management; collaborative parenting; and financial readiness/planning.
- Train providers to: (1) recognize the effects of service member posttraumatic stress (PTS), PTSD, and other combat stress reactions on families; and (2) educate families to recognize, monitor, and manage these stress responses as a team.
- Consider, where applicable, calling service providers *trainers* or *coaches*, in order to reflect their role as strength builders, and thereby reduce stigma associated with care.
- Sustain and further develop bridging education programs for civilian community leaders, school personnel, health care providers, and others in the civilian com-

*Programs must target multiple levels, focusing on three engines of resilience: (1) reduce the level of stress and exposure to risk; (2) boost access to positive assets (e.g., good healthcare, money for food, and safe communities); and (3) harness the power of human adaptive systems, including families and the systems in which they reside.*

munity, about military culture, PTSD, and TBI. The present knowledge base is higher than in the past, but not historically high, considering World War II. This knowledge and sensitivity will decay over time. Continuing an active outreach to civilian communities will relieve soldiers and family members of being the primary educators of their communities and maximize the ability of military families to engage with communities. This is particularly true around smaller installations and with Guard and Reserve service member units.

- When allocating limited resources, consider that cuts in training dollars are associated with increased risks for lack of necessary skills in future times of rapid mobilization/response, as was true in the present conflict.
- Develop fellowships to enhance the skills and knowledge of military providers and researchers in actionable research, program evaluation, and implementation science.

### Programs and Interventions

- Programs must target multiple levels, focusing on three engines of resilience: (1) reduce the level of stress and exposure to risk; (2) boost access to positive assets (e.g., good healthcare, money for food, and safe communities); and (3) harness the power of human adaptive systems, including families and the systems in which they reside. A focus on these engines of resilience — reducing risk, boosting assets, and harnessing human systems (RBH) — will promote sustainable change.
- Aim to reduce risk factors and increase protective factors versus focusing solely on reducing negative outcomes. It is important to proactively assess and address family risk and protective factors as well as risk and protective factors of individuals.
- Assess programs in order to determine if efforts to reduce risk and enhance protective factors are effective. Assessment requires more than process measures. Measure both positive and negative outcomes of programs.
- Develop programs that impact multiple outcomes, thus providing programs that may be more cost-effective. Evaluate programs using multi-level analysis, to assess their effects at various levels (i.e., community, family, and individual).
- The strength of the community (both an installation and the surrounding community) can sustain families and service members. Interventions that build community strength and bridge to civilian communities are an important part of a programmatic approach.
- Include a self-help strategy in programs, in order to empower families and build their sense of efficacy. This approach helps families and individuals sustain their own recovery.
- Consider *gateways, pathways, and configurations*: (1) Incorporate gateway managers, considering what the gateways are and how entrée is managed. This is central to engaging individuals and families, in order to reduce attrition, as the system in which military families live is large and complex. Provide user-friendly access, and recognize that multiple points of contact are crucial, especially for those that feel isolated or depressed. (2) Evaluate the pathways between pro-

grams. (3) Consider the configuration of programs across the system, across career time, and across new and emerging types of military families, in order to determine the matrix of programs that best serves the diverse elements of the population at various and critical points in their careers. This matrix is a *ramp up* — ready to fight — tool for future engagements.

- Modularized programs have the advantage that they can be adapted for emerging needs: (1) Identify core elements of interventions that might be universally effective and adaptable to different situations. (2) Construct programs focusing on these core components, incorporating degrees of freedom so that programs can be adjusted while remaining faithful to the core components. (3) Design programs that are adaptable up front, allowing families to see an early win and engage. (4) Build a resilience component into programs, to promote problem solving. (5) Assess continuously and adjust programs as needed, to meet the needs of different families and situations.
- Where possible adapt existing (civilian as well as military) evidence-based programs to serve military families.
- During implementation, focus sharply on *reach*: impact is a function of effect size and reach. A small effect that reaches a large group (i.e., has substantial reach) has a large impact.
- Implementing new interventions in interdisciplinary teams that include representatives of policy, front-line family work, and intervention science can expedite program development, evaluation, and adaptation.
- For expanded reach to active duty service members and families, as well as Guard and Reserve, leverage existing: (1) mentoring relationships of spouses and service members within the Army community across active duty, Guard, and Reserve families; (2) trusted community supports of each family (e.g. church, school); and (3) technological systems, especially to support geographically dispersed soldiers and their families.

*Modularized programs have the advantage that they can be adapted for emerging needs.*

## Research

- Leverage existing opportunities: (1) Develop cross-linked historical and current administrative health and behavior databases on military families and soldiers, in order to facilitate analyses using new large data-intensive approaches of critical real-time and historic family-soldier health and career outcome questions (e.g., Army STARRS historical data analyses). (2) Develop similar databases on civilian families, which share risk and protective factors in common with military families, for comparison where possible. (3) Increase the use of existing mobile and real-time technology (e.g., use mobile devices and cloud computing technology to collect and evaluate process and outcome data). (4) Identify and reduce unnecessary barriers to research and the use of existing data, to facilitate efforts of researchers to contribute to problem solutions.
- Examine family functioning in studies of deployment and recovery, as it is a critical variable in soldier recovery and reset. Studies to identify the effects of length and frequency of deployment, characteristics of deployment, and dwell time on family function can greatly assist in developing interventions to sustain resilience and promote rapid recovery of deployed service members.

*Balance the informative power of long-term research and the immediate need to assist families, utilizing designs that also facilitate ongoing knowledge (e.g., multifactorial, rollout designs).*

- The leadership must be educated in the use of tools to recognize the effects of cumulative stress on families and service members and in intervention strategies to deal with those effects: Stress is cumulative, and high cumulative risk can overload the capacity of any system.
- Identify risk and protective factors, the most effective times to apply interventions, and opportunities to impact a range of negative outcomes for families and individuals. Negative family outcomes for potential intervention include: family violence, soldier and family legal problems, child school problems, soldier and family mental health problems, family breakup, as well as others. The grouping of these outcomes can provide additional power to identify risk times and groups and interventions which may work across negative outcomes. Such an approach can strengthen actionable research that can be used by leadership in a cost-effective manner.
- Encourage a life-course and career perspective in research: Following individuals and families over time enables an understanding of change and outcomes over time. Using current statistical techniques, one can model patterns of change, in order to identify time points of risk, groups at risk, and times at which interventions may have maximal impact and, therefore, are most cost-effective.
- Balance the informative power of long-term research and the immediate need to assist families, utilizing designs that also facilitate ongoing knowledge (e.g., multifactorial, rollout designs). Incorporate multiple outcomes into study designs as a cost-effective way to evaluate effects of interventions on more than one problem or system. Given the increasing number of women in service and as heads of households, including an evaluation of gender differences in studies of active-duty and veteran populations will be of continuing importance.
- Program evaluation is an ongoing need for research going forward and a critical component of planning for the next conflict time.



## OPENING REMARKS

*Robert J. Ursano, MD and Anthony J. Stamilio, MBA*

**DR. URSANO:** The Forum on Health and National Security is the interface between health and our military forces that sustains the capabilities of the nation. A critical component of the health of our forces is the health of their families. Health is a major aspect of our national security perspective. That can include the health of the nation as well as the health of our Armed Forces.

The Center for the Study of Traumatic Stress began its work in 1987, and shortly after that we had our first conference addressing this interface of health and national security. That conference, which involved the U.S. Air Force, was related to the issue of chemical and biological warfare. The question at that time was, how could troops operate in Europe in a chemical and biological warfare environment, and how would they operate when their families were at risk? In particular was the question pertaining to the delivery of medical care. In the late 1980s large sewer pipes were buried throughout Europe, and they remain there today. Those 20 ft x 30 ft or larger sewer pipes were the contained environments in which medical care was to be delivered. Soldiers, sailors, airmen, and Marines would go to the SCPS (Survivable Collective Protection System) units, leaving their families behind, in order to continue to fight in the case of the chemical or biological warfare attack. We recently pulled out that information due to the present conflict in Syria, and it has been circulated widely throughout the DOD because of worries about facing similar problems.

The task for this meeting, as it was in that one, is to think together about what we have not thought of before. For that meeting and for this one, we went through hundreds of names to come up with a select group of people that could think through and think forward. You are that group. Our challenge is to think together and to talk forward looking at what our families in the military face, as they represent a critical component of our national security structure. We are doing that by having thought-provoking presentations and discussions. The discussion is key. I want to welcome you to that process, and to the opportunity to join in thinking about how the issues of health, security, safety, development, and growth of our military families, and in particular the Army which has been our focus, will influence the capacity of our national security to protect our soldiers and enable them to continue to perform and protect our nation.

With that in mind, I would like to introduce Mr. Tony Stamilio. Mr. Stamilio is Deputy Assistant Secretary of the Army for Manpower and Reserve Affairs. Under him fall the family programs for the U.S. Army. He reports to the Assistant Secretary

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*Through the 1990s we were starting to develop momentum around family programs and put many programs in place that are still served today.*

of the Army. He is a 30-year Army retired officer and a graduate of West Point. He has served as Chief Administrative Officer in the Capitol Police, and has served in the Director of Strategic Planning Office for the Deputy Assistant Secretary. He has received the Distinguished Service Medal, the Legion of Merit, and numerous other awards. It is a pleasure to have him attend and speak with us.

**MR. STAMILIO:** Although I have spoken in front of audiences before, both large and small, this is the first time I have spoken in front of an academic body. Therefore, when Dr. Gabbay said, “We have people coming from a wide variety of academic environments. What would you like to have put on your name card?” I looked around and everybody has letters at the end of their name, and I started to get nervous because I have a letter in the middle of my name. I knew I would never make it as a Ph.D. or an L.C.S.W. or an M.D. I thought maybe I could sell myself as an M.B.A., so I asked Dr. Gabbay to put M.B.A. after my name and then if somebody asked me about it I could say that I am a, “Mind and Body Advocate.”

The topic of this piece of work that we will be involved in over the next couple of days is critical — military families in transition. I am one of the key customers for the work that you are doing. Not that I am the key decision maker in all things that happen in the Pentagon, but I am the senior advocate for military families. Therefore, I am interested in what you have to say, and I have three questions that I hope to gain some insight on by the end of this meeting.

I can only talk about the military families in transition in the U.S. Army over a period of about 40 years. However, I think that is instructive and sets some framework for where we should be heading in the future because it will be different. In 1974, when I showed up at my first duty station, I had to find a place to live for my wife and myself. I received the standard Army family response in the 1970s from people who lived through the Korean War and Vietnam War and were running the Army, and that was, “Lieutenant, if we wanted you to have a family, we’d have issued you one.” That was starting at point one, and my bride was absolutely enamored with the military from that point forward. The 1970s were a bit of a blur, but in the 1980s I recall spending significant time in Europe as the military won the Cold War. We did not know we had won it at the time, but without firing a round we were able to defeat the Soviet Union, and our families were part of that environment. It was an upbeat, positive environment for families at that time. We lived in Frankfurt, and I recall counting the number of hours that it would take for the Soviets to get from the Fulda Gap to Frankfurt. The challenge was to get families evacuated and out through Rhein-Main Air Base and back to the U.S. before Frankfurt was won over. Around 1984 John Wickham, who was the Chief of Staff of the Army, published a white paper focused on families. I happened to be serving in the Pentagon at that time, and I was part of the first Army Family Action Plan team that put together a series of actions that became programs for family members. That has since spiraled into a significant set of policies and programs in support of families, and I could not be more thrilled about that.

Back then the Army was a fairly static environment, so we could do things that over the last ten years we probably could not do. We could be more deliberate about how things happened. Enter the 1990s, and things began to change slightly. We started having adventures to Bosnia and Kosovo, and that now, blink-of-an-eye war that was Desert Shield/Desert Storm that took about 15 minutes on the ground, compared to the 11 years that we have been at the current set of conflicts. There was a significant change in terms of what soldiers and units were required to do.

Deployments were something that soldiers craved because they finally got to do what they had been training for for years. It created some significant stress on families because it was not just a training event; something bad could happen. As a result, the Army was somewhat responsive. Families were probably more responsive in what they contributed by way of family readiness groups and all that they entailed.

Through the 1990s we were starting to develop momentum around family programs and put many programs in place that are still served today. Obviously, the last ten years of war has created some significant challenges for us, not only because of deployments and the casualties that are associated with that, but because of the vast rate of change and the increasing pace of everything that has caused many things to occur around the country and in the Army. Another significant thing that occurred during that period of war is the government printed a bunch of cash, and there was nothing our soldiers and family members needed that Congress was not willing to write a check for. We had money, we had resources to build programs, and by and large we contributed significantly to the support of families as a result of this. It was certainly not without our problems and not without ongoing challenges, but if we found a problem or a challenge that we thought could be solved with money, then we wrote that check to solve that problem.

The transition now is one that I would like to set the stage for. With a little luck, the Army will be in a more stable posture in terms of mobility, in terms of deployments, and in terms of conflict and engagement. Certainly, we will continue to be deployed and be in dangerous places, but hopefully at a slower pace than we have in the past. You can count on the Army being smaller because it will be perceived as a “peacetime Army.” It got smaller after Vietnam. It got smaller after we won the Cold War. It will get smaller after these wars. As we all know and fully expect, resources are going to shrink which will be a significant change. We are talking about half of a generation of career soldiers who have had an expectation that if it could be solved with money it would be solved with money. It is half a generation of soldiers who have spent over half of their time deployed away from their families, and half a generation of families who have had to deal with the challenges associated with war, the challenges associated with deployed spouses, and a massively changing environment. All of that is going to transition again. The question is, in this new environment with a smaller Army and with a more stable deployment cycle but with fewer resources, how should we be transitioning the support that we provide?

I would offer that in the 1970s and 1980s life was simple and predictable. We did not know how easy we had it, and we only had one enemy that we had been watching for 30 years. From a family perspective, it was a normal two to four year cycle, and then you PCS (permanent change of station) to a different place. From the perspective of families, the impact of the military on families, be it casualties or significant deployments, was not terrible. Going forward, we will still have deployments. We will be serving with that half a generation who is now older, but who have lived through, survived, and hopefully thrived in an environment of tremendous turmoil and tremendous conflict. We will be living with those soldiers and family members who have not done so well during that period, but are still serving with us. The Army will also be more populated with this younger generation. How will a bunch of Generation Xers manage with a bunch of Millennials being in the rank and file in an environment of fewer resources? There are a number of dynamics there, including the fact that we have half a generation of war heroes who have spent a long time walking the walk in very dangerous places, and also a growing number

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*If we only had one dollar left, what would you invest that dollar in for the support of military families in transition?*

of people who do not have a great deal of that combat experience. What does that say for the force and what does that say for family members?

Over the course of this conference I charge us with the responsibility of answering three questions. First, if we only had one dollar left, what would you invest that dollar in for the support of military families in transition? The second question involves the collection of difficult issues that are being tracked. These issues are suicide, child abuse, drug abuse, PTSD, risky behaviors, and several other issues that we see statistics on all the time. How can we make some sense of that? Based on the analyses of all of these things, what should we be doing next? The third question is, what are the implications of the changing generational dynamics that will be evident in the Army over the next ten years? Given the generational changes that will be occurring inside the Army in terms of the soldiers who have served in combat and are veterans, and those coming in and may not have ever had a chance to serve in that type of environment — what are the implications for that? In terms of the demographic changes in the Army, given what we are doing with same-sex couples and the diversity associated with that — what are the implications? What should we be doing about that? How should we be thinking about all of these issues as we fashion the thought pieces for the future?

I certainly do not have the answers, but as a fan of all that you do and as a consumer of the work that you are doing, your insights in these areas and many more would be extremely useful to me. I thank you all for doing all that you have done in support of military families, and I look forward to the next several days of discussion.

**DR. URSANO:** Everyone here today is coming from different value points and different perspectives, and that is the tremendous value of this type of meeting. In the forum I mentioned earlier, how would you begin to understand chemical and biological warfare? One thing we did was bring in NASA. We also brought in people that understood submarines because they understood how people live in a contained environment. Similarly, for some of you, you will hear people talk about communities, but you work with individuals. You could be someone who delivers care, but you will hear people talk about populations. The challenge is always how to listen across the boundaries, how to think outside the box, and how to address Mr. Stamilio's wonderful charge, which might be captured as, we need to be able to think about what are we going to invest in, what our actionable items are, and what the future holds.



# MILITARY FAMILIES IN TRANSITION: STRESS, RESILIENCE, AND WELL-BEING

*Speaker: James E. McCarroll, PhD*

**DR. McCARROLL:** It is my pleasure and privilege to be a member of the first panel, and to provide you with an overview of the DOD and the military family and particularly, the Army family. I will also talk about the current and future Army. The purpose of this is to acquaint those of you who are not in day-to-day contact with the military with some of the major themes in a broad way.

The first issue I will address is transformation and the implications of the transformation for the structure of the military, its mission, and implications for families. The transformation poses a number of challenges, some of which might be familiar to you. Finally, I will present some possible approaches to solutions and some of the family research issues.

The Department of Defense (DOD) is a big force consisting of approximately 3.6 million people. By comparison, the island of Puerto Rico also contains about 3.6 million people. The active duty military consists of approximately 1.4 million people including the Coast Guard, which is part of the Department of Homeland Security. Also there is a wide variety of military reservists, active and retired and stand-by, and almost one-million civilian personnel in the DOD. The Army is the largest military service comprising approximately 40% of the DOD. The Navy and the Air Force are approximately equal, at about 22 or 23% each, and the Marine Corps is the smallest service.

The number and percentages of married service members indicates largely a married force. The Army and the Air Force are approximately equal at about 60%, the Navy is above 50% and the Marine Corps has the smallest percentage of married personnel. The total is well above 50 percent. There are married personnel with no children, those who are married with children, dual military couples, and single parents. These are complex populations to think about in terms of the upcoming transitions for Army families.

I will now compare the DOD to the Army. The Army consists of about 1.4 million personnel including service members, spouses and children. By comparison, Dallas, Texas, has a population of about 1.2 million. We are talking about very, very

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*Child neglect is the most frequent type of child maltreatment in the Army.*

large numbers of people, spread all over the world, in installations and in communities, and living as individuals.

The Army is also a young force. About two-thirds of the Army population is under 30 years of age. Almost half of the children are under 6 years of age. A recent Institute of Medicine (IOM) report indicates that children less than 3 years of age are at the greatest risk for child maltreatment. About three-quarters of the cases of child maltreatment are neglect cases.

There are many different Army reserve components. The Army National Guard is the largest at about 42% and the Army reserve is about 24 percent. A large number of people have served in the reserve forces and many are still serving. The Army Guard has activated and deployed 376,000 people, the Army Reserve activated 212,000 people, and there are over 50,000 currently serving.

Where are all of these Army personnel located? Active Army headquarters are largely in the eastern United States with some in the Midwest and some in the South. Many states do not have an Army Reserve headquarters. If you live in the western United States, and you are in the Army Reserve, you might have to travel a long way to your reserve meeting. The Army Guard is a different institution. There is an Army Guard unit in every state.

What are the current Army missions? In general, the Army has to be prepared for a number of contingencies. First is the counter-insurgency and anti-terrorism mission. Humanitarian and stability missions are also important. Third, the Army doctrine has long been to be able to fight a two-front war. At one time, the U.S. was prepared to fight both the Soviets and the North Koreans. I assume that the doctrine of fighting the two front war is still in force. Finally, the Army has to be prepared for limited engagements, including nuclear, chemical, and biological warfare. We are all aware of the risks of war in places like Iran and Syria.

I will now address more about Army structure. The left shoulder of the Army uniform has the patch for the current unit of assignment. The right shoulder has the patch for the unit with which the individual was deployed. Divisions are made up of brigades. During the era in which the U.S. was concerned about the Soviets coming through the Fulda Gap in Germany, we were prepared to fight in divisions. The Army figured out that this was not going to work in the current world environment and they began the process of what is now known as the transformation. This transformation is currently ongoing and is expected to go through 2017. In this configuration of combat units, the force is modular, can be deployed rapidly, and can be task organized to respond to any potential mission. Divisions generally have somewhere between 12,000 and 15,000 personnel. Brigade combat teams now consist of about 3,500 personnel. Not long ago, the plan was to have 45 brigade combat teams, however, that has since been reduced to thirty three. These changes have been very rapid.

The Army will have improved information and weapons technology in which much equipment will be operated by computers. This means that the Army will require highly trained soldiers to operate this equipment and to operate it in different environments. As a result, the training commitment is going to be very heavy.

I will now address more specifically brigade combat teams in a division. In this example, there are four combat brigade teams, an aviation brigade, a sustainment brigade and a headquarters battalion. Each brigade combat team has its own support. It has its own armor, its own infantry, and its own support. This configuration allows the Army to go to war with a tailored force.

Now let us look more specifically at Fort Hood, Texas, the largest installation in the Army. Fort Hood includes many different components including a corps headquarters, a division, and separate organizations of engineers, intelligence, chemical, and medical personnel. Physically Fort Hood is a very large installation. It includes 340 square miles, 7 elementary schools, 2 middle schools, 18 fitness centers, 2 commissaries and a large number of recreational facilities.

In general, you will find 4 types of support facilities on almost all Army installations: 1) morale, welfare and recreation facilities that provide recreation for soldiers; 2) the Army Community Service that is the lead family service agency in the Army; 3) Child, Youth and School Services, which provides support for children that include gyms, after school activities, daycare centers, and many other child centered activities; 4) The Army Medical Department or Medical Center.

What are the implications of the upcoming transitions? Deployments are not going to go away. The current war will end, but there will be training deployments that will occur worldwide. Therefore, the training environment will continue to be important. However, resource constraints will be imposed. What are the implications of those constraints? As I looked at the literature that was supplied to you for this meeting, I noticed an emphasis on prevention. There are questions of how prevention will be funded and how it will be targeted. Will we have standardized programs? If there is a family program at Fort Hood, is it going to be the same program at Fort Stewart, or will it be based on the military units at the installation there and on the individual capabilities of the individuals who are on the installations?

There will be increased joint support. Under the joint basing concepts, there are many installations in which the Army is joined with the Air Force, Navy or the Marine Corps. That will have implications for how installations are run, the services for families, and how services are delivered. It is a cultural change and one that families will have to adapt to.

There are many other upcoming family challenges. These include keeping family stability, mental health needs, and the needs of single soldiers that includes single parents. A critical need of parents is being able to take care of children during deployments. Soldiers suffer battle injuries and non-battle injuries. We have many different populations of wounded service members including those who have experienced other types of trauma during their deployments. Substance abuse is an important factor in many of these situations. Women's health issues, including sexual harassment and sexual assault, are an important focus for care of female soldiers. In addition, there will be financial stresses. Families have financial obligations imposed on them through deployments and through moves, which highlights the importance of personal resources.

Family maltreatment is an important issue for the Army and has been an interest of the Department of Psychiatry at USUHS for a long time. Child neglect is the most frequent type of child maltreatment in the Army. During the period 2004 and slightly before, there was a large increase in child neglect cases. These rates have not decreased during the recent sustainment of the conflicts in the Middle East. Finally, many people who come into the military have had difficult experiences in their lives. They bring those experiences with them.

What are the goals of Army family programs? Will there be standardized programs or individualized programs at the installation level? How will prevention and treatment programs be delivered? We live in a social media environment, a pop

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*What are these programs going to cost, and how do we move from research to practice? How do we take what we know and implement programs and make them available, accessible, and workable?*

culture for many people. How do you get messages to them? How do you teach them? How do you work with them?

Evaluation is a critical component. People functioning in Army staff environments have many questions. What are your limitations? What programs do you want to keep and what programs can we get rid of? What are these programs going to cost, and how do we move from research to practice? How do we take what we know and implement programs and make them available, accessible, and workable?

## ARMY FAMILY PROGRAMS OVERVIEW

*Speaker: Lynn L. McCollum, LCSW*

**MS. MCCOLLUM:** Thank you, Dr. Ursano, for inviting me to attend the conference. I am delighted to be here and look forward sharing information with you. Today I will talk about the Army Family Programs that currently exist at 78 Army Community Service (ACS) Centers located at garrisons across the Army. I will also talk about Army OneSource, which is our alternate service delivery system for those soldiers and families who do not live on Army installations. We will look at our operating environment, what we do in those ACS Centers across the Army, and at some of our service and program data including the demographics of the soldiers and family members who will be coming in the Army of 2020. We will explore what some of their needs might be and how we can perhaps address some of the questions that Mr. Stamilio raised.

Not only have we been at war for 12 years, but we have also had a significant economic downturn, which has impacted the civilian world and our families such as when they move and when they are able to sell their home. As we go through some of the transitions, we expect the Army to downsize from over a 600,000 person force to about 490,000. We will have folks that are transitioning out of the Army who do not necessarily want to do so and transitioning into an economy that does not yet have the jobs and careers that offer the same levels of responsibilities. Earlier, we mentioned funding decrements. I am very concerned about this because those resources that go to our family programs are a very small percentage of our investment, but the return on the investment is very high for the amount of money that we put in.

We still have new families joining the military every day. Those young folks, 18 or 19 years old, who are coming in still need to learn basic life skills and resiliency skills. We often say that the Army grows its own. An interesting thought is that those folks who are reintegrating today, have children who are very likely to join the Army or the military and make that a career. Sometimes the success of reintegration has an impact on the children that will become tomorrow's soldiers and family members in the Army.

Families like to have some sense of predictability and yet we have an unpredictable environment right now with the type of transitions that we are looking at. A really good question is, "How do we measure what it is that we want to prevent?" The media reports that we have serious problems with suicide, with child and spouse abuse, and with sexual assault. But we have many families who have done very

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well. They are resilient and have managed to cope with the demands of the military lifestyle and often thrive — not just cope. Importantly, many folks do really well. Our rates of child abuse are much less than in the civilian sector. It is also important to take a look at who is doing well, why they are doing well, and what has helped them to do well. It is important that as we go through transitions we remember what the job is about. The job is about those families that we are supporting.

Over the past three years, as part of the Base Realignment and Closure, the Army's family programs organization, Family Morale, Welfare and Recreation Command, moved from the Washington, D.C. area to Fort Sam Houston in San Antonio, Texas. In addition, the Army deactivated the Family Morale, Welfare and Recreation Command as a command and became an agency under the Installation Management Command. Sometimes, those kinds of transitions are good in that they force you to look at what the organization does, but do we lose focus on the people that we serve? You always have to keep that in the forefront — who are we serving and what are we trying to accomplish.

Every 4 or 5 years the Army conducts a survey of Army spouses. The last survey was conducted in 2010. One of the interesting points was that there was an increase in Army spouse satisfaction with the Army way of life. That is something that is important to measure. With soldiers we tend to look at re-enlistment, and there have been record numbers of re-enlistments. But with spouses we tend to look at satisfaction with the Army way of life. Would they want their spouse to continue to make the Army a career? Those are the numbers that have increased. If you want to see the whole survey, you can Google it, and can get that information. It is not just that there is stress on families, but there is also satisfaction with the Army way of life. I thought that was pretty remarkable because in 2010, when the survey was done, we had been at war for a long period of time.

The other key point is that it is a young Army and that is one of the things we need to take a look at. As many of you who have children or nieces or nephews that are 19 or 20 years old know, their phone is a permanent part of their body. They keep it with them all the time. They would rather text than talk on the telephone. There is some research about how they learn — that learning needs to be fun. They are used to the internet and engaging with technology in a fun way. Those are important things to keep in mind as we look at the future needs of families and soldiers.

We want to promote self-sufficient families who can manage the rigors of Army life. We want safe homes for our families and we want cohesive communities and people who participate in their communities. We want to support the focus of the Army which currently is reintegration. If the cycle changes, which it is likely to, then we need to be able to focus our efforts where families are focusing their efforts.

During the last couple of years, we have focused on ensuring access to services for wounded warriors and their families and for surviving family members. How do we keep those folks connected to a way of life, and then help them to transition to a new way of life over a period of time? I think we have done an excellent job of changing the tide which is difficult. It does not change the tragedy, but we hear back from those surviving family members about the support they get from the Army.

The key question is how do we sustain the promises that have been made over the last 5 or 6 years, and the support systems we have put in place in a fiscally constrained and challenging environment? With reintegration, we are seeing just the tip of the iceberg. We do not know the full picture yet, as families are just starting to reintegrate for an extended period of time. What kinds of issues might we see, and

what kinds of support are needed? I spoke with a social worker here this morning from Boston University. She talked about work they have been doing with home visitation and working with families. This brings up some interesting issues that may be helpful with reintegration over the long-run.

We have a great many family services on our Army installations. Included in the ACS Center are the Exceptional Family Member Program, programs for families with special needs, survivor outreach, and the Sexual Harassment Assault Response Program (SHARP). These programs are designed to provide support for soldiers and families. Army leadership is currently focused on the Ready and Resilient Campaign. Many of the core programs of this campaign are in the ACS Centers. These include the Family Advocacy Program, which is child abuse and domestic violence prevention, intervention and response, the New Parent Support Program for home visitation, and the Exceptional Family Member Program that supports families with special needs. There has been a great deal of focus in that area over the last couple of years — not only in the military, but country-wide. It is a fragmented system of support services for those families that have medically fragile children and disabled children. When they move from place to place they encounter problems with state regulations. For example, if you are in New York and your child is on a Medicaid waiver receiving many hours a week of respite care, and you move to Fort Campbell, Kentucky, there may be a 7 year waiting list for a Medicaid waiver. How do we meet those needs for those families? How do we assist them? These are families that tend to re-enlist at higher rates because they have access to medical care and medical services.

The Army has also focused on mobilization and deployment, another ACS service. These programs assist families with all stages of deployment and also with emergencies. Another ACS program is Financial Readiness. Finances and relationships are often at the root of some of the issues with suicides. How do we provide the right kinds of education and reach families early?

The Army Family Programs under the leadership of one of my mentors, Delores Johnson, established a partnership with Cornell University to ensure that we looked at outcomes of our programs. Financial readiness is one of those programs where we have data that show if you can reach families early and provide first-term education, their financial literacy increases, their indebtedness decreases, and that if family members participate with the soldier the result is even better. There has been real growth in the usage of our programs and service. It is telling you something about whether folks find services helpful or not. Our needs assessment data from Cornell tells us that when people use services, they find them to be helpful the majority of the time. Research shows that when families or individuals participate in programs designed to build resiliency and self-sufficiency they learn skills they become more resilient overall.

Although approximately 60% of soldiers and families do not live on Army installations, we have made outstanding use of the Guard and Reserve during the last 12 years of war. How do we provide a common level of service or support to those families not living on Army installations? Our leadership has been quite insightful by leveraging technology and community partnerships to provide support to the geographically dispersed soldiers and their families. If you look at places like Idaho, you will find that there is a significant military population in a very rural state with limited garrison support. They also have possibly the third highest suicide rate among service members. We have been able to mobilize community agencies in

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those locations. How does the broader community in the State of Idaho develop an action plan to address that concern?

People have also made use of Army OneSource, especially those individuals and families who are geographically dispersed. When families are given information, and know how to get assistance, they can make better choices and get their needs met. The public at large has overwhelmingly wanted to help support soldiers and families. We have tried to focus in areas that align with Army strategic concerns and initiatives. We have looked into how to increase awareness for behavioral health providers. The National Alliance for the Mentally Ill has partnered with us and made sure that their professional chapters across the United States get training on military culture and treating the invisible wounds of war. As a result of educating them on military culture and on PTSD and TBI, when a soldier or his or her family use the services of a provider who is not associated with the Army, they do not have to educate them about what it is like to be part of the military. These are some of the things that we have done to support and increase the awareness and knowledge in the private sector so that we do a better all-around job of supporting folks.

Last year we had a group come in to do some strategic planning about what we think the soldier and family of 2020 will be like. It goes back to what we think some of the problems will continue to be the same. We are still going to have relationship issues. We will still have financial and consumer advocacy issues. But, the way in which some of the younger generation learns may be different. They have definitely leveraged technology. It is important to continue to put our efforts towards the younger group that is coming up. These are some of the areas to invest in if we were planning to invest that last dollar.



## MILITARY FAMILIES: THE AFTERMATH OF TEN YEARS OF WAR

*Speaker: Brian D. Leidy, PhD*

**DR. McCARROLL:** It is my pleasure to introduce Brian Leidy from Cornell University. Brian has a long history of conducting military relevant research with his colleagues at The Bronfenbrenner Center for Translational Research. Brian will tell us about the current state of Army families and how to deal with the issues of evaluation.

**DR. LEIDY:** Thank you for the opportunity to share my thoughts about the future of military families. This panel covers the effects of transitioning on soldiers and military families in 2025. I do not think there is much we can say with a great deal of certainty about soldiers and families 12 years from now, however, based on a good understanding of where we are now and how we got here, there are some important factors that need to be discussed and dealt with over the next 3 to 5 years. I am approaching this from the perspective of someone who has done program evaluation and needs assessment in military family programs for the last 18 years with the Army, the Marine Corps, the DOD, and more recently, with Army Reserve family programs. Much of what I am going say will be framed in evaluation terminology that can be applied to family programs being delivered. I will address the underlying logic for family programs including how they work and how they accomplish what they need to accomplish.

Family programs support soldiers, civilian employees, and their families by making sure they have the information they need and are ready to face the challenges of military life. These programs teach in large group settings, such as in large group briefings, classrooms, and one-on-one. They coach and leverage the natural mentoring relationships that exist within the Army community. In many ways, family programs get soldiers and families to stop, sit down, focus, get organized, make a plan, and then talk about how they are going to execute that plan. These programs address issues such as: financial, relocation, deployment, and employment. This is not done in a static environment. A great deal of this goes on in an environment that is constantly evolving. That is what I want to focus on today because in the 18 years that I have been doing this research, there has not been a single game changer that has been as big as the decade of war that we have just completed.

Two million service members have been deployed in the last 10 years. Eight-hundred-thousand have experienced multiple deployments. That number is par-

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ticularly important because soldiers and service members who experience multiple deployments are 4 times more likely to experience serious mental health outcomes. Three-hundred-thousand suffer from PTSD or major depression. I have also heard that 20% of returning soldiers and other service members are experiencing PTSD.

Forty-four-thousand soldiers were severely injured with amputations, burns, gunshot wounds, shrapnel wounds as well as other physical injuries. The “signature wound” of the last 10 years of war is traumatic brain injury (TBI). An estimated 10 to 20% of soldiers returning from deployment have mild, moderate, or severe TBI. The Hoge article from 2008, one of the readings on the forum website, maps out the relationship between combat stress and TBI. There are negative outcomes associated with TBI and PTSD. Outcomes associated with TBI include: poorer performance on cognitive tests measuring decision-making and planning skills, lack of self-control, mood changes, problems sleeping, and memory loss. Negative outcomes associated with PTSD include: increased risk for depression, substance abuse, severe anxiety, obsessive-compulsive disorders, Alzheimer’s disease, and suicide.

There are Army programs that are designed to support these troops such as Warriors in Transition and the Army Wounded Warrior Program (AW2). The Soldier and Family Assistance Centers were originally designed for the 44,000 soldiers with burns, amputations, etc., but early on they were seen as being a good resource for these folks as well. The problem is that there are eligibility criteria. For example, soldiers are required to have at least a 30% disability associated with one combat condition, or 50% with all combat conditions. Not all of the injured soldiers in garrison are eligible for those programs. They are eligible for the medical programs if they can get treatment, but they need to do that more or less on their own. They need to figure out what is going on and get the help they need. While the culture of just toughing it out and doing it alone is receding somewhat, there still are many soldiers with these symptoms that are uncomfortable coming forth and getting treatment. In addition, they are not very supportive of family members who are trying to get treatment on their behalf or trying to deal with the secondary trauma issues. As we know, PTSD tends to get worse if it goes untreated.

Where does that leave family programs? The primary model of family programs is to get people to sit down, stop, focus, pay attention, get organized, and make a plan. The person who is having cognitive issues will have difficulty processing information such as planning, organizing, and preparing. Family members who are experiencing secondary trauma can experience similar issues.

The paper by Cesur and Sabia, on the forum website, examines the relationship between PTSD and family violence. A good example of how this plays out is in one of the Army’s family support programs, New Parent Support. Research indicates that support programs for new parents have practically zero efficacy when there is domestic violence in the household. For example, if most of your time is spent trying to avoid conflict and confrontation and protecting yourself, you are probably not going to focus on routines and meeting children’s needs. This is the biggest contextual factor that family programs are dealing with because it affects so many people. However, it is not the only problem that family programs deal with. The Army, like all the military services, has a tendency to raise its own. Today’s Army families are raising tomorrow’s soldiers, to a large extent. When we are talking 10, 15, 20% of Army families having difficulties such as these, it gives one pause to think what soldiers and families might be like in 2025.

There are other issues that we need to consider going forward. Family programs

have always had difficulty engaging some soldiers and some families and, inevitably, those seem to be the ones that they need to engage the most. Prior to the past 10 years of combat there was stigma associated with some of the family programs. That waned a bit, or went away for a while during these years of combat. Now that we are getting back to a non-combat situation, it remains to be seen if that stigma will reemerge.

From 2003 to 2008, 75,000 individuals with criminal backgrounds were given waivers to join the Army. These individuals have social histories, backgrounds, and traits that are far more predictive of family violence than combat stress and deployment. This is not nearly as large a group as those with TBI and PTSD, but it is a significant and important group that needs attention going forward. Many people say that these issues will just go away and that in 3 to 5 years, these people will either make the adjustment and the transition and get the issues that they are facing under control. They will still be in the military, or else they will be gone and will be the VA's problem. Over the next 3 to 5 years, these types of issues will be dominant.

Over the last 20 years, there has been a trend towards more and more single parents. I do not think that is likely to change. It is very stressful for both the soldier and the family. Both the family and the military are very jealous institutions. They want 100% of the individual, their time, and their focus. It is very hard when you are a single parent. It is a more difficult situation for female soldiers or active duty women who are parents. Unfortunately, in many cases, even if the father is civilian and unemployed, the bulk of the child care and household responsibilities fall on the active duty mother.

We talked about resource constraints. They were dwindling prior to sequestration and sequestration has just added to that. I am not expecting a new budget by September 30<sup>th</sup>, or even a continuing resolution that is going to change or improve this situation very much. My understanding right now is that only 70% of the family programs staff positions are filled. Many of the positions are currently vacant. Because of promotions, retirements, and people leaving for other reasons, there has been a freeze on hiring and refilling those positions. When the money does come they will be dealing with all the staff turnover issues and trying to get people up to speed.

Transitions are never easy, and I am not anticipating that this one will be easy. That is not just because I come from a background of program evaluation. Navigating any kind of a transition is easier when you have good feedback systems in place. Process metrics are very helpful in terms of not only making reporting easier, but they also help you identify who is and who is not being served. They also pose some possibilities in terms of how you can reach out to the ones that you are not getting to and do a better job of serving the entire population. If you have a good set of process metrics in place you can track trends or spot trends much earlier.

Outcome metrics are important because you need to know what is working and for whom. For those programs that are not working, you need to make adjustments and modifications in order to be successful with a much larger portion of the population that you are trying to serve. Outcome metrics also give you some ways to judge one program against another. If programs are trying to accomplish the same outcomes, then outcome metrics can give you some suggestion of where you are getting more bang for the buck with different sub-groups of your population.

Finally, translational research is important when you want to make sure that there is fidelity when implementing program changes. This is true whether you are just incorporating the latest research into an existing program or making wholesale

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changes. You want to make sure that you are introducing changes as they were intended. In addition you want to test to make sure that you are getting the results that you intended.

## PANEL I DISCUSSION

*Moderator: Robert J. Ursano, MD*

**DR. RICHE:** I do research at the Center for Naval Analysis. I would like to underscore Ms. McCollum's point on understanding how to talk to the newer generation. A few years ago we did a five-year project for the Air Force looking at diversity and its effect on performance throughout the service. They thought we were going to come back with a talk about race, ethnicity, etc. But the most troublesome aspect of diversity, in terms of performance, was when people of different functional specialities work together and when people worked with other services. My point is that the only troublesome demographic was age diversity, people of different age groups not working together and having different values and different ways of thinking about things.

**DR. PASQUINA:** I am from the Uniformed Services University. I am struck with what we were charged to do. If we were down to our last dollar, what would we invest in? A great number of ideas have been presented. It seems like the military has a tendency to just create new programs on top of new programs, on top of new programs to solve problems without necessarily evaluating the effectiveness of each one. An example of this is that ACS (Army Community Service) has many programs available to our service members with TBI and PTSD. For those who have difficulty making decisions and difficulty navigating complex systems we create a more complex system for them. We give them another counselor or another case manager to help them with that. Now instead of having one case manager they have five, each one telling them something slightly different. I am outlining all the limitations that were presented, but the essence of my question is, how do we evaluate the effectiveness of each of these programs that the Army, Navy and Air Force have established for our service members? Do we have any unified way of looking at the effectiveness of these programs?

**DR. URSANO:** You actually raised another point, and one that is central. You are highlighting a systems-level issue, which is, never mind the programs, how do people navigate between them? How do people know how to get to a resource? I can make that all come alive for any of you by saying, try and get an appointment with your doctor, and then try and figure out how to ask them a question three days later, and then a question after that, three days later. The question of navigation is a target for intervention, and a target that cuts across all of our areas. We can put out as many programs as we want. Are people getting to where they can get what

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we are offering? I want to highlight that because of this issue of trying to get people to think out of the box.

**DR. KLEYKAMP:** I am from the University of Maryland. Most of my research is on veterans and employment. The word transition or in transition means something very different to me than the way I hear transition or in transition being used today. I was struck by that throughout and then by seeing the evidence of the dramatic increase in the use of the Exceptional Family Member Program. These are people who are much more likely to re-enlist and be retained in the Army, in large part, because of the services and support provided to those family members. As much as there may be many needs for military family members, we provide a great deal of support and a safety net for military families. When they become in transition in a different way, they lose many of those supports.

We have retained some of the programs for people who lose a family member through loss of life but when people separate from the Army family by leaving, what, if any, responsibility is there for the Department of Defense to think about family members' preparation for that transition. Who is transitioning into what?

**DR. KESTER:** I am from the Uniformed Services University. Previously, I was responsible for a many large research programs that were works in progress, and going back and saying, "What is it that you are doing? Is it really providing value?" If we make the analogy from healthcare and seeing your doctor and getting lab tests done, it is a system adventure. Yet when we look at these support activities for military family members it is another type of system. We see in healthcare, driven in part by cost, in part by legislative fiat and other things, that there is an increasing emphasis on value and quality.

This brings into perspective the whole aspect of whether we are able to de-conflict the well-intended, well-meaning, and sometimes well-funded programs? When you map them out, you find a crazy quilt of programs. If you want to invest for the future we must assess what we are doing now, and whether we can develop rational, cogent approaches to make a program better, and provide better value. The systems engineering approach while sounding somewhat technical is really not. In many ways it is just common sense.

**DR. SPOTH:** I am from the Partnerships and Prevention Science Institute at Iowa State University. I also have a variation on the theme question concerning how you maximize the bang for the buck, and moving from the status quo to the future, but specifically with the focus on prevention. I was also struck by some of the themes across the three presentations. One is that there will be increasing demands on the family support systems and at the same time there are going to be decreases in resources. If you think about the idea that there needs to be increased emphasis in prevention programming you also think about how that necessarily requires an infrastructure development for sustained quality implementation, preferably evidence-based programming. This must be integrated with evaluation of promising programs that are already part of the system. The result is that you have an incredible increase in demand on resources to move in that direction.

It is really a question about how to think strategically at all levels, at the systems level, at the program level, and at the individual level. How do you move in that direction when you know you are confronting this incredibly difficult situation where resources are scarce and at the same time you want to make some significant changes? One specific illustration of what we know is that in order to get to the point where you understand what is the most optimally cost-efficient and cost-effective

way of programming, you have to invest on the front end in doing evaluation. How do you incorporate that to get to the point where you are maximally using the resources that are available, especially in the context of scarce resources?

**DR. URSANO:** You are saying that to invest the dollar in program evaluation science or activity or skills and capability, that you will not be able to answer that question unless you have that capability. Where is that capability? It is sufficient? Is it robust? Will it be able to respond to the ongoing demands coming up ahead?

**DR. ALDWIN:** I am a developmental health psychologist. One question I have is with all this plethora of family programs is how well they coordinate with programs at the school system? One of the themes that we are raising is that for the next generation of soldiers, good emotion regulation capabilities are really important. If the focus is on the kids you could actually cut through many programs by simply investing in self-regulation programs in the schools for all children, regardless of whether their families are functional or dysfunctional. My question is, does the school system at Fort Hood and other places have these programs in place? That is where I would invest my dollar if I had a choice.

**DR. URSANO:** One of the things you are asking is about the delivery system. What are our best delivery systems for any given program? Does the school system offer a delivery system and is it being maximally and effectively used for the particular programs it would be appropriate for?

**DR. MACMILLIAN:** I am from the Offord Center for Child Studies, McMaster University in Canada. To what extent do you have a systematic approach to looking at the evidence for certain programs? I am a family violence researcher; therefore I will use family violence as an example. What do we know about the evidence for the effectiveness of certain programs and their generalizability to the military? We often re-invent the wheel. New programs spring up and are put in place and we do not know if they do more harm than good.

The assumption seems to be that doing something is better than doing nothing. That is not always the case. With many prevention programs we do not measure whether they are harmful. We do not do a very good job of measuring their benefits, but we also do not incorporate ways of measuring their harms. Finally, there are some general assumptions in family support programs like home visitation. We assume that just by virtue of what they are that they are effective. However, we do not actually know that. Home visitation is not home visitation, is not home visitation. I am a psychiatrist and a pediatrician and I can tell you that we would never apply that principle to various types of medication. But we do it with psycho-social programs that are in place. Back to my first question about what ability do you have to systematically look at the evidence and the generalizability of that to the military?

**DR. URSANO:** I heard at least two pieces. One is that when programs are adapted for the population it is to be delivered to, are those programs appropriate for the population that is to receive care as modified or adapted? Then, secondly, one level of program evaluation is to ask if harm is being created, not just is it effective. The first level of evaluating a program is to seriously consider the harms and risks and not to assume that every program is harm-free. Any program that is effective has to have consequences that will be negative. Otherwise, it probably is not powerful enough to make a change.

We would say the same thing about a medication. If a medication does not have a side effect it probably is not potent enough to be doing something. That side effect

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may be more or less severe. Evaluation for harm becomes an important criterion to keep in mind.

**MS. BARRON:** I am with the Association of the United States Army. I am also a family member. If you had the dollars, where would you put the dollars? In thinking about our families, some being very well and some being very ill, but most of them being right in the middle, how do we handle that transition from leaving the active component and moving into veteran status? This is something that many of our families will be facing soon.

The resilience piece is incredibly important and it is something that the Army is paying great attention to. If you could think about having a component of resilience in every program of the Army Community Service then you are building resilience in every portal that a family member enters. Most families will start with ACS and they will go for financial services, relocation or deployment assistance, etc. If there is a concentrated effort to speak the same language around resilience you will start to build and sustain that to the point of transition into the civilian community.

**DR. URSANO:** We have another panel that is going to address resilience in more detail. Can programs do two things: both problem-solve and “build resilience?” We have many concepts related to building resilience so the question is, “What does that mean?” At the moment, we will use it as a term for strengths, skills, abilities, and capabilities.

**MS. JOHNSON:** I am from the Office of the Assistant Secretary of the Army for Manpower and Reserve Affairs. I would hope that our discussion will acknowledge that the challenges the institution is trying to solve are multi-layered. Because we are in the military the system also has individual and unit components. It also has a community component because people do not live compartmentalized lives. The military lives their lives transparently. While we talk about ACS as a case study of programs and a collection of many programs, it does not mean that we are not also talking about our liaison to the medical community or the criminal justice community. All of those are communities on and off the Army installation.

The other point I would like to make is about transition. We always have to have a discussion about the life cycle of that soldier throughout his or her career. That means that we need to be concerned about what pre-conditions we accept — the conditions on which we accept people, and the way in which we want them to leave the military. It is like we are bringing them back again and that cycle gets repeated.

The third point I would make is that I hope we will discuss some kind of agreement about continuum of care. It is a reality that while we talk about the medical model including prevention, intervention, and treatment, I do not know how many services we actually have along that continuum of care that really gets at the things that we want to get at. If we do not recognize a system problem then we do not know what we are trying to solve. When it comes to trying to figure out under what conditions what program or activity works, we really can not plug that in as cleanly as we think we should be able to do.

**DR. URSANO:** I heard three things. Let me highlight a couple of them. One: the systems in the Army are multi-layered. Let us remember that individuals are within families, within units, and within communities. For researchers that highlights a whole approach of what is called multi-level analysis. Paul Bartone is an expert in that area, as well as others in the audience. Carol Fullerton has a paper coming out, the only paper published, that shows that if you change a community you change the rates of PTSD, and you do not just change the individual. The question of the



life cycle, meaning the changes across time, includes the stage of a career someone is in, as well as the Army Force Generation [ARFORGEN] cycle.

We are going to have to identify what layer of the system we are talking about, across what time frame we are talking about, and lastly, the question of how we sustain continuity across all of those layers, and time cycles. Might one invest in continuity of programs rather than in new programs? Might one invest in a gate-keeper, rather than a new program if that sustains the continuity that one wants to have? If you think of an automobile engine, to be a non-engineer-engineer for the moment, is one trying to change the brakes or the carburetor or the spark plugs, or alter the way in which the fuel comes in or is used? All of those are ways in which we can think of addressing these problems as well as specific content questions.

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# MILITARY SERVICE, WAR, AND FAMILIES: TRANSLATING RESEARCH INTO PRACTICES

*Speaker: Patricia Lester, MD*

**DR. FULLERTON:** Patricia Lester comes to us from UCLA where she is a Professor of Psychiatry and the Medical Director at the Child and Family Trauma Service at the Nathanson Family Resilience Center.

**DR. LESTER:** This is exciting to see so many people together thinking about the needs of military families in transitions. I want to talk about 3 areas today related to translating the science of stress into preventive responses for military families and kids. I want to talk about the research that has been done with military children and families, particularly focusing on the research of the last 10 years. Dr. Cozza's talk summarized some of the mental health pathways when parents have posttraumatic stress disorder (PTSD) and traumatic brain injury (TBI). I will address the research on deployment separations and other ways that military families transition. This research provides a framework for understanding what we already know about child development and family-centered prevention. This will provide an understanding of what we might do now, kinds of implementation practices and processes, and the infrastructures that are needed to bring evidence-based practice to scale.

We know that military transitions occur against the back-drop of prior family experience, child developmental milestones, and family life cycles. Accomplishments and adversities from earlier transitions carry forward to later ones, even the experiences before coming to military service. We know that stress accumulates over this trajectory and shapes our experience of future stressors and that resilience can accumulate over this trajectory cascading throughout other developmental domains.

It is important to remember that when we think about military children and families, that they learn to adapt to new situations and environments often more quickly than non-military children. They are good at making new friends and at bringing coping skills forward into these new situations. The bonds between families may be stronger because they have gone through some of these challenges together.

How does existing research guide us? We started the current war 12 years ago. There is very little information about how a prolonged conflict affects developing children. A child less than 10 years old in a military family may have spent a majority of their lifetime away from one of their primary caregivers. There is a great deal of

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developmental literature that helps us anticipate and predict what might be going on in these families and how this might shape their experience. The point was made earlier that the majority of these families seem to do well. They seem to negotiate these transitions well, at least by the ways that we measure resilience and adjustment in families.

We often use the absence of clinical symptoms as suggesting resilience in healthy adaptation, but we know from the literature and the tiers of research that are unfolding over the last 10 years, there is an increased risk associated with cumulative deployments. Teenagers appear to have increased risk-taking behaviors and some decline in academic performance and have increased levels of anxiety. There are similar findings in school-aged kids.

Most of the data comes from cross-sectional analyses from convenience samples, but the samples are getting larger and the data is fairly convergent across a variety of studies. We also know that there is increased mental health utilization, both for the military at-home civilian parents and kids. The term secondary trauma might represent the broader notion that the stress is relational. We see a direct relationship between mental health and adjustment symptoms between parent and child, parent and spouse, and although we do not know yet, between children in the family. It appears in kids, but there is also transmission through parenting. For a number of you, this is the target of your work.

What are some models from developmental literature that helps us think about families, mental health and stress in children? There is a large body of literature showing that parenting predicts child outcomes. Interventions that target positive parenting practices and healthy parent-child relationships help support healthy child development. We know that there is a spill-over effect of stress. When marriages have high levels of conflict we see more difficulty for the child. When parents have trouble synchronizing co-parenting and are off from each other for a variety of reasons, or when there is a high level of conflict, kids have more difficulty in terms of their emotional adjustment.

The notion of both the impact of the separation on kids, and the inter-generational effect of trauma in these families could be informed by including attachment research in our thinking about the kinds of data we collect. It has been very difficult to collect detailed observational data in young children. There is very little information about young developing kids and their parents over time, but that is an important area to look at because we would anticipate that separating from a primary care-giver in the context of danger is a threat to the attachment system. We see a fair amount of separation anxiety in teenagers, as well. These are important issues to look at as well as when a parent comes back from deployment with post-traumatic stress, and, potentially, disorganized attachment style with their kids. What might that mean in terms of inter-generational risk?

A systems model that is well-recognized is one in which the family is embedded in multiple systems. When we are talking about transitions it is important to think about what exists for active duty families and the opportunities to integrate evidence-based practice into systems. It is much more challenging when you transition to veteran's status or if you are a Guard or Reserve family, moving in and out of civilian systems of care. Many of these systems do not even know that you are a military-connected child or family member. Even the very first level, getting community providers trained to understand military culture, is a challenge that we face in translating what we know into actual practice.

I now want to talk about an example of doing this in an active duty setting and the theoretical under-pinning of the Families Overcoming Stress (FOCUS) model. I will focus more on this issue of implementation and how we can evaluate our programs and use that evaluation to deliver better service, identify a need, and have a real-time data-monitoring system. FOCUS was initially adapted from Dr. Bill Beardslee's intervention called Family Talk, a model for families with parental depression. It is identified in the Substance Abuse and Mental Health Services (SAMHSA) National Registry of Evidence-Based Programs and Practices (NREPP) Compendium. It has been well tested in various cultures and broadly disseminated. It is based on a family-centered approach to addressing risk based on years of looking at resilience factors and risk in these families. Like many family-center prevention models, it focuses on education, developing family communication skills, developing a coherent family narrative, and developing a sense of shared meaning across the family.

We also looked at core elements in our team's other evidence-based interventions. Bill Saltzman, Chris Layne and Bob Pynoos had done an intervention in Bosnia for kids in families affected by war. Mary Jane Rotheram had done an intervention for families with HIV and traced those families over 3 generations. From that, we came up with a core element and core process model for developing the FOCUS platform. We tested it at Camp Pendleton in a collaborative relationship with their provider team, their family support. From that data we standardized the core elements into the FOCUS model. When we implemented it, it was important that we use some new strategies because we got it to the point where normally you would have done a randomized controlled trial with this new adaptation of an existing intervention. Then you would have spent the next 20 years replicating that and doing effectiveness trials and then thinking about ways to disseminate it.

My experience from the HIV epidemic is that the problem would have changed quite dramatically over those 20 years and what you would always be doing is some kind of adaptation or you have an irrelevant intervention. I am raising these points because I think they are important. Nevertheless, we have two randomized controlled trials of FOCUS currently underway. Steve Cozza is the lead on one and we have just launched another.

Seven years ago, the Navy came to us and said, "We would like to do this as a demonstration project for our highly deployed sites." This was based on the foundational evidence, the adaptation process, and their understanding of the literature. We took the core elements from these evidence-based interventions, which were family-centered, and all of which had a circumstance of adversity. It was designed to be selective and indicated prevention along the Institute of Medicine (IOM) continuum. From the launch of the study we developed a continuous data-monitoring system and leveraged cloud computing technology looking at both process and outcome data. We used this both to manage the project and also to track outcomes within the family. We also used it to be able to do rapid adaptation. That has been central to being able to launch it quickly and manage it centrally. It is now at 22 installations.

There are some important concepts spelled out in an article by Mary Jane Rotheram-Borus, Dallas Swendeman, and Bruce Chorpita entitled, "Disruptive Innovations for Designing and Diffusing Evidence-Based Interventions" in the *American Psychologist*, 2012. This article focused on how we can use the notions of disruptive innovation research strategies to scale evidence-based practice. They were not just looking at family prevention. We used an array of flexible platforms taking the core

*There is a large body of literature showing that parenting predicts child outcomes. Interventions that target positive parenting practices and healthy parent-child relationships help support healthy child development.*

*A critical component to the intervention, even at the consultation and group level, was for people to understand how combat stress reactions and PTSD reverberated through the families, how families could identify, monitor, and manage them as a collective team.*

elements of the intervention and putting them into a variety of platforms, but all were informed by the same education, the same five key skills, the same notion of assessment feedback, and a family narrative component. Not every level of intervention had that same intensity. We did this as a suite of services. It was a public health approach that cut across those systems of care. It was in schools, community centers, and in medical facilities. The idea was that you were embedding a family-centered approach based on these core elements, and then training and maintaining fidelity around the core elements.

The multiple platforms of the core intervention included family consultations and group interventions for children and parents in multi-family groups for teaching them skills. Those skills were: emotion regulation, problem solving, communication, goal setting, management of trauma and loss reminders, and deployment separation reminders. A critical component to the intervention, even at the consultation and group level, was for people to understand how combat stress reactions and PTSD reverberated through the families, how families could identify, monitor, and manage them as a collective team.

At this point, over 12,000 adults and kids have gone through or are currently going through the multi-session full FOCUS model, which is an eight-session model. Our providers are called trainers in an attempt to reduce stigma, and it works to some extent. People like being trained up, being prepared. It fits with military culture. They are trained how to do all of these activities, and so they are much more proactive than is typical of mental health workers. They use multiple points of contact and encouragement to people who show an interest. They follow up knowing that it is really hard for people who feel isolated, depressed, or withdrawn to come in. They are not necessarily going to say, “Yes, I want to come do prevention.” It often takes building the relationship with them to do it.

Some of these concepts, such as embedding the methodologist as part of the intervention team, come from the work of Naihua Duan. You also need to include your programmers and your operations people as well as the training team. As you collect data it is really important for the analyst to understand the conceptual frame of the intervention, the family system, and to be able to help the operations and management people work with the teams on the ground in a way that makes them responsive and also supports them. Then issues can be fed back to the learning community and the teams can learn from each other. We saw multiple new issues arise over the last five years. There were issues around intimacy with certain kinds of injury and sleep problems in families. You are able to develop advanced training and embed that in the learning community.

We perform multiple reporter evaluations on children, service members, spouses and providers. We do all this within family reporting and there are longitudinal follow ups over time. At least 70% of our families have consistently completed and followed up in this program. Remember, it is not research. There is no incentive. They are engaged by the program, and they are willing to continue to check in with their provider because they may be interested in new services. You can also see process information about how this has helped the family to become further embedded or connected to the community.

We track referrals into and out of the program. We can see people coming in through the New Parent Support Program. For example, we identify issues where the parent is finally willing to get treatment for PTSD. We can track and support these kinds of pathways. We have done some longitudinal modeling with the data

looking at pathways of change. As we anticipated, improvements in family resilience constructs, problem solving, emotional relatedness, and family communication predict improvements in child mental health adjustment symptoms.

We have used time trend analyses. On the Strengths and Difficulties Questionnaire (SDQ) we found a mean of 12, about double that found in a civilian population. Our kids are pretty distressed when they come to the intervention, but we get dramatic improvements in time. We do have a small group who are non-completers. We have been able to look at non-completers compared to completers even though we do not have a control group. We see that the non-completers drift back up over time. We have the same kind of outcome repeated measures for parents.

Bill Beardslee has an article coming out that gives you a sense of how data monitoring is an innovation or another pathway of how traditional biomedical models for validating behavioral health programs can be used to more rapidly adapt, but also maintain fidelity of the core elements. We have as a core element a family psychological health check-in with immediate scoring, feedback, and guidance to the provider and to the family. We also now have a self-administered version available for veteran and non-active duty families.

Psycho-education is another element of the model that is customized to the family's reporting. If you are doing really well in one area, you are not going to get much psycho-education about that area. It can be customized to your particular family needs and then put on our narrative time line. Our resiliency skills training is very similar to core elements in a number of cognitive behavioral interventions.

There has been a great deal of talk today about technology platforms. This has been huge and is really important for Guard, Reserve, and veteran families, if we think about those transitions and the particular generation we are working with. Having tools that allow people to use emotional regulation skills and problem-solving in a fun, engaging way where they live is critical. A platform for delivering this kind of intervention in-home as a virtual home visit is something we have been working on for the last year. We have developed it as a current service program and will incorporate it into our National Institute of Child Health and Development (NICHD) randomized control trial for virtual home visiting.

The opportunity to do this program in the military is very unique because of the closed system of care and because the leadership had the vision to push prevention forward. Some of the processes that we have developed in this partnership with Navy medicine, from my mind as a civilian preventionist, can help us think about whether some of these similar tools could be used in other communities. As we have moved to working with veteran and Guard families, we recognize it is much harder to implement all these at once.

If you look at Patty Chamberlain's stages of implementation, we just did a whole lot of implementation stages all at the same time. In the community you have to go sequentially and really work to change these systems in which you are trying to embed care. I put that out as a challenge that I would like to discuss because it is a daunting one.

*We have as a core element a family psychological health check-in with immediate scoring, feedback, and guidance to the provider and to the family.*





## PREVENTING VIOLENCE IN MILITARY FAMILIES UNDER STRESS

*Speaker: Eric Elbogen, PhD*

**DR. FULLERTON:** Eric Elbogen comes to us from the University of North Carolina. He is Associate Professor in the Department of Psychiatry at the School of Medicine and a clinical psychologist at the Durham Veterans Affairs Medical Center.

**DR. ELBOGEN:** Thank you so much for inviting me. I am learning a great deal here, because I work at the VA, where we do not have family programs. But, at the University of North Carolina, we serve over 12,000 Tricare patients a year. We have also been doing research with military families. This research has been funded by the National Institute of Mental Health and the Department of Defense.

What I have been hearing today is the question of how to evaluate all these programs, and make sure that they are improving outcomes. This talk is a little different than the previous ones, in that we are picking a specific outcome that has been discussed the entire morning, violence. This research is based on a National Institute of Mental Health grant to develop tools to assess and reduce the risk of post-deployment violence. I will be talking about violence in veterans and military families and the transitions in the process of separation.

I would like to take a poll so please write down your response to the following question: If you had a random sample of all the service members who have served since 9/11 and you asked them, “In the past year, have you physically hurt another person?” what percentage of that random sample would answer, “Yes”? Raise your hand to indicate the category in which your response falls: below 10%; 10–20%; 20–30%; 30–40%; 40–50%, and above 50 percent.? If I would have charted out the bell-curve of your responses, it would have worked quite well. The amount is actually 33%. We did that in a national survey of a random sample, called the National Post-Deployment Adjustment Survey. What we found was consistent with other studies in both active duty and veteran populations. About one-third are self-reporting violence, which could be an under-estimate. These are self-reported aggression problems. These are problems that are not necessarily reaching the level of violence, but there is a sub-set of veterans and military service members who do report engaging in what we called severe violence, which is using a weapon, threatening lethal violence or beating someone up to the point that they need hospitalization. This was self-reported by about one in ten in our national sample. Most of those involved family violence.

*What we found was consistent with other studies in both active duty and veteran populations. About one-third are self-reporting violence, which could be an under-estimate.*

*The key thing to keep in mind is that PTSD does elevate risk.*

*Veterans and military service members with PTSD are at higher risk of domestic violence.*

I became interested family violence about 10 years ago. There were incidents of domestic violence and homicides at Fort Bragg and immediately the media reacted, “Oh, it is PTSD. It has got to be PTSD.” It is a knee-jerk reaction. It turns out that if you look at every study on the subject of domestic violence, the vast majority of families are fine, even in the context of PTSD. The vast majority of veterans and military service members with PTSD, in all published studies, are not aggressive or violent.

The key thing to keep in mind is that PTSD does elevate risk. Veterans and military service members with PTSD are at higher risk. Most of them are not violent, but it does increase their risk of domestic violence. There have been numerous studies that have shown this. It is hard to keep both of these points in your head at once. It is certainly hard for the media to do this, but it is important to realize that it does elevate risk, but it is not a guarantee there will be violence.

What we have begun to do with domestic violence is to try to go beyond PTSD to see if there are specific symptoms of PTSD that relate to different kinds of violence. Results of our national study showed that the anger symptoms and emotional dysregulation are not only related to family violence, but also related to post-deployment arrests, and that flashbacks predicted stranger violence.

The difference between family and stranger violence is not typically examined in the literature, but what we are finding is that different symptoms of PTSD might relate to different kinds of violence. In particular, for military families, the hyper-arousal symptoms seem most implicated. Findings from our study and another report have found that female veterans and service members are actually reporting family violence at a higher rate than male service members and veterans. The men were three times more likely to report stranger violence than the women.

The relationship between PTSD and family violence is complex. The knee-jerk reaction, “It has got to be PTSD that led to it,” is just the tip of the iceberg. Here is where it gets complicated. Are people with PTSD at higher risk of violence than not, or than veterans without PTSD? The answer depends on how you slice it. We performed a longitudinal study of over 1,000 veterans representative of all 50 states and all branches of the military. We assessed PTSD and alcohol use at baseline and then looked at whether they were violent in the next year. A year later, 80% of the participants were retained. We found that, if at the first assessment they met criteria for PTSD, a year later nearly 20% of them reported severe violence during that year. Alcohol misuse had the same increase. When you split it differently and look at the co-occurrence of PTSD and alcohol misuse, it is the combination that seems particularly elevated. It is not just alcohol misuse only or PTSD only, not that they are zero, but it is a combination of the two that warrants attention.

In terms of how this might relate to family interventions, realize that if you have a veteran or a military service member with PTSD, it might be useful to use the evidence that is beginning to accrue that PTSD might be related to domestic violence in specific ways. For instance, in your treatment of these veterans and service members, make sure there are anger components, make sure there are substance abuse components. In other words, make sure that there are non-PTSD components in your treatment.

The other thing to remember is that military service members and veterans have the exact same risk factors as civilians for domestic violence, such as being younger and having a previous history of arrests. We have published that the veterans who had previous arrests before they entered the military were at elevated risk of domestic violence and for being arrested after their service in the military.

Other non-PTSD risk factors related to violence are economic and social attainment, such as not having money to cover basic needs. Among other contextual problems are newer marriages, shorter marriages, and marital relationship problems, just like for civilian populations. Make sure that any programs targeted at domestic violence not only address PTSD, but also address variables that do not have anything to do with PTSD or combat, but are simply risk factors in the general population.

Forensic psychologists frequently talk about risk factors, but at the end of the day, what do you do if you have found out that someone is at high risk? You have to do something to lower it. We have done research to look at some of the factors that are linked to reduced risk of violence in military veterans. Again, these findings are from our national survey of Iraq and Afghanistan veterans. We found a number of social variables and protective factors were related to reduced risk of violence. One factor is employability. Living stability may not be as relevant as when the service member is on active duty, but once they transition out, they have to pay rent. Veterans are disproportionately higher in the homeless population than civilians.

We also published a paper showing that physical well-being is related to reduced risk of violence, better pain management and better sleep habits. Lastly, we measured resilience and found an inverse relationship with domestic violence and veterans. We also found that positive social support and perceived self-determination were important protective factors.

How strong were these relationships? We measured the predicted probability of violence in a one-year period of time. The protective factors reported were: employment, that they could pay their bills, that they had resilience, that they did not have physical pain and that they had good social support. The more protective factors they had, the lower their risk of violence. We found a 92% drop in risk of violence.

I want to make a few points about this. The vast majority of these randomly sampled veterans actually have most of the protective factors. This is what you have talked about and this is what the media does not focus on. It is really a small sub-set of veterans that have the most risk. One of the programs to reduce domestic violence is helping veterans learn to budget better. Someone pointed out to me that instead of violence, you could talk about cost to the system. Certainly, violence is costly. It is cost-effective to teach veterans and service members how to manage their budgets if it helps reduce their risk of violence by 92 percent.

At the VA, I have been running a money management group for the last 7 years. Some of the mismanagement that I have heard is astounding. One might say, “Well, is that the same as the general population?” But, the Department of Labor did a survey of military families and civilians, and found that military families were more likely to be in credit card debt, less able to meet their basic needs, and they had more trouble budgeting than civilians. That was found by the National Financial Literacy Commission, 2010. If you apply this to a domestic violence program, this would be a good way to frame and conceptualize reducing risk once you have assessed it.

In terms of the transition from active duty to civilian life, some people have mentioned that many of those protective factors are present when someone is in the military. For example, you do not have to worry about a job, you have self-direction, your direction is clear, you have social support, your basic needs are met, and you have living stability. In essence, when you separate from the military, the carpet is pulled out from under you and suddenly, you have to find a job and you have to do a budget possibly for the first time in your life — and you are 30 years old. This goes beyond just domestic violence. In thinking about instilling these protective

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*We have developed an evidence-based risk screen that is currently being rolled out and is going to be adopted at Veterans Affairs medical centers.*

factors, possibly before separation, we are talking about preventing poor outcomes, not just for violence, but for other kinds of outcomes after separation. In summary, in terms of what we know about violence in military populations, it is really a subset that we are talking about, and we know that most veteran families are fine and free of family violence. The link between PTSD and violence is complex and needs to be addressed in interventions that are going to be effective. Also important are non-PTSD risk factors, just like in civilian populations, as well as thinking about protective factors and embedding that concept in our research.

We have done 2 things with all of these findings. We have developed an evidence-based risk screen that is currently being rolled out and is going to be adopted at Veterans Affairs medical centers, and we are currently testing an intervention under a DOD grant. The acronym is CALM — Cognitive Apps for Life Management. It is a family intervention aimed at reducing impulsivity using mobile technology. We are trying to translate these into interventions that we are testing. In terms of how this applies to what we have been talking about today, it is obviously just one problem among many. I hope it illustrates how having empirical knowledge of a specific problem might help inform some of the many programs that you have been talking about today, to help our military families.

## CONTRIBUTIONS OF PTSD AND TBI TO MILITARY/VETERAN FAMILY RISK

*Speaker: Carol S. Fullerton, PhD, for Stephen J. Cozza, MD*

Dr. Steve Cozza is ill today and I am going to present for him. There were several key points that he wanted to make. I would like to start with one of these points for people to think about as we walk through the material that Steve has put together; PTSD and TBI as interpersonal disorders rather than individual ones. Many people are affected by these disorders. The point that 55% of active duty service members are married and 44% have children broadens the effects of these disorders. Looking at the longitudinal course of the disorders, there are effects on couples, such as poor couple adjustment, negative communication, lower marital satisfaction, greater mutual family violence and greater rates of conflict. There are also negative effects on intimacy and the risk of spouse PTSD, parenting and child outcomes. This results in poor problem solving, communication and involvement with children, decreased parenting satisfaction, greater perceived parenting challenges, and more challenges and symptoms in children.

Another important concept that is often misunderstood is inter-generational trauma. This was a concept that began with some of the Holocaust studies and represents a the vector of transmission of symptoms — the underlying mechanism by which these symptoms are passed along. The term inter-generational is something to think about in different ways, including the developmental effects on children.

There are important mediators and moderators of PTSD such as emotional numbing and avoidance that are linked to interpersonal impairment and the relationships between spouses and partners, and with children. Anger and depression, as well as the partner response, may also mediate or interfere with negotiating family problems. Emotional sharing moderates the effects of PTSD. Emotional sharing, thus, has an effect on the marital relationship, but also on the functioning as a parent. These are examples of thinking of all these conditions as interpersonal disorders, more than just focusing on the individual.

For the past several years Steve has been conducting a study at a camp for families of injured soldiers. Although it is a small sample size, it is an important study and an important sample. Camps are held every year for injured soldiers. In this study, now conducted for the third year, surveys and focus groups are conducted the families including the parents and the children. Preliminary findings show no direct effects of the injury or the PTSD in the parent on child functioning. Parent

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behaviors have varied direct effects on the child's functioning. In particular, there were no direct effects on involvement behaviors. Low monitoring of behaviors was associated with child conduct problems. There were also interactive effects. As PTSD goes up, and the parent monitoring of the child goes up, the emotional symptoms in the child go down. However, as PTSD goes up and the parent's involvement goes up, conduct problems go up. Monitoring is linked to conduct problems.

TBI is more distressing and more disruptive than other injuries. There are problems that compromise parenting such as: parental irritability, anger, behavior regulation, cognitive capacity and communication. Diminished parenting, in either parent, results in more child emotional behavioral problems. Also, there is an increased caretaking burden and the requirement for ongoing continuous professional help. Do the spouses take on the caretaking burden, and how does the burden of care transition when the soldier returns home? The family, either the parent or the spouse, becomes the primary caretaker. We have examined this in terms of the natural caregiver, something that occurs in the family environment naturally, which is an important target when you are dealing with TBI in families. Again, TBI can be seen as an interpersonal disorder and not just the individual.

Among the transition challenges are the long-term impact of soldier injury and disorders. There may be reductions in national funding and cultural changes in how the nation views the soldiers and their needs. Currently there is great concern about soldiers. The nation has experienced a number of years of soldiers experiencing multiple deployments and combat-related stressors. In the next year or two, how is this going to change? As we get further out from this we know from the past that support, including funding goes down. Obviously, these changes are going to affect soldier and family adjustment.

There can also be problems in community reintegration and also clinical engagement. What will be the healthcare needs of soldiers and families? Patient-focused services may exclude family members. Again, this is the focus is interpersonal and not just individual. There is a lack of clinical expertise, in dealing with this. The soldier has PTSD, but what are the broader implications and affect on the family? We have studied spouses of disaster workers and soldiers and know the importance, on different levels, of including spouses in treatment care.

There is a disconnect of veteran family health care in the VA system. Veterans are often hesitant to include their family members in health care. There might be a stigma issue or family members thinking, "Well, I do not have a problem." The literature shows that it is helpful and potentially critical that family members are involved in health care. There are also reactive, punitive and legal responses to domestic violence. This is something that our group has studied, neglect and violence. What are some of the legal issues that prevent soldiers and families from getting care?

I will end with several recommended actions. Identify the need for sustained care and services over time. Remember that PTSD and TBI are interpersonal disorders, not just individual. Over time, incorporate assessments of interpersonal impact and include psycho-education. Highlight the relationship between the service member and the veteran and the family members' health. Implement family-focused interpersonal treatments. Use relationship functional outcomes in addition to symptom response. Teach collaborative parenting for PTSD and TBI. Utilize violence prevention programs that proactively address the risk in families. This point includes assessing the risk in the families, not just the individual. Prevention includes family emotion regulation, community, problem solving, and both conduct and emotional

responses of the children. Lastly, identify the hot-spots and triggers and build a safety net through planning. Thank you.

*Identify the need for sustained care and services over time. Remember that PTSD and TBI are interpersonal disorders, not just individual. Over time, incorporate assessments of interpersonal impact and include psycho-education.*





## PANEL 2 DISCUSSION

*Moderator: Robert J. Ursano, MD*

**DR. URSANO:** Thanks to our panel for a wonderful series of presentations. We are going to have some discussion, but first I will highlight a couple of elements. First, I would note that in this panel, we have addressed three problem areas, or at least ways to think about them. One is illness, and although the first talk focused on traumatic brain injury (TBI) and posttraumatic stress disorder (PTSD), one could think about illness, period, in the family and how illness is managed, how illness creates family problems and what are our resources for addressing illness in military and in Army families. Twenty years ago, PTSD and TBI would have been what we called MUPS, Multiple Unexplained Physical Symptoms. If it had been after a deployment to Somalia, it might have been an outbreak of malaria that had occurred. The point is that there will be militarily-unique illnesses that will occur over the next years, to 2025. How will families cope ?

Second, was the area of separation and reunion after deployment. We can be guaranteed that in the future, there will be separation and reunion. There will be deployments. The question is whether or not those deployments are long or short. If we move to a force that has deployments once a month for a week, is that better than once every 2 years for 6 months? The issues of dwell time, which the Walter Reed Army Institute of Research (WRAIR) folks and Paul Bliese and others, in particular, have focused on, highlight that issue. There is also the question of how long does it take for a family to re-invest in each other? Not just for a soldier to recover from PTSD, but what is a dwell time for family recovery and recovery of family functions? We are not talking about the just the individual, which we can address, but about the functional capacities of a family which are disrupted by deployment and require new functional capacities. What is the dwell time needed for family functional capacity recovery?

Third, there is Eric's example of targeting a particular problem, the question of aggression and violence, which came from an epidemic outbreak. Again, I would cite WRAIR and Paul Bartone and his shop, where the issue will be epidemic outbreaks that occur. One of those was Fort Bragg where there were with seven killings. The military is marvelously set up with a model for deploying what are called EPICON teams, Epidemiologic Consultation teams, which deploy to collect real-time information rapidly. In many ways, Eric's work is an outgrowth of that response to an outbreak, how one sees an issue, deploys to address and understand that issue, and develops a method of approaching it. The other nice thing that I would highlight

*...one could think about illness, period, in the family and how illness is managed, how illness creates family problems and what are our resources for addressing illness in military and in Army families.*

*We were able to look at the question of whether violence was unidirectional or bidirectional. In other words, was this physical violence due to self-defense? We found that it was just as much unidirectional as it was bidirectional.*

in Eric's work is that of protective factors, not just risk factors. How can we take those protective factors and roll them into programs or assess programs to determine whether or not they are matching those or which ones work once we roll them into programs.

Then, I would highlight data presented today on economics. Do people have enough money to pay for their lives and does how that impact on whether or not there is going to be aggression? How many soldiers are below the poverty line? How many of them collect food stamps? Poverty is not only a problem of our nation; it is also a problem in the military. The transition out of military service, when one is unsure of economics, may be a particular risk time.

My final point — think about which time and what population each of these addresses. We cannot address the all Army, all the time. As Delores was saying, we have to break it into time, cycle, and population. We have talked about populations during illness. We have talked about populations pre- and post-deployment. We have talked about populations at transition time, into and out of the military. Thus, we have some new tools for our discussion. As we think through these issues, what are our tools for addressing future issues and risks, future opportunities and target populations?

**DR. LUNDQUIST:** I direct the Institute for Social Science Research and I am a sociologist at the University of Massachusetts. Eric would you speak more to your speculation or theory of the gender differences that emerged with violence toward family members, among women over men, particularly given recent policy changes that women will be exposed more and more to combat and deployment. Is there emerging research about female veteran **expectationalism**. An example is the higher rates of divorce among female veterans compared to male veterans, as well as active duty gender differences.

I was interested in how you operationalized your dependent variable in defining family-based violence to whom, such as children versus partner. To what extent does the exposure to parenting, that women generally have more of than men, control for the gender effect? Is that something that you had a large enough sample size to look at? One of the differences that the paper found was that female veterans are more likely to enact or think about violence towards family members, whereas male veterans who have been exposed to combat are more likely to have violence towards strangers. Unpacking what may be driving that effect, how much of that is methodological and how much of that is an explanation based on gender?

**DR. URSANO:** Your observation is that one needs to be alert to the question of gender differences in veterans as one studies population risk and response. Talking about service members may not sufficiently identify individuals in need of assistance or adequately scientifically identify the population for a study. I really want to capture that because we have not had that comment yet. It is important for us to say that we are talking about populations, deployment, and non-deployment. No one has yet said, "What about men and women?" They are not the same.

**DR. ELBOGEN:** We can talk afterwards about the specific measurements. We actually over-sampled women. We were able to look at the question of whether violence was unidirectional or bidirectional. In other words, was this physical violence due to self-defense? We found that it was just as much unidirectional as it was bidirectional. There was very little stranger violence by women.

**DR. GEWIRTZ:** I think this is a fantastic direction for future research, but I am not too surprised. This somewhat parallels the findings over the last 5, 10 years, or

15 years, showing increasingly that women report being aggressive in relationships. It is a very important avenue for further research.

**DR. HEYMAN:** This is actually one of the most robust findings in the last 40 years of domestic violence research. Archer's review and meta-analysis would be a good place to start, but this is something that is certainly not military-specific.

**DR. PARIS:** This is a question for Tricia, but may be bigger. It is a conceptual question given some of the things we have been talking about so far today. On the previous panel, Lynn presented the many different services that are available for military families. FOCUS grew in an amazing way to many different domains and to different installations. Now, you are branching onto the web. You described the model about how to assess effectiveness when you are not following the one, two, three, four step with one big clinical trial and replication.

I am struggling with that, partly because we have Lynn McCollum's list of all of these different services available for families, and then you have FOCUS, which was developed off of Bill Beardslee's excellent work, working around depression. My core question is, are we talking about the adaptation of other evidence-based models to military populations and then an ongoing assessment of its usefulness in different kinds of situations? Are we understanding the military populations to be unique in particular ways, and then we are adding on to other programs in existence already? In terms of moving forward and jumping on, how do you put together some of the things that you were talking about and some of what Lynn was talking about in terms of what exists in the plethora of services that are already available to military families?

**DR. LESTER:** This is a complicated question. I am not suggesting abandoning traditional validation models. I am just suggesting that they need to be augmented or we will never have evidence-based practices widely disseminated because they will always be so far behind a moving transitional target. The model that I was proposing is based on a continuous data monitoring system. There was discussion earlier that we need to invest in an infrastructure that would allow us to do that. My guess is that in the giant network of programs, many of them do not have a platform of continuous data monitoring.

It is very hard to do things like delivery with fidelity, to monitor what is actually happening in the room, and even to get effectiveness data. I am not going to speak to the programs that were presented, but I do know that for a number of large-scale programs you often have to go back after the fact. You are not integrating that into what is a pretty fluid need for adaptation.

**DR. URSANO:** Let me capture a piece of that discussion because it states a couple of things that Patricia said earlier that were very valuable. If I highlight it now, we will make sure we get it in our transcript for us to remember.

One was this issue you are presently talking about, program change for problem change, which is a very nicely stated. Over time, the problems change. What are our feedback mechanisms for rolling problem change into program change, and how can that be systematically accomplished?

How do we create a system that has that? I do not know that we are there yet in terms of families. I do not know that we are there yet in individual healthcare. We are trying to do that within DOD.

The idea of a dashboard is something that sells well in DOD, where there is real-time information for action. Do we even know what are the 10 things, are we measuring them, and are they measured in a way that we can use? We measure many

*Over time, the problems change. What are our feedback mechanisms for rolling problem change into program change, and how can that be systematically accomplished?*

*We are focused on the illness, and then we are focused on the person, and then we are focused on the family. But we are not focused on the improvement.*

things, but the concept of a dashboard for family function and problem identification is absolutely right. Whether or not our science is there, is another question.

**DR. ZATZICK:** Part of the challenge in these conferences is getting people to speak the same language. We have this incredible prevention science, behavioral science, developmentalist group, and then we have many front-line, hard-line clinicians on the ground. Part of the context is that a group of us are trying to implement FOCUS now in a very challenging post-injury military context. The behavioral scientists and the social scientists are looking for a meta-theoretical construct that will help us with our implementation and our implementation science. There are all these wonderful models. You need people to be able to understand the contextual factors in a front line perspective. The behavioral science models probably will not inform your behavior. The reason for that is that meta-theory here is in clinical epidemiology. You are looking at how FOCUS was designed initially and what the population was, but you do not want just an epidemiologic framework on the patient population or a normative framework if you are coming from the clinical psychology perspective.

You want a normative framework on the patient population, for the providers implementing it, and then you want the organizational context. Once you understand those three things, you see that your incrementalism in modifying this intervention study by study is completely out the window and you have to come up with something really new.

We have discarded the manual because the patients and the families that were recruited, even in the military studies, were in much better shape than the people we are getting in. We are in pre-FOCUS readiness. We are trying to get people ready for FOCUS. We have tossed out the manual and we are iteratively rewriting this into an effectiveness design.

**DR. MONAHAN:** I want to ask the presenters to speculate about external validity and generalizability. Because we are in an era of big data, how influential will we be with respect to the proliferation of individual intervention studies when they are not linked to larger goals so that we can have more influence in Washington?

**DR. DELANEY:** There are a couple of points that are really important that I want to build on. One is that I do not think that we can underplay the continuous tension between clinical work and the research going on. This is paralleling at Health and Human Services (HHS) pretty much every five minutes. The one thing that we are talking about is a change to a culture of data or a change to a culture of science as part of our practice work. In looking at this and moving forward, we not only need to think about monitoring and continuous monitoring of what we do, but we need to think about quality. That is one thing I am not hearing about as we go forward.

I am sure that it is probably in the back of everybody's mind, but we do need to think about it. We are focused on the illness, and then we are focused on the person, and then we are focused on the family. But we are not focused on the improvement. Sometimes, we are looking at the illness as the target and we are trying to decrease depression. If we decrease depression, but the family falls apart, we are not looking at the quality of the services we are providing. I think this also speaks to a point that you raised earlier, Dr. Ursano, and that is the issue of maybe we need to be thinking that instead of adding a service, we should be adding a connecting point. That is missing in some of the discussions. It was particularly clear in yours, where FOCUS came in and it was all over the place, and there is a great deal happening. Maybe

we evidence-based needed a connector between people to make it happen, but then we needed to look at the quality of those connections, as well.

**DR. LESTER:** Maybe I failed to make that point, which was having a way to monitor not only outcome data, but process data, as it was unfolding, allowed us to look at how those processes, by which the program was integrated, added value at the ground level. I focused only on a couple of key outcomes, but most of these programs are deeply linked to the overall policy goal, which is to mitigate psychological distress such as enhancing resilience and the capacity to cope with ongoing changes in transition.

There are many interventionists in the room who are working on adapting evidence-based interventions for military populations and many of these share common core elements. One thought that comes to mind is Bruce Chorpita's work which has focused on identifying common core elements across evidence-based interventions as an approach to using evidence to guide practice. This type of approach, focusing on the synthesis and diffusion of common robust elements within evidence-based practice, rather than adding individually branded programs is an approach that is particularly relevant to responding to need for rapid adaptation to urgent needs such as those faced by military populations during wartime. Our traditional biomedical model for validating and implementing evidence-based interventions may not support the need to serve large numbers of people in a rapidly evolving context, such as wartime operations. In particular, we need to focus research on the science of implementation, with an emphasis on developing rigorous approaches to dissemination that leverage real time data monitoring for quality improvement, as well as being able to ensure quality in training, fidelity in delivery, and to inform the ongoing need for rapid response to address emerging contextual issues such as timing, development and cultural differences. There is the ability to do that, but it would require an investment and for people to work together, rather than in a competitive way.

**DR. SALTZMAN:** Tricia just said my main point. I am responding to Doug's point that we threw out the manual. Actually, they are adjusting the manual. We tried to construct a program on these core components that are empirically and theoretically derived. This modularized, adaptive program can respond, even after it is in the field, and it can be adjusted for the emerging needs.

**DR. RICHE:** I am a demographer from CNA and Cornell. I just completed a study for the people who are managing transition policy at the Pentagon, the transition from active duty to veteran, and have done a comparison of life force statuses. It is pretty clear that military people, as we just heard, are younger, but they also are more likely to marry. They marry earlier, they get divorced earlier, and they are more likely to have multiple marriages. Given the remark just made that shorter, newer marriages and marriage relationship problems are connected to violence, from a broader policy standpoint, one preventive strategy might be to scrub military programs and practices to incentivizing early marriage.

**MS. JOHNSON:** As I was thinking through this, I think about a little history and a policy point of view. One of the things that stymies research, in particular, is that there is really no clear policy. As you talked about the goal of what the research was, that is your medical goal. There is a personnel community that exists within the military, and there is another undefined conglomeration of things that exist in the military, and each of those segments has goals about what family policy should be or programs should be. General Wickham's white paper laid the foundation for

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the research agenda that followed that era. Dr. Chu, when he was on the DOD staff, developed a social compact which also set a research agenda.

But, absent those two very broad, strategic documents, there really is not a major policy shift that links the medical community goals, that people should live and be happy and be well, with the things that we should do within the personnel community that help people adapt to a unique life style, and help mitigate those stressors brought from the civilian sector.

Then, there is this largely undefined thing that you always struggle with, about how you treat people in general. What does that mission culture bring to the table? Maybe one of the things that we all struggle with in this conversation is this diversity at trying to come at this issue without an overarching policy statement about what we think about what we are trying to accomplish. You cannot do research if you do not know what the programs were designed to do within that organizational context.

There is this framework that we keep coming back to, one that we do not have. I think everybody assumes because it is military, it is structured. Probably, the human dimension is the most amorphous piece that we have. We are pretty clear when we talk operations. We are not at all so clear or have unity of focus when we talk about the human element in our respective institutions or across the services. We each have different ways that we come at these issues, from a philosophical orientation, that we have never articulated to drive research agenda.

DR. URSANO: Your comment, highlights the question of the differences in goals and that there is not one like goal. We have the goals of health and happiness. We have the goals of adaptation to the life style of the military, adaptation coming in, being in and then going out, and we have the concepts of what constitutes the human dimensions of a system taking care of each other. Those are related, but not the same.

DR. MASTEN: I am from the University of Minnesota. I have comments that anticipate the shift this afternoon to resilience. One is that in many ways, it sounds like we need family services and interventions that have the future character we hope for in our military units. These are greater flexibility, nimble quality and modularity, that make it easier to fit and adapt interventions and services to changing people, individual differences and needs.

Secondly, another striking theme in this panel to me was that the risks and protective factors that were discussed are very much in line with the general population in the United States. Although military families are a select group, still, a lot of the findings may well have much broader applications to the general population. What we learn are much broader applications to general family resilience programs. The research that is done in the military may be able to make important contributions in a much broader way.

DR. URSANO: I want to also repeat what you were saying. Some of the evaluation criteria of programs may be similar to what we are trying to accomplish in the military with units, in terms of flexibility, modularity, adaptability, which goes along with the earlier construct of harm. We have evaluation capacities of programs that are not typical to just, "Is this program having an outcome that we are looking for?"

## FOSTERING RESILIENCE IN FAMILIES: LESSONS FOR AND FROM MILITARY FAMILIES

*Speaker: Ann S. Masten, PhD, LP*

**DR. BENEDEK:** I am the Deputy Chair of the Department of Psychiatry, Uniformed Services University, and an Associate Director for the Center for Traumatic Stress. This afternoon we will focus on a framework for research and implementation of programs that address resilience. Our first panelist, Dr. Ann Masten, is the Irving B. Harris Professor of Child Psychology and Distinguished McKnight Professor at the Institute of Child Development, University of Minnesota.

**DR. MASTEN:** I would like to start by saying why I am particularly glad to be at a meeting like this. I was born into the military. I entered the military before I was born and not quite as a volunteer. It has been very exciting and pleasing to see the profound transformation that has occurred in the conceptualization and concern about families in the military. I am going to talk about resilience and introduce some of the contemporary ideas, and comment about lessons learned from all the decades of research that have been done on resilience in children. I will also talk about what the research and practice with military families can and will be able to contribute to our understanding of resilience going forward.

A good place to begin would be with a typical contemporary definition. Resilience is usually defined in terms of a systems dynamic. Now it is viewed as the capacity of any system to withstand, adapt or recover from significant disturbances, and then continue with its life, development, or progress. When I say any, “system”, I mean that this idea came from systems theory, and it really can be applied at the level of a neural system, a cardiovascular system, an individual, a family, a military unit, or the military as a whole. It could be applied to our economic system. We are all hoping for resilience there, as well as for planetary resilience. Global climate change is a concern of global resilience.

There have been five decades of research that grew out of interest in this fundamental question in resilience. How is it that some young people, or some families, or some countries withstand great stress and do well and flourish, and others flounder and do not do well. What can we learn from studying this kind of phenomenon to help inform what we do, to promote resilience in individuals or families who are not doing as well? Over the course of these 5 decades, there have been tremendous

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advances in the way we understand resilience, the definitions of it, in the methodology that is used to research it, and in methods, both of basic research and intervention.

From the very beginning resilience always has had a practical goal. The pioneers in this area were interested in helping children and families because the early research was very much focused on children and families. Researchers recognized that even though research is always ongoing, we have to respond now, to the best of our ability, with what we know. That has always been the case in the resilience field.

One of the contributions from the science of resilience has been how to think about promoting resilience, whether you are thinking about it in terms of promoting resilience of individuals, families, or the military as a whole. I am going to talk very generally, and my colleagues on this panel are going to talk very specifically about particular programs. I am going to talk about an intervention framework.

Lesson one is to frame positive goals. I would like to challenge you to think about positive goals more broadly than prevention because often when you think about prevention, you are trying to prevent a negative. Some of the best prevention programs and best resilience-based intervention programs actually target positive goals. I would argue that many families and children as well are much more motivated by positive goals than they are by, “I can help your family avoid disaster.” They are interested in, “I can help your family do well, succeed, recover, etc.”

Secondly, it is important to have models that include positive outcomes and positive influences as well as to include models that include risk factors and symptoms. You need to be able to measure and monitor the positive outcomes and influences, and we have already heard some about that today.

I am now going to talk about methods. The research in resilience suggests several basic strategies. The research suggests that you have to consider multiple perspectives and multiple levels, both of analysis and measurement. You also have to consider the multiple levels at which you might want to intervene. The three kinds of basic approaches to intervention that have been implicated by a general resilience framework are: risk focused, asset focused, and process focused. One of the most important strategies for positive change is to reduce the level of stress and risk that an individual, family or other kind of system is subjected to. I wanted to highlight this because sometimes people hear about a resilience perspective and they think they are not interested in risk. This is not true. A resilience approach has to take into account the level of risk and adversity exposure of the system. Sometimes you need to lower the risk. Another strategy is to boost assets which means increasing the resources or access to resources that are generally positive. The third strategy is to harness the power of human adaptive systems. These are the big engines of resilience.

I want to make a few other general comments from the literature that I hope you will think about in our conversation today. It is important to conceptualize resilience as dynamic. Many, many systems interact to shape the development of a person or the development of a family or the development of a military. This also means that there are many influences and there are many pathways to resilience.

The capacity for resilience — your adaptive capacity — is always in flux. It is changing as a function of your health, your development, and the resources at your disposal. Your resilience is not a fixed commodity. It is a dynamic capacity and it is also not in the person. This is a common misconception. Resilience is not a trait. There is no such thing. There are certainly individual differences and personality characteristics that are helpful in many kinds of threatening situations. In reality,



resilience is distributed across multiple systems. In a very young child most of the capacity for resilience is in the care-giving system that is supporting that child's life and development. It is important to think about individual children in the military and individual families in the military as parts of larger interdependent networks and systems. This is dramatically evident when you have a catastrophe.

I study children in war and natural disasters. When every system goes down at once, which happens in a calamity like the Colorado flooding, a nuclear accident, a tornado, or tsunami, you realize how interdependent all these systems are. It is very hard for a family or a town to function if every system around them is not operating well. This conference and meeting represents the profound appreciation the military has developed about the interdependence of systems.

Risks matter and I want to underscore this again. We have heard today that risks are cumulative. It matters what your history is and how much adversity you have experienced in your life. There is really good evidence that if you experience a tsunami or a deployment in the context of many other stressful experiences in your life, your risk is higher than if you experience some acute event in a context of a very low-risk background. Sometimes, one of the most important strategies is to lower the risk exposure level. If you have too much high cumulative risk, you can overload the capacity of any individual, any family, or any town to recover and be resilient.

Resources matter and we have heard about that today. Economic as well as human resources can be helpful at all levels of risk. It is helpful to have good health-care and some money for food, no matter what the current risk level is. Protective systems matter and many of these are in relationships and in culture and in many of the other systems that have evolved in human life. We have to invest in and nurture these systems in order to foster resilience.

Families are our focus today and families have had many roles in the development of competence and resilience in children and in all members of a family. It is very important to support the function of the family because it is very hard to replace all these roles in the life of a child. When state welfare systems remove a child from a family and try to replace all these functional roles, they have discovered you have to have a great adopting or foster care family to provide all of these activities. Some of the ways that families matter are biological. There are effects on children before they are born. Stress affects the mother and affects the epigenetic system that is inherited from both parents. This can have lifelong consequences for children.

We have heard that military families have some unique risk. They have an elevated risk due to certain kinds of blast injuries that are not commonly experienced in the general population. They also have a different kind of deployment than you see commonly in the general population. However, military families have a great deal in common with many other families. They are struggling with similar issues. There are families across the United States that are mobile for various reasons. Mobility, in the context of poverty, is something I study in homeless families. There are similarities and differences, but there are some lessons that can be shared across sub-group populations in the United States who have much in common with military families.

Military families also have opportunities that are important not to overlook. I gleaned a great deal from growing up in the military, particularly from the opportunity of living in many different cultures and knowing many different kinds of people. Those experiences have given me certain resources and capabilities that I might not otherwise have.

I want to close by talking about lessons we can glean as a society from military

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families. There is a special issue of, “*The Future of Children*” coming out soon that is focused on military families and children. I wrote the final commentary for this special issue and one of the things I was asked to write about was what can we learn from military families. When you read the articles in, “*The Future of Children*” you will be struck by all that has been learned. I will mention a few examples here.

The military now, in striking contrast to when I was young, has one of the best early childcare systems on the planet on military bases. We could learn from how they went from having not very good early childcare programs to having outstanding childcare programs on military bases. They are beginning to struggle with the issue of how that was done on bases and what can be done about childcare in all the other places where our military families live. We can glean important lessons from the military about how to deliver quality childcare. The military has also done wonderful things for mobile school children. Growing up, I suffered the consequences of many moves from school to school. It is amazing to see what the military does now with programs like, Student to Student. I am a new member of the Board of the Military Child Education Coalition. What they are doing to promote academic success in military children is really great. The military record keeping systems, both in healthcare and in educating kids, provide all kinds of lessons.

There are lessons to learn from a large organization like the military with various components and how they create a family supportive culture. The work is still in progress but compared to decades ago, it is remarkably supportive of children and families.

We are here to discover the benefits of recognizing the interdependence of family success and health, child success and health, and military effectiveness or any other workplace, or societal level of effectiveness. There is potential for longitudinal research on how we can promote resilience and how we can build the capacity for resilience by supporting families. I am very interested in research on the developmental timing of both trauma and stress and also interventions to mitigate trauma and stress. The military can make contributions about how we learn to transform systems so that they work better for families and children.

## FOSTERING RESILIENCE IN MILITARY FAMILIES OVER TIME

*Speaker: William Saltzman, PhD*

**DR. BENEDEK:** Our next speaker is Dr. William Saltzman, a clinical psychologist and Associate Director of the the Nathanson Family Resilience Center at UCLA. For the past 18 years Dr. Saltzman has developed and implemented trauma and loss focused programs for children and families exposed to trauma - military and otherwise. He is a co-developer of FOCUS (Families OverComing Under Stress), a resilience training program for military families.

**DR. SALTZMAN:** I want to build on many of Ann Masten's comments on resilience in a more applied fashion but specifically in terms of the great comment that resilience does not reside within the individual. Some of the strategies Dr. Masten mentioned are important. To be able to harness the natural processes or strengths of the family system and to promote specific behaviors, interactions, beliefs, and attitudes that we believe support a resilient response are important strategies.

I am going to talk about family resilient processes drawing liberally from Dr. Froma Walsh's model and her work in strengthening family resilience. In the course of my talk I have 4 basic ideas for Dr. Ursano that I want to highlight. I am going to present a case example using a veteran family. I have been working a great deal with active duty military over the last 7 or 8 years. I am also working in county mental health in the veteran community and fielding services for veterans. This case is a blended Army family. Mom brings 2 kids to the marriage with dad, who is an Army Sergeant. They have one child who is 2 years old. Dad has had a total of 4 deployments, 2 of them since he has been married. During that time he saw a great deal of combat action involving the death of 2 members of his unit. Post discharge dad is experiencing PTSD and depression, for which he is receiving medication. He has ongoing alcohol problems, a sporadic work situation, anxiety issues, sleep problems, and some GI issues. He has initiated the contact.

I want to organize our discussion of family resilient processes drawing upon Dr. Walsh's work, in part, using 3 different family organization categories. Flexibility is a balance between change and stability. At the heart of flexibility is the ability to maintain care of the family while adapting to the ongoing situation. The Andersons are able to do that. Dad has switched roles in many ways because his work is more sporadic. Mom needs to work more. They have been flexible, although mom feels badly that the kids seemed to be parked in front of the TV a great deal and some

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of the care routines seem to be breaking down. In terms of cohesion, we see that resilient families maintain a core of connection with engagement of the parents to provide accurate types of support. In the Anderson family we see strong efforts in that direction although things are also getting ragged. Mom is used to being a ruling parent and much more involved. She is not capable of doing that right now. It is important for families under stress to maintain boundaries within and between the family and the outside world. Parental leadership is key to maintaining appropriate boundaries within the family and to the outside world. The Andersons have difficulty with this. They have inconsistent parenting, as well as attending with a tendency to become rigidly isolated. They have cut off some contacts to their support network outside of the family.

The next category of family resilient characteristics is communication and collaborative skills. We will talk about affective and instrumental types of communication patterns. It is important for families under stress to maintain openness and to have a tolerance of different types of expressions of distress. We have seen a great many families in the FOCUS project and other places go into lock-down. Perhaps, because of the parents' irritability or their stress, they cannot tolerate the expression of what is going on. The kids can actually become protective in some ways by not sharing their difficulties. We see some of that behavior with the Andersons. Mom is overwhelmed and the kids' communication has shut down at the affective level. Instrumental communication is key. With the Andersons, there are efforts to maintain clear communication, but it is hard with mom working so much and the hand-off between mom and dad is difficult.

Sometimes couples have different approaches to parenting. Sometimes there are problems with injury communication. We see this problem with some combat injured veterans in the FOCUS program. Mom, who has anxiety and serious GI problems and has even been hospitalized, has not communicated clearly to the kids what is going on. When Mom disappears or she is acting ramped up, the kids do not know what is going on. They worry about her and they worry about dad, who can be explosive at times and has pulled back from the family.

This family has had difficulty maintaining family level collaborative skills. They do not tend to hang together and have fun like they used to. Decisions are often made unilaterally. They do not set family goals so that is a skill missing for them. Affect regulation is an area to monitor family members' levels of affect and distress and then to move in appropriately.

The third group of family resilient processes that are key involves family beliefs and the capacity to make meaning in adverse situations. This includes the operative aspects of a family identity. It involves how a family appraises threat situations and their capacity to respond. It involves whether they tend to be more optimistic and hopeful, as well as whether they can draw upon religious or even transcending values. The basic idea is that the dominant beliefs within a family often determine how a family responds to adversity and stress. Key parts include what has been called a mastery orientation. Parents teach the family that adversities are comprehensible and family members can understand what is going on. Family members do not have to be overwhelmed. They can navigate a path forward. Behavior is modeled by the parents in many different ways. It is modeled by reactions and discussions that parents have along the way with kids. The next part is the capacity to make meaning out of stressful and de-stabilizing experiences. This is critical and this is where the parents come full center to help deal with affectively charged events and help the

children to organize, manage, and make sense of their experiences. Parents' examples and skillful encounters help shape the child's experience and memories and build the expectation for both young children, as well as older children. We can get through this by working together. We can understand this and develop a pro-active plan.

Parents can also help kids in the family navigate their way toward positive beliefs and attitudes that will be adapted for the long term. It is important to understand that parents play a key role in promoting protective beliefs and attitudes. Through scaffolding conversations with kids, parents help make sense of scary or very challenging types of transitions and situations. Parents can help move children through difficult situations by talking with them.

Generally speaking, we believe that you can target and try to enhance specific family resilient processes through a fairly brief type of program. There is a great deal of skill required as well as structured exercises that are helpful. I want to emphasize the centrality of belief structures and the meaning-making capacities for long-term resilience and recovery of the service member and the family. It is at this level at which many military families take a hit in terms of their belief structures, their trust in each other, their institutions, as well as ongoing trust in the world. This is an area where military families can sustain some real damage. In fact, when the Andersons first came in they appeared beaten down, despondent and hopeless. They had difficulty finding a path forward and difficulty remembering their strengths and their previous successes.

What are the tools that are available to help families construct meaning and to build resilient in the family? A quote by Bruner (1986) provides meaning, "It's by constructing a narrative that we make an experience knowable, integrated into our conscious life, and then access it as a memory." This quote gets at the idea that we are hard-wired in certain ways to use the narrative or story form to make sense of things, especially affectively charged traumatic events. Those of us who do trauma work know about the use of narrative to help reduce reactivity. What I am promoting is a family level narrative. This is what we do in the FOCUS program to try to bridge estrangements in the family. We have a graphic approach to eliciting narratives from all the family members.

We have a time-line for parents who have experienced multiple deployments. There are many points in which mom and dad's lines converge and some points where they diverge. This highlights the fact when you explain this with a mom and a dad present, they can see the differences in their experience for the same events. In the FOCUS program we have parent sessions in which we elicit narratives from mom and dad, or we work with the single parent or the care-giver to elicit their story. A graphic representation provides a way to bridge misunderstandings across the care-givers, as well as to provide an opportunity to see the whole context of the multiple stressors they have been through. It is a way to normalize and validate their current levels of distress.

We have a different format and different ways of working with kids in which we elicit stories about their experience across deployments and whatever points are important for them. We call the story telling, Time Map, and we use a color-coded method from green to yellow, orange and red, to show what was distressing for the child. We have a graphic representation with their drawings, their ratings, as well as their specific questions and concerns that they have not felt comfortable expressing to mom and dad. With the child or teens approval we use the Time Map when we meet with the parents. We use this tool to help the parents prepare for a family

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session where we can share individual narratives, questions and concerns. We are moving more towards a family narrative or a shared understanding of what the family has been through and where they are now, as well as to highlight their current strengths. We identify what they bring to the table and then we move towards development of specific skills that would be most useful for that family.

The next idea is the utility of the narrative approaches and methods to enhance parental skills and co-constructing children's experiences and understanding of the stressful events. Using this platform combined with the narrative sharing, we find that we can enhance all 3 levels in terms of resilient processes. We see improvement in many cases. This is anecdotal but we see improved family organization, communication, and collaborative skills. The family is able to find the more positive aspects of their family identity and confirm adaptive and positive beliefs to help them deal with their current difficulties.

This next piece has to do with something that we talked about earlier. Over time, individuals and families have different emergent and changing needs after they have experienced trauma, stress, or transition. At different phases of recovery from traumatic events the individual may have very different needs and different resilient processes may be more or less important at specific times. Some of the early work by Lietz identified families who had a resilient response to a range of traumatic or adverse situations. They identified a series of stages of response and recovery, as well as different types of family factors that seem to be most helpful for those specific periods of time.

We can start to look at where the family or an individual is in terms of their arc of recovery. We cannot assume that the same things are always good for all stages. In survival stage, perhaps external/internal support is taking charge, as well as drawing upon morale and spirituality. In adaptation, flexibility and communication are key. In the acceptance stage, families are growing stronger and finding meaning so the belief aspect comes more into play. Finally, families felt that helping others was an important end stage for their recovery. The prime idea is that there are different approaches and different pieces and we want to factor in stages of time as well.

I have had the opportunity over the last 20-some years to respond to a host of different types of trauma or disaster events. I have been involved in the immediate and long-term recovery from school shootings like Columbine and Santana. I worked 5 years on the World Trade Center and for 6 years on the Bosnian War developing programs for kids and families. What was very clear is that it was like trying to hit a moving target. We started off with pretty clear trauma programs with a trauma and PTSD focus. I remember very clearly when Chris Layne and I were up in Banja Luka, which is a Serbian entity, and their psychologist said, "Bill, it's not the trauma. It's the death." This was 3 years after the war. The grief and complicated bereavement issues were more prominent at that point and we had to shift our intervention.

In closing, families are dealing with a complex mix of many types of exposure and difficulties. There are different trajectories for different problems, whether it be PTSD, TBI, or bereavement. Each has a very different cycle that we have to be responsive to. The centrality of belief structures and meaning-making capacities for long-term resilience is key. I am not saying we need to do cognitive processing therapy. That is different. I am talking about family level focus on belief structures and that these belief structures are a lynch-pin in a family's resilience response. The utility of narrative approaches to enhance parenting skills for making meaning and understanding is key. This is teachable and learnable and is a wonderful tool to build

resilience across families. Understanding the changing set of skills and changes in the resilient processes during a family's recovery trajectory is key. Understanding the differential impact and trajectory of grief and moral injuries for the service member and the family is important. These types of injuries have a different half-life than PTSD. Grief often picks up in year one and two, for many different reasons, as does TBI and other chronic medical difficulties. We have to have a complex understanding of structuring these interventions.

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## FOSTERING RESILIENCE IN MILITARY FAMILIES: CASCADING EFFECTS OF POSITIVE PARENTING

*Speaker: Abigail H. Gewirtz, PhD*

**DR. BENEDEK:** Dr. Abigail Gewirtz is Associate Professor, Department of Family and Social Sciences at the Institute for Child Development, the University of Minnesota. Dr. Gewirtz will continue to discuss the research framework for resilience and give us some examples of implementing this in military populations.

**DR. GEWIRTZ:** I want to acknowledge our sources of funding for our research and our program: National Institute on Drug Abuse (NIDA), National Institute of Child Health and Human Development (NICHD), and the Substance Abuse and Mental Health Services Administration (SAMHSA). In addition, I have a fantastic team of co-investigators and collaborators from across the United States.

I am going to talk about fostering resilience by supporting parenting. I would like to start by answering one of the questions that was put to us this morning. What would you spend your last dollar on? If I re-frame it as what would you spend your last dollar on to support military families, which I think was the intent, my answer would be parenting. My goal is to explain why. Why do we focus on parenting? I will talk about the role of parenting in the lives of children who experience stressful events and what we know from decades of parenting research. Excellent science has shown us that you really can strengthen parenting and strengthening parenting has cascading effects, not just on children, but throughout the family system. While we have many services and supports for families within military systems, there is a challenge in terms of empirically supported data.

I will begin with a theoretical perspective that is the perspective of social interactional learning. Gerald Patterson is the father of social interaction learning theory, which previously was known as coercion theory. Patterson was a World War II veteran. When he was 17 years old he enlisted and was sent to the island of Okinawa. After an injury and after having seen several of his buddies killed, he was discharged. Patterson spent the rest of his career studying families who get into trouble, and what he found was that kids learn how to get into trouble because they have stressed parents. The interaction between parents and children becomes increasingly coercive. You can predict childhood arrests or youth arrests 3 years

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later from the intensity and the frequency of coercive interactions between parents and children. This is pretty powerful science.

This was not just Patterson's idea. There are a group of family researchers who developed a model called the Family Stress Model. The idea is that in stressful situations children's adjustment is mediated through the effect of these stressful situations on parents' parenting. Steve Cozza and his group highlight that in a very nice way. There are specific parenting practices that are associated with, and that predict, children's positive adjustment and children's problems.

Our conceptualization is that deployment is a military family stressor. Why is it a family stressor? For 2 reasons; separations and combat stressors, and reintegration are very special opportunities for changing trajectories. If we take a family stress perspective what we understand is that it is the parenting practices of the parents that mediate the impact of deployment stress on children's outcomes. There is a robust literature on a variety of civilian populations showing how these conditions impair parenting under a variety of stressors including: parental psychopathology, socio-economic stress, economic conflict and family transitions like divorce and re-parenting. When parents are stressed, their interactions with their children are more coercive and you see the results in detrimental impacts on child adjustment.

What are effective parenting practices? The parenting practices that I am discussing come from the model that emanates from Patterson's social interaction learning theory. It is the Parent Management Training Oregon Model and is the most widely tested model that is out there. SAMHSA's NREPP (National Registry of Evidenced-based Programs and Practices), represents the largest category of evidence-based parent training programs. There is literally 40 years of research on these programs. The research shows that when we strengthen parenting practices, not only does parenting get better, but children's resilience improves. What do we mean by effective parenting practices? We mean teaching positive behaviors through encouragement.

Effective parenting practices involve encouraging kids and using non-coercive discipline that is consistent and includes: follow through, family problem solving, and parents teaching children to approach problems in a flexible, structured way that results in a resolution. Enjoying children, positive involvement, monitoring and supervision are also important. Steve Cozza's data talked about the associations between monitoring and problematic child outcomes. I am pleased to see that finding in the military literature. These associations have been replicated time and time again in the civilian literature over the last 40 years. Pont DuCharme's work is a good example of this.

Regulating parent emotions and helping parents deal with their children's emotions is a particularly salient issue for military families. We have heard a great deal about experiential avoidance associated with PTSD. As my colleague, Jim Schneider, puts it, "The family is the crucible for strong emotions." It is not surprising that experiential avoidance would be one of the key factors associated with difficulties in the family. The Oregon model for parent management training is arguably the most well-validated parent training model. It has been shown to improve parenting, does not rely on self-report, but actually what you see when you video tape parents and children interacting together prior to and following a randomized control trial.

What do we mean by improving children's resilience? When you improve parenting, kids do better in school, with friends and in social situations. They have fewer behavioral problems, less depression, less substance use, less truancy, and fewer school problems. What is beautiful about this model is that that you see changes to

children's adjustment and development, as well as concurrent changes or subsequent changes.

My colleague Marion Forgatch conducted a 9 year follow-up study of a group of single mothers who were randomly assigned to either participate in a group-based parent training intervention, or to receive services as usual. Nine years later, the mothers who were randomly assigned to the parent training group had children who were doing better on all the dimensions I mentioned earlier. Those mothers also had less depression, less substance use and were earning more money. They were better educated and had better jobs than the control mothers. To me, that is the ultimate definition of a cascading intervention. In addition, another study of this same model with step-parents showed that this parenting intervention had impact on the co-parenting structure as well. The study showed improved parenting and marital satisfaction among the step-parents.

Unfortunately, this parent training intervention has not been implemented in a military context, with the exception of one program. There is an experiment that we have been conducting over the last few years, with the support of NIDA, to modify this parent training intervention for military context specifically for families who have deployed. We heard earlier about the importance of thinking about deployment and reintegration as key stressful points. This randomized control trial is specifically focused on reserve component families. These are families who do not have the benefit of the structure and support of the military installation. They are often isolated. They live in pockets and they may not know another military family.

After deployment Adaptive Parenting Tools (ADAPT)) is a 14-week long web-enhanced parenting program for families where one parent has returned from deployment and with a school-aged child between the ages of five and twelve. In collaboration with the program developer, we made some significant modifications for the military culture. Specifically, we focused on emotion regulation. We spent a great deal of time teaching skills related to what we call a united parenting front. Being on the same page, as well as addressing barriers to participation are key issues that parents talk about as reintegration stressors. We are conducting a large-scale randomized control trial with 400 families in the Midwest. We are midway through the trial, but we are already seeing six and twelve month outcomes.

Our program addresses the issues related to prevention science and how to bring research into practice, as rapidly as possible, without compromising our scientific integrity. We teach specific skills in a group with the use of videos of family interactions illustrating specific points. Skills training is typically more challenging if you are dealing with individuals with PTSD or high levels of experiential avoidance, etc. After parents have spent a couple of hours in a session with other parents, practicing this skill over and over again we send them home to do home-practice. They have an additional video to watch that shows parents actually practicing this skill. We then build on this. We teach parents about encouragement and then we spend quite a bit of time on emotions. We teach parents about discipline, problem solving, managing and monitoring conflict, co-parenting, dealing with the transitions associated with deployment, and how to manage that in a family context.

We were concerned that we would get a great sample of mothers not in need of skills training; however, it is the moms who generally come in first. In this National Guard population they are mostly civilians. Mothers and fathers attend equally and benefit equally, as do parents in our pre and post analyses. We are pleased to find that parents at both high and low risk at baseline seem to benefit equally.

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The second question from this morning was what are the future research questions we have? Parenting is very close to my heart. One of the beautiful things about doing a large-scale randomized control trial with military parents is that we include military dads. This is important since we do not have as much information about dads as we do on moms. We have military moms as well and I want to finish with a quote from one of our first study participants. She is a single mother and a high ranking officer in the National Guard. She speaks so beautifully of the challenges that are associated with being a deployed mother:

*“When I left they [my children] were mommy’s girls, just two school-age girls. I took them to day-care, I picked them up, I did everything. Then when I came back, there was a lot of conversation about what I missed. They were with their dad. When I came home, my youngest, would not let go of me. She held me so hard it would actually hurt sometimes. She would just squeeze me. They would talk about how they were the girls who went places and everyone else but them had a mom there. Moms carry that guilt. You, as a mommy, think that you are supposed to be there all the time — not that men don’t have the same experience. But when I was talking to my male counterparts, when they were coming home it was to play with kids. They would not talk about coming home and now have to take care of the kids. It wasn’t that they were going back into a care-giver role.*

*I joked with my office mate when we were in Afghanistan. If we could just get child-size protective vests, then we could bring our children over, because other than being away from our children, we both loved being on deployment. We were doing our jobs. We were doing what we were trained to do. It is sort of like if you’re talking to your kid, as if they were a dancer, but never got to dance in a dance. Wouldn’t you really want to dance in a dance, if given the opportunity? If all you did was train and prepare to be a soldier, but never had the opportunity to be a soldier in a combat situation, when given the opportunity, you’d feel like you’d missed something important.”*

I love that quote because it brings depth what soldiers experience, something that is missed when we focus only on averages or scores. We have a great deal of data on mothers; however, narrative experiences such as this one bring an important dimension to the experience of our military families.

## PANEL 3 DISCUSSION

Moderator: David M. Benedek, MD

**DR. BENEDEK:** I want to remark on the common themes from the morning and the afternoon and some lessons learned. First and foremost is the idea that resilience does not reside in the person. I have always thought of myself as a resilient person. But in reality, I have to thank the systems that I have been brought up in including my family and my employer. I also like the idea of thinking about system resilience and planetary resilience.

The other theme that was important to me is the notion of consistent meaning across family members. People coming home have a shared meaning of their experience with those who stayed at home and the challenges associated with that. We see this in the importance of the reception at home in terms of family members and in terms of service members.

**DR. WALSH:** Just as resilience does not reside in an individual as a set of traits that are immutable and either you have them or you do not, we have to be careful with families. We cannot think that some families are resilient and some families are not resilient. Think of these as processes over time and that a core principle of a resilience approach to intervention is the conviction that all families have the capacity to gain resilience. Families may not all reach the same end point, but there is that core conviction.

**DR. BLOW:** I am excited to hear about the inclusion of multiple family members and treatment this afternoon, and in Steve Cozza's presentation this morning. I like the phrase, "cascading effects." The more we include family members in primary treatments for disorders like PTSD, TBI and the other issues we have talked about, we will have a much larger impact. It may cost more in the short-term to include more family members; but in the long run, I think we will save millions and hopefully, even billions of dollars.

**DR. SALTZMAN:** In terms of the bang for the buck issue, I agree wholeheartedly. We know some practical things and there are strategies to meet families where they are. In terms of sustainable change, it is important to focus on children and parents and to work within their system. We can have an enduring impact that is under their control.

**DR. LONDON:** I wanted to comment about cascading effects. That finding came out of a nine-year study and as Ann Masten said, we may be able to learn a great deal from studies of military families that could extend to other kinds of families. Meredith Kleykamp talked about the importance of veteran families and following

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families longitudinally over time. All of the comments linking across multiple sessions today point to the need for more of a life course perspective for studies that compare veterans to non-veterans or follow interventions with families over the long-term. Long-term follow-up is required to really understand the consequences of military service and the lessons learned from the interventions we do with families who are facing different kinds of stressors.

**DR. BENEDEK:** Your comment about the need for longitudinal examination of interventions and the challenges of military transitions is consistent with Dr. Saltzman's comments about the differential trajectories of the kinds of stressors our service members experience. I concur with your observation.

**DR. GEWIRTZ:** How much research is enough before you go large scale? One of the reasons we picked the model to develop ADAPT is because the model has 9 years of research behind it. Also, this is a model that has been implemented on a wide spread basis in 5 countries in the world, and in 4 states in the United States. It has been implemented on a wide spread basis in the children's mental health system, the child welfare system, and in prevention systems. What do we need to do in order to get it out?

In prevention science, we have some really good findings and good data. We have a large body of effective programs of the highest standards, gold standard effective programs, and we also have a growing number of programs that have been taken to scale with implementation infrastructures that are validated. Not only are the programs validated, but the implementation infrastructures are validated. They have fidelity systems that have been shown to have predicted validity. For example, in the Parent Management Training-Oregon Model (PMTO), you observe what a facilitator does in a group and score it. There is a reliable system for scoring and the level of fidelity with which the facilitator delivers the program predicts the amount of change in parenting. These are all empirical findings that can and should be built upon in the military. There is no need to reinvent the wheel.

**DR. COOPER:** Hearing about these models raises a question in my mind. In the military you have a slightly different situation. You could have a two-parent family and then you have a deployment, which leads to a one-parent family, and then you have the return from the deployment, where you return to a two-parent family. What I heard is that these are dynamics about how to co-parent better or how two parents work it together. The military, by its own nature, essentially creates an intervention that we can learn from. We know a little about what to do when the parent returns. We know how to prepare parents while they are together, but we do not have any models for while one parent is deployed.

**DR. MASTEN:** I would agree there is less general research within a military context on that, but I do think there is an extensive relevant literature on families that get separated for other reasons. A family could be separated due to a business deployment, due to divorce and separation, and for many other reasons. Many of the findings that undergird the interventions that we are talking about and from the resilience literature, have strong implications for how you would support a single-parent family, or a family that is in transition. I do agree there is less evidence and that would be a very powerful way that the military could contribute to our knowledge base.

**DR. GEWIRTZ:** Bob, this morning you posed the question of multiple deployments and high operational tempo. We do not know anything about the impact of shorter, more frequent deployments. That kind of research would provide a huge

contribution because I understand, in the future, wars will be fought by small, highly trained, frequently mobilized units. What is the impact of coming in and out of the family two or three times a month?

**DR. BENEDEK:** Another lesson we learned this afternoon is that transitions are also opportunities, and this morning we talked about the risk factors. There is an opportunity for the military to leverage the models of different length transitions and study and learn from them. What are the effects and what are the best ways to mitigate the effects is always before us. We should invest in that.

**DR. COOPER:** There is also the question of learning. When a person is deployed they need different parenting strategies. They have their own unit, their mission to fulfill, and the safety of their team and themselves. But they also want to have a role in the family. That is an aspect that we do not understand very well. Their role needs to change while they are deployed.

**DR. MASTEN:** I wanted to underscore that point. It is a very important issue and as I think back, I have a personal anecdote. When I think about the situation of my father parenting when he was in Vietnam, it is profoundly different than how deployed parents in recent years have enacted the parenting role. In those days, you sent little recorded tapes that would arrive every day, except during the Tet Offensive. They shut down everything for three weeks, and you are panicking. Those little messages were so monitored. My father was actively changing what he said to be supportive to us as kids. Listening to the tapes, you would have never realized that he was in a war zone and a Battalion Commander. He was parenting in a protective way.

That does not work anymore. The world of 24/7 news, CNN and text messaging presents a new set of issues that we need more knowledge about. How does a parent know when to Skype and when not to? How do you manage live interactions when you do not want a child to be fully aware of every little stressor?

**DR. BENEDEK:** That is an excellent point. We have discussed the technology and the utility of technology, and importance of technology. It is a double-edged sword if we are trying to be a real-time parent while ducking bullets. On the other hand, we do not necessarily want to be doing that.

**DR. THOMAS:** I was very happy to hear Dr. Gewirtz's presentation about some larger studies on parenting programs. Very respectfully, I disagree about the fact that there is one empirically driven program that all of the services use. All four services have the nurse home-visitation program. This program comes out of a very strict, randomly controlled design that has been replicated again and again. Dr. Gewirtz is absolutely right, that once you have an empirically defined program and you implement it, you do get effects and it addresses the issue of a single parent, a temporarily single parent, and parents together. This is a place where you can see a great deal of prevention and intervention happening.

**DR. GEWIRTZ:** I stand corrected. My population is 5 to 12 year old children.

**DR. MacMILLIAN:** I was going to make the same point, and that is why I think it is so important to ask systematically what your target audience is, what the intervention is, and what are your outcomes? For example, even with this particular age group, if you are interested in the reduction of violence or the prevention of child maltreatment, then it would be a different parenting program. By altering the outcome you are interested in, from behavior problems in children to prevention of child maltreatment, you will then get different levels of evidence.

That is why it is so important to bring people together, like the people present-

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*There are different ways to measure outcomes, and different stakeholders have different views of what success is in a program.*

ing this afternoon, but also people who are more at arms length. This is something that Manuel Eisner from the University of Cambridge talks about. If we are going to be clear about what the evidence is, it needs to be the people who have a vested interest in the outcomes of particular programs. I say that as somebody who works very closely with David Olds, who developed the Nurse Family Partnership. But then we need to have people who have the critical appraisal skills to do the systematic reviews, who are at arms length, and can look at the effectiveness of intervention with those issues in mind.

**DR. BENEDEK:** That goes very much to Delores Johnson's point earlier this morning. There are different ways to measure outcomes, and different stakeholders have different views of what success is in a program. There are different programs to address a better war fighting machine, or diminished inter-spousal violence, or kids who are better decision makers. We would like to think there are some core elements of interventions that might be universally effective and adaptable to different situations.

**MS. BARRON:** It is important to remember the component that you are working with. Is it an active duty or reserve component family member? The cultures are different and the intervention could then also be informed from that perspective.

**DR. REIDER:** At the National Institute of Drug Abuse (NIDA) we have a portfolio on substance use prevention that spans the prenatal period through the young adult and adult periods. We have 40 years of research that includes efficacious and effective interventions, as well as systems level studies. We have been very fortunate to have funding that has followed many projects over time from childhood through young adulthood. We have evidence of the long-term effects on substance use prevention as well as effects on a broad array of behaviors not targeted by the intervention.

We have a good idea of what works and what does not work. The big issue is getting it out into communities. We think many of these interventions would be relevant for military families. NIDA has been funding these studies along with other institutes to see if they work when they are adapted and tested in military and veteran communities.

**DR. BENEDEK:** The nature of the comment is perhaps we do not need to reinvent the wheel, if in fact, it has already been invented and tested. In some places that may be the case. This forum is designed to exchange those kinds of ideas and get some cross-talk going.

**DR. SPIRO:** Do many of you know the Cochrane Collaborative? It is evidence-based medicine. Do you know about the Campbell Collaborative? That is a place where they evaluate, with independent people, the efficacy of a variety of different kinds of interventions. It is a place to go and find things that have been tested and validated. I am not sure whether that would be relevant, but it certainly would be a place to look.

An interesting question I would ask is whether it is worth focusing on the prevention of disorders or is it worth focusing on the fostering resilience or adaptive skills in a non-disorder approach?

Another point I would like to address relates to whether some parenting skills may be generic and the outcomes question asked earlier about whether we are trying to make better soldiers, or better parents, or better children, may be answered by focusing on the processes.

**DR. BENEDEK:** One would hope that there are some universal elements of utility.



**DR. LESTER:** I was struck by the fact that within the foundational programs, the intervention that is targeting parenting actually resulted in positive outcomes across the whole family system. That is a consistent finding across many family center preventions. It is not just prevention of disorder, but it is the enhancement of resilience capacities and processes that probably hold the most weight in the long term. In our 10-year outcome of a similar intervention the psychological health reductions and symptoms wore off; but we found long-term developmental improvements for the kids. They completed school, delayed first pregnancies, and had healthier adaptation as they transitioned to adulthood. This kind of investment in prevention and using these foundational programs does make a great deal of sense. We also need to talk about the infrastructure processes for implementation.

**DR. MASTEN:** It is important to think about adaptive processes because many of the fundamental systems that serve a protective role in high-risk or high-adversity context are the very same adaptive processes that promote positive human development in general. We have heard about these processes many times today, for example, self-regulation, capabilities, close relationships, and families' cultural practices. There are some core processes that play a very important role in human development under all circumstances that also function as resilience processes in threatening situations. It is similar to your immune system. We do not want to go into surgery with an immune system that is compromised. Many of the things we are talking about are like the immune system that is the core protection for your health. How do you foster a healthy immune system? We also want to inoculate people for infectious diseases because there are situations where we need the antibodies for the infection in order to survive. It is very useful to think about the specialized protections we want, under certain circumstances. What are the fundamental processes that promote positive adaptation in human beings? What are the different points in development that are very flexible and that you can use to adapt to many situations?

**DR. DELANEY:** I want to reiterate what Dr. Lester said. These studies are critical. I manage the National Registry of Evidence-based Programs and Practices (NREPP) out of my office. People come back and say to us, "It didn't work out right." We have a large number of tools that work very well, but they only work well if you implement them with fidelity and you manage them over time. Part of the problem and challenge is that doing the science does not address what you do to keep programs running well. We have an implementation science, but that is getting to the point where it is its own little field. It has its own little meta-analysis of whether we did the right study on the implementation of the meta-analysis, which somehow is cyclical in its argument.

The Centers for Medicare and Medicaid Services (CMS) will not pay for a clinical social worker, a clinical psychiatrist, or a clinical psychologist to supervise a clinical person so that they can evaluate their work. I was trained on Current Procedural Terminology (CPT) when I was working at Bethesda. From that training, I was supposed to implement it. Patty Lester will tell you there was no ongoing supervision to make sure we did it right.

The part that we really need to be thinking about is how do we change the structure? How do we collect data and use that data to help people implement programs over and over again with fidelity? We are going to be back here in 4 or 5 years, having very similar conversations. We have really good data, and we know how to do a great deal of this stuff well. We will not have made the changes that we really wanted to make because it works great. I was at the National Institute of

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Drug Abuse (NIDA) with Eve Reider. Everything worked great while we were there funding it; however, it does not always work very well when our funding goes away.

**DR. BENEDEK:** You make a good point for sustainability science, or post-implementation science, or at least post-implementation stewardship.

## POPULATION IMPACT CHALLENGES AND STRATEGIES: ILLUSTRATIONS FROM PROSPER UNIVERSAL PREVENTION RESEARCH

*Speaker: Richard L. Spoth, PhD*

**DR. ZATZICK:** The topic of Panel 4 is program evaluation. As we prepared for our panel discussions we considered implementation science and sustainability. That is something we are trying to integrate into our preventive programs. Our first speaker is Dr. Richard L. Spoth. He is an F. Wendell Miller Senior Prevention Scientist at Iowa State University.

**DR. SPOTH:** I would like to pick up on Abigail Gewirtz's cue and talk about how I would spend that last dollar. If I had the choice of how I would spend my last dollar, I would spend 33 cents on programs that had demonstrated efficacy with the primary socializing environments of the children and families that we were targeting. I would spend another 33 cents on developing the infrastructure to support both sustained and quality implementation through effective training and technical assistance. Perhaps 33 more cents would go into evaluation and data systems with 2 goals. The first goal would be providing data through the implementation process to do the kind of continuous quality improvement that we talked about, adapting where adaptation made sense. The second goal would be to evaluate promising programs that were not yet available to reach the defined populations of interest. I am holding out on that last penny!

As Doug Zatzick referenced, our panel will talk about implementation science. When we were planning for this panel one of the questions we posed was, how do we best achieve impact with military families? I will be addressing that through the lens of universal programming. One of the things that worked out well for this panel was that each of the three of us will talk about a different type of programming. I will be focusing primarily on evidence-based, universal preventive interventions and delivery systems. Over the course of this talk I will present some context for translation science of relevance to population impact and provide illustrations to prompt discussion concerning the focus on universal intervention. I will then suggest some primary future directions. Our model, which provides a framework for our work, follows the 1994

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Institute of Medicine (IOM) model for prevention called the Preventive Intervention Research Cycle. This is a preventive intervention model that starts with an empirically driven intervention design that is intended for ultimate scale-up. We need to consider the ultimate goal which is population impact and scaling up evidence-based interventions to achieve that population impact.

We start with pre-adoption research based on a business model approach that looks at consumer preferences, market feasibility, and considers the organizational implementation setting. The next phase is adoption. In this phase the decision is made as to whether or not an intervention is implemented. There is an emerging literature on this topic. The W.T. Grant Foundation has done a review about how different groups of people make decisions, such as school administrators. Implementation is the next phase and the final phase is sustainability.

One must always consider translation functions in multiple contexts. Context influences how programs are adopted, implemented, and sustained. One of the core challenges we talk about are the desperately needed practice and research infrastructures, especially infrastructures that facilitate a careful integration of practice and research.

I am going to talk about our research program and how it addresses some of these translational issues. There are two windows of opportunity for universal intervention in the case of substance misuse in youths: first, before initiation of substance use, and second, before advanced use. This is a theoretical framework for some of the work that we do. It focuses on programs that are specifically designed to reduce transition. The youth that are targeted by these programs have an age related pattern of reuse. We know that for every year of delay in initiating use there is a significant reduction in the odds of eventually developing an alcohol dependence disorder or drug use dependence disorder. What we are trying to do with these programs is delay onset and delay transition to more serious use.

One of the big points to be made across multiple prevention trials is that the interventions we have tested have had effects up to 14 years past baseline. Therefore, we start working with these kids in middle school and we see multiple cross-over effects. We see improved youth skills, improved school engagement and grades, decreased aggressive behaviors and conduct problems, decreased mental health problems, decreased health-risking sexual behaviors, and improved family functioning. We target outcomes that are related to family functioning, the mediators of ultimate problematic use. We have data and published articles about outcomes up to 14 years past baseline. Our results indicate that the programs address common risk and protective factors that have demonstrated effects on primary socializing environments. We need more of these kinds of programs. We need an effective way of reaching the families, kids, and communities that can benefit from these programs.

We have conducted survey research in multiple types of settings, including school settings. However, most programs are not evaluated, and some that are evaluated are not effective. Others are evidence-based interventions that are consistent with set standards that are produced by the Society for Prevention Research. Even fewer are sustained and responsible for quality implementation. When looking at longitudinal outcomes, program benefits are rarely demonstrated. We began our program of research, an analyzed control trial, focused on two universal family programs. We were concerned about implementation and we had access to The Land Grant University based outreach system. It is a 3 tiered structure that evolved over 24 years. This is what we call our sustainability model because we have sustainable local teams that are responsible for quality implementation and a sustainable technical assistance team.

We have discussed the difficulty in engaging families, bringing them in, recruiting them, and having them continue to be involved in programs. We have the problem of implementation drift. We also have the problem of communities generating funds to sustain the programs on their own. We conducted a study in 28 school districts, 14 in Iowa and 14 in Pennsylvania. They were randomized to a full partnership support or they were delayed by 3 plus years. It was a random sequential cohort design, multi-method, multi-informant measurement and now we are collecting data with the participants, now young adults.

The last data point we have analyzed is through 12th grade. This is a representative outcome. Again, the primary target is substance abuse, but we also look at conduct problems. We have another paper on outcomes at 12th grade. There is a diverging trajectory. There was a significant difference in growth over time between controls and intervention groups. Each point, the 12th grade, 11th grade, and so forth, is significantly different. We have published multiple studies focused on moving towards population-level impact with community-based interventions. The findings I want to emphasize are process related outcome studies. Most of the effective mobilization of community teams and teams' sustaining programs have reached the 12 year mark. For the most part, the teams are self-sustaining, have high recruitment rates, and are implemented with high levels of quality. We examined proximal outcomes for which I will refer people to look at our published findings.

I am most enthusiastic about how the intervention has actually changed the social networking among the youth in the community. We are also conducting economic analysis that show cost efficiency which specifically relates to having that effective system. This is such a broad area that we have identified research priorities specific to each of our four translation functions. We have a table showing 13 priority areas and 40 key research questions. There is still a great deal of work to be done, especially in the areas that have not received as much attention such as implementation. We need to understand more about the consumer cycle of demand-related systems. For example, how do you use social media to create a demand? How do you better understand the markets for these kinds of programs?

There is so much we need to know in this area, including the importance of references to the dynamically changing systems. For example, if you want to use social media with kids, such as a new app to help them better engage with the programs, by the time you set up a 5 year randomized control trial the technology has changed. Finding financing is also an issue. We have a network team that has been designed to scale up. We have worked for 5 years on the scale up challenges, and we just recently got funding to do an adaptation of the model for military families.

*We have discussed the difficulty in engaging families, bringing them in, recruiting them, and having them continue to be involved in programs. We have the problem of implementation drift.*



## IMPROVING THE BEHAVIORAL HEALTH OF MILITARY COMMUNITIES

*Speaker: Richard E. Heyman, PhD*

**DR. ZATZICK:** I would like to introduce Dr. Richard Heyman, Professor at New York University. He will talk about implementation science involving an Air Force Program.

**DR. HEYMAN:** I am going to be presenting work on two different prevention programs that we have done in partnership with the Air Force. And I do not know exactly why, of our team, I was the one who was asked to present. Amy Slep who is in the back could have just as easily done it.

We've been working on NORTH STAR for about 15 years with the Air Force in a programmatic series of things that have been funded by some of the people who are in this room. And the second program, ARMOR is more recent, but has also benefitted from similar investment.

The challenge that we have been talking about at various times today and that these two programs I have referred to focuses on problems that we have labeled under the umbrella of secretive problems. We are referring to family maltreatment, child maltreatment, partner abuse, alcohol abuse, drug use, and suicidality. These are issues that people tried hard to keep from the community. It is the classic tip of the iceberg kind of problem. The Air Force has data from 4 different community surveys collected every 2 years over the past 10 years. The surveys give us information on about 50,000 people with each data collection. These numbers suggest that the size of the iceberg is about a third of the active duty population. This varies depending on which of those secretive problems you are talking about. But somewhere between 1 and 6 and 1 in 20 members are reporting clinical levels of these problems when you ask them in behaviorally specific ways.

About 1 out of 6, or 1 in 20, including those in uniform, do not report the extent of these problems. So people are doing a pretty good job of keeping the extent of these problems hidden. The community becomes aware of these issues when, for example, someone gets a DUI, or someone has security forces come out to their home when there is a domestic dispute. But largely people keep these problems from the community. This poses a challenge for prevention because these are also people who are not going to attend preventive programs. For the most part they receive help when they get into trouble or a problem comes to the attention of the authorities.

The NORTH STAR project started as a data gathering prevalence project that we

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were conducting with the Air Force Family Advocacy program and it was expanded to include other behavioral health problems similar to those I just mentioned. At a certain point we realized that we were spending time building this data gathering infrastructure that provided information about prevalence, risk and protective factors; however, the information was only going to headquarters for planning.

In addition, there was an implementation infrastructure at every base that was required by the Air Force to have the prevention and human service agencies coming together in an integrated way to deliver prevention care; however, these agencies were not guided by anything other than their own resources. Therefore, we thought this is our Reese’s Peanut Butter Cup type of opportunity to do cutting edge prevention science. We had the makings of what modern prevention science would say are necessary; however, we were not integrating these elements into a prevention program. We were fortunate to get the support to pull a program together.

We borrowed from the Communities That Care (CTC) model, which was using a data driven approach to help community planners guide their choice of evidence-based interventions, implement them, and then collect the data to determine whether the interventions were working. CTC was aimed at youth problems; however, nothing similar existed for adult problems. We thought that this was an excellent opportunity to take that same approach that was becoming recognized within the prevention science world and apply it to adult problems. The beauty of the CTC approach is that it targets risk and protective factors. It allows the data to guide you to identify the strongest leverage points and the ones that have the most in common. This allows you to tackle the risk and protective factors instead of the outcomes, while providing the opportunity to measure the outcomes and determine whether you are both increasing the resilience and the capacity of the community, as well as reducing the outcomes. This ties together some things that were discussed earlier today, such as using empirically supported activities to achieve desired goals.

The goals of NORTH STAR were first, to reduce secretive behavioral health problems by improving the risk and protective factors, and second, to profile the communities without the “Santa Claus” effect. That is, without us coming in and providing money and resources to develop interventions and then once the funding for the research dried up, leaving with nothing in place that can be sustained. We planned to do this without providing any additional implementation resources other than integrating the capacities that were essentially already there and then testing them. That is what the research was designed to do rather than providing extra resources. In this approach there is local control, local decision making, and local sustainability. The data is used to help set priorities, to choose risks, and to let the community choose their priorities and choose risk and protective factors to target. One of the amazing things that happens when you actually use data to guide this is that you are able to assess and decide what the 2 or 3 key outcomes you are most interested in are. If we targeted “A” that everybody thinks is important, that would hit one of these outcomes. However, if we target factor “B” that we also think is important that hits 8 out of the 9 outcomes, the data can guide you to a problem that gives you the most leverage. You then help the local community by choosing to implement emphatically supported activities, monitor the impact, and evaluate the effectiveness.

We conducted a randomized controlled trial. One of the problems is that we were doing this with the community as the unit of randomization. We had 4 pilot sites in our initial outline, and then we randomly assigned 24 communities to test



or control conditions. Twenty eight communities represent a third of the Air Force. However, we still ended up with an underpowered study because the fact that you have tens of thousands of people in your surveys at those bases only adds to your procession a little bit, you still only have 12 and 12 in your test and control conditions. Regardless, we were able to get significant main effects for reduced alcohol abuse. We also had a moderate effect size on child emotional abuse which was just short of statistical significance, but was nevertheless fairly strong.

Interestingly, if you looked at the pre-implementation adverse conditions where there was less command support, the committee that was charged with doing the prevention did not function as well. For the bases that received a NORTH STAR there was an interaction that had significant effects on partner physical abuse, suicidality, and prescription drug misuse. I should mention that at those 12 bases that received a NORTH STAR, we went in with the naive notion that because the program was required by Air Force regulation, they would have a community action plan that their leaders would follow. One third of our bases implemented their action plan as designed, one third at least did something, and one third of our test bases did not do what was on their action plan. There were only 12 bases and one third of them were not even “taking the medicine,” yet we still got these effects.

There is a great deal of variability within the community prevention teams. NORTH STAR was attempting to help with that, and it did. Our sense was that the work units were the place where you would have the most impact. They are most adversely affected by secretive behavioral health problems, they have the greatest incentive to act, and they are an action-oriented group. NORTH STAR is able to streamline the decision making and implementation process for military commanders rather than human services people on a prevention committee. We could make it more actionable in that way and we would get more statistical power. This has been funded and we hope to begin data collection soon.

We are beginning a new randomized control trial (RCT), ARMOR. The plan is to use data to guide community prevention, and to look at these items in an ecological way. One of the things I did not mention earlier is the data on individual, family, work unit, and community. It was built with an ecological model in mind from the beginning. Both of these approaches, NORTH STAR and ARMOR, are not the standard RCT in looking at individuals or individual families. They are looking at things in a more integrated way.

ARMOR is attempting to build on the Triple P model, Positive Parenting Program, that Dr. Matt Sanders created with some 90 studies in 15 or more countries and 2 large meta-analyses. It is a well established prevention program focusing on parenting. We thought the model was great for parenting, but there was nothing for couples. We had been working with Air Force Security Forces and with the Airman Family Readiness Centers who wanted to do something for couples. Based on their needs and the vision they were describing, they were unwittingly describing something like Triple P, but they wanted it for couples. Therefore, we are trying to adapt that. The idea is to merge these together in a unified strategy. The brilliance of Triple P is it tries to get people what they need, when they need it, and from whom they prefer to get it. The example in Triple P is if your child is having sleep problems you might mention this to your childcare worker at the childcare center. If that community node whom you trust and happen to be bumping into in a just-in-time way, could be delivering some just-in-time evidence-based intervention to bump you in the right direction, you might be able to prevent a great deal of problems.

*The brilliance of Triple P is it tries to get people what they need, when they need it, and from whom they prefer to get it.*

*Palatability is a critical issue and the focus on risk and protective factors, not the problems themselves helps to make things more palatable.*

Triple P indicates that you are able to prevent many problems. Yet if the parents decide that they need more, you are helping build in the trust, and then you are integrating the levels of intensity in a way that the parents are receiving something consistent. We are attempting this stepped approach with level one being the more universal step. Level one includes public awareness campaigns and helps couples see that their challenges are normal. Most of the focus to this point has been on levels two through five. Levels two and three are similar; both are brief, structured advisory sessions, but with slightly different level of intensity. Both consist of 5-10 or 10–15 minute sessions with a follow up session. Levels four and five are more of a workshop approach, including individual, couple, and group prevention workshops. One of the ways that this differs from other programs is that we have had to be extremely flexible. The Army has a version called Strong Bonds which is a great program, but is only reaching 4 couples a year. That is not reaching our targets. The Air Force wanted flexibility so that people could come and go in a way that fits with their schedules or their interests.

The ARMOR program uses pamphlets for decision-making. What Triple P calls tip sheets we call action sheets. For example, we have a pamphlet on stress. It is a tri-fold pamphlet with an action strategy. It is billing as a meta-self-regulation skill that asks the person, what am I trying to achieve, what am I doing now, and what are the pros and cons of what I am doing now? What are the rewards for my current behavior that I am going to need to supersede in order to change my behavior? What is my plan in a specific operational way? Then the person can review the pamphlet afterward to be able to see what worked and what did not. We try to boil down what is known from the evidence-based literature on that topic in a concise way, and give some quick actionable suggestions of what the person might do. The idea is that they will select the thing that best fits their situation and decide, “This is the one thing I would like to implement that might make a difference based on my knowledge of my own situation.”

We were asked to lay out some discussion points for our panel. The ones that I selected were secret behavioral health problems which require a different approach than problems that are out in the open. Palatability is a critical issue and the focus on risk and protective factors, not the problems themselves helps to make things more palatable. Another discussion point is a tremendous focus on reach. When you see what the prevalence rates are, reaching four couples a year, no matter how good the program is, will not reach far enough when your data says you need to get 500 in order to see improvements. Access is another key discussion item — breaking free of the formal agency model. Finally, for Guard and Reserve soldiers these issues are even more pronounced because there is no centrality of an installation to knit everything together.

# DEVELOPING, EVALUATING AND SUSTAINING STEPPED COLLABORATIVE CARE INTERVENTIONS FOR PTSD AND COMORBIDITY AFTER INJURY

*Speaker: Douglas F. Zatzick, MD*

**DR. ZATZICK:** I would like to begin with my developmental history as a clinical investigator. I started out in the mid-1990s doing a VA fellowship, treating mostly Vietnam Veteran populations with both PTSD and substance abuse, and many other issues. We did a number of epidemiologic studies with the National Vietnam Veterans Readjustment Study (NVVRS), showing a strong association between PTSD and core function, physical limitations, and unemployment. In 1999, I left the VA thinking there would not be another land war in Asia, and did prospective work at inner city trauma centers. I worked at the equivalent of Baltimore's Shock Trauma Center on the west coast, Harborview Medical Center. I had a long standing interaction with Chuck Engel and with Bob Ursano's group. After the Pentagon attack in 2001, Chuck had this brilliant idea to reduce stigma with an evolving collaborative, embedded, behavioral health model and primary care. The idea was to put social workers and nurses in the 10 Pentagon primary care clinics to be present for behavioral health issues as they came up. I was doing work for PTSD in acute care settings and I was the coach for Operation Solace in that Pentagon trial. I have done a number of other things, including spending one day a week with the WRAIR (Walter Reed Army Institute of Research) group and Chuck Engel as part of the civilian behavioral health team. I worked at Fort Hood as part of the civilian behavioral health team after the shooting in 2009. I have been part of a 4 year Institute of Medicine (IOM) study of PTSD. Therefore, I have a policy background as well.

Currently, I am working with Carol Fullerton, Bob Ursano and the Center for the Study of Traumatic Stress group on the Mortuary Affairs intervention study at Ft. Lee with Carol Fullerton as principal investigator (PI). STEPS-UP (STepped Enhancement of PTSD Services Using Primary Care) is a six-base collaborative care trial with Chuck Engel as PI. I coach the nurse care managers who are implementing

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*Step two is harm reduction. This is an elemental procedure compared to the complex family interventions we have heard about today. Step two involves motivational interviewing targeted at risk behaviors.*

this integrated behavioral health primary care model. I also work on the FOCUS-CI (Families OverComing Under Stress – Combat Injury) project with Pat Lester and Steve Cozza. That is my developmental trajectory. We are bringing this integrated model, which is collaborative care, together with family focused projects and trying to make it work in the unique context of the DOD.

Referring back to spending that last dollar mentioned throughout the day, I do not know if I would spend any money on an intervention that I was not convinced would have legs in what I think is one of the most challenging contexts to intervene in, which is an active duty or in-theater DOD context. I also do not know if I would do more research at this point after this 4 year IOM study if there were not Data and Safety Monitoring Board (DSMB) factors and organizational consistency across the forces in the decision about how an intervention would be implemented. I do not know if it is worth it. Delores Johnson and others have asked about these organizational factors today. After an immersive experience as a clinician, 330 cases into STEPS-UP, unless we have a robust design construct from engineering and lean manufacturing, I do not know if I would spend much money on it.

There is an excellent evidence-based study of over 60 injury survivors looking at depression and primary care using the collaborative care model. It is a disease management strategy that targets chronic conditions, combined with diabetes and depression. There is a *New England Journal of Medicine* article about it, and it is now the bread and butter of medical interventions.

If you combine general medical providers with mental health specialists you get stepped measurement-based care. We created a basic care management model for an injury. Everyone gets assigned a care manager at the time they are injured and then we step up care. We deliver motivational interviewing interventions to target risk behaviors such as recurrent injury, alcohol use, or carrying weapons, followed by medication and cognitive behavioral therapy for PTSD. Richard Heyman presented on stepped care earlier. The first step of our stepped care model is post-trauma support engagement. It asks, “Of everything that has happened to you since your injury, what concerns you the most?” In all of our preliminary studies we took random samples of injured trauma survivors, asked this question, transcribed the results, and got domains of concerns. That is how we targeted our care management. We keep it simple because, for example, after a Humvee hits an IED and half the unit gets taken out, what is concerning you the most right now? We have looked at early intervention trials, we track it, and there are no negative results. Maybe it does not prevent PTSD, but it is essentially unbreakable. We did it in Haiti with less-than-high school educated HIV workers who had to reconstruct things after an earthquake. It is simultaneously an empathic question and an assessment. At the end of the assessment a person says, “I need a bag of rice. I need a tent. I am concerned about my 17 year old daughter in this new camp after the earthquake. She is coming in at night after her job and I am afraid she will be assaulted.” The psychological piece takes off after basic need provision. That is step one and we think it is unbreakable.

Step two is harm reduction. This is an elemental procedure compared to the complex family interventions we have heard about today. Step two involves motivational interviewing targeted at risk behaviors. We are now trying to do it over Skype. Skype is a communication strategy that can be embedded almost anywhere. For example, you are a drinker and you are getting your cast off at the orthopedists office and now you really want a drink. You can have a 10 minute discussion via Skype about the pros and cons of drinking. It is embedded within care management.

The third step is cognitive behavioral therapy and medications for PTSD. The nice thing about this model is you can take it apart, and you can put different elements in for families. It is built to be taken apart and put back together.

I want to spend a minute here discussing acute medical care/surgical-psychiatry integration. There is a classic article in *Milbank Quarterly* by Theresa Greenhalgh from 2004 concerning the diffusion of innovations in service organizations. You can let it happen, which is passive diffusion, or you can help it happen. Everyone in the DOD is in a “help it happen” mode. We have these models with great evidence behind them, and here are all the ways we can help you think about this, or help get this implemented. The National Health Service (NHS) in England is supposed to work like this, but in the United States in acute care medical settings trauma surgeons regulate care. There is a book called *Resources for the Optimal Care of the Injured Patient*. You have to do what is in the book if you want to be a trauma center that is accredited by the American College of Surgeons (ACS). Every three years the ACS shows up for a review. If you are not doing what they say you should be doing, you lose points towards accreditation and funding. The Patient Protection and Affordable Care Act has grant funding for trauma centers. That is one piece of a “help it happen” implementation framework.

Our group conducts clinical trials and because we are in a “help it happen” system, we get buy-in up front. There is not enough money for large scale pragmatic trials, or for any trials. So the ACS will make a policy decision based on one trial. If there is a second trial that contradicts it, they will change the policy, but they will go with the best evidence they have. However, before the trial is conducted you have trauma surgical empiricists who are going to review the literature and take action based on that. Simultaneously, next month I am a full time trauma center provider. I am not a scientist just thinking of something that is going to get me a treatment effect. We have an alcohol screening mandate, a brief intervention mandate at every trauma center in the United States. It is being extended to level two whereas previously it was just level one. Every scientific piece also applies to my front line clinical provider hat. There is no distinction. Now you can do this in interdisciplinary teams. I am not saying all prevention scientists should become clinicians, but you can build a team this way. It is policy, front line clinical work, and intervention science all in one group.

If you are interested in clinical epidemiology, this brilliant guy, Dr. Tom Koepsell at the University of Washington, derived a basic epidemiologic theorem from the weighted average rule of disease rates. That is the population impact of a randomized trial related to 2 things: the treatment effects and the reach. If you want to target reach and get a high reach so your population impact is high, you do not exclude anybody. We do not exclude people from our studies. If you have made an intentional suicide attempt you are excluded, but just about everybody else is included. For example, in one trial a 32-year-old veteran with a pre-military psychiatric history was in a sandstorm in Iraq, his Stryker tank crashed, and he suffered a TBI. He gets out of the VA care and is driving with his father in the passenger seat. They are both drinking, he crashes the car, and his father dies. He is on our trauma ward with polytrauma and a TBI. Luckily, he is randomized to the intervention group. You can quibble about the ethics of having him in the control group. About one third of folks are that bad off. There is a middle third, and then there are people like us in bad motor vehicle crashes.

With that treatment effect we have a 5 point movement on the SF 36 PCS (Short

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Form health survey-Physical Component Summary), basically orthogonal to PTSD symptoms. That is like one chronic condition going away after 6 months. But the 12 month point is tricky in these trials if you get the population of the worst one third. I think we are getting the worst of the worst in FOCUS-CI. One of the things you have to watch out for is massive differential drop-out in your clinical trial. At the end of the first year it was 80% follow up in the intervention group and 40% in the control. This was because we had a lenient DSMB and internal validity was only part of what they were concerned about.

Our tenet and how we are designing our pragmatic trials is that population impact equals effect size multiplied by reach. This is what we think is going to take the day in terms of large scale implementation. It is like flipping a light switch; you do in the trial what tomorrow you would like to do in your service. But what happens is you start your clinical trial and you have one month to do it in, but you think these are complex interventions that take a great deal of time. You have to save your time; you cannot go on a fishing expedition. Therefore, you are going to use the electronic medical record to find the cases with PTSD. The corollary of this, in terms of the population of your screening procedure, is going to be related to all the diagnostic sensitivity and specificity area under the ROC but it is also going to be related to risk. In acute care, as soon as you have five gurneys lined up, no one is going to screen for PTSD. Therefore your impact is zero, so you might as well use a chart review automated screen and actually find the high risk cases. That is where we are now, along with clinical decision support tools that can be deployed by us. You can do this after the earthquake in Haiti now as long as you have internet access. You can get your decision support and your supervising psychiatrist long distance. This is what Chuck Engel has in RESPECT-Mil (Re-Engineering Systems of Primary Care Treatment in the Military). The DOD has this, but they are canning the program. There is this tremendous movement in flux. We should talk about that. Is it worth investing anything when programs that are successful all of a sudden are going to disappear?

## PANEL 4 DISCUSSION

Moderator: Douglas F. Zatzick, MD

**DR. BENEDEK:** This was an excellent panel presentation, which segued nicely into a call for sustainability efforts, sustainability research, and for those of us that were not aware, some evidence that such things already exist in some places. In addition, we had an excellent discussion of stepped and collaborative care.

**DR. BLIESE:** When we have done randomized trials of soldiers, particularly focused on resilience post-combat, we have been surprised to find that relatively small interventions have an effect and that we can detect that effect. It is a curious finding that sometimes a small effect done at the right time can have a long lasting change in the trajectory of individuals going forward. I think one of the key challenges that we have is to think about what types of interventions those are and how to maximize them.

**DR. BENEDEK:** Timing is very important. What is the moment of maximal impact for something such as a motivational interview? Small things can make a big difference if they are done at the right time.

**DR. ZATZICK:** In terms of RCTs there are two methodological routes you can go. Dr. Thomas Ten Have at the University of Pennsylvania was a big name in sequential randomized designs. You administer your small intervention and some people respond and others do not. That is sequential randomization. The other route is from a statistician at Harvard, Dr. Jamie Robins, using a measurement-based approach. This is what the RESPECT-Mil program is. You give the increment to a population, and then measure it to see if people are better or worse. If they are worse or have not improved then you step it up, but you only have a single randomization.

**DR. CONNER:** In reference to Richard Heyman's presentation, if you have 12 bases doing the NORTH STAR intervention and the intervention chosen is essentially their decision, how do you prevent chaos in terms of 12 different interventions at those bases?

**DR. HEYMAN:** That issue was by far the hardest part in getting the project funded because it goes against the grain of people who are used to traditional RCTs. What you are testing is a framework, and that is what is invariant. Everybody went through the NORTH STAR process in the same way. However, the evidence-based interventions that they chose or the target issues they were wanting to focus on was up to them. There were some similarities, but there was variation in the programs. There was no program that was being tested. You are testing a framework for implementing a data-driven approach. Once the light bulb goes on it does not seem

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that different from traditional approaches. We are testing a framework, not testing a program.

**DR. COX:** Back in 2003, I think it was Avshalom Caspi et al. who did a study on resiliency. They were looking at resilient kids related to the 5HTT allele, and there has been some replication in different populations; I think even in different species. Someone stated earlier that resiliency is not a trait. Well these studies seem to show that if you have two long alleles you actually have a better resiliency capacity than those with short alleles. My question is, has that been debunked? If it has not been debunked, are we adding those behavioral or biological pieces into our model developments, and are we testing for that when we look at who is actually being successful?

**DR. ALDWIN:** That particular study has been difficult to replicate. A number of people have tried and have not succeeded. The field has moved to more epigenetic effects. You can show first, that stress effects epigenetics which is the gene regulation, and second, that interventions can reverse epigenetic changes. If you want to bring in biology that is the direction I would go. I liked Ann Masten's discussion that resilience occurs at multiple levels. I think what this conference is getting at is that we need systems level thinking. I am surprised that I have not heard anybody talk about the various new statistical design programs that can do systems level work and test out models based on the available data before you run them, and then apply them. I would like to work on a large model looking at physiological, individual, and community regulation and see how they all fit together.

**DR. ZATZICK:** That model is in the *American Journal of Public Health* from Russ Glasgow of the National Cancer Institute (NCI) and David Chambers of NIMH. They have a translational model that is circular. Our automated screen in the hospital, ROC.72 looks at gender and PTSD, low income, ethnic diversity, and prior trauma admissions with a hospital E-code. It is a whole population. Kerry Ressler, a world renowned genetics researcher, is looking for the ten biomarkers that will predict PTSD. He is taking saliva and blood and running snips. It takes 10 or 20 years, but it costs \$7,000 right now to run those 70 snips. If we have a patient leaving the hospital tomorrow, we have 72, you can add another ten points to our ROC curve. But they cannot get this to us for 2 weeks. Epigenetics, methylation, shake a test tube, put it in a machine, have it spit out, that could go right into our screen. But that is the circle. That is how this public health, real world, front line, in-theater, acute care feeds back to inform basic research. That is how the public health approach feeds back to inform the basic science, and that is the kind of dialogue we really want to have. We are open to basic scientists, but we have to tell you what will work so that this can fly tomorrow, not in a hundred years.

**DR. REIDER:** Prevention science, if you are using randomized control trials, is experimental etiology. Dr. Gene Brody at the University of Georgia and his RCT of strengthening African American families, which is a drug abuse prevention intervention for middle school aged African American families, showed that it ameliorated genetic risk. We have other examples of prevention interventions changing neurobiology including Dr. Phil Fisher's work at the University of Oregon with preschool aged kids in the child welfare system who are very dysregulated. If you teach foster care families parent management training and special techniques with the children it actually regulates their behavior and their neurobiology. That is the impact of prevention on neuro-biology and genetic risk.

**DR. URSANO:** Wonderful discussion, however, it belongs in a different forum.



This is the area of discovery science, far from the question of implementation science. But the question of a forum that adjusts gene-environment interaction in military populations would be marvelous to undertake.

**DR. SPOTH:** Bringing it back to implementation science, I want to pick up on a point that Paul Bliese made about carefully considering developmental timing and how that can yield larger effects than what you might otherwise see. Even with propagated effects over time with cascading processes within the family, we normally expect small effects from universal interventions. We have seen large effects proximally, and effects that have grown over time. What that highlights is the prospect of bigger bang for your buck. Think about the potential for population impact. If you have a universal intervention with a large effect size that you are effective in implementing, then the reach is great, the effect size is great, and you have greater population impact. How do you think strategically in this climate of increased demands and reduced resources? How can you best use the scarce resources? Practically speaking, it brings me back to the question of, how do you structure the conversation tomorrow to get to those key strategic points that have been referenced here in light of what needs to happen, given the realities of the funding environment?

**DR. URSANO:** Part of our target should be the identification of inflection points or tipping point opportunities. How do we identify those for maximum impact? Motivational interviewing is a nice example of that. There is not much research that actually looks to find what the best point is. It is expensive and difficult to do repetition across time. We do not even do that in animals, let alone in people. We are trying to identify the spot for intervention versus what *is* the intervention. It is a great topic.

**DR. SPIRO:** The Army used to have the slogan, “An Army of One.” There is an approach to doing clinical trials of one, which might be useful for something like trying to find inflection points rather than a \$50,000,000 randomized trial that you cannot adaptively modify. Another approach that we have developed in the VA is called, Point of Care Randomization. If you have two efficacious treatments and a patient comes in with a condition, they can volunteer to be randomly assigned to either treatment at the point of care. You can build trials in relatively inexpensive ways to look at psychotherapy combinations with or without medication for treating anything. I am not sure if you can use them as easily in behavioral interventions, but I think it would be worth exploring.

**DR. ZATZICK:** The NIMH has a funded trial where they are using that technology. I think it is depression in primary care and medical comorbidities.

**DR. LESTER:** I wanted to discuss something said earlier about attention to a continuum of care. That includes all the pieces that come between universal prevention and acute treatment, especially as we have shrinking resources. The continuum of care is useful in thinking about how we can use science to identify risk groups so we can better allocate our care for people who are perhaps not tipped into clinical services, but could benefit from brief windows of intervention.

I also wanted to add to the discussion about timing. I think it is both developmental windows and the readiness of the family around all these different cycles and trajectories that are overlaid on top of each other, particularly for military families. Often it is that window of opportunity and readiness that we need more information about, and how to identify and maximize them.

**DR. BENEDEK:** Unfortunately it may be that one member of a family is in the window and another one is not, so it gets more complicated in these interventions.

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*Concerning the point about dosage, in thinking from a developmental perspective, one of the interesting things is that we see dose-effect relationships that disappear over time, in part because of effects on social influences and social networks.*

**DR. GEWIRTZ:** Colonel Bliese's comment was like a Rorschach inkblot because what he mentioned was not just timing, but also dosage of an intervention. I think it is an important issue that has been addressed in multiple prevention studies in the context of randomized control trials. Our intervention is 14 weeks long. What is to say that 14 is the magic number? Could it be done in seven? Does it have to be two hour sessions? Can it be one hour or half an hour? We know motivational interviewing is the best example of an intervention that did not even start as an intervention. It started as an assessment tool and just a few minutes of that is powerful enough to effect change. I think these are critical questions that can be, and are, answered in the context of trials.

**DR. SPOTH:** I want to underscore the point that Pat Lester made concerning the continuum of care. I think that is why some of the tiered models are potentially so effective. They can enhance the effect across the spectrum of risk. If you use the universal approach as a way of moving people up the line, they could potentially benefit. You would still benefit the broader population that does not necessarily need intensive treatment well enough to have a good effect without that intensive level of care. I think these tiered models are intriguing and potentially very effective and cost efficient. It is not only developmental timing, but family readiness. Interestingly, our research suggests that often the developmental timing produces the readiness of the family. For example, the child starts experimenting and the parents start sensing that there is an issue, which brings them in for care.

Concerning the point about dosage, in thinking from a developmental perspective, one of the interesting things is that we see dose-effect relationships that disappear over time, in part because of effects on social influences and social networks. For example, we may have 30% of the families that participated, but we are seeing community level effects. We have the mediating mechanism of our social network having empirical influence. Anecdotally, we know that these networks are influencing each other even though they did not receive the intervention. There is an initial dose-effect that dissipates for good reason because of social influences rather than social networks.

**DR. MACMILLAN:** I have a comment about translation science. Coming from Canada, I wonder the extent to which the concept of integrated knowledge translation has caught on in the U.S. One of the things we are doing in some of our Canadian trials is getting the policy makers involved from the beginning. For down-the-road implementation they are onboard from the start in terms of the question, the design, and the outcomes. This is because at the end of the day, if they are not going to fund the intervention, then what is the point of doing it? And this way whatever the outcome—negative, positive or whatever— they have been involved through the whole process.

We did this in a province-wide randomized trial of intimate partner violence (IPV) screening, which was negative just like the CDC trial in the U.S. However, people have gone ahead and implemented IPV screening through the Affordable Care Act with two negative trials. The point is that in Ontario the policy makers were onboard from the beginning and we had the capacity to implement IPV screening with the universal health care system. However, when the policymakers saw the results, having been involved through the whole process, they were able to say there is no evidence of effectiveness so we are not going to implement it.

**DR. ZATZICK:** That is an outstanding point. The NIMH had a conference 4 years ago on dissemination implementation and Roy Cameron of the University of

Waterloo in Canada gave a brilliant presentation. There was an office of research translation as part of the political organizational structure. Other countries are on to this but for Bob Ursano and the DOD group, you have a top down, hierarchical organization. In the military, if you had a four star general equivalent to a trauma surgeon or a Canadian policymaker, and you had a body of evidence that was good and applicable to your population pragmatic trials, could you not mandate something like that?

**DR. HEYMAN:** You can guess from the work I presented that it is a partnership. There is no way you could randomly assign a third of the Air Force to your intervention without the help of the Air Force policymakers. I think that for something really to have legs, that support has to be there from the beginning. The huge caveat is that this system does not support sustainability. For example, a new leader comes in and has a different way of looking at things or they are not going to get a bullet on their performance report to be promoted if they are not doing something novel. Therefore, there are a great deal of policy and structural things within the military that argue against continuing with the same thing.

**DR. ZATZICK:** Remember, anything that happens within the military is truly an act of Congress. I was given wonderful advice when I first came into the DOD. I was asking questions like, “How do you ever change anything?” I was a Second Lieutenant at that time, and I was talking to the senior consultant to the Army Surgeon General. His response was, “Do you know how to sail?” And I said no. He said, “Well, do you know about tacking?” I said, “Yes, you kind of head in this direction and move in that direction.” He said, “Yes, you tack towards your goal and do it for 20 years.” That is absolutely true. One of the dilemmas within the DOD is that it can be a hard system in which to get a change. But if one can get a change in the conservativeness of the system, one will also keep it there. So there are pros and cons in all those directions.

**DR. SPOTH:** Involving the leadership is one thing, however, involving the policy changers to the degree possible, is another. I also think that is an excellent point. It is contemplated in that model I was showing talking about the contextual influences and how they are part and parcel with what happens when it comes to all these translation functions and sustainability. Picking up on Rick Heyman’s point, it is one thing to have leadership, but you also need people who can effectively change the policy incorporated into that process. I do not know if there is a model for that. I do not know what the practical strategy is, but there has to be a strategy.

**DR. JOHNSON:** The bureaucracy is focused on incremental change and that is just the nature of the beast. It is not about just the Commander or the policy. At a practical level, you have great variability in knowledge, scientific depth and breadth, and in people’s ability to devote time to the research that you are talking about, whether it is a survey or randomized trials. When you have people walking through the door in some great element of crisis, what you are offering has to be a substantial change. In a great deal of cases, even with the data that you are talking about today, it is a quantum change in the kinds of programs and the results that we are getting. It is difficult to say to someone on the ground who has people coming in who are in some level of pain, “Wait a minute, I want to do something new,” when what you are suggesting is probably only 5-10% different than what they are already doing. Plus they have to be trained in it, understand it, and then train all their people. Therefore, it is a whole system that you have to engage with multiple

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*The issue is always what is coming, not where we are now. The real challenge is, what is the Army in 2020 or 2025? What is coming over the horizon?*

components because it is a closed community. Everybody has to be in all the time to get the kind of change you want.

We did that in family advocacy 15 or 20 years ago, where we worked with Cornell and we had the whole system moving. I think the best thing we can say about that is we identified the resources and we taught people a language of outcomes. When you come in and begin to talk to people on the ground, for those who actually stayed in those positions, they can have fairly reasonable conversations with you about what it means and why they should be doing this, and why it is important to have an evidence-based strategy. That is the tacking that has occurred over 20 years.

**DR. URSANO:** The reason we are having this meeting is because of a 15 year relationship with Delores. It was her vision 15 years ago that has led to our ability to have this meeting.

**DR. WADSWORTH:** I was thinking about the opening remarks that Dr. Ursano made today and that we are trying to figure out what we think the Army ought to be thinking about 10 or 12 years from now. I am not sure that when Dr. Ursano made those remarks he was necessarily thinking that by the end of the day we ought to be talking about which program was better or how to figure out which program is better. In other words, the challenge that the Army has is a higher level challenge, which is a whole system of trying to ensure that a ready and prepared and fully supported force can do its job. How do we take where we are now and move it up to the more strategic level of the additional questions and problems that need to be addressed beyond this thorny set of problems that we are currently dealing with?

**DR. URSANO:** The issue is always what is coming, not where we are now. The real challenge is, what is the Army in 2020 or 2025? What is coming over the horizon? The amazing thing within the DOD is that you are always waiting for the unexpected. When I put on the science hat, we are dealing with what we have now. When I put on the DOD hat, we are dealing with what is coming that we cannot quite see yet and trying to get ready for it.

When I talk to the people at our Center I refer to us as the Mini Cooper. We are not a Hummer. We are not big enough to take on huge things, but we are high quality, we move quickly, and we try to look at what is coming over the horizon before other people can see it. That is what we are engaged in here today. Can we anticipate what is coming over the horizon? Can we provide tools for what is coming over the horizon without even knowing what is there? Those are the tools we need to have to be ready for the unexpected. The issue is not, can we solve the present problem. That is only a piece of the story to the extent that it gets us ready for the problem we have not yet seen.

## MILITARY FAMILIES AND TRANSITIONAL STRESS: WHAT CRITICAL INFORMATION IS MISSING?

*Speaker: James L. Schmeling, JD*

**DR. URSANO:** Our goal this morning is to think about some of the gap areas, and in particular, what is missing that we have not yet talked about. Our first speaker is Jim Schmeling from Syracuse University. Jim is the managing director and co-founder of the Institute for Veterans and Military Families at Syracuse University.

**MR. SCHMELING:** Unlike many of you in the room, I begin to work with military members when they are thinking about their transition — or with spouses as they are thinking about their post service careers. Much of my interaction begins about a year before people are transitioning. The Institute for Veterans and Military Families is focused on the post-service life course. But what we have found is that for many veterans, their transition planning either begins a year or more ahead or it does not begin until they are actually in the process of transitioning. We believe that the transition of veterans and families post service is a national security issue. We wrote about this in our national veteran strategy policy document, which was published in February, 2013.

How veterans transition will impact the future of the all-volunteer force. Their experience in the military will impact their post-service life course. This includes the things that they have learned, their education and training, their experience with multiple cultures and with deployments, the experiences that they have with their family and spouses, careers, their dependents' education, and special education for students with special needs.

The experiences that people have during transition, and finding out whether military service benefitted them and their families, is a key to whether or not future generations of their family will serve. We were actually quite concerned that we might be losing generations of families because of the experience that military children have had with multiple deployments, for instance. We are working with many spouse networks, including the Military Officers Association of American (MOAA), the Military Spouse JD Network, and others. These organizations have brought many issues to our attention. In fact, we just launched a survey with MOAA to better understand the experiences of spouses as they transition from one place to another and as their spouses transition out of military service.

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This transition really begins long before separation and includes family even if they are not consciously thinking about it. They are beginning to gather the skills, education, and training that will serve them in their post-service life courses. There are many policy and practice issues that can impact that transition and favorably impact national security by increasing the likelihood that people will serve in the all-volunteer force.

Transition stressors include employment, education, housing, healthcare, financial literacy, and issues for spouses and dependents, particularly issues pertaining to education of dependents, including special education. Often families are uncertain as to what they are going to find in their post-service life—for example, what services are available for military families and for veterans in states where they are settling. We do not do a very good job at this point of helping our veterans understand what their post service life opportunities will be.

Although we have an excellent transition assistance program, when it is fully taken advantage of, and when people opt for many of the optional segments, the reality is we do not yet educate veterans and their families on what their real options are. For example, where are the geographic opportunities for their employment? What education benefits are available state by state? What are the opportunities for their spouses to take their licensure and certification across state lines.

Many of these initiatives now are happening around the country, thanks in part to initiatives like Joining Forces and FOCUS, and spouse certification and credentialing. In some states it is happening around certification and licensure of military members based on their experience. For instance, in New York you can get a commercial driver's license now if you have been an operator of heavy equipment or a truck driver during your military service. That is going to help people who want to remain in those positions.

But we still have not adequately addressed the issues regarding teacher licensure, or in the medical field for emergency medical technicians. We are beginning to do that now. We are also beginning to create some educational opportunities and programs on a state by state basis, but we are still not telling people adequately what those include.

We are not handling spouse transitions well, for example, career interruptions resulting from geographic changes. Spouses often change careers because the licensure and certification requirements are onerous as they move across state lines. In some cases people are separating physically when a spouse is transferred because they cannot afford to take a new job in a new place that does not fully take advantage of their degree or their background. This is particularly the case with certified professionals. For example, many people have onerous student loan debts. If we can provide credentialing and licensure opportunities, whether they are temporary or permanent, we can increase the quality of life and reduce stress on military families. This will have implications for the future of the all-volunteer force.

There are also significant issues around civilian equivalency of military training and education. That is an area where we can actually make a difference while people are in the military. During the curriculum development and idea generation phases we need to consider what to include in training curricula for military members while they are learning their professions. In many cases the civilian requirements are met but not documented. They are not coordinated with whatever civilian licensure body is necessary.

Unfortunately, many states have state level certifications; therefore we need

to better understand what those certifications are at the locations where we have military members being trained. Can we offer the opportunity for them to become licensed or certified in that civilian job market in a way that may be transferable across jurisdictional boundaries? Those kinds of policy changes and those kinds of practice changes would reduce stress on families as they are thinking about what to do post service.

We have some interesting examples to learn from. For example, California is an interesting state when it comes to teacher licensure. My understanding is that if you are a teacher in California and you are a military spouse, you can be licensed in California as long as your spouse is on active duty. But as soon as your spouse leaves active duty, your teacher licensure is no longer valid. That is an example of a state-level policy that could be easily changed. If you are qualified on one day, you should not be disqualified the next day by an action that has only to do with your spouse and not with your professional qualifications.

Military members are able to contribute economically to an area as they are leaving military service and settling in those areas. We want to make it as easy as possible for their spouses to settle and stay. These types of things will reduce transition stress. Focusing on issues at the policy and practice levels will make a difference.

Another issue that we have heard repeatedly from the veterans that we are working with is that sequestration, budget issues and predictability are important to them add a level of stress that is very difficult for families. There are a couple of important examples of these issues. We saw tuition assistance change in reaction to sequestration and then change back in many cases. We also are starting to see a change in the transferability of GI bill benefits to dependents, particularly with the Army. Although this was definitely intended as a recruiting and retention tool when it was begun, that reduction and ability to transition, or the requirement to give additional service commitment in order to transfer GI bill benefits, is something that is impacting the predictability of their service life. It also is impacting the predictability of what will happen for their spouses and dependents.

The predictability piece is as important as the policy change itself. People think about retirement differently now. In the civilian sector for instance, we just saw IBM take all of their military and healthcare recipients who were retired off of their retirement plans. They just notified them that this was going to happen. In the military we are seeing changes in the military retirement health benefits. We are seeing changes proposed for co-payments, changes in Tricare for dependents, and other kinds of issues. Again, these kinds of issues and policy changes and the way they are projected to military people will potentially impact what they think about their careers and will also impact retention.

We are now hearing from military veterans about their concerns regarding the military-civilian divide. The Pew Charitable Trust did a survey recently about the military-civilian divide, and we have seen the results. Essentially what our researchers have shown has happened in every country with an all-volunteer military. Civilians not connected to military members or veterans begin to see military service as a choice and not as an obligation. Because it is a choice, they feel that their obligation to those who serve and to veterans declines over time. We are not seeing this yet in this country. We are still seeing a great swell of nationalism, patriotism, and support for our troops. This is very different than what we saw post-Vietnam and even post-Gulf War I, but we are not seeing that same level of commitment in all of the civilian population. When surveyed, many civilians said that they have no

*We are now hearing from military veterans about their concerns regarding the military-civilian divide.*

*One aspect that really impacts people is related to employment and hiring initiatives.*

responsibility whatsoever to military service members and to veterans. Fortunately, many communities have come together showing a responsibility to military service members when they return from deployment, still welcoming them home with parades and celebrations. But eventually, the research shows, most countries have had significant divergences between their military and civilian populations.

One aspect that really impacts people is related to employment and hiring initiatives. In my work with the Institute for Veterans and Military Families, a big focus is on employment initiatives related to hiring veterans. We work with the U.S. Chamber of Commerce through Hiring Our Heroes. We work with the JP Morgan Chase 100,000 Jobs Mission, which now includes 114 companies that are committed to hiring 100,000 veterans. Very large companies are involved in both of these initiatives. We also work with Alcoa, Lockheed Martin, and Boeing on the GE Get Skills to Work program, which is focused on opportunities for veterans to transfer their skills into advanced manufacturing careers in the 600,000 job openings available there. What is interesting is the narrative in this area. Because we have a narrative that is largely in the public sense, we must do something because we owe it to veterans, or we must do something because veterans need help.

We are trying to change the dialogue now while the country is still in the mood to help, and while they still see this as a corporate social responsibility. We have supported about 10 propositions on why veterans are good for business, including adaptability, trainability, education, and resiliency. We also provide information about the strengths veterans develop while they are in military service, and how those translate into the military and veteran environment. That message is not yet getting out fully to the American public. They do not yet understand that, like the post-World War II generation that Tom Brokaw called our greatest generation, this generation of military veterans has incredible skills, education, and training. These assets can be applied in the civilian contest in business and industry, and in civil society and community leadership positions. Veterans have the ability to do community building in the same way that they did community building in other nations. Taking advantage of that, and messaging around that, is very important.

There are two critical messages that get in the way of each other. First is that all veterans have an unemployment rate that is nearly a percentage point lower than that of their civilian peers. However, post 9/11 veterans, and particularly those who are 20 to 24 years old, have a much higher unemployment rate than their civilian peers.

We know the veteran experience can benefit their employment across their entire life course. What we do not yet know is how to help transition veterans quickly, particularly young veterans, from their military service into their civilian roles. We need to work on these issues. They begin early and are an important part of the discussion on transitions and stressors facing members of the military.



## MILITARY FAMILIES AND TRANSITIONAL STRESS: WHAT CRITICAL INFORMATION IS MISSING?

Wanda L. Finch, LICSW, CAS

**DR. URSANO:** Our second speaker is Captain Wanda Finch. Wanda is from the Family of Community Resilience Program, the Defense Centers of Excellence (DCoE). DCoE is a long term friend and partner of the Center for the Study of Traumatic Stress and of the University. It is a pleasure to have Wanda here to speak.

**CAPT. FINCH:** I am going to provide a brief overview of DCoE, and highlight strategies to address psychological health and the needs of military families. I will identify some of the ways the DCoE is employing strategies to increase research knowledge and also identify some innovative ways to transfer that knowledge into practice. Our mission is to improve the lives of our service members, families and veterans by advancing the excellence of psychological health and traumatic brain injury (TBI) prevention and care. Our vision is to be the trusted source for the Department of Defense (DOD) but also to serve as an advocate for psychological health and TBI knowledge, and to improve the system of care in the military health system. The values that we exercise are excellence, integrity, and teamwork. We recently reorganized and now have three centers rather than four. My particular team is embedded in the Deployment Health Clinical Center (DHCC). Our primary mission is to improve the deployment-related health care needs of military health systems, and to look at research program evaluation and program implementation support for our partners within DOD and for our external federal stakeholders. We also have the Defense Veteran Brain Injury Center (DVBIC). Their focus is to provide state-of-the-art clinical care, including research and education programs as they relate to traumatic brain injury.

Our third center is the National Center for Telehealth Technology (T2). This Center is at the forefront of many health technology solutions. If you are a provider, you may have the Resilience Provider App on your phone. You may also refer many of your patients if you are doing clinical care using many of the applications that our T2 center develops.

Who is our population of focus? We are all well aware of the basic stressors are that our military families face across the employment cycle. What are some of the unique readiness concerns? One is financial, having a plan. What types of support

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will family members need in the absence of the service member — whether it is a deployment or the extended training that many of our service members face. These issues can often create stress for the family members. We also know that the current conflicts in which the U.S. has been engaged over the last decade have led to an increase in the operational tempo for our service members. We have relied heavily on the guard and reserve as well, to be at the forefront of today's wars.

With regard to the deployment cycle, we want to be aware of the ambiguous loss and worries that many of our children and spouses face. They are concerned as to when the service member may be coming home, and whether will they be coming home injured. If they are not coming home injured, how will they be? Will we be able to reunite and be the family that we were prior to their separation? It also brings about increased roles and responsibilities for spouses, when they may be missing that extra pair of hands to drop off the kids in the morning, take one of the kids to the doctor, or some of the other household duties that the spouse may be asked to do in the absence of the service member.

During the post deployment phase, we also want to be cognizant of the lack of support and various changes that our military families encounter. We need to consider how the roles differ, and that there may be other boundaries the family member may have problems with, for example, managing care or addressing particular issues such as financing. Or they may need other types of support to sustain themselves in the absence of the service member.

There is also concern about the care of physical injuries and/or mental health issues that our service members may come home with, and whether family members are prepared to deal with those injuries. We are concerned about whether family members know how to get assistance for the service member or for themselves, to help them cope with the challenges that they are facing. With the reintegration phase, often families are faced with the dual mission of preparing for another operational mission, transitioning post service, or perhaps entering the veterans' system.

We see that there is often a limited time to transition and/or address other issues, in order to support the families and help them make a successful transition. Looking at what the U.S. Army has been doing, I identified the Army's position regarding support for military families. Some of you in the audience may be familiar with the Army Family Covenant, which was signed by Secretary McHugh in 2007. The covenant states that, as you are changing your life for the Army, a bond should be formed that lets you know this is not a commitment to be taken lightly. The Army will look out for you, for your soldier, and for your entire family. We are all one family in the Army and should act accordingly.

What came out of this covenant is a commitment by the Army to provide services and support to make those services available and accessible to family members. The Army has also enlisted a couple of other strategies to improve force readiness and save lives and also to advance the health of service members and support military families. One of those strategies is the Health Promotion Policy, which is designed to maximize readiness, war fighting ability, work performance, and to enhance well-being. This particular program is looking at readiness in terms of a number of strategies including policy, organizational, social, behavioral, spiritual and healthcare activities. The Ready and Resilient Campaign is another such program. This campaign looks at enduring cultural change that recognizes the family as an essential part of the strong foundations for Army readiness. This enduring cultural change is designed to differentiate the definitions of readiness and total soldier fitness, and to

address the way that the Army develops the soldiers and civilians in the future. This change integrates resilience into how soldiers and their families build their health and fitness capacity, as well as strengthening and maintaining access to a variety of resources.

One of the other key strategies is the Army 2020 Campaign. This program is designed to transform the healthcare system into a system of health that will maintain, restore and improve the health readiness and resilience of soldiers, their families and communities. I want to highlight communities because the Institute of Medicine recently released their follow-up report on the readjustment needs of service members, veterans and their families. It includes a chapter that looks at some of the challenges that our communities face in view of the high Operational Tempo (OPTEMPO), which has heavily relied on our guard and reserve troops in the past conflict.

Finally there is the Comprehensive Soldier and Family Fitness Program (CSF2). The CSF2 was also endorsed by the Secretary as a major component for Army readiness and the resilience campaign. The CSF2 teaches life skills intended to help people face stressful events and confront future challenges in five major areas: physical, emotional, social, spiritual, and family. There are also five additional components that the CSF2 endorses as part of this program. One of them includes the Global Assessment Tool (GAT), and the Comprehensive Resilience Modules. The GAT is an online survey designed to assess an individual's social, emotional, spiritual, and financial status, as well as physical fitness. The GAT also encourages individuals to seek support at their area service centers.

The Comprehensive Resilience Modules (CRMs) are another web-based self-development tool that provides training to address aspects of strength and resilience. There is also the Master Resilience Trainer Course (MRTC), which is a ten-day course that teaches resilience fundamentals and follows the soldier throughout his or her career. In addition, the Institutional Resilience Training, the Warrant Officer Education System, and the Noncommissioned Officer Education System also support the officer throughout his or her career and professional military education. And then, finally, there is Performance Enhancement training, which is designed to strengthen the minds and the performance of service members.

I am going to take a moment to share with you some of the strategies that DCoE has used. First, however, I want to make sure that we understand that the current conflicts are not our fathers' or our grandfathers' wars. We have a different adversary. These conflicts have involved many unparalleled challenges. For example, the use of guerrilla and terrorist attacks to identify the enemy combatant is much more difficult. There are a growing number of invisible wounds in our returning service members, and there is also a changing demographic. We have relied heavily on the Guard and Reserve in this past decade of war. As frequent deployments are occurring in larger numbers, there is often little downtime for service members. Most recently we have lifted the ban on women in combat. We need to have a discussion about what this is going to mean for our service women.

We also have a different environment in terms of the military operation. Many of the adversaries are non-state—they are unknown. They may not be an organized government, which could be easily recognized. There are also stringent rules of engagement which our service members have to follow to make sure that the mission is successful. We have also increased coordination of operations with our joint bases, to share information and provide access to all service members or their families who

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are receiving support from joint services. There is also an increased flow or ambiguity of information about tasks because we do not know what our adversaries have in store for us. Finally, there is also the responsibility of what is happening to boots on the ground within the combat unit.

The 2010 Survey of Army Families recognized many of those issues. The Survey also found that many families believe that they were resilient through these difficult and challenging times, which is wonderful. However, the Survey also found that spouses identify concerns that we need to consider as we continue our research addenda. These included the redeployment of the service member, and whether or not their loved one would be injured in battle. A number of emotional and nervous experiences were described by family members on the Survey of Army Families, as well as marital problems experienced in the last six months. There are also reports from some spouses on dissatisfaction about deployments and the amount of time that the service member is away from home. Spouses also reported having limited knowledge about Army systems and questions regarding how to access the right service at the right time.

With regard to deployment, spouses identify a lack of knowledge on emergency assistance generally, and, in particular, about where those supports were. For example, they expressed questions about how to access documentation on entitlements and other types of services and concerns about the lengthy separations or the ambiguous loss for children. That is, children may not clearly understand if their parent is going to be returning home and if so, whether there will be changes. How will the family renew their relationships? Finally, spouses also reported challenges on the job, in terms of managing their roles as a caregiver and as a professional, or having time to volunteer.

The Survey also identified a few other concerns from spouses. One of those included the amount of time that it took to readjust the family relationship once the service member returned home. Five weeks appeared to be the average, according to the 2010 Survey of Army Families. Spouses also identified some changes in the service member's mood or personality, and challenges with communicating or reestablishing household roles and responsibilities. The reintegration phase was identified as another difficult time. Older children may have had more challenges fitting in with the returning parent and restoring that relationship, but also being worried—are they going to leave again? Is it going to be next week? Is it going to be next year? How long will they be away? The total number of months deployed was also associated with challenges for many of the children.

A few other studies also looked at ways to support our service members. The Army STARRS program hopes to apply health promotion and risk reduction strategies, as well as suicide prevention efforts, in order to support service members and increase their protective mental health factors. The Military Life Project found that improved communication between service members and families was a big plus. Obviously social media played a big role in much of this. It also minimized the impact of deployment on the home front but also enhanced support through the Military OneSource by encouraging families to access many of the supports that were available.

The Millennium Cohort Study found that the population was healthier than was perhaps once perceived, in terms of mental and physical challenges. This was perceived to be very useful in the prospective evaluation of health and post-deployment issues. Finally, the Blue Star Families Survey found that despite the high OPTEMPO,

military families again found themselves to be very resilient. However, there was also some concern about a decrease in marital harmony in that particular survey.

Looking at the literature, I pulled together a short list of some key challenges. One of the key things is caregiver issues. How does that impact spouses post deployment? Finally, yesterday we kept talking about service and access for our military families from a treatment-only perspective. I want to remind us that families do not stay in treatment forever. There will come a point in time where they will be expected to be on their own, to be able to exercise some type of self-help strategy, so that they can sustain their own recovery and outlook for the future.

These are thought-provoking questions, which I hope you will be able to apply in your research strategy as we move forward. If you have any questions about other collaborations that DCoE is engaged in with our federal partners, please see me.

*One of the key things is caregiver issues. How does that impact spouses post deployment?*



## POINTS TO CONSIDER IN JUDGING THE VALUE OF INTERVENTIONS FOR MILITARY FAMILIES IN TRANSITION

*Speaker: Stephen A. Maisto, PhD*

**DR. URSANO:** Our next speaker, Dr. Stephen Maisto is Professor of Psychology at Syracuse University, and Executive Director of the Center of Integrated Healthcare.

**DR. MAISTO:** Part of my research program is conducted as the Director of the Center of Integrated Health Care, which is a VA Center of Excellence. What has been discussed here during the last day and a half is important and related to the work we do in the Center. The Center has a mission of advancing knowledge about the integration of treatment for behavioral and mental health concerns in the primary care setting, which is a non-traditional setting for those concerns.

Although military families in transition was not my area of expertise, working in the VA in various capacities for the last 20 to 25 years, I acquired knowledge in delivering direct clinical services, both as a clinical psychologist serving veterans and as a program administrator. I am now a Director in the Center of Excellence and continue to do research within the VA context. The knowledge that I have accrued in these roles is closely related to the topics we are discussing at this conference.

In addition, I delved into the literature to determine the most important questions being asked in the field. What is the state of knowledge on multiple dimensions? One such question involves looking at both preventive and therapeutic interventions. My research programs have been focused on the effectiveness of treatment for substance use and related disorders, including comorbid substance use disorders, in traditional and non-traditional settings. My particular focus has been on the primary care setting. In fact, the DOD and the VA are leaders in that regard, pushing the treatment of these disorders in the primary care setting.

A number of interventions have been developed to help spouses and children of military personnel. There are a lot of outstanding programs that have the potential to help the people that they are intended to help. If you look at what they are designed to do they all, in one way or another, distill down to those two points: to help military families cope with stresses of deployment and its aftermath and to enhance their resilience in facing potential stressors. Research has shown the kinds

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of stressors that military families experience, the problems they face in coping with them, and the factors that facilitate their resilience.

It is important to note that researchers are always concerned about the past and the present, but the DOD is concerned about the future. There is tension, because researchers are conservative, they want to look at what is and how good it is. Whereas if you have other priorities, for example, if a crisis is happening, the question becomes, how do I deal with it? You want to know what should we do right now. I hope to say a few things today that might help to resolve some of this tension. Whatever the future brings, if the DOD and the VA have any hope of coping with what comes up, they will be looking at these three points to help families cope with stressors and to make them more resilient.

During the last day and a half, we have heard about empirically based interventions. That is, we have heard about interventions that are based on research. But are the interventions themselves evidence-based? For example, how do we know that they actually improve the lives of individuals for whom they are designed, however we might measure that. In the literature, the most common critique of interventions is that they typically are not evidence-based. As we have heard in this conference, that critique does not apply to the interventions per se, but to the question, do they work for military families? That is, there is a great deal of evidence, in some contexts, that the interventions are effective and further, that when they have been implemented widely, they have continued to prove effective. But there is less data to support their effectiveness with military families.

What does “evidence-based” mean actually? It is a complex term, and usually it refers to research that has been done to support the intervention. Not necessarily what the intervention is based on, although most of the interventions are based on solid research data. But rather, does the intervention hold up when tested?

The kinds of research evidence that have been published and discussed include research designs that are clinically relevant and patient centered. In fact, these are buzz words you hear in VA and DOD: clinically relevant and patient centered. If you are looking at the clinical context, or if you are looking at prevention work, the same question applies. Does this actually apply to what the provider or the intervention is trying to do? Does the intervention address the needs of the patients or clients? These are important questions that we have to ask when we do this kind of research.

The design considerations that a researcher has to consider include whether they will conduct quantitative research or qualitative research. Will they use a group design or a single-subject design? Why not study one person? This is a tradition in biology, psychology, and psychiatry that went out of existence for about 30 years, since the 1970s, but it is slowly making its way back. This is important for people who do clinical practice or are actually on the line, working with clients or patients. This is the kind of research they feel is most related to the work that they are doing, as compared to research that focuses on group averages rather than on the individual. They consider that this kind of research is related to what they are trying to do with patients. That is, what should I do with this person right here and now, given what kind of picture the person is presenting?

The next consideration is whether we should do a randomized controlled trial (RCT) or one that is not randomized? Both have a contribution to make.

Finally, is this an efficacy trial or an effectiveness trial? This is not really an either/or—it is actually more like the next stage of development. One does an efficacy trial at the earliest stage and intervention evaluation where there is the most internal



control. It is like a controlled experiment, or as controlled an experiment as you can get in this kind of context.

For an effectiveness trial, the context is more like real-life clinical activity. For example, one of the features of that would be not screening out patients based on various criteria that might create noise in your data. Rather, you are more likely to accept patients who have all sorts of different issues, just as would be the case in clinical practice. Interventions have to pass this second test in order to go further. If we are going to implement an intervention, it must pass the effectiveness test.

Researchers need to stop adhering to the RCT as the almighty gold standard, as the only way that we can evaluate interventions. This clearly is not true. These other research designs have a great deal to offer, and typically use fewer resources. This is not to denigrate RCTs. The point is that they have a place; however, other designs also have a place. One of the things that slows down the connection between research and practice is that RCTs take a great deal of time and resources, and there may be other types of data that we can consider, which may also help to address the question of whether an intervention is effective.

The second point is that given these different types of research designs, it is important that researchers now have an ability to look at all the research data related to this intervention, not just those data accrued from controlled studies. Can we integrate these various types of data and come up with a coherent picture of whether this intervention has potential? If so, it should be disseminated and ultimately implemented on a widespread basis.

It is problematic that many review articles consider only controlled trials. This kind of thinking has to stop if we are going to have any relevance to places like DOD and the VA, who are looking for ways to act quickly and effectively. Because there is far less data for us to use to answer their questions, which are often times urgent questions. "What do I do now? Give me something that can work given my situation." Being able to draw on a wide array of sources of data will increase our relevance.

I also want to emphasize the value of a coordinated set of smaller types of studies rather than larger studies. The former require fewer resources, and at the same time, evaluate the intervention across multiple sites and multiple places in multiple ways, which is what you have to do in the final analysis. Integrating the data to make sense out of it can paint a picture that could be ready when a crisis comes up or when a situation arises in which this particular intervention might be of use.

Some methodological points to consider beyond simple or basic research design involve intervention quality control. Is the intervention being delivered in the intended way? Is it being done in the way it is supposed to be? Do you know what you are evaluating? In implementation science, we do not expect an intervention to stay intact. It will vary by clinical practice across multiple sites. You always have to make adjustments, but does the core of intervention stay intact? Do the principles on which it is based stay intact? These are important to consider in doing these studies.

We talked about following patients over time, and we asked how long do you follow them? It is critical to follow patients over long periods of times in order to understand the course of their symptoms or problems, or the course of their outcomes over time, that is, how their symptoms and outcomes fluctuate. How can we create a knowledge base that will help us identify the most efficient and effective time to deliver an intervention for these families?

Related to this is a statistical point. In psychology and other behavioral and

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social sciences, we have been trained to use the linear model to analyze our data. This simply means we accept a linear relationship between an independent and a dependent variable. However, in reality these kinds of outcomes do not tend to be linear over time. They are often nonlinear and are often characterized by spikes in the data. Why is that important? As an interventionist, understanding this is may help you to identify the tipping point. When is the best time to deliver the intervention? Do not expect straight lines over time; rather, expect many bumps in the data. That is the way behavioral variables are best characterized. This basic fact has been known for many years. However, we now have statistical models available that allow us to model these patterns of change.

Many of the points we have been discussing over the last two days stem from the biopsychosocial model. Anyone who has been trained in behavioral science or health psychology, or who has been studying health and treatments of health-related problems, has heard of that model. George Engel, a psychiatrist, first published that model in 1977. Unfortunately thinking in both research and practice has waxed and waned over the years, often in favor of a biomedical approach. Over the years a strict biomedical approach often gets more attention than a biopsychosocial model. However, in his article back in 1977, Engel had a picture of a series of concentric circles representing what you have to consider when looking at health and treating health-related problems, starting at the molecular level and building up to the level of the community and culture. That kind of thinking is helpful in guiding research design and in thinking about your research more generally. It is important to think at those multiple levels.

I would like to make one final point. We all agree with much of what has been said during this conference. We value research. We value helping families, military personnel and veterans, and we value the role of research in that. But we have to lobby for what we believe in, because people in Congress, who actually hold the purse strings, do not all agree with us. We need to get better at this—we need to improve our ability to lobby people in Congress to support the kinds of things we do.

DR. URSANO: I appreciate Stephen's comments in particular, which were directed towards science and the scientist. But let me translate for Mr. Stamilio and Delores Johnson Davis and for other policy people. What is the minimal actionable evidence to institute a program? That question includes both a science question and a political question. What is the minimal evidence that allows science to move forward and—as those of you that work in the world of policy and politics know—make a defensible case in front of a hundred senators? It is a very important question. Not what is the best evidence, but what is the minimal acceptable evidence?

I would also like to draw a quick analogy. The biopsychosocial model, which we have not explicitly mentioned, embeds all of our thinking. The Walter Reed Army Institute of Research (WRAIR) is one of the homes of that model, with a tremendous history including Mort Riser, John Mason, and now Paul Bliese and Paul Bartone, as well as others who have carried that forward. George Engel is a wonderful name to recall in this context. The question is, how do we think across those multiple levels?

## MILITARY FAMILY TRANSITIONS IN THE NEXT DECADE

*Speaker: Shelley M. MacDermid Wadsworth, PhD*

**DR. URSANO:** I would like to introduce Shelley MacDermid Wadsworth. Shelley is Professor of Human Development and Family Studies and Director of the Center for Families and the Family Research Institute at Purdue University. Purdue has been one of the most active places in the areas of family programs and family research.

**DR. WADSWORTH:** I would like to thank Dr. Ursano, of course, and my good friends and colleagues at Syracuse University for inviting me to be here. I am going to start by giving some background. By my estimation a good chunk of the military force of 2025 today is about eight years old. You watch your eight-year-old kids or nieces and nephews teaching you how to work the remote in your house, knowing how to do these sorts of things we do not know how to do. You watch all the ways they move through the world. They are not fictional, theoretical people. They are real people and they are already here. We can see how they are being trained and educated and prepared for their military careers in the future.

The second overarching point I will make is that families have always been diverse, and they have always been evolving. We like to think that there are moments or periods where there is a certain kind of family, or a modal family, or a typical family. In fact when you dig into the data, you find that the picture is rarely as clear-cut as we would like to think. Stephanie Coontz has written persuasively on this issue, and it is just as if the military is a pipe that is open at both ends, and so it is not like there is a military force. There are people flowing through the military at all times. That is true also with families. Families are flowing through different kinds of forms and arrangements. There are always many more forms and arrangements than we are thinking about.

Finally, war and warfare always also seem to be evolving. The decisions that we make today to address the issues that we have learned about in the last ten years will probably be relatively poor preparation for the next conflict, just as the template that was created in the early to mid- 1990s was an imperfect reflection of what we ought to have been ready to expect in the 2000s. These guesses that we are making are guesses, and they are difficult.

It is in the context of these three points that I have thought about what to say today. I also want to be intentional and overt about levels of analysis and levels

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of thinking because much of our conversation here has been about one or two or maybe three levels of analysis. I am aware that there are people who have to operate at additional levels of analysis, or higher levels of analysis, which I personally find incredibly intimidating. But that is part of the reason that we were brought here. I just want to recognize those.

There are individual programs, and that is where we have spent much of our time speaking. But there is also the notion of the configuration of programs. That is a level that Ms. McCollum and others frequently have to deal with. It is not a matter of which should it be, Program A or Program B. The question is what is the matrix of appropriate programs that need to be in place for the diverse elements of the population at the moments that they need them.

I confess I have a negative reaction to bubble diagrams that have 200 bubbles on them, only because I have seen them used quite a bit in the last 5 years to describe family programs. It is as though those bubble diagrams are somehow evidence in and of themselves of redundancy or poor quality or other things. I will respectfully suggest that you could do a similar diagram about training in the military or medical services or educational programming for children. You can do it about many things. But it is a simplistic way to understand the complex matrix of things that need to be in place to address particular problems at particular times over the course of the military career or family's life. It is not a nuanced way to understand things. I am not being critical because I know there for a reason for using this type of model. However, as we think about how to deal with these problems, there is a level of analysis that goes far beyond which one program is better or which kind of evidence is best.

A third level is that families are embedded in much larger systems, including but not only the military. There is healthcare, there is education, there is the economy, and there is the political system. We cannot forget those things. The military is not its own world, despite evidence to the contrary sometimes. Those other things are out there, and they are impactful.

Fourth is the issue of connectors, which others have recognized. But what I have observed over time is that we put far more energy into developing programs than to developing the pathways between programs. We spend far more time figuring out what it is that people need to do that will fix this particular problem. But we spend relatively little time figuring out how we are going to get families to those places, or how we are going to make that work. The most common suggestion is probably case management, and if you add together all of the voluntary, political and military, and medical and VA programs that have created case managers, there are some people, it seems, who might need a case manager for their case managers. We have not cracked that nut yet. We have the question right, but we do not have the answers figured out. In general we have to challenge ourselves. Every time we think about a program or a solution we have to figure out the pathways to and from that program. Where is that going to live? How is it going to be embedded?

Finally, at the highest level there is the Army and the DOD stance on families, per se. This frame affects not just research on particular programs, but also the policies and practices that shape everyday life in the military. This is the level at which Mr. Stamilio has to operate. He has to be thinking beyond just the family programs stovepipe to a whole variety of portfolios of interventions. These could be policies or other things that convey and create the environment within which military families serve.

I thought about the question posed to that group earlier, what would you do if

you had a dollar to spend, and being a very literal person I tried to take that very literally. I've asked many of you, "What would you do if you had a dollar?" Asking others I would say the answers ranged from costing maybe a million dollars to a billion dollars. But what could I do for a dollar? I could write a memo to make some recommendations.

Number one, before we become completely a peacetime Army once again, we ought to record lessons about what needs to be done the next time a big conflict emerges. As family researchers, it took us quite a while at the beginning of this conflict to figure out that this was going to be a long, protracted, big deal and that a great deal was going to be required. Now is the time to think about what we did not do that we should have done. What did we do that seemed to be good ideas? What are the things that we never even thought of that we can now? Somewhere in the Pentagon, there is a place for those manuals. When something big and bad happens, there are manuals for everything on the operation side. I propose a manual for family programs for the next big conflict. This is the moment to do that, because ten years from now, when we have a peacetime force, we will not remember anymore. There are many great lessons that we can learn from the past decade of conflicts.

Number two, the second item in my memo—I loved what Ann Masten said yesterday about harnessing the power of human adaptive systems. We are not yet fully engaging families as powerful, adaptive systems around military service members. We talk quite a bit about it but there are still places in which this idea has not become fully embedded in how we act and what we do. Much of our talk is still about preventing, or solving, or addressing, or minimizing the problems that families cause. We have not yet fully engaged the positive power of families as adaptive systems.

Evolving family diversity is also going to challenge us to figure out what the policy stance in the military needs to be regarding families, because, increasingly, marriage is going to become an unworkable gateway for defining families. We already see that we cannot use it for gay families in the way that we have used it before. But if you cannot use it for gay families, then why would you try to do it for straight families? And if you cannot do it for straight families, then why would you use it for single service members whose parents and siblings are their primary support systems?

This is something that is very difficult, but my fear is that the easy decision is going to be to decide that we are not going to have a gateway. We are not going to try to harness the power of families as adaptive human systems. This is not a smart decision for the long-term, given how every first sergeant will tell you that they spend inordinate amounts of time dealing with family-related issues. This is a very thorny problem, and I wish I had a simple answer.

My third recommendation is to take trajectories seriously. Understand that small inflections early on can really change the future. Increasingly we are learning that to a large extent, past is prologue. People who are having difficulties before they go on deployment have a much greater likelihood of being messed up after they come back from deployment. People who enter military service with a load of exposure to prior trauma and with other problems are at higher risk for having more problems later. How good a job are we doing of understanding the prior experiences of accessions when they enter the military, so that we can take that into account as we plan resilience training, as we allocate people to positions, and as we decide how much trauma we are going to expose them to?

What sorts of trajectories are we setting up for kids? New parent support is a

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good example. Trying to change a later trajectory is an early intervention. Some of the other prevention activities that we have discussed have that same sense. Female service members have an abysmal experience, by all accounts, in trying to get and stay married, if they want to be in the military. Many women have to choose between having a career and having a family. Is that a tenable pathway going forward, now that we have lifted the combat ban and are trying to make the military something that is really open to women?

My fourth recommendation: Figure out how to partner productively and in a sustained way with communities and understand that this is not just a reserve component issue. Active component service members and their families live in civilian communities, attend civilian schools, receive their healthcare from civilian providers, and, increasingly, live around civilian people. Civilian communities are part and parcel of what we are trying to do with families, not just for the reserve component. We are figuring out how to engage them and work with them. My fear is that it is all going to fall away now, and some of the lessons we are learning will not be sustained. If this happens, the military then leaves resources on the table because there is help out there that we should not be leaving alone. This includes communities defined by both affiliation and by geography.

Finally—and this is self-serving for people in this room—stop wasting taxpayer money and leaving money on the table by imposing unnecessary barriers to research and data. Allow the use of data. Remove barriers from funded, credible projects and embed evaluation when programs are created. When researchers can get money from other places to help the military answer important questions or deliver services to families, let us not be so scared about it. When this happens, we waste money and fail to get the full value of the skills and resources that we are bringing to the table. When researchers can use your existing data to help you answer important questions, let them. Let us figure out how to make that more possible, not less. There have also been a number of instances where there have been barriers posed to evaluation that are not necessary. I am not suggesting that there are no necessary reasons for gates and filters. However, more could be done with the resources available if unnecessary barriers were eliminated.

## ARMY SCIENCE AND TECHNOLOGY ESSENTIAL CORE COMPETENCIES

*Speaker: Mark N. Glauser, PhD*

**DR. URSANO:** I am pleased to introduce Mark Glauser, Professor and Associate Dean for Research and Doctoral Programs at the L.C. Smith College of Engineering and Computer Science at Syracuse University. For those of you who have not caught my earlier allusions to engineers, there is both method and history to those allusions. There are engineers in our audience. Mark is one of those, as is Gina. We have nearly always included engineers in these forums.

There is one engineering methodology—failure mode analysis—that I find particularly useful. We do not use it enough when we think about things. My non-engineering description of that methodology is that you take a hammer and throw it into the air conditioner, and then you try and understand how it broke. Not how it runs, but how it broke. Understanding how things break requires a whole different set of concepts than understanding how they operate. But these concepts inform us, particularly during high operational times. When you are running your air conditioner intensely, you want to understand what is going to break, not necessarily how it operates. These are very important questions as we think about identifying what is coming over the horizon. How will we identify what will break first? Not necessarily what is the new program to put in place, but what is going to break, how it is going to break, and what band-aid is going to be available?

**DR. GLAUSER:** Thank you. It is indeed a pleasure and honor to be here with this distinguished group of colleagues, working on a problem that is extremely important and near and dear to my heart. I am a child of a veteran, and someone who has worked closely with the defense industry and systems for most of my academic career. I want to give you some of my thoughts, and the first thing that you will notice is that everything should be tied to the warfighter mission. This is my view. When I spent three years at the Air Force Office of Scientific Research as a program manager in my own field, this was always a driving principle behind our thinking. We were funding a 6-1 program, so we were funding basic research. But we wanted to make sure that that research, even though it was fundamental, was tied to the mission.

When I see all the wonderful programs that you are all working on, I have to encourage you to tie these things to the mission. I heard some of this qualitatively: We all have a sense that if a soldier's family issues are good, that soldier is probably going to be more effective. The question is how do you quantify that?

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In an all-volunteer service, a high percentage of the next generation of service personnel is going to come from current military families. From my perspective, that is something that can be quantified and utilized, to convince Congress of the importance of these programs. CAPT Finch mentioned some of the programs the Secretary of the Army has put in place that are along this line as well. There is recognition of the importance of tying the health of the family back to the mission.

We heard in Dr. Maisto's and Dr. MacDermid's talks about systems as a way to think about this. My area of expertise is turbulent flows and steady aerodynamics and noise. Think uncertainty. Think lack of predictability. The reason we cannot predict weather as well as we would like is because of our uncertainty in understanding turbulence. That is at the core. But what do we do? We do not stop trying to predict it. Rather, we send data. We build models. We correct those models on the fly. There is an adaptability component to this.

There is a real opportunity for folks in the social sciences to team with computer scientists, engineers, and applied mathematicians to look at ways of using modern tools to deal with complex high-dimensional non-linear systems. When I am sitting in the audience and hearing the questions you are dealing with, I feel I am dealing with turbulence because of the complexity and the high dimensionality of those questions. However, there are tools out there.

You want models for understanding. You want to know what is happening. You want to be able to predict and then control. This gets to the issue of when something is going to happen. Can I change something before it happens? Can I find predictors that will tell me when something is going to happen? Because applied mathematics, computer science, and engineering are driven by physical systems that are highly complex and nonlinear, we have a marvelous set of modern tools to use in addressing these challenges.

Those are two high-level things. What are the Order 1 issues? I hear the many things that you are dealing with, but I am thinking like an engineer now. What is the most important problem? And what does that mean? From my perspective—and again this is an engineer's perspective—I might argue that this should be linked to the following question: How do we impact in a positive way the greatest number of people? Because we deal in our business, in engineering and science, with things that vary in space and time, that is how I am thinking about this question. From my perspective, this would be a high-level goal of your programs. Now, can we provide a framework to move forward with this challenge? I am going to propose that a core competency framework might make sense for sorting out some of these issues.

I serve on the Army Science Board and was brought on as an aviation expert. We were asked by the Secretary of the Army to go through a process, to give the Army, in particular the Science and Technology (S&T) community, guidance on core competencies that they need in order to make sure that they keep within the Army labs. I have some idea as to how this might map onto dealing with military families.

Essentially we were to determine what the Army must develop as S&T core competencies. Of those core competencies you want to identify and recommend what must be formed in-house, onsite, and why this is the case. This gets to the issue of what is unique to military families, and those should be the things that the military would focus on. This is the key. Then you want to identify some sort of a model that would strengthen the performance of these core competencies and provide appropriate justification for that model. That is a framework.

The first thing I want you to know is that to do something like this took a great



deal of work. If you are going to try to implement something like this as a community, you must get a handle on what the Order 1 problems are, what part of the solution needs to stay within the military, and what you can get from the outside. You are going to have to do a great deal of work. As to the core competency discussions, this is based on an idea proposed by Harvard business professor, Professor Hamel, and one of his former students (see Prahalad, C.K. and Hamel, G., 1990, The core competence of the corporation, Harvard Business Review, 68: 79-91). We took Hamel's definitions, which were driven by a corporate view of the world, and we mapped them onto the Army S&T infrastructure. The idea is that you have core competencies that are your roots, then you have your core products, and finally you have your end products. Hamel's model was initially a business model, and one can see how it might apply to United Technologies or General Electric. But how does it map onto Army S&T? Figuring this out took a great deal of effort.

We worked at Fort Carson for about 12 days back in July adapting Hamel's model to the Army S&T. I was in charge of putting the chart together for the mapping to vertical lift. Within the DOD infrastructure, the Army is responsible for vertical lift, i.e., helicopters. Basically we identified the core competencies. The military rotorcraft was our core product and the end products were the various types of helicopters.

Over the past day and a half I attempted to apply the Hamel model to the issues that have been discussed at this conference. First, what is the end product that you are interested in? My feeling is that you are looking to deliver great things to military families, particularly when they are in transition. I would argue that the end product is providing good stuff to military families that are in transitions. I would consider separation, reunion, and deployment as one transition, and then transition to veteran status.

Then I asked, what are the core products? I would argue that the core products would be the DOD-VA family support programs—the trunk in the Hamel model. Next we get into the core competencies. Which of these are more important than others? I do not know. That is for you to figure out. I can tell you what they are for the vertical lift for the helicopter problem. I have taken Hamel's model and projected it onto the issues of military families in transition. While this needs some work, it is an interesting framework.

There is also another question, and it was Tony's first question. What about the dollars? A second question is how do I deal with the large numbers of suicides and with aggression? This was a question that the Secretary of the Army was very interested in from the point of view of S&T. Here is the basic idea. I would argue that in-house research would be that work which needs to be done on issues unique to military families in transition. That body of research must be done by the military.

Next, when you are transitioning someone to veteran status, you would be working with, for example, the Department of Labor. At that point, you might work with state agencies or with other federal agencies. You could work with not-for-profits, universities, and everything else out there that you can leverage, whatever that might be. Maybe we can learn something by studying other countries.

This is a framework, and it needs to be filled in. Many of us on the Army Science Board were not ready at first to drink the Hamel Kool-Aid, and I still do not. We had to modify it. We conferred with Hamel, and he worked with us to modify the model for the Army S&T. My thinking is that if you go back to this model, it gives you an idea of how to start thinking about the issues. The model provides a framework to

*The idea is that you have core competencies that are your roots, then you have your core products, and finally you have your end products.*

*For each of the six areas that we had a focus on within Army S&T, we went through and basically did an analysis of every one of them.*

think about your core product and the end products. That is one step, and then you need to support that interpretation.

The model also provides a way to filter one of the most important things. As part of the exercise we had for the Army S&T, we were asking some very tough questions in an era when there could be reduced budgets. How are you going to make the best decisions? For each of the six areas that we had a focus on within Army S&T, we went through and basically did an analysis of every one of them. It was interesting. We argued that with some of them, there were things that could be captured from the outside community and did not need to be funded in-house. There were others, I am happy to say, in aviation that basically were already applying a model like this and doing a good job at it. This is an interesting framework, but whether it is the right framework, I do not know.

**DR. URSANO:** At the next forum I am not only going to mention failure mode analysis, I am going to mention the Hamel model. Very nice dovetailing of Shelley's comments about capturing lessons learned with the Hamel model, which is very compatible with what we have been talking about today. Needless to say, this is a big piece of budget modeling. The question of what things must be sustained in-house versus purchased out-of-house, which is a traditional way and which the WRAIR folks will recognize. In fact this is the way we think of research activities in general within DOD. Where should its research dollars be versus where should Pfizer's research dollars be?

In general research dollars from the federal government are spent in two areas. The first is the absolute innovation area, which no company will take on because it is too expensive and because there is no evidence there will be product. The other area includes critical things related to the military population, which no one else is going to do but which are necessary for national security. For example, making sure we can treat malaria does not generate a great deal of interest in the United States; however, it is of tremendous interest to the military. Similarly, the whole area of PTSD generated little interest within the United States until it became a critical national security issue for the nation. This is a wonderful perspective for us to think through these challenges.

## 6

## RESEARCH AND MILITARY POLICY: THINKING FORWARD CLOSING DISCUSSION

*Moderator: Robert J. Ursano, MD*

**DR. URSANO:** We are open for discussion, comment, and observation. In particular, we would welcome thoughts about what constitutes core competencies. Or what constitutes critical issues that must be resolved in-house versus out-of-house? Or what are the issues of continuity that Captain Finch brought up? Or what are the levels of investigation that DOD looked at as Dr. Maisto brought up? Or as Mr. Schmeling began with, where is the role of considering opportunities, what are opportunities as an aspect of implementation science, and how does the provision of opportunities for families and service members maintain mental health during the last year of a tour and the beginning of the next year of a tour?

**DR. LESTER:** The tree model, the Hamel model, would be interesting to think about when trying to integrate the diversity of programming that Dr. MacDermid pointed out. It is not just an array of many different programs, but programs that are there by design to touch people at different points. If there were an opportunity to think across the DOD systematically, what are the core competencies across all those interventions as they relate to military families? And then think systematically about training and technical support, and about data collection.

**DR. GEWIRTZ:** I have been thinking about quality control and trade-offs. I would like to comment on the randomized control trial (RCT) because I think it has become a hot button. The idea of a RCT as a gold standard is not my opinion; obviously it is a general scientific consensus. I will defer to my colleagues at the National Institutes of Health on that. It is sort of a gold standard and that is not an opinion, it is a scientific consensus. That doesn't mean that that is feasible or desirable in every circumstance.

It would be easy for a high level administrator to say, "Well these are the programs I have now. I have an inherent interest in keeping up these programs. So let us keep going with that, and let us add some evaluation after the fact." Just like it would be easy for a researcher whose running a RCT to say, "I am not going to report any of my data until a year beyond the end of my trial so I can know exactly what's happened." This would lead to a 20-year cycle between research and practice.

Clearly what we have to do is find the balance. There are some great contri-

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*But we have had the opportunity in the last year to hold focus groups with spouses, who say the biggest problem is that they do not know anything about the services.*

contributions that the civilian sector can provide. That is the whole area of prevention research. It is an area that has 20 years of solid evidence. The military sector can contribute because of the immediacy and the urgency of families who need help now. You cannot operate in an ivory tower. The crux for me, in terms of quality control and what we are willing to give, is the intersection between those two challenges.

**DR. URSANO:** One of the pieces that dovetails with this is the earlier comments on lessons learned about competencies. How does one carry on a ramp-up? What are the ramp-ups for now? What have we learned about ramping up to respond given the present war? This was our major challenge for 5 years in this war — to meet the current need.

**DR. COOPER:** What I consider interesting is that there actually could be a failure analysis. We have talked about what works. But we have not talked about what has not worked. There have to be things that have not worked because there have been many programs that have been rapidly deployed. There have been many delivery mechanisms that have been rapidly developed and deployed. I imagine that some of them do not work. Being a biomedical engineer, I have to ask if there has been any harm done, or have there been any missed opportunities?

**DR. URSANO:** Well said. Earlier in the conference Dr. MacMillan mentioned the importance of the question of harm.

**DR. SLEP:** What Dr. MacDermid said really resonated with me — thinking about how to engage families, and about further enhancing and supporting resilience of the soldier in addition to that of the family. If we think more deeply about that, it will help address one of the biggest challenges of family programs, which is that we have no way of mandating things to family members and, in fact, we do not want to do that.

But we have had the opportunity in the last year to hold focus groups with spouses, who say the biggest problem is that they do not know anything about the services. That is fine but there are systems to try to educate those folks about those services. That may be because people have a problem meshing well with the services that are provided in the traditional ways. But if you are not at the end of the continuum, it is harder to think about how to engage people. It could be that thinking about how to enlist families as a resource might lead to novel ways of engaging and partnering with families.

**DR. URSANO:** Great point. Families as a resource to involve in the solution to the problem dovetails with Dr. MacDermid's comments about the pathways and gateways, and how people move between programs, as we have case managers of case managers of case managers. Great observation and absolutely true.

**DR. BARTONE:** Every panelist in one way or another touched on policy issues. I want to raise a policy issue that does not get enough attention in our business, and that is the length of deployment. What is the right deployment length? Is it 6 months, 8 months, 12 months, 18 months, or 24 months? This is an important issue because it affects transitional stress in that it can add substantially to the problems faced by military families as they transition to civilian life.

Captain Finch presented data from the Survey of Army Families indicating that the families are very concerned about the length of deployments. There are a few studies that have looked at the impact of deployment length on soldiers and troops, but also on family members. One was a study in the *New England Journal of Medicine* a couple of years ago by Alyssa Mansfield and colleagues. This was quite a comprehensive study. It looked at medical records for over 250,000 wives of active

duty Army soldiers and found that wives of soldiers deployed for more than eleven months had significantly more mental health diagnoses, as determined from medical records. These were depressive disorders, sleep disorders, anxiety problems, acute stress reaction and adjustment disorders. This is an issue that merits more research.

Captain Finch, do the Defense Centers of Excellence (DCoE) have a role to play in gathering relevant evidence on issues like this, and then advocating for policy changes specifically within DOD, because this is DOD policy, or Army policy?

**CAPT. FINCH:** The Army commissioned The Deployment Life Study in 2009 to specifically look at the impact of deployment on service members and their families. In 2010, DCoE was able to provide additional funding to expand that study to the other services. We just completed the baseline data collection for multiple waves of the study. It is a 36-month baseline collection. The Navy part of the study is going to continue until the spring, but what we are finding right now is that there is no direct impact of deployment on the particular service members and their spouses that were interviewed in terms of some of the outcomes that were being reported.

One of the other questions that I have posed is whether we are seeing any differences in the services that are accessed. Do we know any information about these families anecdotally before deployment, in terms of whether there are some readiness activities or resources that they were accessing prior to deployment that may have minimized the impact of deployment? That will give us a little bit more information.

I have not come across anything that definitively states a time frame, whether there is a difference in the effects of a 3 month or 6 month or 18 month deployment. What I am picking up is that the separation period in and of itself creates a disruption to the family system.

**DR. URSANO:** Good discussion that echoes some of our comments earlier about the question of family function. What is the decay curve of family function related to deployment? How long does family function remain altered rather than impaired? How long does it take for family function to be restored? What are the different family functions that are affected? Which ones are critical family functions? How long before capability is restored in a redundant fashion, so that one can have a second deployment that does not add to the impact of the first deployment? One can picture hazard curves related to the question of family function over time. Several of those must be critical capabilities from which a family cannot recover, or from which a family cannot recover quickly. This is a very important policy question, as well as research question.

**CAPT. FINCH:** The Deployment Life Study examined traditional married families where the service member is typically a male with a female spouse. We have not looked at single service members with children in this study, which is another area of concern, particularly as we bring more women into combat roles.

**DR. URSANO:** Dr. MacDermid made an excellent point about the different definitions of family, and whether or not our present definitions are sufficient as we think forward. I will remind those of you who have been through this war, one of the perfect examples of that is the question of wounded warriors. We found that our definition of family provided no funds for moving parents of single soldiers to come to visit their warrior when they were wounded. Clearly the definition of family never covered that. We need a different definition.

**DR. MACMILLAN:** I really like the idea of core competencies, and if we apply that to the intervention research area, some of the essential competencies have to do with knowledge about the use of mixed methods. We hear about quantitative versus

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qualitative methods. There is some creative work going on right now with mixed methods. There is a whole literature on the evaluation of complex interventions. We heard yesterday about the idea of system navigation, and we know so much more about how to evaluate not just complex interventions but complex systems.

I would like to comment on RCTs which do get a bad rap; however, they do not have to take a long time and increasingly there have been a variety of articles on them. There was one recently in the *New England Journal of Medicine* about strategic ways to be more nimble in conducting RCTs. RCTs are not good or bad. What it really comes down to is what the question is, and what is the best approach to answer the question. We want to see research methods used that control other factors as much as possible, and many times that is the RCT.

**DR. ROBICHAUX:** As the Family Advocacy program manager at the U.S. Army Medical Command, I would like to make two points. One is that we talked a great deal about PTSD and the stress of 10 years of war, but I would submit that what is looming on the horizon, with sequestration and budget concerns that cut training dollars, is the increased risk for a wide range of misconduct, including domestic violence and child abuse. We had this experience in the 1990s in Europe when we drew down. Those units that had no purpose sat around and played video games all day, basically acted out and showed up in all of our programs with higher levels of problems.

The other point I would like to make is that the recent VA study indicated that about 10% of that cohort had engaged in severe domestic violence. In contrast, the current numbers among the active duty population, indicate that close to one quarter of the cases of domestic violence fall into the severe category. We have tracked this and the numbers have risen since 2009, and we think part of the reason for this increase centers around the increased use of Army combatives. Soldiers are routinely taught techniques associated with Brazilian jujitsu wrestling moves, the old hand-to-hand combat, and they tend to be inclined to use that training when things turn physical in their marital discussions. Parenthetically, when you read the literature on the evolution of Army combatives, the colonel who is given credit for proliferating the doctrine outside of the Ranger battalions is Colonel Michael Ferriter who is now Lieutenant General Ferriter, the Assistant Chief for Staffer Installation Management, under which family advocacy falls. It is kind of a circular process.

**DR. URSANO:** Very interesting observations, particularly the comment about increased risk time. For those of you familiar with the military literature, there is the question of frequent deployments in combat. The other risk time is boredom. In Vietnam the rates of substance abuse increased as boredom increased; boredom—because of a lack of things to do—creates risks. Also the issue of actual rates of severity versus the change in rates of severity of events is very important. In addition, approximately 20% of the Army in any given year has had some type of mental or behavioral health intervention in the medical system — either counseling or assistance for sleep or actual treatment of a disorder. That is the good news; however, even if those who have insurance and the capability and ability to get there receive health care, we still know that not everybody who needs it receives health care.

**DR. COX:** I would like to make two comments about the issue of core competency. One of them is an observation, and the other one might be slightly controversial. From my perspective, the Army did a very good job in the 1990s maintaining a core competency of individuals who could look at soldier issues. Even though we were not at war, we were sending teams into Bosnia and Haiti, and similar places,

so that when the war occurred, we had that core competence and the ability to be very effective. We had the Hoge, et al., article in 2004 in the *New England Journal of Medicine* and then followed up, supporting the *National Health and Aging Trends Study*. But that did not happen just by magic. That happened because we had maintained a core competency, and somebody had strategically decided that it was important to keep teams around with those skills.

A more controversial part of this is that in my over 20 years of experience with the military, I am still not 100% sure who has the core competency for the execution of research when it comes to families. There is a great deal of excellent research that we are funding extramurally. There are many individuals and different institutions doing research. However, I do not know whether we can really define core competency or groups within DOD that maintain that core competency. For example, the Millennium Cohort Study now has a huge family component. But when did they start this—about 4 or 5 years ago? It is a relatively new DOD initiative. Dr. Riviere has some good studies; however, I do not know that we would define ourselves as being the group with the core competency.

**DR. URSANO:** That is an excellent organizational observation about WRAIR. Seems to me WRAIR has always had great interest in this area, but only occasionally is able to build a cell around it. The Uniformed Services University has some good activities, somewhat limited, but supported because of this office, with the support of Delores Johnson Davis and Mr. Stamilio. But the issue of sustained combat and war-related operations is a whole other concept. Clearly it is one of the things we have been talking about today, let alone core competencies and basic research to core competencies, and program evaluation, implementation and sustainability, which also has a whole set core skills related to it.

**DR. LUNDQUIST:** I wanted to point out that although only about a third to a fourth of families experience war deployment, this is not an insignificant number. However, something that every active duty family experiences is a permanent change of duty station (PCS). In looking to the future, I hope we can assume that the wartime will not be a constant. However, thinking about the effect of an average of 3 year intervals between permanent changes of duty station, it is important to understand that while there are many advantages to the mobility, there is also a kind of trauma in moving constantly, changing school systems, and changing employment trajectory for spouses, etc.

To go back to the original question, that if I had one dollar to spend, how would I spend it. I would go back to the homesteading policies that were talked about and brought out for certain sub-populations, maybe a decade ago. The idea is that, at least for first-time enlistments, families spend 5 to 7 years in one garrison, in one place. This could be very cost effective, as has been talked about in the past. Good in terms of reduced stress. It is important to think about the life course of families at that point in time. Many families have very young children during that first enlistment, and at the youngest stage of development, these children are most vulnerable to their parent stressors. If they were to stay in one place for 5 to 6 years, many of the problems we have been talking about would be eliminated.

Second, to go back to Martha's point about very early marriages occurring in the military. This is a period of time when many of those early marriages do occur upon the first PCS, maybe leading someone to make a hasty decision to marry in order to stay together and move on. If people were able to stay in place for 6 to 7 years, this could also have an impact on the early marriage issues that have been discussed.

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*We need to think about the family as a network of relationships, and that resources for resilience can be found throughout the network. That is especially true for African-American and Latino families.*

**DR. WALSH:** I would like to address the important point that Dr. MacDermid made about families being diverse and evolving. What does that mean for us in our research and in our programs and services? We are talking about couples and about parenting; however, if we have a systems view of the family, we need to be asking each family about who their resources are, who is important in their family network, and who could be an important resource for resilience. An example of that would be for a parent when the spouse is deployed, the grandparent may be a critical resource, whether living in the home or not. For post-divorce or separated couples, what is the role of the non-residential parent in the child's life? That is a significant factor in that child's well-being or possible dysfunction.

In addition, we need to think about the family as a network of relationships, and that resources for resilience can be found throughout the network. That is especially true for African-American and Latino families, as well as many others. As we think about transitions, an important factor that demographers are finding is that families are changing and evolving more fluidly over the life course. This means that, if we are thinking 10 or 15 years out, the family that we are working with today may be going through disruptive transitions including divorce or separation into single parent households, into re-partnering, or into step-family configurations. Although the complexity may be something we do not want to see, if we can draw on considerable research over the last 2 decades about varied family forms, we have very good evidence about what works well, and what works poorly for family and child adaptation.

**DR. BRISTER:** At the National Alliance on Mental Illness (NAMI), we rely heavily on research for our advocacy and education. One of our signature programs, the Family to Family Program, was recently designated as an evidence-based practice. We are in the process of developing a similar program for military families. Our niche—and this is going back to the previous presentation on core competencies—is knowing the community, and knowing where people live. Most of our programs are taught by peers. We have 50 state organizations and 1,100 chapters across the country.

I want to encourage the folks in the room, both the academicians as well as individuals with the VA and the DOD, to think outside the box and look at where things are already happening. Somebody mentioned that we are only as good as the people to whom we can deliver the programs. How do we get families engaged? I frequently refer to myself as a recovering mental health professional. I ran community mental health centers prior to coming to NAMI about 8 years ago. If I had known then what I know now about families and individuals, I would have run better mental health centers.

We cannot all know everything. In reference to the circle figure that Dr. Glauser presented, I would encourage folks to think about what is shrinking and what is growing? What do we do in-house? What do we outsource? Look at people that are already out there. NAMI has a memo of understanding (MOU) with the VA. We are in our third year of our second three-year MOU, where we offer our family to family programs on the VA campuses and engage families so partnerships can work.

**DR. CONNER:** I was intrigued by Richard Himmons' intervention study, in which they showed effects on partner physical abuse, suicidality, and prescription drug misuse. The impact of an intervention on multiple outcomes is encouraging. It reminds me of a large-scale Air Force intervention trial for suicide prevention that showed effects on multiple death outcomes including suicide. I am a suicide



researcher so I am always thinking about that as a primary outcome. However, perhaps that gets in the way of thinking about the most important interventions—those that can have widespread impacts. It will be very useful for us to consider intervention or prevention activities that are most likely to have multiple impacts across these sorts of endpoints. One could even think about family-based interventions as being nested in a larger intervention strategy, as one component rather than a singular component.

**DR. URSANO:** Excellent comment. This echoes back to Dr. MacDermid's comments and to Mr. Stamilio's and Ms. Davis's challenge of the portfolio of portfolios. How does one choose a program that, in fact, may have multiple impacts across multiple bad outcomes? Yet our research strategies are not quickly aligned with that, as we tend to want a nice clean outcome to assess. There are advantages to grouping outcomes when one wants to affect many people and there is a cost benefit associated with it.

**DR. LEE-GLAUSER:** That gets to my point as a systems engineer. I see people optimizing for an event, whether it is a suicide prevention or a special needs family or other things. When you have integrated assistance, you have a different dynamic. When you are talking about failure mode in engineering, sometimes when you optimize for an individual event, optimization integration could be a failure mode when you are evaluating at the level of the system. For example, if you think in terms of your vehicle, you are balancing your tires, and you have a vibration problem in your car. If you do the static balancing of your tires, and they fit with little weights around your rims, when you are driving, that adjustment could make the vibration worse than anything else.

You have to look at an integration systems view of dynamics. Not only does this community have to think about the family dynamic situations. How could mathematicians and computer scientists with a variety of artificial intelligence and data mining use their expertise to help look at the integrated system model? Inflection points have the sensors and actuators. Where do you put that? Where do you put the interventions, and what are those inflection points?

**DR. URSANO:** Excellent thoughts. I especially like the wheel analogy. Optimizing for one thing may actually create substantial problems so that as one goes up the system, there is the question of optimization at the system level. This question of sensors is a great term within DOD. What are sensors? Where do we place them if they are placed in the wrong spot? We get information that will actually increase the problem rather than decrease it.

**DR. BLOW:** I would like to comment on Dr. MacDermid's outstanding memo. One of the things she talked about was the need to figure out how to partner with communities in productive and sustained ways. That is a critical point. In my state of Michigan, we know that communities really want to help, and we have had great responses in our Star Behavioral Health Provider training there. We have reached out to communities in multiple ways, and they are eager to help. But community members do not always know how to help. The military is often this big machine with whom community members do not know how to work. The military in Michigan, and the National Guard in particular, has reached out to communities but sometimes these are not sustained outreach efforts.

My last point is that there are many resources aimed at the military, for example, the VA. Many resources are given to the military but not enough resources are given to community members who want to work with the military. Figuring out how

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*We have a master resiliency training program, and approximately 18,000 soldiers have gone through it. It is based on a University of Pennsylvania model of positive psychology.*

to provide resources in communities who want to work with the military is a big question.

**DR. URSANO:** Excellent observation, particularly the question of lessons learned and capturing them. If part of our challenge is how to ramp up, ramping up requires rapid bridging to the civilian community. One of the core elements of being able to do that is knowledge of the military in the civilian community. How do we keep that activity available, sustained over time, when we expect it will go down? As the war goes away, knowledge of the Army or DOD within the civilian community will decrease dramatically. It is already fading off the front page. But that is a critical function of being able to ramp up.

**DR. THOMAS:** I wanted to address something that was said several times yesterday. We all like to collect our own data because it is our data, and we know how to do it in the best way possible. I would like to make a plea that people not forget that the Army, and particularly family programs, collects a great deal of process and implementation data across what Dr. MacDermid described as this matrix of programs. One of the things to think about is that, when a family is having problems and getting services, they may very well be using a number of these services. There are data available to look at who is using what at critical times. Please consider that, especially in this time of constrained resources, not everybody is going to be able to collect new data. It is important to think about leveraging the tremendous amount of data that already exists.

**DR. RIVIERE:** I have two main thoughts. First, what lessons will we have learned from this process for the next efforts that some of us may be involved in? Defining the problem that we are trying to fix is important, because I have seen proposals in which it is unclear exactly what the problem is. Part of the problem is that we do not know exactly how many families are experiencing stress. In addition, you have this ambiguous, unclear definition of military families under stress. What exactly is the problem that you are trying to fix in this whole universe of stress? Without a clear definition of how your program affects a very specific problem, we are throwing money at a particular issue, and it is not necessarily solving the problem. Defining the problem is also useful for the concept of everything is tied to mission, which is not necessarily comfortable. You do not want to think all of your work is tied to the effectiveness of war fighters on the field. But if you have to justify why your project should be funded, it has to have some relevance to the military, and if senior leaders have to approve your project, they need to understand how it affects war fighter effectiveness. So in the fighting the problem is very specific to the problem you are trying to solve because we know that 10% of military families don't have access to services. Then we can also address the question of military relevance.

The second point has to do with reflection and competencies. I am thinking of our own center and branch, and what we do at WRAIR. I am referring to The Center for Military Psychiatry and Neuroscience, Colonel Bliese, Director, and my branch, the Military Psychiatry Branch. Reflecting on what do we do and whether we are doing what we should be doing, the point of understanding what the competencies are is for you to understand. For example, this is what we do and this is what we do not do. If I know who else is competent in an area in which I am not competent, then I can share my research findings, and we can estimate the prevalence of a problem. I can tell you this is the nature of the problem, and you will be the one to create an intervention or program to solve it. That way we can actually have the

flow of information from one competent cell to another competent cell, each with different competencies.

**DR. DRETSCH:** We are in the business of trying to build resilience for soldiers as well as family members, knowing that there is a huge link there. We have a master resiliency training program, and approximately 18,000 soldiers have gone through it. It is based on a University of Pennsylvania model of positive psychology. There is a great deal of room for improvement. We have performance experts who work with the troops to ensure that they are able to try and improve their performance, whether it is on the marksmanship range, or another operation. It is important to categorize what this resilience is, whether it is operational, and whether it is offsetting what happens when soldiers return from deployment.

Again, the outcome measures are extremely important. We are looking at how to enhance performance, knowing that if you enhance performance, if you increase job satisfaction, if you help soldiers feel they have reached some level of competence, this affects the family too. It is bidirectional. What do we do to address issues within the family so that we can have a bigger impact overall on the force? But it goes in both directions. What purpose can we serve during down time, when soldiers are re-deploying, and re-integrating and asking again? There needs to be activities or some level of interaction in which the war fighter returns and feels like they are still part of something other than maintaining some level of readiness and training. All soldiers, all humans, need some level of arousal, especially when they are younger. You need to be engaged. You need to be active. When you come back and you experience the stress of down time and not serving a purpose, and this emptiness, while you are being directed to attend various formations and do online trainings, etc. That is a stress. How can we address that? It may not be an easy answer or the solutions may involve a great deal of trial by error.

**DR. URSANO:** Those were excellent observations, in particular, the importance of defining resilience. If one is going to use that term referring to policy or to research, one needs to specify, resilient to what, from what. Resilience is not a new term in the military, nor is it a new term in science. It has been used in relation to children for a long time. It has been used in the area of the military since prisoners of war. For example, how are soldiers resilient to the prisoner of war experience? Although it is not a new concept or term, it needs to be defined carefully.

**DR. COZZA:** A couple of thoughts, one related to Dr. MacDermid's comments on perspective. Gaining a perspective on what the issue is and recognizing how fluid the experience of military families is, and her metaphors with the open-sided pipe and the eight-year old child were incredibly helpful. It also made me think about when we discuss core competencies, and also core issues. How do we define what the core or the continuous issues are for military families versus what are transitional or situational issues? We are not always entirely clear about that. When we are in the midst of the experience, we may assume that certain things are core and continuous, however this might not be the case. It makes me think of disaster models of examining populations over time and the particular experiences that they have had. Also it speaks to research methodology. There are certain research methodologies that would better identify what the core issues are versus more nimble methodologies that might be required in terms of situational or transitional issues. One of our core competencies then as researchers needs to be this capacity for vigilant observation, so that we can determine when there is a shift within the population. We need to maintain our awareness, and be prepared to understand,

*How do we define what the core or the continuous issues are for military families versus what are transitional or situational issues?*

*Sometimes strengthening communities is a much more effective way of keeping people resilient at a number of different levels.*

address, and study the changes that we see. One example I have relates to the shift of the population over time. Whether we are talking about the VA or the DOD community, what is the experience going to be for military families as we begin to have the co-existence of combat experienced versus combat-naive populations living in the same military communities as well as the VA? When combat veterans from this war are engaged with Vietnam veterans, there are multiple ways that could go. It could lead to opportunities for successful mentorship or it could lead to competitive or conflictual relationships within the population. What mechanisms can we think about or study or be aware of that could impact or contribute to those outcomes in a more successful way?

**DR. URSANO:** That is an excellent allusion to the disaster literature. I am reminded of a study that was done here in DC around the time of the anthrax attacks. What was looked at was the question of who received vaccinations for influenza and who did not. They found a substantial generational gap as to who felt at risk and who did not feel at risk. The way that was resolved with a positive outcome was to bring the generations together. Older people were much more likely to get influenza vaccinations than younger people. They created town hall meetings that brought together the cohorts to exchange information. They could hear from each other what the challenges were, and, in fact, there was a positive outcome in that there were increased rates of influenza vaccinations in the younger generation. It is important to keep track of our cohorts, how they had different experiences, and how they can be used as a tool. We have a whole new cohort that we have created.

**DR. COOPER:** A question I have is how do we define family? I know that has been a challenge because in some cases the traditional definition of family is not going to apply. In the wounded warrior population as well as the generation population, maybe it is parents, maybe it is a sibling, or maybe it is a boyfriend, a girlfriend, or fiancée. In some ways you have to realize that there are certain restrictions due to family. If you are trying to build resiliency and coping strategies, then we need to look at casting a wider net for the definition of family.

**DR. URSANO:** Excellent point. It would be very helpful at the policy level to go after a couple of the low hanging fruits. I could see all kinds of challenges, but there are some that we could solidify easily, for example, the question of parents or grandparents of single family members. Are there laws that may assist us to implement those kinds of family definitions more rapidly in the future as we need them? Maybe such laws already exist, but clearly they are challenged.

**DR. ALDWIN:** Over the past day and a half I have been struck by how top down all of this is. We are going to develop programs and deliver them to people to make them more resilient. But I was very glad to hear, and I really want to reinforce, that sometimes strengthening communities is a much more effective way of keeping people resilient at a number of different levels. We need to understand that people's networks are broader, and remember that there may be social networks within base communities, and between base communities and other surrounding communities that are important resources. Understanding that, for example, an individual's contributions to communities may be the best way to maintain their own mental health. If you bring soldiers coming back with down time into community service projects and identify barriers that the military itself may be making to the enhancement of natural existing support communities, this might be a different way of looking at things.

**DR. URSANO:** I am reminded of a brief conversation I had with Paul Bliese just a few moments ago. Maybe one of our questions is not to define what the family

is but to ask the question what is the soldier's network that creates impact on the outcome of interest. That is, first define where we are seeing an impact and then figure out how to describe that in a way that would include things like buddies, units, etc. There may also be ways to use research tools to define the impact of family other than the generational family, and there will be substantial overlap between the two definitions.

**DR. SPOTH:** I have three general points pertaining to the Hamel model, about what might be characterized as strategic multi-level system thinking. In addition, I would like to make an illustrative point, and a point about standards of evidence. The first general point goes back to the question about how to spend a dollar. There have been many references to future scarce resources. In light of many competing demands in this area, there seems to be a need to be clear about what that means, especially in light of anticipating future issues to address. Another point is getting clear about the resources and demands, which relates directly to what Dr. Glauser was saying about Order 1 issues or priorities. He referenced how difficult that is and, indeed, in this context it seems immensely difficult to be clear about what is unique to the military and what has to be the highest priority. Second, how do you operationalize these? The third point is the importance of getting specific about how you identify core competencies. How do you operationalize something that is a more systems oriented, strategic kind of approach?

That brings me to a more specific point about standards of evidence. There have been many hints about how to think about this strategically. This is not black and white. It is not either/or. It is not RCT or not RCT. There is a great deal of creative thinking about research designs and methods. One of the things Tony Biglan, Brian Flay, and other people have developed is this idea of hierarchical decision-making, which starts with clarifying the question but then addresses how you can maximize scientific rigor within specific practical constraints. There you get into many kinds of interesting designs, for example, multi-factorial or roll-out designs, that are in the randomized family. Then you get into many kinds of other qualitative methods that have a great deal of value, for instance, observational studies. It is a systematic, higher-archival decision-making process that starts with the question and then carefully considers how you can you maximize rigor within obvious practical constraints, in way that is specific to the question.

**DR. KLEYKAMP:** Given the nature of this conference, the focus is on military and military-specific core competencies and specific programs, areas, and domains of expertise. But as a citizen and not just as a member connected to the military family, I want to go back to James Schmeling's point of thinking about not building a higher, thicker, more fortified wall between what is military specific and what is civilian specific, but thinking about moving into the future and bridging those military-civilian divides.

One thing that is connected to this is the continuing notion and complacency with the idea that our military families today are breeding the military families of tomorrow. From a citizen perspective, I find that incredibly problematic that we think about how to treat military families today as a means of recruiting the next generation. It is something that I find concerning. I understand from a policy and pragmatic perspective the need to divide and conquer, to be nimble and effective. But there is a much higher-order societal level concern about the tendency to divide rather than integrate military and civilian communities.

**DR. MONAHAN:** I am thinking along the same lines. What is resonating for

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me is the point that Dr. MacDermid made with respect to eight-year-olds being the soldiers in the future in 2025. I am thinking about civil society and the issue of a third of children being raised in impoverished households and impoverished neighborhoods. What are we doing about healthcare and mental healthcare for children today? What are we doing to improve the educational institutions, to incentivize them to become productive citizens and to engage in military service and so forth? I am thinking of the obligation that we have to get out of our own silo with respect to the field of study and think more broadly about the individual who becomes part of an organization, who is part of a family, maybe part of the military, and so forth. That challenges us a great deal with respect to our civic responsibility.

**DR. URSANO:** Of course the military in the biggest picture has always been one of the boot strap operations of our society. It is one of the ways to move up. That becomes an important component to sustain in the future.

**DR. ELBOGEN:** We have talked about definitions of military families and trying to refine the definitions resilience. One of the things that struck me over the last 2 days is that the transitions into the military and from the military have different rationales. The reason we want to help families in transition to the military is that more supportive families lead to better soldiers. That rationale will not work for soldiers leaving the military, but their children are going to be our next generation of soldiers.

Those contexts need to be considered with respect to all the interventions that are available. What are the top 5 needs and problems of families transitioning to the military? It is going to be different than the top 5 needs and problems of military families transitioning away from the military and into civilian life. I did not know about many of the surveys available. It seems like there might be data pertinent to these questions. We have listed at least 30 different problems that military families are having. There are limited resources. I am going to bring up the dollar again. I would say 50 cents should go to looking at what are the problems associated with the transition to and from the military. Then you could prioritize 10 cents for each of the 5 top problems. You can probably gather that information from data across all those great data sets.

**DR. SPIRO:** I am from the evidence, not the policy-based, community. I like to dabble in what I think of as facts. Dr. Elbogen just made a great lead into something that has been striking me through much of the discussion over the past day and a half, and that is, what is the evidence base for the decisions we are making? What is the evidence base for what is a family? What is a transition? What is stress? Two people have shown the survey of Army families that is done every five years. Those data might have been quite worthy at the time that they were collected. But to make decisions on data that are now three or four or five years old seems rather ineffective.

I want to ask 2 questions. How many soldiers over the past 5 years have decided to make the military a career? Is there an answer for that? What is the marital rate going to be of people who are 8 years old now and who will be in the military in the future? It seems that it is declining among Millennials from some of the things I am reading. Perhaps the issue of families in the military will be rather different in 20 years than it is now.

Those are rhetorical questions but I want to come back to Dr. MacDermid's comment about trajectories. How do people get into the military, and what leads them to come in as a family or to become a family once they are in? How and why

did they stay? How and why did they transition out? How will these things change over time? Where can you get the evidence to answer these sorts of questions?

Part of that can come from “big data.” Another way is transferring from the health care system a learning healthcare system. Most healthcare systems, most large businesses, Google, Amazon, etc., are using data in real time to inform them and to make decisions and predictions. Based on the 3 movies I have watched, Netflix will tell me 10 that I should watch. Now they may be predictions based on past behavior. They are not going to tell me about the new genre of movies that I have never heard of. Would it be worth thinking about the military, which has the advantage of being in many ways a total institution, managing to collect data on real-time basis and using it to guide, at least in the short term, future actions?

I want to go back to the Hamel model and the core competency idea. There are certain competencies that the military should retain. Focusing on what, if anything, is different about a military family versus a non-military family can do a great deal to help us decide whether intervention programs can be simply lifted, transported, and worked for military families. Alternatively, why are we unique, what is different, and how do we have to adapt these programs and evaluate and modify them on the fly, as we begin to implement them?

**DR. URSANO:** I would like to capture a few of those important comments: How many soldiers decide to stay in? Of course that information is known. The marital rate of eight-year-olds is a little more challenging, but we can speculate and it is a great question as to how that will go forward.

The broader issue of trajectory, a term that I actually thought would come up much more often in this conference than it has, is clearly a powerful and important issue. I remember discussions in 2001 or 2002, when Dr. Chu was the Deputy Secretary of Defense. At that point he had great interest in, and a major initiative around, identifying trajectories of careers into and out of the service. This remains an important issue as a target to help understand families as well as soldiers.

Last, the comment about Google, Facebook, Twitter, which are certainly important data sources that influence our folks as well as everyone else. You may recall an article in Science this past year, which showed that the influences of one’s friends are substantially greater than other influences on Facebook. How that influences family and how we can better use those are important questions.

**DR. PARIS:** I am reacting today to things that were said yesterday and today, from my position as researcher and clinician, having worked with families for 30 plus years in many different venues. I support the idea of core competencies and synthesizing basic ideas to inform the ways we move forward. Part of the reason I support that is because the more things change, the more they stay the same. That is, we have some core ideas and people are struggling to define family. The definition of family has changed over the last 50 years and it will change over the next 50 years. But the function that families serve and who is in those families, what is important about relationships, what human beings need to grow and live out their life cycle—I am not going to say throughout history but let us say the last 100 years—has stayed relatively the same, although the formations have looked different.

If we have some common understanding that we can agree on, the way it actually looks is going to change. Some of that we may be able to predict and probably much of it we are not going to be able to predict. To go with Dr. MacDermid’s ideas about the 8 year-old, it is important to look and see how he or she is growing and

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changing. I look at my 23 year-old students and the way I am trying to teach them is different than I taught 10 years ago or 10 years before that.

But I do not think we can throw out all we know about families, human relationships, core ideas about growth development, and the biopsychosocial model. If you have some basic tenets that you can hold onto, it allows for a great deal of flexibility in how people and things and needs are going to change. That may be kind of simple but I do think it is true based on my observations over 30 years.

**DR. WADSWORTH:** Thank you, Dr. Paris, for mentioning that because I realize I was not as clear as I should have been. I should have said that family structures are always evolving. But I completely agree with you that family functions really have been remarkably consistent across cultures and throughout history. In this society we do tend to spend far more time worrying about structures than we do about worrying about functions. We assume that one is a function of the other—that if you ensure a particular structure then function will surely follow. Yet we have so many examples that show that that is not true. Certainly the very creative solutions that many step and blended families come up with to deal with completely unprecedented complexities in family structure are a very good lesson about that.

**DR. LESTER:** I wanted to respond to the comment that these all seem top-down. I appreciated the community partner research efforts that were presented yesterday and know that there is a great deal in the civilian literature about working closely with communities.

We want to introduce the idea of military culture diversity, that not every installation nor branch nor sub-groups within branches at the military are the same. In fact, they are quite diverse. Any implementation like yours, where the sites just ignored the intervention, required this kind of community partnering at the ground level. Even though there may be the advantage of some systemic, top-down organizational decision, change is not going to occur unless that kind of partnering happens on the ground.

I also wanted to advocate again for the use of some of the real-time data collection processes that could help us guide intervention delivery, not only at the family level but to make those kinds of real-time modifications around specific installation culture and also follow a dynamic trajectory. If we could enlist the assistance of the business world and the computer engineers who can help us do that kind of thinking, it would be easier to think about the delivery of core competencies, whether those are in the research or intervention realm or even in the implementation realm. We have not talked much about training. That is such a critical component of integrating any of these into the system.

**DR. URSANO:** Excellent comment and I am reminded I want to ask Ms. Davis and Mr. Stamilio whether we have a cell at the Command and General Staff College and at the War College that is directed towards teaching about family structure and family support. It is support for the longitudinal picture of how we integrate that into the thinking going forward?

**DR. ZATZICK:** It is important to have an on-the-ground sense of what is going on. I cannot tell you how much we have learned with Steve Cozza at the head, and with the UCLA focus team, just hearing a series of cases. From an engineering perspective, if I understand, as in hydraulics, you are going to create a model and you are going to break it down. You take your hammer and throw it against the damn and it breaks. There are points—inflection points—at which you cannot optimize everything.



That is really what we are seeing in these incredibly complex military systems, case by case. FOCUS depends on two parents communicating. Dad comes in with TBI and PTSD, and he cannot communicate. We go back to the medication clinic. The TBI clinic is giving 3 meds. The psychiatry clinic is giving another 3 meds. We need to build an organizational intervention to get the dad on the right medication regime so that we can go back and do FOCUS.

I am going to suggest something that does not cost Mr. Stamilio any money—basically, you want to redesign jobs. You want Dr. Ursano to have a clinic or maybe a little more feasibly, you want Dr. Cozza or Dr. Bliese to have a team early on in the next conflict that is fielded, an expert team that is saturating on cases. Even before you have a research network and data coming in, you want to taste the diversity of the cases. That way, the engineers can pick up on this and these kind of higher-level engineering models can come through, which would not be feasible if you do not have the team on the ground. Dr. Glauser was just saying that the engineering models rely on good field information.

**DR. URSANO:** One piece of that would be the importance of ecological observation early on and having teams that can carry those out so that one has a sensor that one has ready to work and can deploy with the core skills of accurate observation.

**DR. GEWIRTZ:** One point I would like to make is just a reminder that close to half of our forces are civilian soldiers. I have heard a great deal of discussion about installations and culture and separation from the service. But the family dilemmas of the civilian soldiers and the resources that are available to them within the military structures are vastly different and much harder to access. They are much less centralized. They are often highly isolated and some of the data on the vulnerability for PTSD and other disorders shows that is a risk factor for those disorders. Let us not forget those military personnel.

A second point is about methodologies and real-time methodologies. These exist and are being tested now in highly innovative ways of capturing just-in-time data. DCoE's National Center for Telehealth Technology (T2) provides an excellent example of that. But also, civilian researchers around the country are experimenting with smart phones and respondent report or observational data that are gathered immediately, wherever participants are. This can really inform this kind of work.

**DR. SALTZMAN:** One of the themes that also emerges is the difficulty with engaging families to participate in programs. For many projects I am working on, it is hard to get the families in, and then difficult to go where they are, in terms of dealing with some of their immediate needs so that they feel they want to participate in the program.

One of the things we are doing in Dr. Cozza's program, and with Dr. Zatzick as well, is designing the program so that it is nimble up front. We adjust what we need to do so that families see an early win and get pulled into the program. We do not just follow a manualized approach in which we have our checklist and we are going to do these things no matter what. This goes to the design of programs or the modular agile approach we are talking about, and also speaks to the process of developing the programs.

We are talking about an iterative approach that feeds into the ecological fit that you mentioned. This approach has points along the way so that we can re-evaluate. We build in degrees of freedom so that the programs can be adjusted in ways that are faithful to the original, core components of the program. We plan up front that

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we need to adapt the program, and we have dimensions for adaptation built into the program so that we can hold on to those core components going forward.

**MS. BARRON:** As a military family member whom you might study, I have a couple of comments. I like what Dr. MacDermid said about adaptive human systems. Our military changes constantly because of the people that come into the military. They are young, and they do not stay in very long or if they do, a long time is only 20 years. I would venture that some of you have been in your career for a much longer time than just 20 years. Therefore, it is constantly being represented by a new cohort of people that bring with them their own sets of ideas and ways of doing things. What I like about what Dr. MacDermid said is that if we could just look at what is working and continue to look at that because it is going to change. What works will change all the time. Then we can inform those programs that we have in place, programs that I hope will not go away because of the basics of financial stability and behavioral health, etc. But we can make those programs even stronger by informing what is working for that particular group of people.

I mentioned that the young lieutenants and captains today are going to be your battalion and brigade commanders in 2025. When I ask my daughter who is an Army captain, what she wanted me to tell the group, she said tell them that young leaders, both NCO and officer, do not trust their leadership. Right now there is very little trust in leadership for many different reasons. Families carry with them an enormous amount of anger. And that is the cohort that, in 2025, is going to be leading those eight-year-olds that Dr. MacDermid talked about earlier. Again, I am one of those family members whose daughter decided to follow in her father's footsteps for many different reasons.

**DR. COX:** I really hear what Ms. Barron says about the trust in leadership. The thing we need to understand—there was an article written in the mid-1960s called, “The Art of Muddling Through.” Some of you may remember it. It is an old policy article we had to read eons ago. The bottom line is, for example, who would have guessed that December, January, and February, Mr. Stamilio would have spent his lifetime looking at childcare checks, out of the blue.

As policy people, we like to think, and I am talking strategic now. I am not talking about which studies do we do and how do we do them. But at the strategic level, we have this issue that we really do live on a day-to-day edge of what did the Congress say yesterday or what does the President want to do tomorrow. There is a constant going on that is interplayed between congressional interest and the press. What is the hot topic in the news? We are in reaction mode way too often unfortunately.

Then there is this other effect. A few years ago, we celebrated the 60th anniversary of our being in the war in Korea. Of course we have had garrisons there for a very long time. I like the expression, “Korea: 60 years, one year at a time.” The idea being that nothing really ever gets better in Korea because by the time you get there, you spend 3 months figuring things out. You have 3 months of actively working on things. Then you have the rest of the time packing to come home. This has gone on for 60 years. Nothing ever really gets better because I, personally, am going to be here only for a year.

The same is true with the command levels. Most commanders are in place for 18 months to 2 years. They cannot wait for a command. They cannot wait 6 years for an outcome study to show how great it is that they have made a splash on the organization. They need something to go on their Officer Evaluation Report this

year, about how well things are going. We get this effect of immediate kinds of issues that at the strategic level end up influencing how we do long-term studies, if there is money to do these studies.

For example, about 30 minutes ago I got an e-mail from DOD that says, “What would happen if we cut your budget by 13.7%?” What bothers me about that is, if you had asked me how much would I take at a 10% or a 15% cut, I would not be nervous. But when you say 13.7%, I wonder whether this a done deal? Do I have a real say in this? What is going to happen? These are the realities. Most likely, I just lost millions of dollars in the last 30 minutes.

We live on-the-edge, wondering what is going to happen next. Mr. Stamilio, these guys are living it every day up in the Pentagon, trying to defend our basic resources. Having lived through the 1990s, the young kids have problems with the leadership now, however, wait until the Army starts discharging them in large numbers.

To give you an example, I was a young social worker at Fort Sill. I was an artillery officer. Luckily, I was in the very top of my advanced course in artillery. The 3 top guys—I was number 2 in my advanced course—were given an option to do any job in the military they wanted. I went to the general, and said, “Sir I want to be a social work officer. I have my master’s degree in social work.” He was not happy, but he granted my wish and I remained at Fort Sill. Over the next 3 of the 4 years, 43% of my class was eliminated. The Gulf War seemed like nothing compared to the stress and trauma that was put on those families when they got out.

We are facing that again. This is the short term. It is not going to last forever. We are going to get through this, and life is going to go on. But the next two to three or four years is going to be pretty traumatic on the Army. In ways, it will be more traumatic than the war has been. For families it is going to be more traumatic, because it is one thing to have your soldier deployed back and forth. It is another thing not to have a job, not have a career. It is outstanding that you were a gunner during the war, however, when you get out that will, maybe, get you a job at Walmart.

This is going to be very traumatic for families. We are going to have to work through this. I do not know what that means for long-term programs but in the short term, this is going to be a traumatic and devastating kind of experience. That is what we are up against.

**DR. URSANO:** Excellent comments. They keep us current about what is anticipated, and the 13.7% budget cut rule applies. It means that someone has actually thought about it. Someone has at least taken the average of several numbers to come up with a percent of the budget to cut. It makes it more real.

**MS. LEWIS:** That brings us back to transitions. We know that this cycle repeats itself. Our job near-term is dealing with these guys. They are going to be going out and not necessarily willingly leaving a career they were planning on being in for 20 years, and it has only been 5 or 7 or worse. But how do we also then take care of them through this transition, so that when we need them again—and we will need them again—they will be ready to step up and volunteer?

**DR. URSANO:** Excellent point. No one has mentioned much about the Reserve and Guard as one of the opportunities. It seems appropriate to talk about this issue of opportunities as a part of the planning, and to ask how those opportunities affect the people that are in service, as well as the people getting out.

**MR. SCHMELING:** I would like to comment on 2 issues that occurred to me. The first is the comment that was made earlier about how we are, as a society, putting the burden on military families to produce that next generation of soldiers. The

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reality is that the percentage of people who are serving is declining. We have just less than 1% of the population serving on active duty at the moment, and overall about 9% of our population has served in the military. Those percentages were significantly higher in World War II. Thus, we are drawing from an ever-smaller pool for a variety of reasons, and that contributes to the military-civilian divide and lack of understanding.

This is amplified in the Guard and Reserve components in that they are back in their communities. They were deployed and now they are back home. They are demobilized very quickly. They are reintegrated into their communities in many cases. Some of the challenges that we have are with business and industry and community leaders, and their reluctance to hire and rely on these folks because they do not trust that their workforce will be there. They do not know whether or not they can reintegrate into their lives.

For the Guard and Reserve members, that is also the challenge. They do not know how long they are going to be back in their communities. They do not feel that they can put down permanent roots, and that is a stressor and a transition issue. Further, the family members who are not going to deploy have to deal with their life as it changes, when people move in and out, when their employment situation changes. They are employed and unemployed. When they are receiving pay, there are differences in their pay when they are activated versus when they are not activated, and that has implications for their life cycle and their transition.

This relates to the leadership issue that we just talked about. While I understand the comment about trust in senior leadership, it goes back to our military-civilian divide. Fundamentally, our elected leaders, perhaps, may not fully understand the ramifications of the decisions that they are making, or the changes in decisions that they are making, and the ebb and flow of money and politics and how that impacts our soldiers and decreases the predictability of their lives.

**DR. URSANO:** There is also the impact of reductions in Guard and Reserve where people may have expected a particular retirement plan up ahead or a supplement to their income that may not be present as well.

**DR. KLEYKAMP:** I have a factual question as we are talking about this notion of downsizing as the context in which many of these transitions—family transitions, strategic tactical transitions—may be taking place. In the 1990s when we drew down, I understood best from the research that that actually took place, it was less by pushing people out who had been in, and more by closing the front door a bit more tightly and not letting as many people join up. Are we changing how we are downsizing versus an earlier time? If so, that would change the nature of the trust between your junior members and your leadership. If it is that you are tightening standards and not letting people in, that changes people's sense of connection to the institution versus if it seems to be systematic that you are pushing people out.

**DR. URSANO:** Before I invite Mr. Stamilio to share a couple of last comments, I want to thank you all for being here and remind you of the marvelous road that we have traveled together. We began with a picture of what is the Army. We then addressed some of the stressors and challenges of the Army. We then discussed some of the programs and approaches that the Army has had for dealing with these stressors and challenges. Next, we addressed the questions of how to build and foster resilience. Finally, we had an outstanding panel to address what we had forgotten, what we did not think of, and to examine the systems issue.

The group has been marvelous moving across levels, from the individual to the

family to the larger system in which things have been embedded. It has been a very successful conference, and I thank all of you for your participation.

**MR. STAMILIO:** Allow me to give you a couple of reflections before I give you my truly heartfelt thanks. First, I had to go back to the Pentagon yesterday. I met with a sector of the Army. I said, “Boss, would you loan me a dollar?” He said, “Stamilio, what is it you want to use it for?” I said I am looking to make an investment at family programs, working on resilience and the family. He asked, “How would you define resilience?” I said that the conference has not decided that yet. He then asked, “How would you define family?” I said the conference has not decided that yet, either. He put the dollar back in his pocket.

As I reviewed about 15 pages of notes from this forum, I have been struck by a couple of things. One of these is that we are looking at a systems engineering approach as one possible way to look at this. It is incredibly insightful. I was struck by a couple of other things, including the notion of core competencies. Sitting in the middle of my desk is that Army Science Board briefing. It is there because the other side of my portfolio is to manage the civilian human resources for the Army, and I am working with the science and technology community on these core competencies. In the matter of one short presentation by Dr. Glauser, I have reduced my problem set from two to one. All I have to do is figure out how to make these trees grow that represent core competencies, and I will be in great shape.

My granddaughter is 8 years old. She has not joined the Army yet, but she is on the delayed entry program. Dr. Kleykamp, I would like to make one very serious comment, which gets exactly to the point you mentioned: if we are only breeding the next generation of soldiers by way of taking care of families, then we have a significant societal problem. I could not agree more, and I can tell you that is not the intention of the United States Army. That is really not what we are trying to do. The facts are, though, that the sons and daughters of our soldiers become soldiers, and we like to think it is because of the way that we take care of families.

To the point that many of you have made, communities are absolutely vital and a fact that needs to be addressed is that we now have approximately 70% of our military families that do not live on military bases. They live in communities, and so the Army has a charge—to reach out to our communities more effectively.

One of the last comments was about using facts. If you are familiar with how things work around the Potomac River, the facts are just the color commentary around which positions are built. They are marginally relevant. We do dabble in facts from time to time, but only when it comes to our advantage. Colonel Cox mentioned the art of muddling through. I have been muddling through on this, working with this institution for nearly 40 years now, and it is a day at a time, a year at a time. What this body has taught me and reinforced for me is that we owe much more to the institution and to the nation than merely to muddle through. The charge that I have taken away is, given all of the ideas that have been presented and all of the challenging questions and all of the notions that are not fleshed out yet, the charge is to do something more than just muddle through. The charge is to figure out some way to make a strategic difference.

Such strategic differences happen over a long period of time, but they have to happen. They happen because people like you keep poking and prodding and asking hard questions of people like me, to force us to do something strategic to fix what is going on. Not that we are broken, but we are challenged, and we face ever-increasing challenges. It is not a matter of throwing up your hands. It is a matter of taking the

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*...we are looking at a systems engineering approach as one possible way to look at this. It is incredibly insightful.*

great work that you all are doing and trying to make some sense out of it, trying to move the organization forward in a very meaningful way. You have given me, a nonpaying customer, a great deal to think about and a great deal to work with. I cannot thank you enough for your investment of your time here.