

**Testimony before the US House of Representatives**

**Committee on Veterans' Affairs**

**Subcommittee on Health**

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Mr. Chairman and Members of the Subcommittee:

I am Ira Katz, Professor of Psychiatry at the University of Pennsylvania and Director of the VISN 4 MIRECC. I am speaking today in my role as a member of the University of Pennsylvania faculty with expertise in clinical care, research, and teaching in psychiatry. However, I want to focus my remarks today on the VA's Mental Illness Research Education and Clinical Centers or MIRECCs.

Today, while our country is fighting in Iraq, it is important to remember that the wounds of combat affect the mind, brain, and spirit as well as the body and that, for today's heroes as well as yesterday's, stress-related conditions like post-traumatic stress disorder (PTSD) and depression can be among the most chronic and disabling of illnesses. Moreover, mental disorders such as PTSD and depression are common complications of injuries of all types, and they often represent significant barriers to rehabilitation and recovery as well as sources of suffering. These and related issues constitute the ongoing work of the MIRECCs.

The concept of the MIRECCs was derived from the Geriatric Research Education and Clinical Center (GRECC) program. In developing the model, the idea of translating from the field of aging to mental health was supported by recognition of the extraordinary activities of the National Center for PTSD. The MIRECC concept received growing support for a decade before they were authorized by the 104<sup>th</sup> Congress in Public Law 104-262 that created them to provide an intellectual infrastructure for the VA's mental health programs,

and to provide a mechanism for innovation. The first three MIRECC's were first funded in 1997, the second three in 1998, and the third set of two in 1999. Each became operational the following year.

According to 38 USC Sec 7320 (a) and (b), the purpose of the MIRECCs is to improve the provision of health care for veterans with mental illness (especially service-related disorders) through research, education, and improved clinical models. The goal of the MIRECC program is to generate new knowledge about the causes and treatments of mental disorders, apply it to model clinical programs, and widely disseminate it through educational outreach programs to improve the quality of veterans' lives and their daily functioning and to assist veterans in recovering from mental illness.

There are currently 8 MIRECCs within the VA, located in VISN 1, 3, 4, 5, 16, 20, 21, and 22. Together the MIRECCs directly serve 8 VISNs and 27 states as well as the District of Columbia. Programmatically, the MIRECCs cover a diverse set of foci, all responsive to the overall goals of the program. Through the impact of their research, education, and information dissemination activities they serve the VA system as a whole, and, in fact, provide leadership in improving mental health care for the nation.

The VA New England Healthcare System MIRECC (from VISN 1 serving the six New England states) focuses on veterans with combined mental illness and drug or alcohol dependence (dual diagnosis), an area that is significant because veterans with dual diagnosis constitute a major part of VA practice. In addition, they have special needs because having two types of illnesses makes it more difficult to recover from either one. The aim is to improve the treatment of dually-diagnosed veterans by developing innovative new treatments, devising more effective ways to deliver existing treatments, and creating better programs to train VA providers in therapies with proven efficacy.

The New York, New Jersey Veterans Healthcare Network MIRECC (from VISN 3 serving the New York metropolitan area, the Hudson Valley, and northern New Jersey) focuses on improving our understanding of the causes of serious mental illness and the development of effective treatments to better assist in the recovery and return of our veterans to the community. This is accomplished through the study of current practice, provider education, service delivery, neurobiology, and psychopharmacologic treatment of serious mental illness.

The Stars and Stripes Network MIRECC (from VISN 4 serving Pennsylvania, southern New Jersey, Delaware, and West Virginia) focuses on issues and problems related to comorbidity, the coexistence of psychiatric illnesses, substance abuse disorders, and/or medical conditions. Comorbidity is the rule rather than the exception in VA patients, in whom coexisting disorders complicate the diagnosis and treatment of individual patients and the operations of the programs and systems that serve their needs. The goal is to develop knowledge and programs to improve care and integrate mental health and general medical care services.

The Capitol Health Care Network MIRECC (from VISN 5 serving Maryland, the District of Columbia, Virginia, and West Virginia) focuses on improving the quality and cost-effectiveness of services for veterans with schizophrenia and their families through research on the nature and treatment of the illness, and education and clinical demonstration projects that promotes the translation of research findings into evidence-based practice. The primary concerns are in the areas of substance abuse, psychopharmacology, neurocognitive factors and rehabilitation, health behaviors, women with schizophrenia, and service delivery systems.

The South Central Network MIRECC (from VISN 16 serving Arkansas, Texas, Louisiana, Mississippi, Oklahoma, and Florida) focuses on “closing the gap” between what research demonstrates is

possible to achieve with mental health treatments and services, and what is actually achieved in day-to-day clinical practice. Its primary concerns are on four patient populations – patients with schizophrenia, PTSD, substance abuse, and the mental disorders of late life. By identifying opportunities to improve treatment adherence, the technical quality of mental health care provided and the service delivery system, this MIRECC aims to optimize the clinical outcomes of the mentally ill veterans that it serves.

The Northwest Network MIRECC (from VISN 20 serving Washington, Oregon, Idaho, and Alaska) focuses on discovering and disseminating new knowledge about the causes and treatments of major mental disorders afflicting veterans. In this, the primary concerns of MIRECC scientists, educators and clinicians are in schizophrenia, posttraumatic stress disorder, agitation and psychosis in Alzheimer's disease, and mental illness complicating chronic medical illness (including post-Gulf War related disorders).

The Sierra Pacific Network MIRECC (from VISN 21 serving California, Nevada, and Hawaii) focuses on veterans with dementias and behavioral problems due to dementia, and veterans with Posttraumatic Stress Disorder (PTSD). The aim of the MIRECC is to improve the treatment of these veterans by working toward better matching of veterans with the types of treatment that will provide them with the best treatment for their own personal situation.

The Desert Pacific Healthcare Network MIRECC (from VISN 22 serving California and Nevada) focuses on improving the long-term functional outcome of patients with chronic psychotic mental disorders, including schizophrenia, schizoaffective disorder and psychotic mood disorders. Each of these illnesses is characterized by psychosis during its most severe periods, and functional impairments that can lead to deterioration in social and vocational adjustment. Each is a chronic illness that usually appears during young adulthood and requires a long-term management strategy that includes pharmacological and psychosocial management.

The focus of each of the MIRECCs was proposed as part of the competitive application process on the basis of the strengths of the investigators, clinicians, and educators, and existing clinical programs, as well as needs, both locally and nationally. The areas of focus provide overlap enough to facilitate collaborations and synergies, but they are distinct enough so that the program as a whole covers a comprehensive range of content areas and methods. The MIRECCs interact extensively with each other, with the National Center for PTSD, and, in many cases with GRECCs and PADRECCs. Other MIRECC activities include service to their own VISNs and to the system as a whole including outreach to other VISNs through training, dissemination of best practices, and consultation. The research activities in MIRECCs are centered around infrastructure support, and pilot or seed support programs to enable the development of new research and new investigators. Thus, in their activities, the MIRECCs have major research enabling and facilitating roles. With the aid of these resources, MIRECC investigators compete for and are awarded research funds to study the complex phenomena of mental illness and brain diseases through the VA, NIH (primarily NIMH, NIAAA, and NIDA), foundations, and other sources. In this way, the MIRECCs leverage their resources, and bring new opportunities for research and program development to the VA and its patients. In addition, each of the MIRECC's have strong roles within their host medical centers, VISN's, and academic affiliates.

One key aspect of the added value that MIRECCS bring to the VA is linkage of research, educational, clinical, and clinical evaluation activities that, in other contexts, are often kept distinct from each other. This occurs in the translation from basic research to treatment development, from treatment development to a progression of clinical and efficacy trials, and from efficacious to effective treatments. The activities distinguish the MIRECC from business as usual with each of the domains in which they function, and serve to fulfill the vision of the authorizing legislation that they will serve as sources of innovation.

The value of the MIRECC's to the VA is best described by providing examples of current and recent activities:

PTSD Research: With the ongoing war in Iraq, we all want to focus on what we be able to do to help those who will be returning from combat. Through its education and information dissemination activities, the National Center for PTSD has been ensuring that evidence-based treatments are available to benefit veterans throughout the system at the same time that its research activities are developing and validating new approaches to care. Within the MIRECCs themselves, work at both VISN 20 and 21 has focused on the role of adrenaline-like transmitters as mediators of stress effects in the brain and has led to the hypothesis that adrenergic-blocking agents should be useful for treating at least some of the symptoms of PTSD. VISN 20 investigators have observed that the alpha-adrenergic blocking drug prazosin shows promise in treating the trauma-related nightmares and sleep disturbances that cause significant suffering and disability in these veterans. Other MIRECC clinicians and investigators have been concerned about the vicious cycle that occurs some people with PTSD turn to street drugs in an attempt to treat themselves. In many settings, the substance abuse can make people ineligible for standard mental health care for PTSD, but, at the same time, the PTSD can make them less able to benefit from substance abuse treatment. To address this problem, clinical investigators from both VISNs 4 and 21 are evaluating Seeking Safety, a novel psychological treatment that allows them to address both conditions. In the conduct of these initiatives, they are both advancing knowledge and providing new hope to many veterans who have had persistent and disabling symptoms. Finally, other research in VISN 21 is underlining the importance of recognizing and treating PTSD through research demonstrating that it can contribute to age-related neurodegeneration.

Cocaine abuse: There are programs of research focusing on substance abuse in several of the MIRECCs. Investigators in VISN 1 have been using genetics to study the problem of cocaine abuse and have found that

genes related to the functioning of dopamine-beta-hydroxylase, an enzyme involved in noradrenaline metabolism, are related to the likelihood that someone who uses cocaine will become drug dependent or experience paranoia. Following these findings, other VISN 1 investigators have been evaluating the effects of the dopamine-beta-hydroxylase inhibitor disulfiram on relapse rates after cocaine withdrawal, and have observed early positive and promising findings. Following a different line of research, investigators from VISN 4 have been studying the craving that occurs when people who were previously cocaine dependent are exposed to the sights and sounds that were associated with drug abuse. Not only do the cues induce the psychological symptoms of craving, they also induce related changes in brain activity that can be demonstrated with neuroimaging techniques. Having demonstrated that they can measure cue induced craving, both psychologically and through brain imaging, they then used these techniques to screen medications to evaluate which ones might be worth clinical studies to see if they could have enough of an effect on craving to be prevent relapse. So far, they have found that the drug baclofen, an analog of the neurotransmitter GABA shows promise.

Other investigators in VISNs 3 and 4 have been concerned about cocaine abuse as a complication and comorbidity of schizophrenia and have been evaluating approaches to combined treatment.

Alcoholism: The development of naltrexone as a treatment to prevent relapse in abstinent people with alcoholism was a significant contribution of VA investigators in Philadelphia and West Haven, from the time before the implementation of the MIRECCs at those sites. Although the effectiveness of naltrexone has been demonstrated in a number of studies, a recent large scale VA cooperative study did not find drug-placebo differences. However, this puzzling variability in responses may be related to evolving findings from MIRECC investigators from VISNs 1 and 4 who studied the genetics of the response to naltrexone, and observed that variability in brain receptors appear to have a major impact on whether or not naltrexone

prevents relapse. The next steps, currently being pursued, are to determine whether genetic tests can identify those who would benefit from naltrexone and those who should be receive other treatments.

Schizophrenia: There are a number of MIRECC activities that show promise toward advancing the care of veterans with schizophrenia and related disorders. One set of activities is approaching schizophrenia as a cognitive disorder. It is evaluating basic neural mechanisms in laboratory animals that advance the understanding of the neural pathways that are affected by schizophrenia and drug treatment, the value of basing rehabilitation on an understanding of the cognitive deficits associated with the disorder, and the importance of provider education on the ability to deliver effective rehabilitation in real world settings. In pursuing these areas, the MIRECCs in VISNs 3, 5, 16, 21, and 22 are develop new knowledge while at the same time improving the competencies of VA providers, and facilitating the delivery of state of the art care to substantial numbers of veterans.

Other findings related to schizophrenia are that use of clozapine, the most effective of the antipsychotic agents but the one with the most significant profile of adverse events, is low within the VA system. Accordingly, VISNs 3 and 16 have developed practice guidelines and educational programs to facilitate its optimal use.

There are also concerns about the medical care of veterans with schizophrenia. These have been intensified by findings from VISN 1 that most of the newer atypical antipsychotic agents can affect glucose tolerance and lead to diabetes. Related activities include quality initiatives from VISNs 3, 4, and 5 evaluating the recognition and control of diabetes in patients with serious mental illness. There are also initiatives from



VISNs 5 and 22 that are teaching behavioral strategies to veterans with schizophrenia to improve their management of diabetes and related conditions.

Depression: In the VA as elsewhere, depression is the most common of the mental disorders. It occurs in veterans who are otherwise healthy and as a complication of medical or neurological illnesses. Unlike the case with schizophrenia, or bipolar disorder that requires specialty care, there are evolving models for integrating the treatment of depression into primary care. MIRECC investigators are working to improve the recognition, diagnosis, and treatment within the primary care setting as well as within mental health services by developing new knowledge as well as strategies for facilitating the application of knowledge from the current evidence base. Ongoing initiatives include promising pharmacogenetic strategies to guide the choice of medications for individual patients (VISN 21), the development and dissemination of practice guidelines (VISN 16), use of tele-psychiatry for outreach to rural areas (VISN 16), and the use of disease management strategies and a clinical behavioral health laboratory to facilitate the integration of mental health services with primary care (VISN 4). The MIRECC program's activities related to depression include initiatives in primary care, CBOCs, rural areas, patients with lung disease, Parkinson's disease, and PTSD, and geriatric patients including those in nursing homes and those with Alzheimer's disease (VISNs 4, 16, 20).

Conclusions: My summary of the highlights of the MIRECC program is somewhat arbitrary. I could have focused more on other clinical and research programs, educational initiatives, or the development of new investigators. Instead of providing vignettes about research and clinical initiatives, I could have talked more about the added value of the MIRECCs to their host VISNs or the system as a whole. I am especially proud of the activities of the clinicians, scientists, and investigators with whom I work in VISN 4, and I may have emphasized our activities at the expense of others. However, the overall productivity of the MIRECCs as a whole, their commitment to improving the quality and effectiveness of care for veterans, and their

contributions to the VA and to the nation as a whole would emerge just as strongly from any review. Thus, the operations and activities of the MIRECCs have confirmed the wisdom of the authorizing legislation that created them to provide an intellectual infrastructure for the VA's mental health programs and a mechanism for innovation.

Although their support is derived primarily from clinical funds, the MIRECCs' missions include both education and research- facilitating and enabling activities such as the maintenance of infrastructures linking researchers with clinical care, pilot programs, and support for developing investigators. The linkage activities of the MIRECCs and the focus of their research on the development and application of knowledge directly related to clinical care provides a strong justification for the current funding mechanism.

Also, in considering the value of the MIRECCs to the VA, it is important to take a broad look at mental health programs during the era that led to the creation and operation of the MIRECCs. The VA Healthcare system as a whole has been under stress during this period, and mental health services were deeply affected. For example, from 1996 to 2000, programs for PTSD, homelessness, substance abuse, and serious mental illness grew by approximately 5.5% in the number of patients that they served, but they shrank by approximately 13.5% in their budgets. In a time marked by increasing needs, budgetary challenges, and emerging opportunities, mental health care within the VA needs the intellectual infrastructure and mechanism for innovation that the MIRECC provides. I urge you to maintain the current funding mechanism for the MIRECCs and to expand the program by creating additional centers.