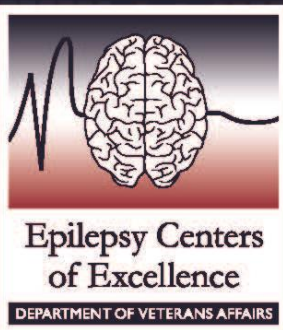
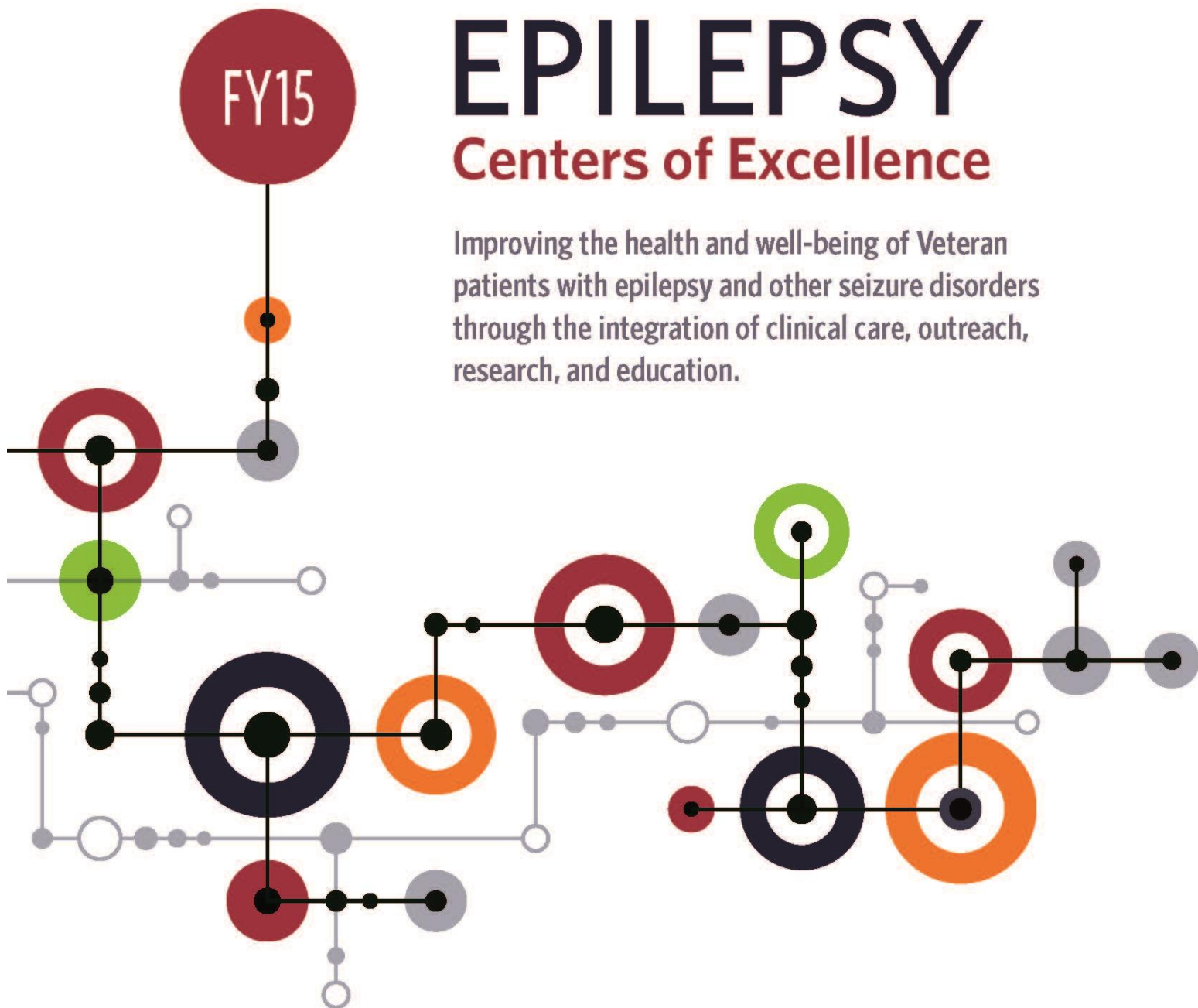


FY15

EPILEPSY

Centers of Excellence

Improving the health and well-being of Veteran patients with epilepsy and other seizure disorders through the integration of clinical care, outreach, research, and education.



www.epilepsy.va.gov

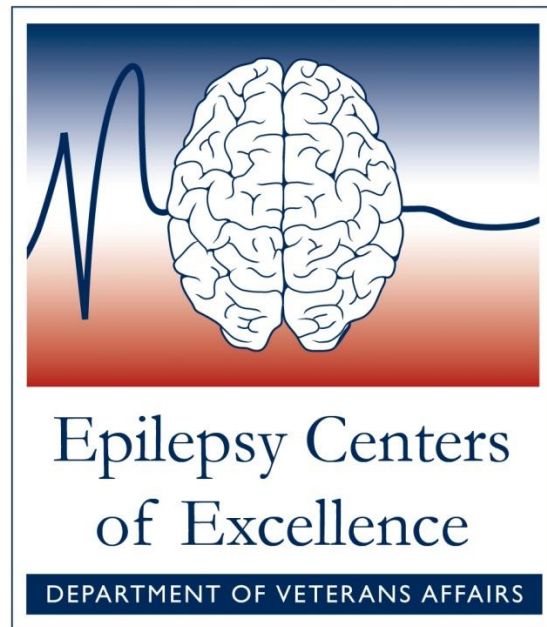
VA
HEALTH
CARE | Defining
EXCELLENCE
in the 21st Century

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EPILEPSY CENTERS OF EXCELLENCE
ANNUAL REPORT FY15
October 1, 2014 – September 30, 2015



MISSION

Improve the health and well-being of Veteran patients with epilepsy and other seizure disorders through integration of clinical care, outreach, research, and education.

MESSAGE FROM THE DIRECTOR



The past year has been one of change. The directorship of the Epilepsy Centers of Excellence has transitioned from Dr. Parko to me. Dr. Parko's shoes are hard to fill and I am still striving to meet the leadership benchmarks she has set. We also now have a new national director of Neurology, Dr. Donald Higgins who is at the Samuel S. Stratton VAMC in Albany, N.Y. Change has occurred in central office with a re-organization that is ongoing. At this time, many of the issues important for our success are still a work in progress. I am an optimist and expect that we will continue to provide comprehensive epilepsy care and that the efforts of Epilepsy Centers of Excellence and consortium sites will result in better care for our Veterans with epilepsy and other seizure disorders.

In the past fiscal year, we have met many of our goals. A telemental health program for psychogenic non-epileptic seizures has been established and cognitive behavioral therapy (CBT) is available in all regions. Furthermore, a white paper outlining mental health services for patients with epilepsy and recommendations to improve care of mental health issues associated with epilepsy has been completed. Overall, telehealth efforts have expanded in terms of sites and numbers. The nursing work group has surveyed safety practices of epilepsy monitoring units (EMUs) and will be evaluating how to institute best safety practices in EMUs. The nursing group has also developed a national EMU consent form that is in the final stages of implementation. A new work group addressing issues in the care of women Veterans with epilepsy has been established.

Research efforts have continued to be active in the Epilepsy Centers of Excellence. As a group we have continued to have a data base that classifies the diagnosis that results from EMU stays. A letter of intent for a study to compare standard therapy versus cognitive behavioral therapy for psychogenic non-epileptic seizures is about to be submitted to the VA office of cooperative studies. The pharmacy work group is investigating the use of anti-epileptic drugs (AEDs) and anti-depressant medications to understand if dosage is different with enzyme inducing AEDs. Also the current AED prescribing patterns are being queried.

Educational efforts include a series of videos addressing Veterans with epilepsy ("Epilepsy Basic Training") that has been completed and is now undergoing final editing. These videos are directed to patients and care givers. A series of presentations for providers have been taped and are now being edited. Local presentations to advocacy and Veteran groups have continued. The nursing work group has produced a pamphlet on self-management in epilepsy.

Fiscal year 16 provides challenges but also new opportunities. Our goals reflect a continuation of on-going work and the evolution of new projects. We will continue to expand our telehealth services and incorporate the SCAN-ECHO approach to communicate among ourselves and referring physicians. An effort to increase CBT for epilepsy and mental health co-morbidities will be made. The EMU data base will now also include information regarding TBI as a possible etiology for a patient's epilepsy. The epilepsy clinic template note will undergo revision to improve use. We will develop a way to enhance research collaboration by developing a process to include interested sites to contribute and be part of research projects that use the resources and data sets that are created by the Epilepsy Centers of Excellence. The woman with epilepsy work group will collaborate with the Woman Veterans Health Care program and Pharmacy Benefits Management group to enhance care for woman Veterans with epilepsy. We will also develop a handbook that describes and codifies our operations. We will continue to review and improve our epilepsy monitoring unit operations. Our educational efforts over the past year will culminate in both patient and provider educational series that will be rolled out in FY16. For FY16 we will strive to provide patient education regarding sudden unexpected death in epilepsy (SUDEP) and provider education regarding mental health co-morbidities.

I want to thank all of the people who staff the VA Epilepsy Centers of Excellence and consortium sites for their dedication and hard work. It is amazing how much has changed since the inception of the Centers and how epilepsy care in the VA has improved because of effort of the people involved in providing care for Veterans. I look forward to FY16 and expect that the Centers will strive to continue to meet their mission of improving the health and well-being of Veteran patients with epilepsy and other seizure disorders.

A handwritten signature in cursive script that reads "Paul Rutecki".

Paul Rutecki, MD
National Director
Epilepsy Centers of Excellence

INTRODUCTION

In 2008 under Public Law S. 2162, the Department of Veterans Affairs (VA) set upon its mission to revolutionize services for the Veterans afflicted by epilepsy and other seizure disorders. The VA founded the Epilepsy Centers of Excellence (ECoE), establishing 16 sites that are linked to form 4 regional centers. The ECoE seek to provide the best possible epilepsy care to Veterans throughout the United States with state-of-the-art diagnostic and therapeutic services. Our goal is to deliver the highest quality of ongoing medical care to Veterans suffering from epilepsy. We also seek to promote outreach and educational efforts for both patients and their physicians in order to further the understanding of this chronic condition. The ECoE offers a range of services in both the outpatient and inpatient realms. The ECoE provides outpatient epilepsy clinics with a staff of neurology sub-specialists. From these clinics, patients can be directed to the most advanced testing methods for the evaluation of epilepsy, including magnetic resonance imaging (MRI), electroencephalography (EEG), and video monitoring. For those patients that require more intensive testing or attention, the ECoE also provide inpatient units for examining certain seizure types more closely, changing medications in a monitored setting, and presurgical evaluation. The epilepsy centers are also linked with the Polytrauma Centers to increase ability to mutually follow Veterans with moderate and severe traumatic brain injury that are at the greatest risk for post-traumatic epilepsy. The sites are developing protocols to identify Veterans with epilepsy and to develop referral networks to enable Veterans to obtain specialized treatment such as epilepsy surgery and advanced electro-diagnosis within the Veteran healthcare system

If you are a Veteran with seizures and are interested in seeking services at one of the Epilepsy Centers, please inquire with your local VA primary care physician. This doctor will be able to determine if you might benefit from the services provided by ECoE and assist you with scheduling an appointment. You can also contact your local ECoE site directly for assistance in connecting to services. For more information please visit our website at www.epilepsy.va.gov.

NATIONAL PROGRAM GOALS

- Establishing a national system of care to all Veterans with Epilepsy, to function as a center of excellence in research, education, and clinical care activities in the diagnosis and treatment of epilepsy.
- Collaboratively develop a national consortium of providers with interest in treating epilepsy at VA healthcare facilities lacking an epilepsy center of excellence in order to ensure better access to state-of-the-art diagnosis, research, clinical care, and education for traumatic brain injury and epilepsy throughout the VA healthcare system.
- To collaborate with VA Polytrauma / TBI System of Care that provide research, education, and clinical care to Veteran patients with complex multi-trauma associated with combat injuries.
- Utilizing national VA and other databases in order to inform providers and policy makers in VA Central Office about healthcare delivery and health policy decisions, conducting state-of-the-art research in Epilepsy, and implementing an informatics backbone to meet the above objectives.
- To ensure an affiliation with accredited medical schools, providing education and training in neurology, and the diagnosis and treatment of epilepsy (including neurosurgery).
- Providing health professional education and training to nursing staff, medical students, house staff, fellows, and referring physicians, in order to deliver the highest quality of standard of care to Veterans with epilepsy.

FY15 NATIONAL ORIGINAL GOALS

1) Clinical Care:

- a. Complete a white paper that assesses existing mental health epilepsy services that describes existing models of care across ECoE sites, gaps in care and offers recommendations for a potential health service intervention. **Steward: Hamid**
- b. Evaluate current safety/quality assurance ECoE and civilian EMU. **Stewards: Krumholz & Ozuna**
- c. Train individuals from each of the four regions in the CBT-informed therapy for PNES and establish formal psychotherapy clinics for patients with PNES and intractable epilepsy who are motivated to work with a therapist through the mentorship of Dr.LaFrance. **Steward: Hamid**
- d. Leverage technology to increase access to epilepsy/seizure specialized care with further development of Tele-epilepsy infrastructure, including Tele-EEG to increase reach within the VHA with an emphasis on the Southwest region to add more spoke sites and increase patient numbers while decreasing cost. **Stewards: Davis & Tran**
- e. Bringing Neuropace and Visualase into ECoE. **Steward: Rutecki**

2) Research:

- a. Facilitate collaboration in research through ECoE research workgroups and multi-site studies. **Steward: David**
- b. Change the EMU clinical database to research database repository. **Stewards: Towne & Benson**
- c. Develop and submit a letter of intent for a nationwide ECoE VA Cooperative Study 'TBI and Psychogenic Seizures: Characterization and Treatment of a model Post-Traumatic Conversion Disorder'. **Stewards: Salinsky & LaFrance**

3) Education:

- a. Produce Practioner DVD. **Steward: Rieger**
- b. Produce "my epilepsy story" patient DVD. **Steward: Rieger**
- d. Develop an advanced nurse epilepsy training curriculum. **Stewards: Ozuna**

4) Outreach:

- a. Assess potential clinically important interactions between AEDs and psychotropic drugs among Veterans with both epilepsy and mood disorders in an effort to identify potential interactions thereby reducing department cost and liability. **Stewards: Tran & Rehman**
- b. Review within the VHA epilepsy population on how psychotropic medication use may be affected by different AED's. **Stewards: Tran & Rehman**
- c. Review national VHA data from past years in an effort to educate personnel on appropriate and frequent medication combinations. **Stewards: Tran & Rehman**

5) Program/Operational:

- a. Establish Operations Manual. **Steward: Chen**

FY15 NATIONAL REVISED GOALS

I Clinical

- a. Assess the need for services for psychogenic non-epileptic seizures (PNES) and train individuals from each of the four regions in cognitive behavioral-informed therapy (CBT) for PNES. Establish CBT therapy options for Veterans with PNES through collaboration with the National Telemental Health Center.
- b. Evaluate patient safety indicators for Veterans cared for in ECoE Epilepsy Monitoring Units (EMUs).
- c. Leverage technology to increase access to epilepsy specialized care with further development of Tele-epilepsy infrastructure, including Tele-EEG. Increase reach within the VHA by adding more spoke sites and increasing patient numbers while decreasing cost.

II Research

- a. Facilitate collaboration in research through ECoE research workgroups and multi-site studies.
- b. Review within the VHA epilepsy population how psychotropic medication use may be affected by different anti-epileptic drugs.
- c. Develop and submit a letter of intent for a nationwide ECoE VA Cooperative Study 'TBI and Psychogenic Seizures: Characterization and Treatment of a model Post-Traumatic Conversion Disorder'.

III Education

- a. In collaboration with employee education system (EES), produce and distribute online video/DVD presentations accredited for continuing medical education (CME) targeted to primary care health care providers and neurologists on epilepsy care.
- b. Evaluate opportunities to develop and implement patient and caregivers educational resources.
- c. Assess the needs for epilepsy education for nurses who work in epilepsy clinics and EMUs.

IV Outreach

- a. Review national VHA data from past years in an effort to identify frequent medication combinations and possible safety or efficacy issues. Develop action plans with Pharmacy Benefit Management (PBM) and VA MedSAFE.
- b. Partner with PBM and Women Veteran Health Care to ensure quality and safe treatment for woman Veterans with epilepsy.
- c. Continue to grow consortium interactions through e-consults, SCAN-ECHO participation, telehealth, teleEEG, and EMU referrals.

FY15 HIGHLIGHTED ACCOMPLISHMENTS

- Drs. Karen Parko and Robert Ruff receive the American Epilepsy Society Service Award for the development of the VA epilepsy Centers of Excellence
- All four regions now provide cognitive behavior therapy for psychogenic non-epileptic seizures
- San Francisco VA demonstrates that an online patient community improves self-management and self-efficacy in veterans with epilepsy (Neurology® 2015;85:129–136)
- Continue to increase number of Veterans served the ECoE. FY 15 included 931 patients undergoing epilepsy monitoring unit evaluation for a total of 3391 days (likely over 6 million dollars to do outside of the VA). Over 10,000 clinic visits and nearly 7,000 EEGs done at epilepsy center sites. Over 800 telehealth clinic visits.

FY16 NATIONAL GOALS

Clinical

- Develop EMU safety policy (Ozuna and Krumholz)
- Ensure that teratogenic or potentially teratogenic anti-epileptic drugs are identified when ordered in CPRS (Van Cott and Women Veterans Health Care)
- Upgrade epilepsy clinic note (Rehman and Kelly-Foxworth)
- Continue to increase access to mental health services for PNES and pilot a tele-mental health group therapy program for Veterans with epilepsy and mood and/or anxiety disorders (Hamid and LaFrance)
- Continue to build and enhance hub and spoke model of care (Rutecki)

Research/Surveillance

- Add TBI information into the epilepsy monitoring unit database (Salinsky and Towne)
- Develop a policy to enhance research collaboration and publication process for data obtained through the ECoE and consortium sites (Pugh and Towne)
- Enhance collaboration with the Continued Effects of Neurotrauma Consortium (CENC) (Towne)
- Complete pilot evaluation of anti-epileptic drug (AED) and psychotropic drug use and possible interactions of enzyme inducing AEDs (Rehman and Tran)
- Tracking anti-epileptic drug use in the VA (Rutecki, Rehman and Tran)

Education

- Roll out patient and care giver “Epilepsy Basic Training” videos (Rieger)
- Obtain approval and disseminate provider educational presentations that have been produced (Rieger)
- Undertake educational initiative for providers, patients, and care givers regarding Sudden Unexpected Death in Epilepsy (SUDEP) (Ozuna and Rutecki)

Operations

- Begin development of VA Handbook on the Epilepsy Centers of Excellence (Chen and Rutecki)

CENTERS OF EXCELLENCE

Southwest

States Covered: California, Utah, Colorado, Kansas, Nebraska, Nevada, Hawaii, Arizona, New Mexico, Texas, Oklahoma, and Philippines

Linked Polytrauma Site: [Palo Alto](#) and [San Antonio](#)

San Francisco	San Francisco VAMC	415.379.5599
West Los Angeles	Greater Los Angeles HCS	310. 268.3595
Houston	Michael E. DeBakey VAMC	713.794.8835
San Antonio	Audie L. Murphy VA Hospital	210.617.5161
Albuquerque	New Mexico VAHCS	505.256.2752

Northeast

States Covered: Virginia, W. Virginia, Ohio, Pennsylvania, Delaware, New Jersey, New York, Vermont, Maine, Connecticut, Rhode Island, New Hampshire, Massachusetts, Maryland, and District of Columbia

Linked Polytrauma Site: [Richmond](#)

Baltimore	VA Maryland HCS	410.605.7414
Richmond	Hunter Holmes McGuire VAMC	804.675.5000 x3734
West Haven	VA Connecticut HCS	203.932.5711 x2420

Northwest

States Covered: Alaska, Washington, Oregon, Idaho, Montana, Wyoming, N. Dakota, S. Dakota, Minnesota, Iowa, Illinois, Indiana, Michigan, and Wisconsin.

Linked Polytrauma Site: [Minneapolis](#)

Madison	William S. Middleton Memorial VA	608.256.1901 x17728
Minneapolis	Minneapolis VAMC	612.467.2047
Portland	Portland VAMC	503.220.8262 x58330
Seattle	Puget Sound	206.277.4292

Southeast

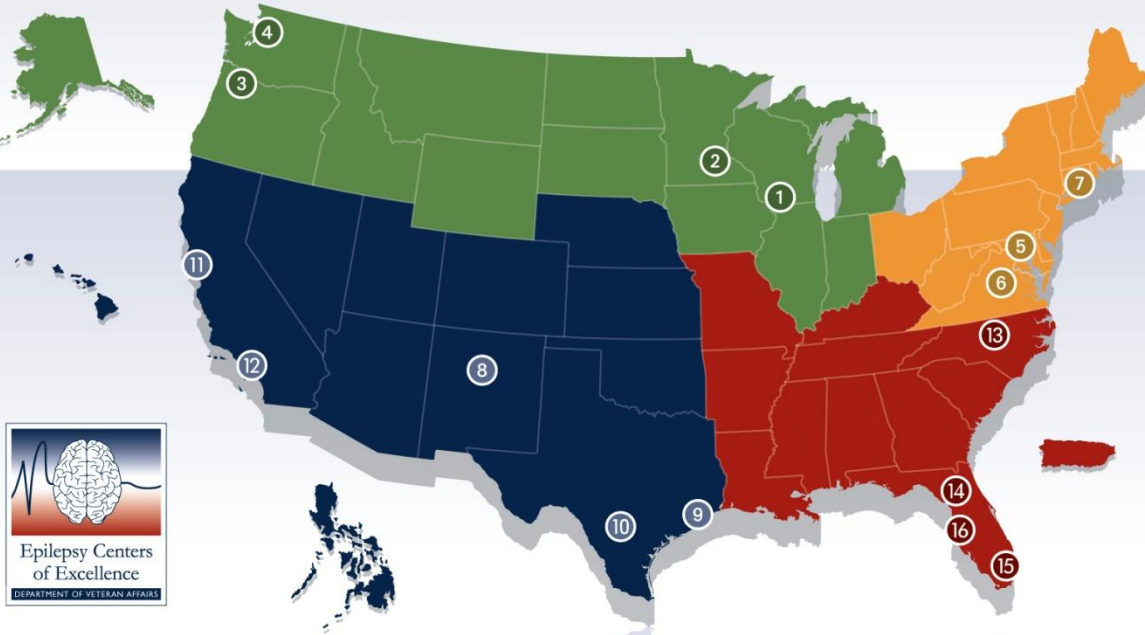
States Covered: Florida, Alabama, Georgia, Mississippi, Tennessee, Kentucky, S. Carolina, Puerto Rico, Arkansas, Louisiana, N. Carolina, and Missouri

Linked Polytrauma Site: [Tampa](#)

Durham	Durham VAMC	919.416.5982
Miami	Miami VAHCS	305.575.7000 x7008
Gainesville	Malcom Randall VAMC	352.376.1611 x6818
Tampa	James A. Haley VAMC	813.972.7633

REGIONAL MAP

EPILEPSY CENTERS OF EXCELLENCE REGIONAL MAP



NORTHWEST

- 1 MADISON**
William S. Middleton
Memorial VA
2500 Overlook Tr.
Madison, WI 53705
(608) 256-1901 Ext. 17728
- 2 MINNEAPOLIS**
Minneapolis VA HCS
One Veterans Dr.
Minneapolis, MN 55417
(612) 467-4236
- 3 PORTLAND**
Portland VAMC
3710 SW U.S. Veterans
Hospital Rd.
Portland, OR 97239
(503) 220-8262 Ext. 58330
- 4 SEATTLE**
Puget Sound HCS
1660 S. Columbian Way
Seattle, WA 98108
(206) 277-4292

NORTHEAST

- 5 BALTIMORE**
VA Maryland HCS
10 North Greene St.
Baltimore, MD 21201
(410) 605-7414
- 6 RICHMOND**
Hunter Holmes McGuire VAMC
1201 Broad Rock Blvd.
Richmond, VA 23249
(804) 675-5000 Ext. 3748
- 7 WEST HAVEN**
VA Connecticut HCS
950 Campbell Ave.
West Haven, CT 06516
(203) 932-5711 Ext. 4724

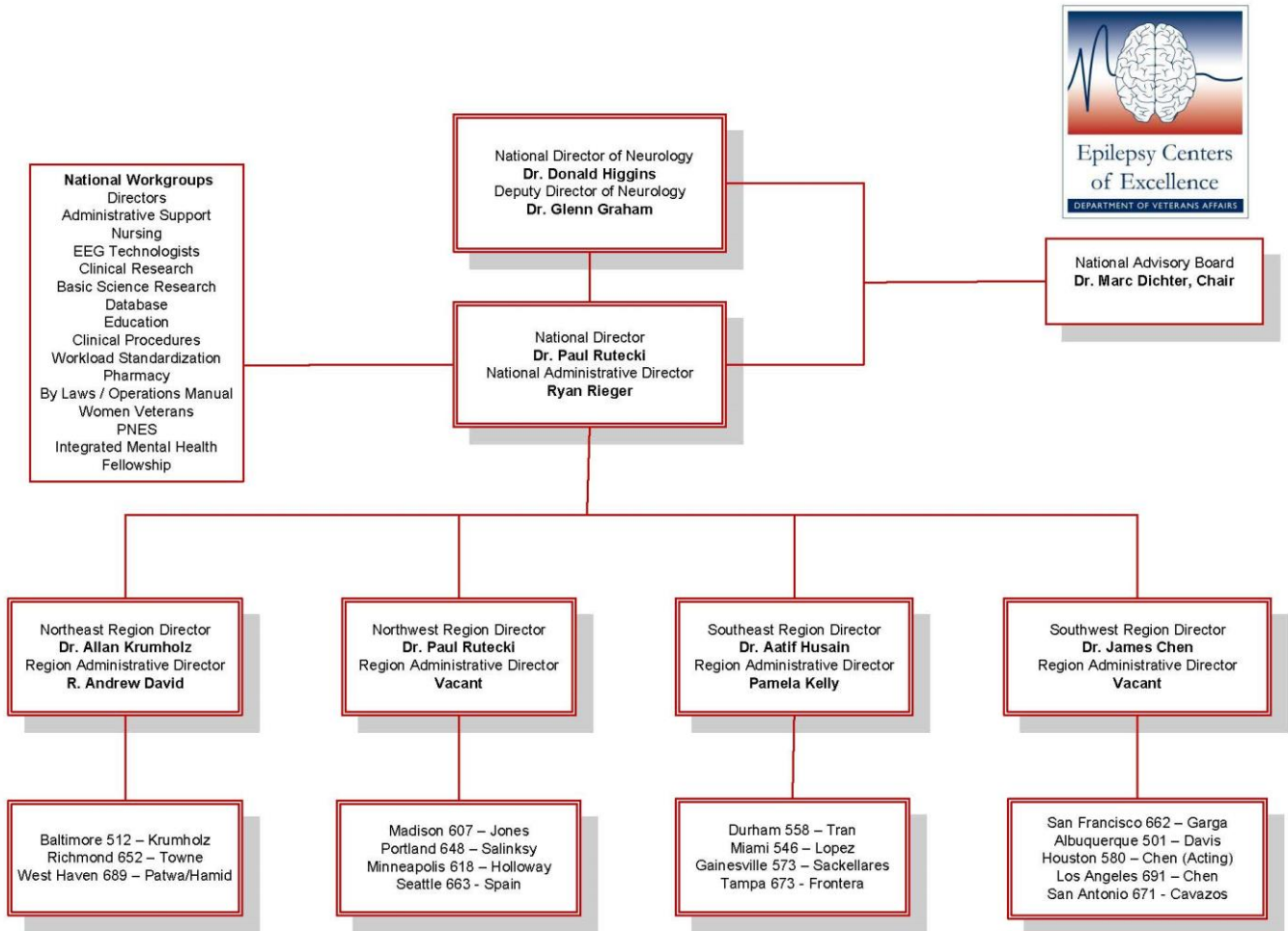
SOUTHWEST

- 8 ALBUQUERQUE**
New Mexico VA HCS
1501 San Pedro Dr. SE
Albuquerque, NM 87108
(505) 265-1711 Ext. 2752
- 9 HOUSTON**
Michael E. DeBakey VAMC
2002 Holcombe Blvd.
Houston, TX 77030
(713) 794-8835
- 10 SAN ANTONIO**
Audie L. Murphy VA Hospital
7400 Merton Minter
San Antonio, TX 78229
(210) 617-5161
- 11 SAN FRANCISCO**
San Francisco VAMC
4150 Clement St.
San Francisco, CA 94121
(415) 379-5599
- 12 WEST LOS ANGELES**
VA Greater Los Angeles HCS
11301 Wilshire Blvd.
Los Angeles, CA 90073
(310) 268-3595

SOUTHEAST

- 13 DURHAM**
Durham VAMC
508 Fulton St.
Durham, NC 27705
(919) 416-5982
- 14 GAINESVILLE**
Malcom Randall VAMC
1601 SW Archer Rd.
Gainesville, FL 32608
(352) 374-6082
- 15 MIAMI**
Miami VA HCS
1201 NW 16th St.
Miami, FL 33125
(305) 575-7000 Ext. 7008
- 16 TAMPA**
James A. Haley VAMC
13000 Bruce B. Downs Blvd.
Tampa, FL 33612
(813) 972-7633

ORGANIZATIONAL CHART



DEFINITION OF CENTERS

ECoE sites and Regional Centers will be designated by the ECoE National Program as ECoE program sites or centers.

Each ECoE - referred to as an **ECoE site**

- Offers weekly specialty Clinics in Epilepsy (not seen within a general neurology clinic)
- Providers for these clinics are trained specifically in epilepsy care
- Provide V-tel epilepsy consultation
- Provide epilepsy monitoring
- Have a single director that is an epileptologist
- Has a designated administrative support person that works within the ECoE and participates on a national level
- Participate in national ECoE initiatives and workgroups

Each Region - referred to as an **ECoE Regional Center**

- An established network covering all Veterans in their region with a specified pathway for referral of Veterans with epilepsy to a surgical center if needed
- Be able to see Veterans in a timely manner with EMU recording within 3 months of request
- Have at least one surgical center that is comparable to a NAEC level 4 center to include:
 1. Interdisciplinary and comprehensive diagnostic team approach
 2. Team to include epileptologists, neurosurgeon, neuropsychologists, nurse specialists, EEG technologists
 3. Offer complete evaluation for epilepsy surgery including Wada testing
 4. Offer neuropsychological and psychosocial treatment
 5. Offer specialized brain imaging
 6. Have fixed EMU beds that can provide VET to include: Intracranial electrode, functional cortical mapping, electrocorticography,
 7. Provide a broad range of surgical procedures for epilepsy
- Be involved in clinical trials
- Have a dedicated full time epilepsy AO who serves as part of the national team
- Has opportunities for specialized education in clinical epilepsy care

Consortium Site

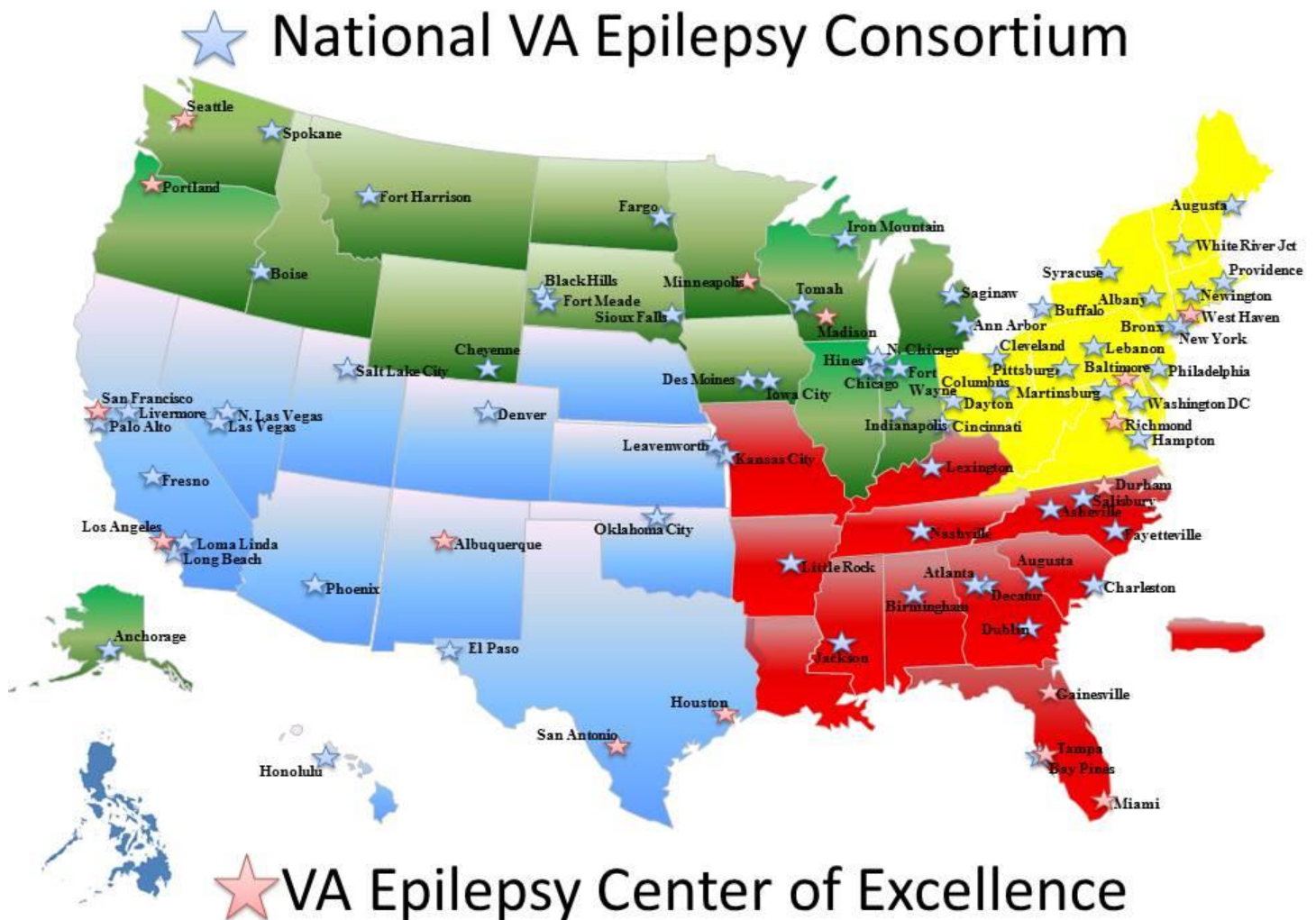
- Applies to the National ECoE for site designation and is recognized locally and nationally as a ECoE consortium site
- Has a provider specifically trained in treating and managing epilepsy
- Is linked to the ECoE network and has established administrative pathway to refer patients to ECoE
- Provides ECoE epilepsy resources to Veterans
- Available to participate in collaborate research projects
- Participates in ECoE educational programs for clinical epilepsy care
- Can participate in national ECoE initiatives and workgroups

NATIONAL VA EPILEPSY CONSORTIUM

The goal of the National VA Epilepsy Consortium* is to support the delivery of optimal care for Veterans diagnosed with epilepsy and seizure disorders through professional education, collaboration, and peer support across the collective VA Healthcare System. All interested VA clinicians, including epileptologists, neurologists, gerontologists, general internists, practitioners, and other allied health professionals who serve Veterans with epilepsy and related seizure disorders (regardless of capacity), are invited to participate.

Together with the Epilepsy Centers of Excellence (ECoE), the National VA Epilepsy Consortium will create a hub and spoke model of care across the VA Healthcare System, expanding and streamlining the referral network for specialized epilepsy treatment, advanced neuro-diagnostics, and surgical evaluation. The Epilepsy Consortium will ensure accessibility and continuity of specialized care for Veterans regardless of locality, broadening the impact of the ECoE network. The National VA Epilepsy Consortium serves as a direct link to the 16 ECoE sites, which are staffed by epilepsy specialist or neurology clinicians, and provide administrative assistance, professional collaboration, and educational offerings in epilepsy care.

Members of the National VA Epilepsy Consortium will be offered a variety of epilepsy educational resources and updates on state-of-the-art epilepsy care from the ECoE. Additionally, Consortium members that provide more comprehensive epilepsy services to Veterans can engage with the ECoE sites to assist in the development of standardized clinical processes and procedures ensuring consistent quality of care across the VA Healthcare System.



**110 VA healthcare providers from 56 VA facilities*

INVENTORY OF SERVICES

ECoE Inventory of Services - FY15	San Francisco, CA	Los Angeles, CA	Houston, TX	San Antonio, TX	Albuquerque, NM	Baltimore, MD	Richmond, VA	West Haven, CT	Madison, WI	Minneapolis, MN	Portland, OR	Seattle, WA	Durham, NC	Miami, FL	Gainesville, FL	Tampa, FL
Outpatient EEG	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Specialty Epilepsy Clinics	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Epilepsy Inpatient Consultation	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Scalp Video-EEG Telemetry (Phase 1), # of Beds	4	2	4	3		1	2	2	3	2	3	2	3	2	4	2
Epilepsy Protocol MRI Imaging	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
PET Scanning	x	x	x	x	x	x	x	x	x	x	x		x	x	x	x
Magneto encephalography																
Radio Surgery (Gamma Knife)			x													
Functional MRI (fMRI)			x	x			x				x					x
Ambulatory EEG		x	x	x		x	x	x	x	x	x		x	x	x	x
Epilepsy Video Telehealth Clinics	x	x	x		x	x	x	x	x	x	x	x	x	x	x	x
eConsult	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Telephone Clinics	x	x	x	x	x	x	x	x	x	x	x	x	x		x	x
SCAN-ECHO	x					x	x	x	x	x	x					
Patient Home Telehealth	x							x	x				x			
Store & Forward Remote EEG Reading			x	x							x	x	x		x	
On-Site Therapy for PNES	x		x			x		x					x			
NTMHC Tele-NES Provided	x		x				x	x	x							
Ability to Perform Wada Testing	x		x	x		x	x		x		x		x			
Ability for Pre-Surgical Neuropsych Testing	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Resection Surgery	x	x	x	x		x	x		x		x		x		x	
Intracranial Recordings: Grids/ Strips	x	x	x	x					x		x		x			
Intracranial Recordings: Standard Depth	x	x	x	x					x		x		x			
Intraoperative Electrocochography (ECoG)	x	x	x	x			x		x		x		x		x	
Intraoperative Cortical Stimulation / Mapping	x	x	x						x							
Extraoperative Cortical Stimulation / Mapping	x	x	x						x		x					
Placement of VNS	x	x	x	x	x	x	x		x	x	x		x	x	x	x
Neuropace																
Deep Brain Stimulation	x	x	x	x			x				x					
Primary ECoE Contact Phone Number	415.379.5599	310.268.3595	713.794.8835	210.617.5161	505-265.1711 x2752	410.605.7414	804.675.5000 x3748	203.932.5711 x4724	608.256.1901 x17728	612.467.4236	503.220.8262 x58330	206.277.4292	919.416.5982	305.575.7000 x7008	352.374.6082	813.972.7633

CLINIC WORKLOAD

Data Source: VSSC Encounter Cube

Data collected using ECoE stop code 345 (in the primary or credit stop code position)

ECoE Clinic Workload – FY15	Outpatient Clinic		EEG		EMU	
	Unique Patients	Unduplicated Encounters	Unique Patients	Unduplicated Encounters	Unique Patients	Unduplicated Encounters
(V01) (689) VA Connecticut HCS, CT	202	384	145	150	43	93
(V05) (512) Baltimore HCS, MD	324	493	177	190	25	132
(V06) (558) Durham, NC	589	965	282	317	66	257
(V06) (652) Richmond, VA	451	875	464	581	30	63
(V08) (546) Miami, FL	250	485	357	417	63	117
(V08) (573) Gainesville, FL	147	283	541	599	55	192
(V08) (673) Tampa, FL	253	355	559	602	56	240
(V12) (607) Madison, WI	255	480	232	249	57	278
(V16) (580) Houston, TX	706	1,188	777	909	168	744
(V17) (671) San Antonio, TX	523	709	587	684		
(V18) (501) New Mexico HCS	296	456	201	213		
(V20) (648) Portland, OR	593	977	345	389	60	282
(V20) (663) VA Puget Sound, WA	475	720	413	449	44	126
(V21) (662) San Francisco, CA	249	681	118	122	106	375
(V22) (691) Greater Los Angeles HCS	312	594	542	617	119	341
(V23) (618) Minneapolis, MN	381	561	389	426	40	145
Total	5,997	10,206	6,123	6,914	931	3,387

Unduplicated Encounters: a count of clinic stops made by patients where duplicates have been removed. A duplicate clinic stop occurs when a patient makes more than one of the same type of PRIMARY clinic stop at the same station on the same day. An encounter is a professional contact between a patient and a practitioner vested with primary responsibility for diagnosing, evaluating, and/or treating the patient's condition.

SURGERY WORKLOAD

Data Source: Self-Report
Data collected locally at each ECoE site

ECoE Surgery Workload - FY15	Resection Surgery	Intracranial Recordings: Grid/Strip	Intracranial Recordings: Standard Depth (Free Hand and Neuro- Navigation)	Intracranial Recordings: StereoeEG Depths - Stereotactic Frame	Intraoperative Electrocorticography (ECoG)	Intraoperative Cortical Stimulation / Mapping	Extraoperative Cortical Stimulation / Mapping	VNS	Neuropace	Other Surgery (Please Specify)
(V01) (689) VA Connecticut HCS, CT										
(V05) (512) Baltimore HCS, MD										
(V06) (558) Durham, NC	3	4					1			
(V06) (652) Richmond, VA								1		
(V08) (546) Miami, FL										
(V08) (573) Gainesville, FL	1									
(V08) (673) Tampa, FL										
(V12) (607) Madison, WI			1					1		
(V16) (580) Houston, TX	1	1			1					
(V17) (671) San Antonio, TX								1		
(V18) (501) Albuquerque, NM										
(V20) (648) Portland, OR	1	2						2		
(V20) (663) VA Puget Sound, WA										
(V21) (662) San Francisco, CA					1	1				
(V22) (691) West Los Angeles, CA	3	1		1	7	1	3			
(V23) (618) Minneapolis, MN								1		
Total	9	8	1	1	9	2	4	6	0	0

TELEHEALTH WORKLOAD

Data Source: VSSC Encounter Cube
Data collected using appropriate stop code

ECoE TeleHealth Workload – FY15	Video TeleHealth Clinic Local Station		Video TeleHealth Clinic Different Station	
	Unique Patients	Unduplicated Encounters	Unique Patients	Unduplicated Encounters
(V01) (689) VA Connecticut HCS, CT	8	11		
(V05) (512) Baltimore HCS, MD	3	6	1	1
(V06) (558) Durham, NC	49	74	32	41
(V06) (652) Richmond, VA	55	96	22	32
(V08) (546) Miami, FL	37	49		
(V08) (573) Gainesville, FL	47	77	12	13
(V08) (673) Tampa, FL				
(V12) (607) Madison, WI	43	68	17	26
(V16) (580) Houston, TX	45	51		
(V17) (671) San Antonio, TX				
(V18) (501) New Mexico HCS	39	47	3	3
(V20) (648) Portland, OR			47	83
(V20) (663) VA Puget Sound, WA			12	18
(V21) (662) San Francisco, CA	38	72	10	17
(V22) (691) Greater Los Angeles HCS	8	13		
(V23) (618) Minneapolis, MN	14	18	3	6
Total	386	582	159	240

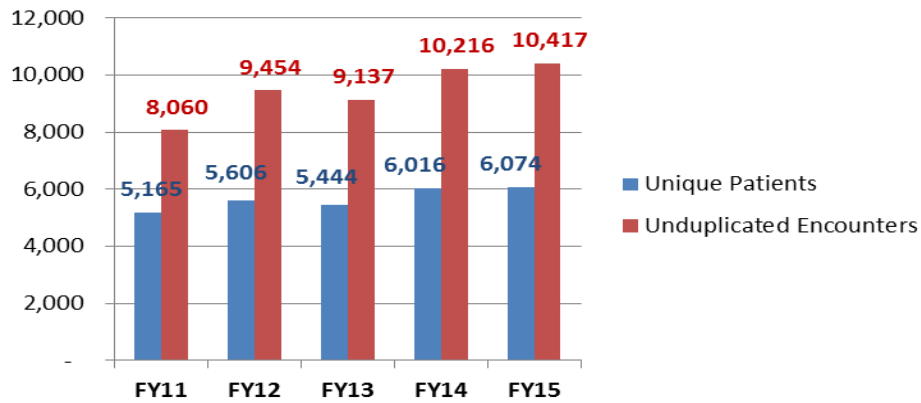
ECoE TeleHealth Workload – FY15	Telephone Clinic		eConsults		Store & Forward	
	Unique Patients	Unduplicated Encounters	Unique Patients	Unduplicated Encounters	Unique Patients	Unduplicated Encounters
(V01) (689) VA Connecticut HCS, CT	58	120				
(V05) (512) Baltimore HCS, MD	106	228	2	2		
(V06) (558) Durham, NC	61	104	9	9	152	154
(V06) (652) Richmond, VA	1	1	5	5		
(V08) (546) Miami, FL	32	57				
(V08) (573) Gainesville, FL	29	29				
(V08) (673) Tampa, FL	47	95				
(V12) (607) Madison, WI	123	249	1	1		
(V16) (580) Houston, TX	25	26				
(V17) (671) San Antonio, TX	150	192				
(V18) (501) New Mexico HCS	9	11				
(V20) (648) Portland, OR	288	579	63	65	99	104
(V20) (663) VA Puget Sound, WA	77	100	33	33		
(V21) (662) San Francisco, CA	129	350	17	19		
(V22) (691) Greater Los Angeles HCS	100	122	18	18		
(V23) (618) Minneapolis, MN	69	111	12	12		
Total	1,301	2,374	160	164	251	258

ECoE PNES Workload – FY15	PNES TeleHealth Clinic Provider Site	
	Unique Patients	Unduplicated Encounters
(V01) (650) Providence, RI	14	75
Grand Total	14	75

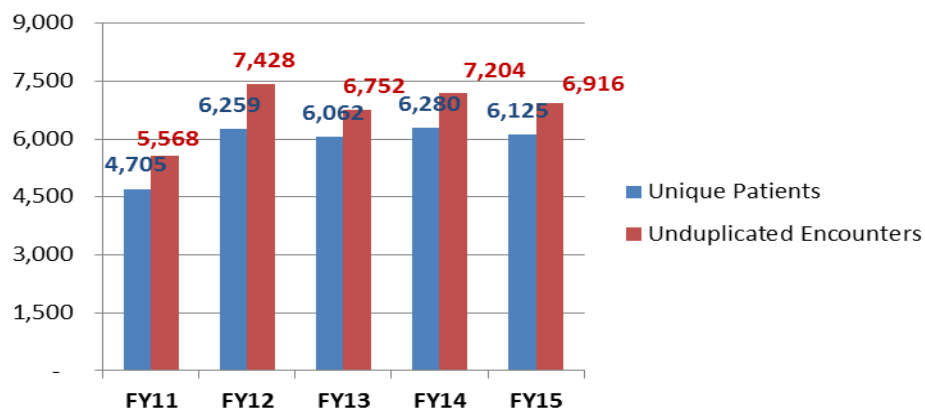
WORKLOAD TRENDS

Facility Clinic Visits

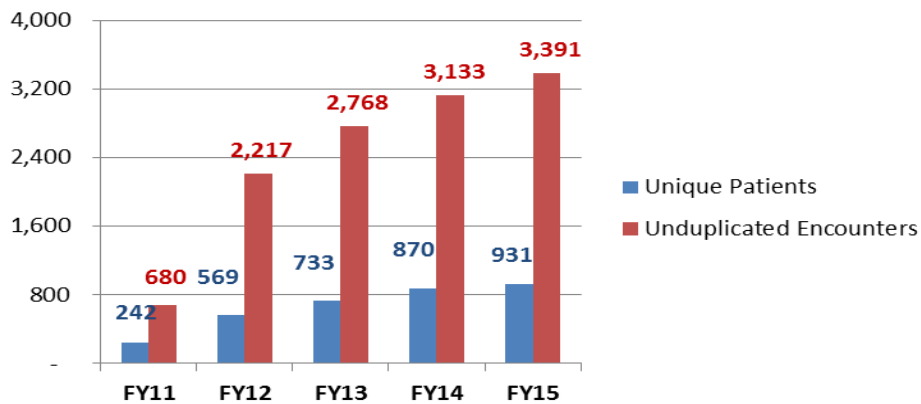
Epilepsy Patients



Electroencephalogram (EEG)



Long Term Video Monitoring (LTM)

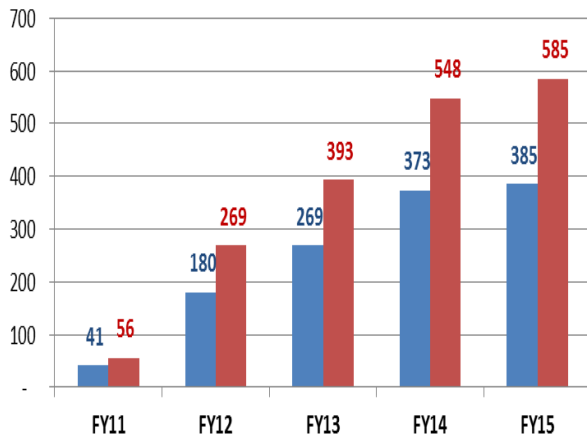


Data Source: VSSC Encounter Cube.

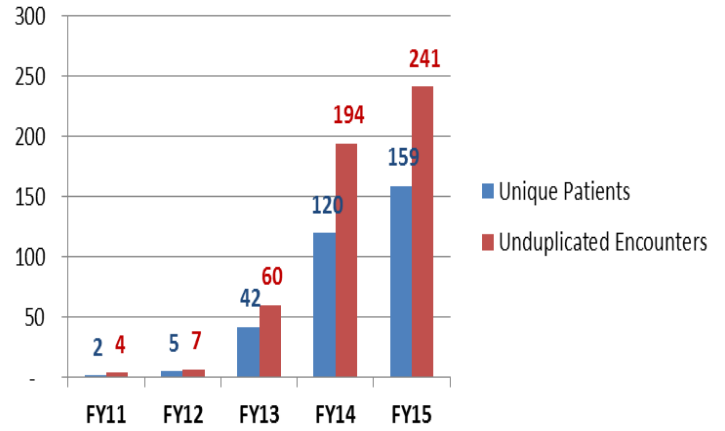
Numbers for FY11-FY12 maybe under reported due to workload capture issues.

Outreach: Tele-Epilepsy

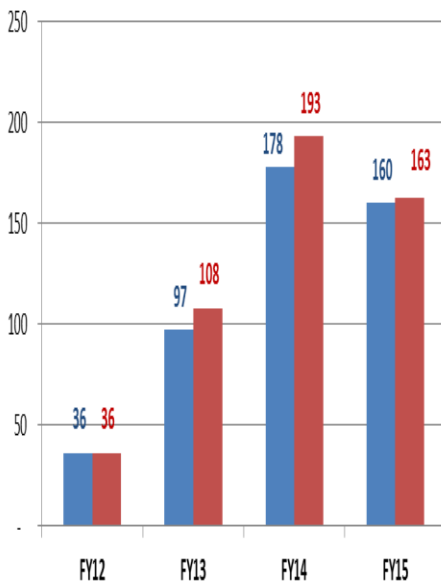
Clinical Video Teleconference (CVT) Same Station



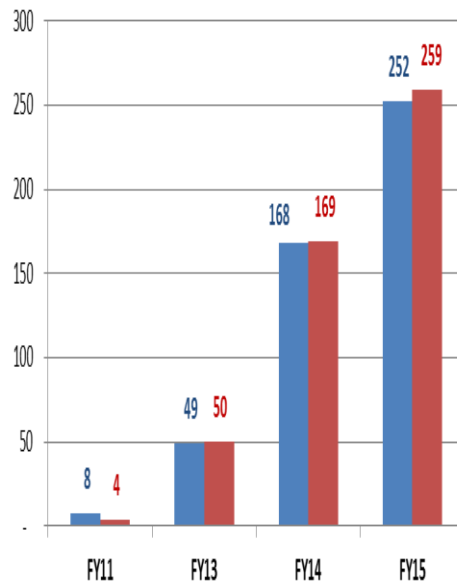
Clinical Video Teleconference CVT Other Station



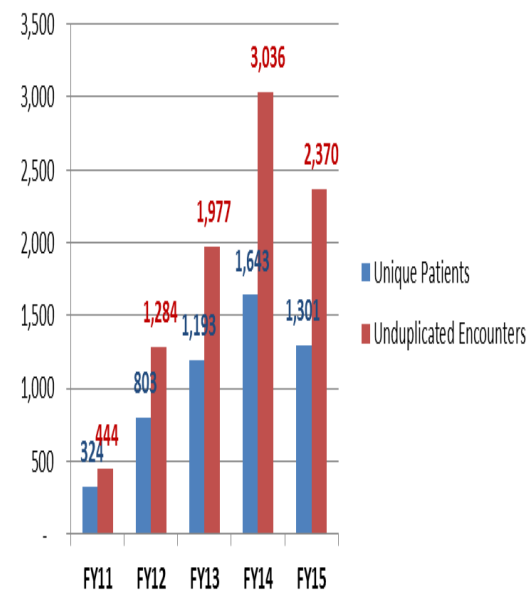
Epilepsy Chart Consults (e-consults)



Remote EEG



Telephone



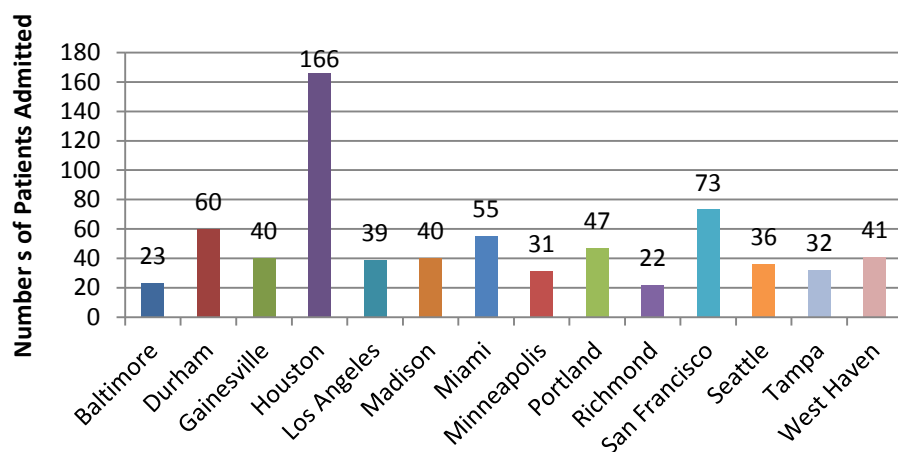
Data Source: VSSC Encounter Cube.

Numbers for FY11-FY12 maybe under reported due to workload capture issues.

EMU DIAGNOSTIC DATABASE

Data Source: Self-Report, Data collected locally at each ECoE site

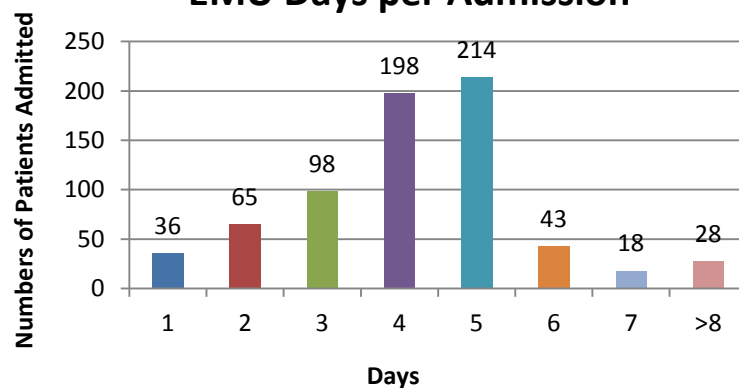
EMU Admissions FY15 Oct 2014 - Sept 2015 Epilepsy Centers of Excellence



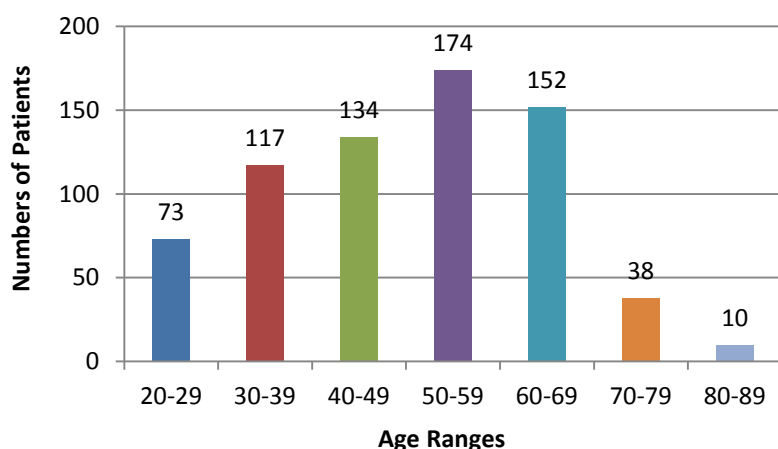
The aim of the FY15 EMU database capture was to assess elements of care and utilization provided across the network of ECoE's. Each of the fourteen sites with EMU admissions collected information on the elements; age, gender, & length of stay along with EMU classifications for each visit and cumulative visits (if appropriate) and primary and secondary diagnoses. The total number of epilepsy/seizure patient admissions was 705 with 649 being unique patient visits.

The median length of stay was 4-5 days with a minimum of 7 hours of EEG recording to a maximum of 19 days. Overall sites admissions totaled 2991 days with the 4-5 day stay most utilized.

EMU Days per Admission

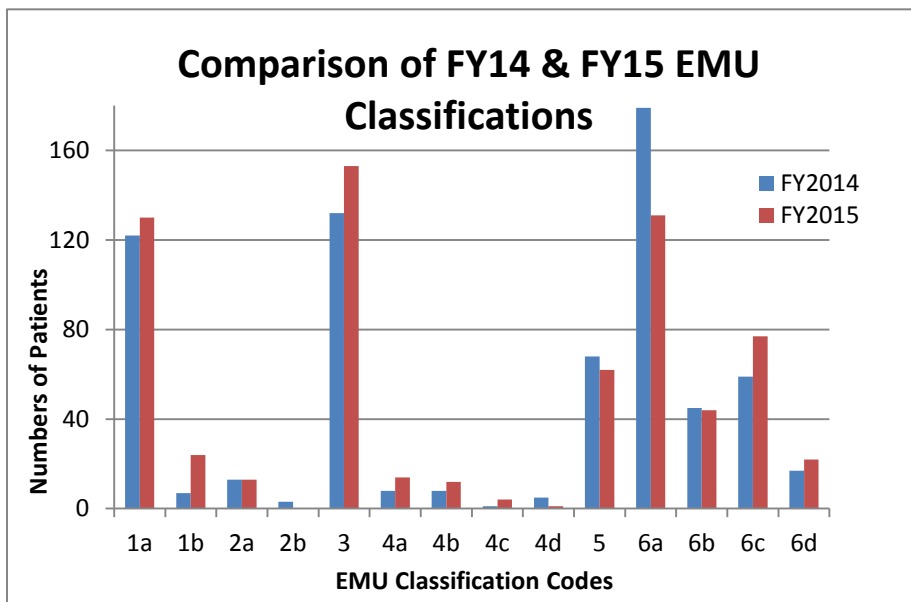
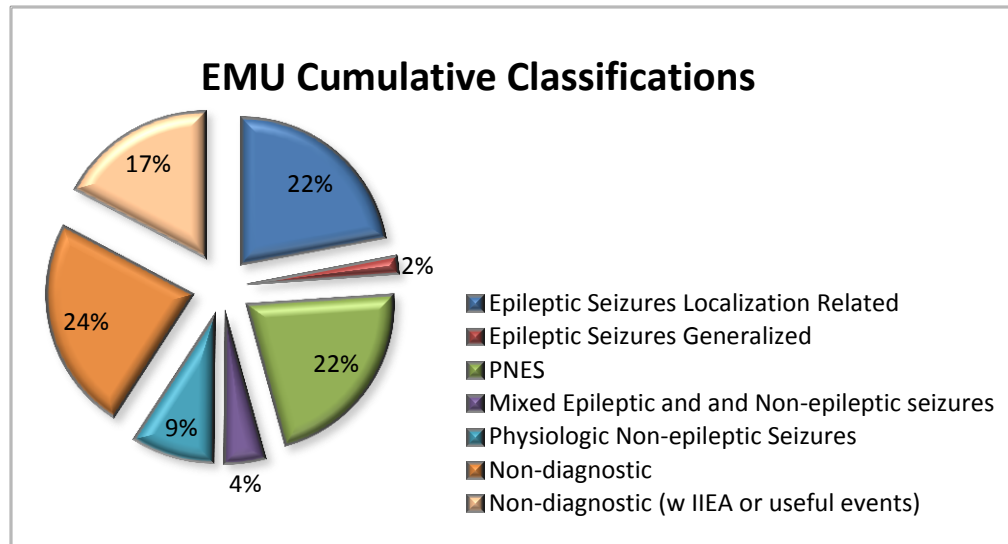


Ages Served in ECoE EMUs



Age groups ranged from 20-89 years with median ages from 50-59 and 84% of known gender patients being male.

Summary EMU classifications highlight the patterns most encountered over all EMUs. Classification categories most observed were; localization related epilepsy with ictal EEG changes (22%), PNES (22%), and the Inconclusive category with no diagnostic events, IIEA or informative subjective events (21%). 3% of the inconclusive category was uncategorized with no useful events.

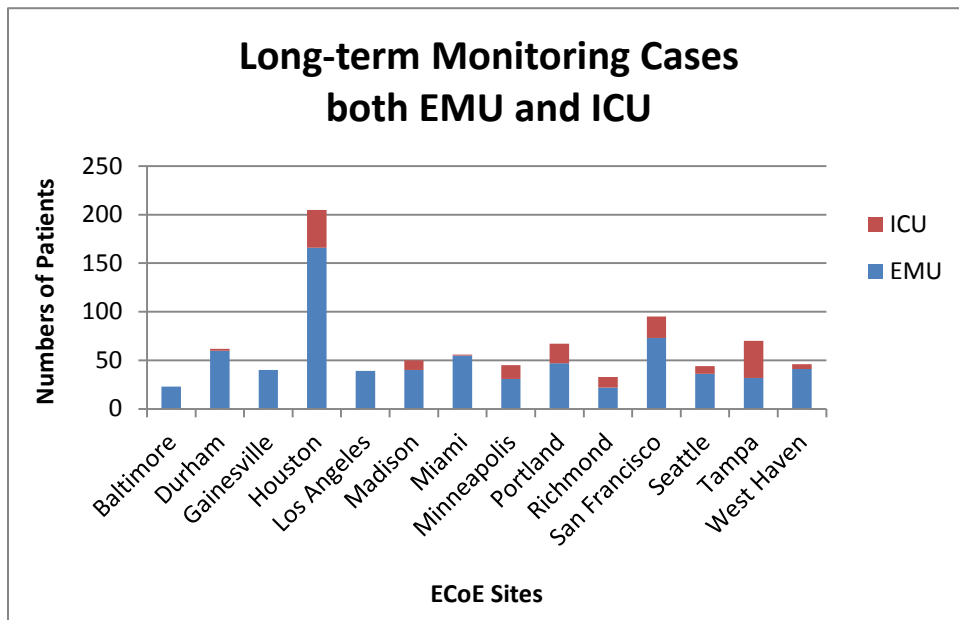


Key classifications compared almost identically between years. Discharges grouped to reflect general diagnostic categories show that 37% of the admissions were found to have epileptiform activity. One-quarter of admissions were diagnosed with PNES. Inconclusive categories with no diagnostic events, w or w/o IIEA and/or subjective events with potential diagnostic value comprised 91% of that category with 9% being uncategorized at the end of the admission.

The EMU discharge classifications are as follows:

1. Epileptic Seizures; Localization Related
 - a. with ictal EEG changes
 - b. without ictal EEG changes
2. Epileptic Seizures ; Generalized
 - a. with ictal EEG changes
 - b. without EEG changes
3. Psychogenic Non-epileptic Seizures
4. 'Mixed' ES and NES
 - a. Captured ES (1a or 2a) and captured PNES
 - b. Captured PNES and IIEA
 - c. Captured ES & other
 - d. Captured PNES & other
5. Other Non-epileptic Seizures
6. Inconclusive
 - a. No diagnostic events captured; no IIEA. Includes & subjects events not thought to be of diagnostic value
 - b. No diagnostic events; with IIEA. Includes subjective events not thought to be of diagnostic value

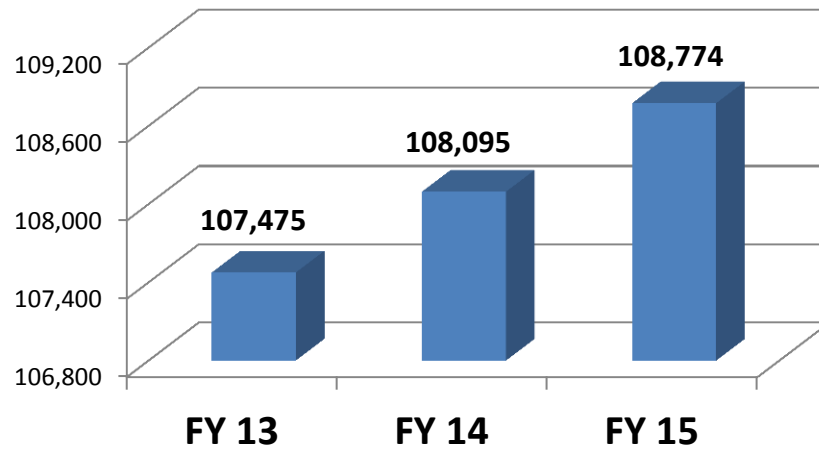
- c. Potentially useful spell(s) captured, but not meeting criteria for 1-5. Includes patients with captured subjective episodes (i.e. 'loss of time spells') that are characteristic of the habitual spells, and are therefore thought to be of potential diagnostic value.
- d. Spells that could not be confidently classified under any of the above categories.



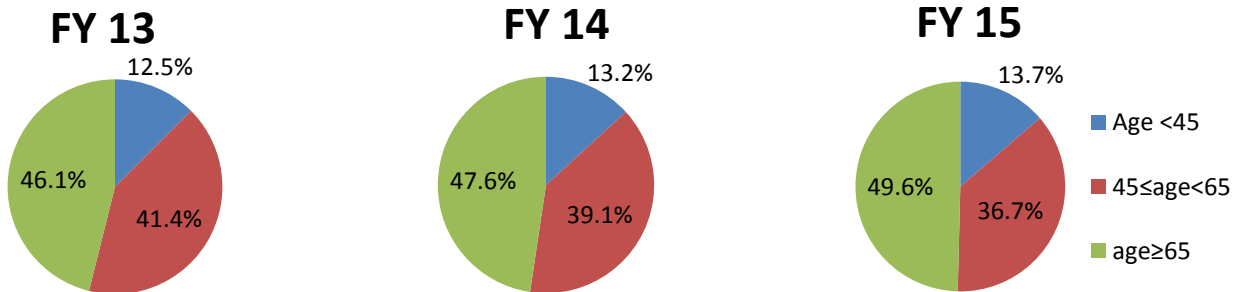
Non-EMU monitoring was categorized separately from the EMU monitoring and represented on average, 19% of our long-term monitoring cases.

VHA SEIZURE, EPILEPSY, OTHER EVENTS ENCOUNTERS

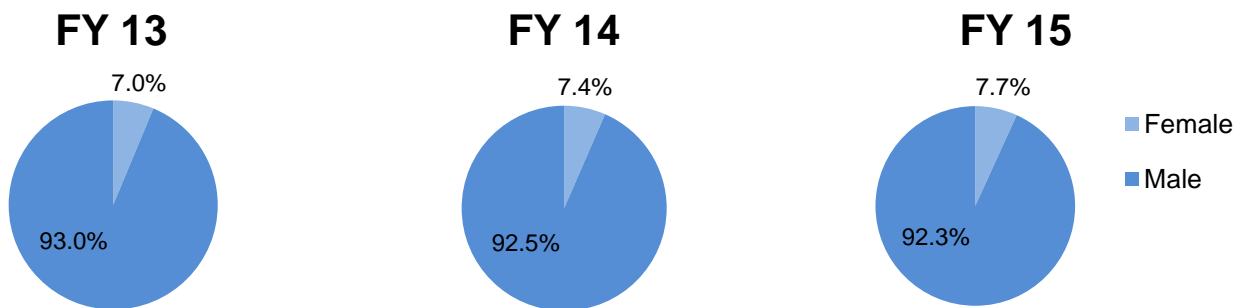
Unique Patients



Age Group Distributions



Gender Distributions



Algorithm: Data collected using ICD-09-CM codes: 345.xx Epilepsy, 780.3x Convulsion, 649.4x Epilepsy Complicating pregnancy, 780.02 Transient Alteration of Awareness, and 780.09 Other Alteration of Consciousness

Data Source: VSSC Diagnosis Cube, VA inpatients or VA outpatients. Numbers rounded to the nearest one decimal digit for percentages. Uniques with unknown ages/genders are excluded from the analysis.

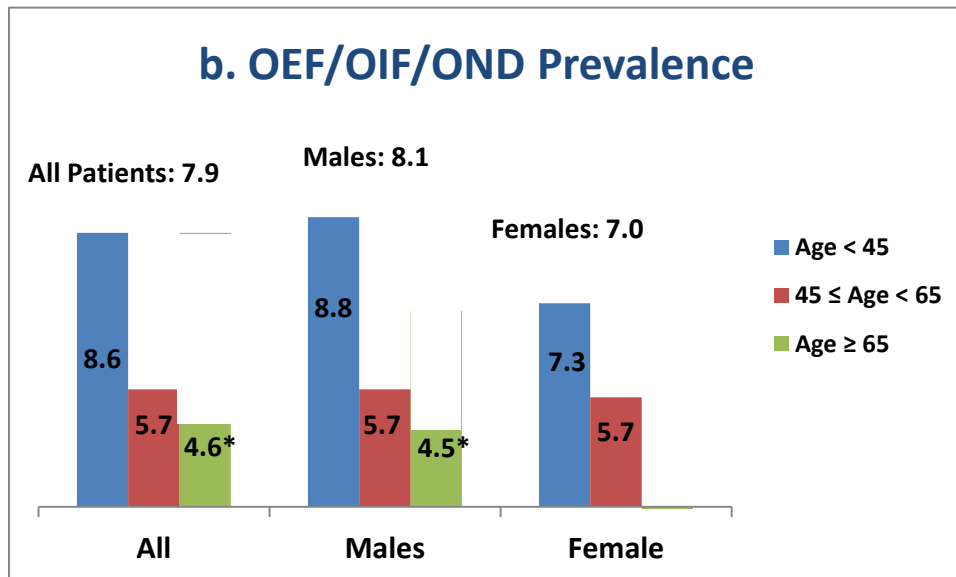
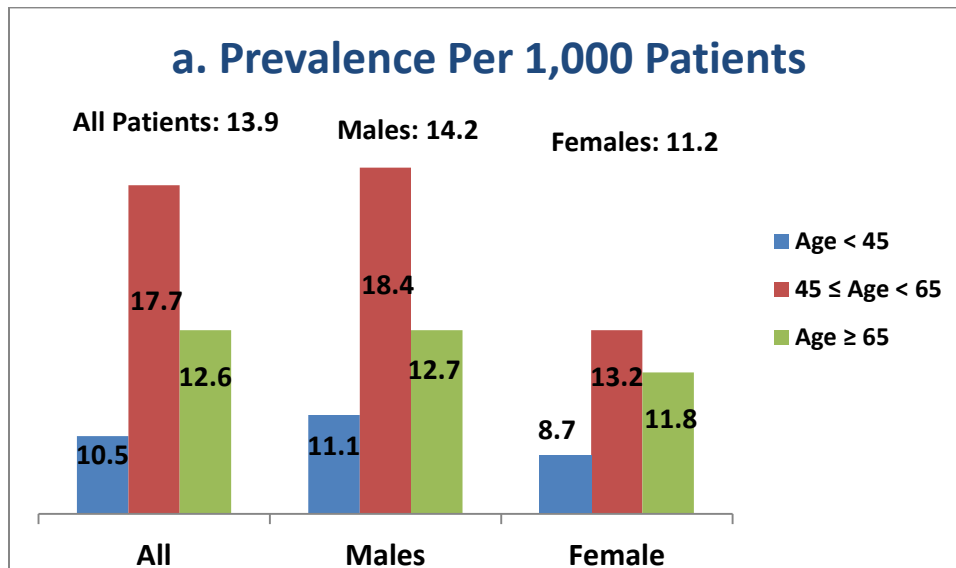
VHA FY14 PATIENT COUNTS

Cohort	Epilepsy Patients, %		All VA Patients, %	
All Patients	82,436		5,915,027	
Age <45	10,687	13.0%	1,015,723	17.2%
45 ≤ Age <65	34,480	41.8%	1,951,286	33.0%
Age ≥ 65	37,269	45.2%	2,948,018	49.8%
Males	76,176		5,355,783	
Age <45	8,668	11.4%	783,932	14.6%
45 ≤ Age <65	30,978	40.7%	1,686,625	31.5%
Age ≥ 65	36,530	48.0%	2,885,226	53.9%
Females	6,260		559,244	
Age <45	2,019	32.3%	231,791	41.4%
45 ≤ Age <65	3,502	55.9%	264,661	47.3%
Age ≥ 65	739	11.8%	62,792	11.2%
Epilepsy: Males 92.4%, Females 7.6% All VA: Males 90.5%, Females 9.6%				
OEF/OIF/OND PATIENT COUNTS				
All Patients	5,362		676,071	
Age <45	4,454	83.1%	516,708	76.4%
45 ≤ Age <65	885	16.5%	154,403	22.8%
Age ≥ 65	23	0.4%	4,960	0.7%
Males	4,738		587,062	
Age <45	3,933	83.0%	445,664	75.9%
45 ≤ Age <65	784	16.5%	136,724	23.3%
Age ≥ 65	21	0.4%	4,674	0.8%
Females	624		89,009	
Age <45	521	83.5%	71,044	79.8%
45 ≤ Age <65	101	16.2%	17,679	19.9%
Age ≥ 65	2	0.3%	286	0.3%
Epilepsy: Males 88.4%, Females 11.6% All VA: Males 86.8%, Females 13.2%				

Algorithm: Patients prescribed at least thirty days of anti-epileptic drugs in FY14 cross matched with seizure diagnosis (ICD-09-CM 345.xx, 780.39) during FY12-FY14. **Diagnoses data from EEG and LTM clinics were excluded.**
Estimated positive predictive value of 82.0% from chart review of 500 patients (95% confidence interval: 78.6% to 85.4%)

Data Sources: Corporate Data Warehouse (CDW), VSSC Diagnosis Cube and Pharmacy Benefit Management (PBM).
Numbers rounded to the nearest one decimal digit for percentages. **Unknowns have been excluded from the analysis.**

VHA FY14 EPILEPSY PREVALENCE ESTIMATES



Algorithm: Patients prescribed at least thirty days of anti-epileptic drugs in FY14 cross matched with seizure diagnosis (ICD-09-CM 345.xx, 780.39) during FY12-FY14. **Diagnoses data from EEG and LTM clinics were excluded. Estimated positive predictive value of 82.0% from chart review of 500 patients (95% confidence interval: 78.6% to 85.4%)**

Data Sources: Corporate Data Warehouse (CDW), VSSC Diagnosis Cube and Pharmacy Benefit Management (PBM). Numbers rounded to the nearest one decimal digit for percentages. **Unknowns have been excluded from the analysis.**

***Rates based on counts less than 30 are statistically unstable.**

SOUTHWEST REGION

James Chen, MD, Southwest ECoE Regional Director
Vacant, Southwest ECoE Regional Administrative Director



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San Francisco ECoE Staff

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Garga, Nina	Co-Director	Nina.Garga@va.gov	415.221.4810 x24147	0.750
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Cooke, Daniel	Neuro-interventional radiologist	Daniel.cooke@ucsf.edu	415.221.4810 x25190	0.000
Mueller, Susanne	Epilepsy Imaging Research	Susanne.mueller@ucsf.edu	415.221.4810 x2538	0.000
Balter, Stacey	Epilepsy Research (COVE)	Stacey.balter@ucsf.edu	415.221.4810 x25075	0.000
Chen, Stephanie	Nurse Practitioner	Stephanie.chen5@va.gov	415.221.4810 x25273	0.600
Poon, Linda	Clinical Pharmacist	linda.poon@va.gov	415.221.4810 x24375	0.000

FY15 Accomplishments:

- Formalized EMU nursing standard of practice (SOP)
- Upgraded EMU to include EKG telemetry, continuous pulse oximetry (discretionary), and RN's trained to perform continuous video observation of patients.
- Developed and implemented continuous quality improvement program for EMU patient safety. This includes daily feedback to RN's performing seizure assessments as well as those detecting clinical seizures.



- Provider at SFVA has nearly completed mentored training to independently provide cognitive behavioral therapy for patients with psychogenic non-epileptic seizures.
- Developed an After Visit Summary template to improve communication with outpatients
- Participated as site for Epilepsy Education Video Series, "Introduction to Seizures".
- Continued monthly support groups for patients and bimonthly support groups for caregivers.
- Successfully transitioned clinical neurophysiology fellowship to ACGME epilepsy fellowship in joint training program with UCSF.

Future Initiatives:

- Expand CBT for PNES by video telehealth to additional CBOCs and referral sites within SFVA ECoE catchment areas.
- Develop SOP for non-EMU continuous EEG monitoring outside of the ICU
- Expand video-to-home telehealth clinic to bi-weekly sessions, specifically reaching out to Reno and Sacramento patients that do not support standard CVT
- Improve remote EEG reading access with installation/activation of biomedical engineering ports throughout hospital wards
- Upgrade EMU systems within 2 years.
- Establish contract with NeuroPace to implant device (approved as surgical site)
- Maintain current services without increased funding, having reached maximum manageable clinical volume with increasing administrative demands limiting patient care service expansion.

Publications / Manuscripts / Chapters:

- **Rao VR**, Lim LE, Fong D, **Garga NI**, **Parko KL**. Multicentric Castleman's disease with voltage-gated potassium channel antibody-positive limbic encephalitis: a case report. *BMC Neurol.* 15:4, 2015
- Davis LE, **Garga NI**, King MK, **Chen S**, and **Parko KL**. Teleneurology in the United States Veterans Health Administration. In: Tsao JW and Demaerschalk BM editors. *Teleneurology in Practice: A Comprehensive Clinical Guide*. Springer 2015
- Patients optimizing epilepsy management via an online community: The POEM Study. **Hixson JD**, Barnes D, **Parko K**, Durgin T, Van Bebber S, Graham A, Wicks P. *Neurology*. 2015 Jul 14;85(2):129-36. Epub 2015 Jun 17
- Interest in a digital health tool in veterans with epilepsy: results of a phone survey. **Hixson JD**, Van Bebber SL, Bertko KM. *Mil Med.* 2015 Apr;180(4):387-90. doi: 10.7205/MILMED-D-14-00224.
- Pugh MJ, **Parko K**. Research using archival health care data: Let the buyer beware. *Epilepsia*. 2015 Feb;56(2):321-2. PMID: 25708477
- **Rao VR**, **Parko KL**. Clinical approach to posttraumatic epilepsy. *Semin Neurol.* 2015 Feb;35(1):57-63. PMID: 25714868.
- Natalie N Rohde, MS; Christine B Baca; Anne C Van Cott; **Karen L Parko**; Megan Amuan; Antiepileptic Drug Prescribing Patterns in Iraq and Afghanistan War Veterans with Epilepsy. *Epilepsy Behav* 2015 May;46:133-9. PMID: 25911209
- Hippocampal Subfield Group (including **Mueller SG**). Quantitative comparison of 21 protocols for labeling hippocampal subfields and parahippocampal subregions in in vivo MRI: towards a harmonized segmentation protocol. *Neuroimage*. 2015. 111:526-41.

Abstracts / Posters / Presentations:

- **J Hixson**, D Barnes, **K Parko**, T Durgin, S Van Bebber, and P Wicks (2014). The POEM Study: Results of the Use of a Digital Health Solutions for US Veterans with Epilepsy. Poster presentation, European Epilepsy Congress, International League Against Epilepsy, Stockholm, Sweden
- **J Hixson**, D Barnes, **K Parko**, T Durgin, S Van Bebber, and P Wicks (2014). The POEM Study: Patient Usage and Satisfaction with an Online Health Management Platform for Epilepsy. Poster Presentation, American Epilepsy Society Annual Meeting, Seattle, USA
- Hennessy R, Mendoza M, French J, Haut S, **Hixson J**, and Detyniecki K. (2014). Delay to Initiation of Treatment: Data from the Human Epilepsy Project. Poster Presentation, American Epilepsy Society Annual Meeting, Seattle, USA
- **Karen Parko**: Epilepsy Foundation of America: Ask the Experts Panel, Washington DC, April 2015
- **Karen Parko**: Epilepsy Foundation of America: Ask the Experts Panel, Washington DC, April 2015
- **John Hixson**: Doctors 2.0 (2015) "Digital Advances for Epilepsy Monitoring and Management" Paris, France
- **John Hixson**: California Neuro Society (2015) "Advances in Epilepsy Management"

- **John Hixson:** Kentucky Neuro Society (2015) "Advances in Epilepsy Management"
- **John Hixson:** Hawaii Neuro Society (2015) "Advances in Epilepsy Management"
- **John Hixson:** Health Tech Forum (2015) "Improving the Role of Patients: VA Open Notes Experience"
- **John Hixson:** Health 2.0 (2015) "Care Coordination and Digital Health"
- **John Hixson:** New York Academy of Sciences (2015) "Use of Mobile Tech and Wearables in Clinical Trials"
- **Stephanie Chen:** American Academy of Neuroscience Nurses Annual Conference (2015) "Post-traumatic Epilepsy: Risk Factors, Pathophysiology and Implications for Nursing Care."
- **Mueller SG,** Garcia P, Barakos J, Laxer KD. Evidence for Complex Extratemporal Atrophy Pattern in TLE with Secondly Generalized Seizures. Human Brain Mapping 2015, Honolulu, Hawai'i, USA.

Research:

<i>Principle Investigators</i>	<i>Grant/Study Title</i>	<i>Project Start Date</i>	<i>Project End Date</i>	<i>Name of Funding Source</i>
Hixson, John D	the POEM study: Policy for Optimized Epilepsy Management	03/01/2012	Ongoing (Year 3)	UCB Pharma
Mueller, Susanne	Improved non-invasive Focus Lateralization in Partial Epilepsy with DSASL MRI	1/1/2013	12/31/2014	UCSF REAC (Research Evaluation and Allocation Committee)
Mueller, Susanne	SUDEP Imaging Project	09/01/2014	08/31/2015	Epilepsy Foundation
Parko, Karen (site PI)	Psychogenic Non-epileptic seizures in U.S. Veterans (Co-investigator and site PI)	8/12/2012	8/12/2016	Merit Review Award: Department of Veterans Affairs

Fellowships:

<i>Name</i>	<i>Fellowship</i>	<i>ACGME</i>	<i>VA FTE</i>	<i>Start Date</i>	<i>End Date</i>
Brian Cabaniss, MD	Clinical Neurophysiology	Yes	0.5	07/01/14	06/30/15
Wolfgang Muhlhofer, MD	Clinical Neurophysiology	Yes	0.5	07/01/14	06/30/15
Brian Cabaniss, MD	Polytrauma Epilepsy	No	0.5	07/01/15	06/30/16
Wolfgang Muhlhofer, MD	Polytrauma Epilepsy	No	0.5	07/01/15	06/30/16
June Yoshii-Contreras, MD	Epilepsy	Yes	0.5	07/01/15	06/30/16

GREATER LOS ANGELES VA MEDICAL CENTER

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FY15 Accomplishments:

- Three epilepsy resection surgeries were performed: one of the left occipito-parietal region, and two anterior temporal lobectomy.
- Two phase II studies with implanted electrodes were performed: 1) depth electrodes: bilateral depth electrodes in the orbitofrontal, anterior cingulate, and temporal lobes. 2) subdural and strip electrodes implantation in the left occipito-parietal-temporal head region.
- Six electrocorticography (ECoG) were performed.
- One case of extra-operative eloquent cortex mapping of the primary sensory and language areas.
- One case of intra-operative language mapping.
- **AWARDS: Christine Baca**
2015 UCLA Health Teaching Humanism Award, UCLA, Los Angeles CA. *Nominated by UCLA Department of Neurology.* 1 of 7 awardees in 2015 (49 total since program started in 2010).
- **AWARDS: Sunita Dergalust** – Accreditation of a PGY2 Neurology Pharmacy Specialty Residency Program – the 1st in the country.



Publications / Manuscripts / Chapters:

- **Baca CB, Barkley G.** Can big data help us close an epilepsy care gap? *Neurology* (in press).
- Cowansage K; Shuman T, Chang A, **Golshani P**, Mayford M Top-down manipulation of a natural memory by optogenetic control of cortical circuits. *Neuron*. Published online October 10th, 2014.
- Varga C, Oijala M, Lish J, Szabo G, Bezaire M, Marchionni I, **Golshani P**, Soltesz I Functional Fission of Parvalbumin Interneuron Classes During Fast Network Events. Published online on November 6th, 2014 *ELife*.

- Sato Y, Shobe J, Zhou M, Huang S, Shuman T, Cai D, **Golshani P**, Kamata M, Silva AJ. Creb regulates memory allocation in the insular cortex. *Current Biology*. Published online Oct 2014.
- Peñagarikano O, Lazaro MT, Lu XH, Gordon A, Dong H, Lam HA, Peles E, Maidment N, Murphy NP, Yang XW, **Golshani P**, and Geschwind DH. Exogenous and evoked oxytocin restores social behavior in the *Cntnap2* mouse model of autism. (2015) *Science Translational Medicine* 7 (271)
- Srinivasan R, Huang B, Venugopal S, Johnston AD, Chai H, Zeng H, **Golshani P** & Khakh BS (2015) Physiological Ca^{2+} signaling in astrocytes from *IP3R2^{-/-}* mice in brain slices and during startle responses *in vivo*. *Nature Neuroscience*, Published on-line April 20th, 2015.
- Gdalyahu A, Lazaro M, Penagarikano O, **Golshani P**, Trachtenberg J, and Geschwind D: The autism related protein Contactin-Associated Protein-Like 2 (CNTNAP2) is required for stabilization of new spines. *PLOS One*, Published on-line May 7th, 2015.
- Gezalain MM, **Wasterlain, CG**, Status Epilepticus: an Update. North African and Middle East Epilepsy Journal (NAMEEJ), 2 (6): 7-12, 2013.
- Gezalain MM, Sen-Gupta I, Chen JWY, **Wasterlain, CG**, Management of Status Epilepticus. Fed. Pract. 31, S5: 24-29, 2014. PMID: 23313318.
- Benz AP, Niquet J, **Wasterlain CG**, Rami A., Status epilepticus in the immature rodent brain alters the dynamics of autophagy. *Curr Neurovasc Res*. May; 11(2):125-35, 2014. PMID: 24597603.
- Niquet J, Baldwin R, Gezalain M, and **Wasterlain CG**, Deep hypothermia for the treatment of refractory status epilepticus, *Epilepsy Behav.*, 49:313-7, 2015
- Jara-Prado A, Ochoa A, Alonso ME, Lima Villeda GA, Fernandez-Valverde F, Ruano-Calderon L, Vargas-Canas S, Duron RM, **Delgado-Escueta AV**, Martinez-Juarez IE. Late onset Lafora disease and novel EPM2A mutations: Breaking paradigms, *Epilepsy Research* 2014; 108(9): 1501-1510; PMID 25246353.
- Wight JE, Nguyen VH, Medina MT, Patterson C, Duron RM, Molina Y, Lin YC, Martinez-Juarez IE, Ochoa A, Jara-Prado A, Tanaka M, Bai D, Aftab S, Bailey JN, **Delgado-Escueta AV**. Chromosome loci vary by JME subsyndromes: Linkage and haplotype analysis applied to epilepsy and EEG 3.5-6 Hz polyspike waves, *Molecular Genetics & Genomic Medicine*, accepted for publication.

Abstracts / Posters / Presentations:

- Baca CB, Pieters H, Iwaki T, Mathern GW, Vickrey BG. "A circuitous journey": Parents perspectives of getting to pediatric epilepsy surgery. American Epilepsy Society Annual Meeting; Seattle, WA: December 6, 2014.
- Keselman I, Lopez-Baquero R, Bukovskaya Y, Barreda J, Baca CB. Myoclonic jerks and generalized tonic-clonic seizures – The Diagnostic Dilemma. American Clinical Neurophysiology Society Annual Meeting; Houston, TX: February 6, 2015.
- Baca CB, Pieters H, Iwaki T, Mathern GW, Vickrey BG. "A circuitous journey": Parents perspectives of getting to pediatric epilepsy surgery. *Neurology* April 6, 2015; 84 (14); Supplement P6.281.
- Berg A, Loddenkemper T, **Baca CB**. Diagnostic delays in children with early-onset epilepsy. *Epilepsia*. 2014 Jan; 55(1) 123-32. [Epub 2013 Dec 6] [PMCID: PMC3946922]
- Chen LL, **Baca CB**, Choe J, Chen JW, Avad ME, Cheng EM. Posttraumatic epilepsy in operation enduring freedom/operation Iraqi freedom veterans. *Military Medicine* 2014 May; 179(5): 492-6. [PMID: 24806494]. [PMCID pending].
- **Baca C**, Vickrey G, Caplan, R, Vassar S, Berg T. Generic versus epilepsy-specific health-related quality of life measures in young adults with childhood-onset epilepsy. *Quality of Life Research*. 2014 Nov 21 [Epub ahead of print] [PMID: 25413780] [PMCID pending]
- **Baca CB**, Pieters H, Iwaki T, Mathern GW, Vickrey BG. "A journey around the world": Parent narratives of the journey to pediatric resective epilepsy surgery and beyond. *Epilepsia* 2015 Apr 20. doi: 10.1111/epi.12988 [Epub ahead of print]. PMID: 25894906
- Pugh MJ, **Baca CB**, Van Cott AC, Rhode N, Amuan ME. Anti-epileptic drugs prescribed for Afghanistan/Iraq War Veterans Diagnosed with Epilepsy. *Epilepsy Behav.* 2015 Apr 21. pii: S1525-5050(15)00132-8. doi: 10.1016/j.yebeh.2015.03.027. [Epub ahead of print] PMID: 25911209
- Estrada-Sánchez AM, Indersmitten I, Haiem M, Cepeda C, **Golshani P**, Levine SM. Altered cortical calcium dynamics of cortical microcircuits in the R6/2 mouse model for Huntington's disease. Society for Neuroscience 2014
- Nieto G., Lazaro M, Cederbaum A., **Golshani P**, and Lipshutz G Functional alterations of motor cortical circuits in Arginase 1 deficiency. Society for Neuroscience 2014.
- Polack PO, Friedman J, **Golshani P** Brain state dependent membrane potential dynamics in visual cortex. Monitoring Molecules in Neuroscience Meeting. Los Angeles, CA August 2014.

- Srinivasan R, Huang BS, Venugopal B, Ruotian J, Haustein M, **Golshani P** and Khakh BS Astrocytes from IP3R2 knockout mice display extensive calcium signaling *in situ* and *in vivo*. Glial Biology Conference, UAB, 2014.
- Cai D, Shobe J, Shuman T, Aharoni D, Biane J, Lou J, Baumgaertel K, Tuszynski M, Mayford M, **Golshani P** & Silva AJ Hippocampal Memory Allocation Mechanisms Link Contextual Memories Across Time. Molecular Cellular Cognition Symposium (Society for Neuroscience), Washington DC, 2014
- Bakhurin K, Mac W, **Golshani P**, and Masmanidis S Coordinated network dynamics of striatal ensembles during associative reward processing. Cosyne 2015 Meeting, Salt Lake City, Utah, 2015.
- Cai D, Aharoni D^{1,2*}, Shuman T^{*}, Shobe J^{*}, Biane J, Lou J, Kim I, Cowansage K, Levenstain A, Tuszynski M, Mayford M, **Golshani P** and Silva AJ A shared neural ensemble links distinct contextual memories encoded close in time. Society for Neuroscience, Chicago, 2015
- Huang BS, Belafard A, Vrontou S, and **Golshani P** Cortex-wide cellular-resolution calcium imaging access in head-fixed behaving mice using chronically implanted glass cranial windows covering the entire dorsal cortical surface. Society for Neuroscience, Chicago 2015
- Shuman S, Javaherian M, Kaba C, Cai D, Cheng K, Daneshrad J, Fariborzi A, Manavi R, Rao N, Lou J, Flores S, Yang C, Ghiaee S, Shtrahman M, Bakhurin K, Masmanidis S, & **Golshani P** Dentate gyrus/ CA1 hippocampal interneuron desynchronization in chronically epileptic mice. Society for Neuroscience, Chicago 2015
- Aharoni D, Shuman T, Cai D, Lou J, Kim I, Khakh BS, Silva AJ, **Golshani P** Open-source miniaturized wide-field fluorescence microscope for imaging large-scale neural activity in awake freely behaving animals. Society for Neuroscience, Chicago 2015.
- Lazaro MT, Penagarikano O, Bachmutsky I, Dong H, Geschwind DW, **Golshani P** Synaptic and network pathologies in the CNTNAP2 mouse model of Autism Spectrum Disorder. MCCA Pre-meeting, Society for Neuroscience, Chicago 2015.
- Huang BS, Belafard A, Vrontou S, and **Golshani P** Cortex-wide cellular-resolution calcium imaging access in head-fixed behaving mice using chronically implanted glass cranial windows covering the entire dorsal cortical surface. Engineering the Brain Symposium, Chicago 2015
- Shuman S, Javaherian M, Kaba C, Cai D, Cheng K, Daneshrad J, Fariborzi A, Manavi R, Rao N, Lou J, Flores S, Yang C, Ghiaee S, Shtrahman M, Bakhurin K, Masmanidis S, & **Golshani P** *In vivo* interneuron circuit dysfunction in chronically epileptic mice. American Epilepsy Society Meeting, Philadelphia 2015
- Wen M, Nguyen VH, Bukovskaya Y, Dergalust S. Beyond efficacy: focus on safety and effectiveness of anti-epileptic drugs. Presented at: American Epilepsy Society 68th Annual Meeting; December 5, 2014; Seattle, WA
- **Wasterlain, CG**, Baldwin, R, Niquet, J, Suchomelova, L, Hypothermia for Refractory Status Epilepticus, Ann Neurol, 2014
- Rossetti F, M. K. Schultz MK, M. De Araujo Furtado M, Furman AR, Stone MF, Schultz CR, Schwartz JE, Bourne AR, Moffett MC, Turner T, Wright LK, **Wasterlain CG**, Lumley LA; The anticonvulsant, anti-epileptic and protective effects of midazolam and ketamine combination treatment after soman-induced seizures in rats Soc. Neuroscience Abs., 2014.
- **Wasterlain CG**, Baldwin RA, Niquet J, Suchomelova L, Gezalian M, Norman KM, Sequential vs simultaneous poluthery in the treatment of status epilepticus, Neurology, 2014.

Research:

Principle Investigators	Grant/Study Title	Project Start Date	Project End Date	Name of Funding Source
Todd Wagner, Christine Baca	VAHSR&D, "Access to specialty care for Veterans with complex conditions" 1 IO1HX001056 (IIR 12-337-3 PI – Todd Wagner). Total costs \$960,100. \$337,850 in Year 1. Site PI – West LA VA.	4/2015	3/2018	1 IO1HX001056 (IIR 12-337-3 VA
Dr. Sotiris Masmanidis., Peyman Golshani, Md. Ph. D.	Systems level electrophysiology for addiction and reward research. Amount: \$1,531,261 Amount to Golshani Lab: \$100,000	7/1/2012	6/30/2017	NIMH(RO1DA034178)
Peyman Golshani, MD, Ph.D	"Optogenetic treatment of social behavior in autism." Amount: \$1,250,000	8/1/2013	7/31/2018	NIMH (RO1MH101198-1)
Peyman Golshani MD, Ph.D. Dr. Carlos Portera-Cailliau	"Linking network dysfunction & abnormal behavior in genetic autism spectrum disorder mouse models" Amount: \$526,762	11/1/2013	10/31/2015	Simons Foundation

Dergalust, Sunita	Evaluate the efficacy of dual therapy combinations of AEDs in patients with epilepsy.	2010	12/31/2015	None
Dergalust, Sunita	Analysis of phenytoin protein-binding pharmacokinetics in the Veteran population	2012	09/31/15	None
Dergalust, Sunita	Evaluating the use and efficacy of Anti-Epileptic Drugs in the treatment of status epilepticus in the Veteran population	2011	11/30/15	None
Dergalust, Sunita	Implementation and Evaluation of a Comprehensive Program for management of headache in Veterans with Traumatic Brain Injury	2014		None
Claude Wasterlain	Merit Review Treatment of Status Epilepticus: a Translational Proposal, PI	04/01/2013-	03/31/2017	VA Merit review
Claude Wasterlain	1 UO1 NS074926 (PI), Rational polytherapy in the treatment of cholinergic seizures,	09/15/2011	08/31/2016	NIH/NINDS
Claude Wasterlain	Studies of the Antiepileptic and Antiepileptogenic Potential of Propylparaben	07/01/2014	12/31/2016	UC Mexus-Conacyt
Delgado-Escueta, Antonio	Discovering More Juvenile Myoclonic Epilepsy Genes by a Consortium	04/01/2010	03/31/2016	NIH/NINDS
Delgado-Escueta, Antonio	Persisting Myoclonic and Grand mal Seizures in JME including Veterans	2013	2018	VA Merit Review
Delgado-Escueta, Antonio	Two CIDR Grants (Center for Disease Research) provide genotyping services	2012	2016	NIH federal contracts to Johns Hopkins University

Fellowships:

<i>Name</i>	<i>Fellowship</i>	<i>ACGME</i>	<i>VA FTE</i>	<i>Start Date</i>	<i>End Date</i>
Rafael Lopez-Baquero, MD	Polytrauma Epilepsy	No	1.000	07/15/14	07/15/15
Justin Cheongsiatmoy, MD	Clinical Neurophysiology	Yes	1.000	07/01/14	06/30/15
Inna Keselman, MD, Ph.D.	Clinical Neurophysiology	Yes	1.000	07/01/14	06/30/15
Chutima Saipetch, MD	Clinical Neurophysiology	Yes	1.000	07/01/14	06/30/15
Inna Keselman, MD, Ph.D.	Polytrauma Epilepsy	No	1.000	07/15/15	06/30/17
Christopher Cheng, MD	Clinical Neurophysiology	Yes	1.000	07/01/15	06/30/16
Parissa Vassef, MD	Clinical Neurophysiology	Yes	1.000	07/01/15	06/30/16
Yana Bukovskaya, PharmD, BCPS	PGY-2 Neurology Specialty Pharmacy Resident	Candidacy Status	1.000	07/01/14	06/30/15
Grace Minassian	PGY-2 Neurology Specialty Pharmacy Resident		1.000	07/01/15	06/30/16

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FY15 Accomplishments:

- Completed our 900 teleneurology visit, slightly over 25% visits were seen for seizures
- Expanded teleneurology to 3 more West Texas CBOCs

Future Initiatives:

- Introduce Neurology residents to concept of teleneurology for seizure follow-up care
- Continue to expand the number of rural veterans with seizures that receive their follow-up care via teleneurology
- Epilepsy education via teleneurology

Publications / Manuscripts / Chapters:

- Springer 2015, *Fundamentals of Neurologic Disease*, Second Edition, **Larry E. Davis**, Sarah Pirio Richardson

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FY15 Accomplishments:

- Named Houston ECoE Co-Directors.
- Implementation of a clinic dedicated to delivering individual cognitive behavioral therapy-informed psychotherapy (CBT-ip) for patients with psychogenic nonepileptic seizures.
- Implementation of a novel group intervention program for all veterans (regardless of etiology) admitted to the MEDVAMC EMU, with first group session starting on day one of admission. Topics include education related to causes of seizures, assistance in identifying precipitating risk factors, frameworks for modifying behaviors related to risk factors.
- Implementation of a novel, brief outpatient group psychotherapy (3 weekly sessions) for patient with identified psychogenic non-epileptic events who live locally.
- Piloting treatment via VA Tele-Seizure Program (Dr. LaFrance) for patients with pharmaco-resistant epilepsy -- Two patients with epilepsy enrolled in FY-15.
- Implementation of new Support Group Program for patients with epilepsy. A separate Seizure Support Group Program is exclusively dedicated to patients with psychogenic nonepileptic seizures.
- Establishment of an ACGME-accredited Epilepsy Fellowship position, and in turn the expansion inpatient epilepsy consult services as well as the addition of one extra outpatient (half-day) epilepsy clinic.
- Petitioned to MEDVAMC P&T Committee for availability of IV Vimpat and IV Levetiracetam for VA inpatient use.
- Enhanced educational partnership with the VA Sleep Center, with neurophysiology fellows rotating through polysomnography interpretation sessions, while sleep fellows rotate through EEG interpretation sessions.
- Establishment of a Seizure specific E-consult.

- Establishment of Epilepsy IFC consult within VISN 16

Future Initiatives / FY16 Goals:

- Recruit and hire SW Regional Administrative Officer
- Seek ABRET EEG laboratory certification.
- Purchase equipment
 - Dedicated reading station for the Epilepsy Fellow
 - Laptop Computer for Neuropsychological Testing
- Increase TeleHealth Epilepsy clinic enrollment in current CBOC's.
- Expand referrals to VA Tele-Seizure Program (Dr. LaFrance).
- Expand current MEDVAMC formulary of anti-epileptic drugs.
- Implement new IMED consent form for EMU patients.
- Improve speed of VA remote EEG reading capability.
- Establishment of Epilepsy IFC consults for all facilities within Houston ECoE area of responsibility.
- Enhance relationships with Consortium sites.
- Improve work-space of Epilepsy and Neurophysiology Fellows.
- Cross train EEG technologists to perform intra-operative electrocorticography (EcoG).
- Expand quantify of epilepsy surgeries and VNS implantations performed within Houston ECoE.

Publications / Manuscripts / Chapters:

Books:

- **Zulfi Haneef** and Atul Maheshwari (eds): **A Concise Manual of Epilepsy. 2015.** Neurogroups publishers, Boston, MA, USA. ISBN-10: 1499563477.

Chapters:

- **Chen DK**, LaFrance Jr WC. Nonepileptic attacks. In eds. Schomer DL, Lopes da Silva F. Niedermeyer's encephalography, 7th edition, Lippincott Williams and Wilkins; Philadelphia. *Submitted 7/2015*
- **Chen DK**, LaFrance Jr WC. Neuropsychiatric aspects of epilepsy. In eds. Yudofsky SC, Hales RE, Arciniegas, DB. Textbook of Neuropsychiatry and Behavioral Neuroscience, 6th edition, The American Psychiatric Publishing, 2016. *In press.*
- **Zulfi Haneef** and Atul Maheshwari. "Seizures and Epilepsy" in Neurology Secrets, Sixth Edition. Eli Mizrahi and Joseph Kass, editors. Mosby publishers.
- **Yoshor D**, and Beauchamp MS: Studies of Human Visual Perception Using Cortical Electrical Stimulation, in Gazzaniga M (ed.) The Cognitive Neurosciences V, 2014

Publications:

- **Chen DK**, LaFrance WC Jr. Nonepileptic seizures: Diagnosis and Treatment. Continuum (Minneapolis Minn). Submitted, 4/2015.
- Nunez-Wallace KR, Murphey DK, Proto D, Collins RL, Franks R, Chachere DM, **Chen DK**. Health resource utilization among US veterans with psychogenic nonepileptic seizures: A comparison before and after video-EEG monitoring. *Epilepsy Res.* 2015;114:114-121.
- Chu J, Majmudar S, **Chen DK**. Cardiac asystole associated with seizures of right hemispheric onset. *Epilepsy Behav Case Rep.* 2014;2:127-129.
- Kougiyas, P., **Collins, R. L.** Pastorek, N., Sharath, S., Barshes, N., McCulloch, K., Lowery, B., Psiimisis, G., & Berger, D. (accepted, March 2015). Comparison of domain-specific cognitive function after carotid endarterectomy and stenting. *Journal of Vascular Surgery.*
- Robinson, J., **Collins, R.**, & Mukhi, S. (accepted, October 2014). Alexia without Agraphia in a Right-handed Individual Following Right Occipital Stroke. *Applied Neuropsychology.*
- Ng JR, Antic NA, **Haneef Z**, Aiyappan V. A patient with daytime fatigue and an abnormal EEG on polysomnogram. *Annals of the American Thoracic Society* 2015. *(accepted)*
- Robles L, Chiang S, **Haneef Z**. "Review of systems" questionnaire as a predictive tool for psychogenic non-epileptic seizures. *Epilepsy and Behavior* 2015.
- **Haneef Z**, Chiang SC, Yeh HJ, Engel J Jr., Stern JM. Brain network changes correlate with duration of left temporal lobe epilepsy. *Epilepsy and Behavior* 2015 *(in press)*.
- **Haneef Z**, Levin HS, Chiang S. Brain graph topology changes associated with anti-epileptic drug use. *Brain Connectivity* 2015
- Moseley B, Dewar S, **Haneef Z**, Stern JM. How long is long enough? The utility of prolonged inpatient video EEG monitoring. *Epilepsy Research* 2015. PMID: 25524837

- Chiang SC, Stern JM, Engel J Jr., Levin HS, **Haneef Z**. Differences in graph theory functional connectivity in left and right temporal lobe epilepsy. *Epilepsy Research* 2014. PMID: 25445238
- **Haneef Z** and Chiang SC. Clinical correlates of graph theory findings in temporal lobe epilepsy. *Seizure* 2014. PMID 25127370.
- Chiang SC, Levin HS, **Haneef Z**. Computer-Automated Focus Lateralization of Temporal Lobe Epilepsy using fMRI. *Journal of Magnetic Resonance Imaging* 2015. PMID: 25044773
- Vedantam A, **Yoshor D**, and Foroozan R; Visual Recovery After Surgical Decompression of an Occipital Intraventricular Cyst; *J Neuroophthalmol.* 2014;34(3):255-6

Abstracts / Posters / Presentations:

- Majmudar, Franks R, **Chen DK**. Correlation of pre-diagnosis illness perception and clinical outcome in patients with psychogenic nonepileptic seizures. Poster presented at the 68th American Epilepsy Society meeting in Seattle, WA, USA (December 2014). [poster 1.089]
- **Collins, R.**, Pacheco, V., Miller, B., Robinson, J. (2015). The Relation between the WMT and CVLT-2 in a Sample of Patients Evaluated for Dementia. Abstract presented at the 43rd Annual Meeting of the International Neuropsychological Society, Denver, February 4-7.
- Robinson, J., Miller, B., Pacheco, V., **Collins, R.** (2015). Examination of the Severe Impairment Profile in Dementia Evaluations. Abstract presented at the 43rd Annual Meeting of the International Neuropsychological Society, Denver, February 4-7.
- Miller, B., Robinson, J., **Collins, R.**, Pacheco, V. (2015). Added Value of Neuropsychological Assessment to the Clinical Dementia Rating Scale in Assessing Mild Cognitive Impairment. Abstract presented at the 43rd Annual Meeting of the International Neuropsychological Society, Denver, February 4-7.
- Stinson, J., Robinson, J., Grayban, J., V., **Collins, R.** (2015). Factor Analysis of the Percieved Competency Rating Scale in a Sample of Patients Admitted for Epilepsy Monitoring. Abstract presented at the 43rd Annual Meeting of the International Neuropsychological Society, Denver, February 4-7.
- Kougias, P., Pastorek, N., **Collins, R.**, McCoy, S., Lowery, B., Mukhi, S., Bechara, C., Barshes, N., Pisimisis, G., McCulloch, K., Berger, D. (2014). A randomized controlled trial of cognitive function after carotid endarterectomy and stenting. Paper presented to the late breaking clinical trial session of the Vascular Annual Meeting, San Francisco.
- **Haneef Z**: Computer-Automated Focus Lateralization of Temporal Lobe Epilepsy using fMRI. Annual Meeting of the American Epilepsy Society, December 5-9, 2014 in Seattle, Washington.
- **Haneef Z**: Brain graph theory topology changes associated with anti-epileptic drug use. Annual Meeting of the American Epilepsy Society, December 5-9, 2014 in Seattle, Washington.
- Blum D, **Van Ness P**, Krauss G, Chung S, Elger C, Galimberti CA, et al. Hepatic safety of eslicarbazepine acetate: Summary of five Phase II and three Phase III adjunctive trials. American Epilepsy Society (AES) 68th Annual Meeting in Seattle, Wash. (Dec. 5-9, 2014)
- Culver C, Konikkara J, Howe-Martin L, **Van Ness P**, Agostini M, Hays R, et al. Impact of psychogenic non-epileptic seizure (PNES) diagnosis on acute care resource utilization, role for psychiatric consultation, and follow-up within a Dallas county hospital system. American Epilepsy Society (AES) 68th Annual Meeting in Seattle, Wash. (Dec. 5-9, 2014)
- Ding K, Agostini M, Gupta P, Hays R, **Van Ness P**, Modur P Rhythmic ictal nonclonic extremity movements in temporal lobe epilepsy: A reappraisal. American Epilepsy Society (AES) 68th Annual Meeting in Seattle, Wash. (Dec. 5-9, 2014)
- Dubey D, Hays R, Gupta P, Ding K, Agostini M, **Van Ness P**, et al. Autoimmune epilepsy: Clinical features, management and outcomes. American Epilepsy Society (AES) 68th Annual Meeting in Seattle, Wash. (Dec. 5-9, 2014)
- Konikkara J, Pacheco J, **Van Ness P**, Agostini M, Hays R, Howe-Martin L, et al. Unique characteristics of patients with comorbid epileptic and psychogenic nonepileptic seizures. American Epilepsy Society (AES) 68th Annual Meeting in Seattle, Wash. (Dec. 5-9, 2014)
- Rutecki P, Herekar A, **Van Ness P**, Bergey G, Bazil C, King-Stephens D, et al. Responsive neurostimulation in patients with periventricular nodular heterotopia (PNH). American Epilepsy Society (AES) 68th Annual Meeting in Seattle, Wash. (Dec. 5-9, 2014)

Research:

<i>Principal Investigators</i>	<i>Grant/Study Title</i>	<i>Project Start Date</i>	<i>Project End Date</i>	<i>Name of Funding Source</i>
Haneef, Zulfi	"Connectome based integration of fcMRI and DTI to define epileptogenic zones	06/2014	06/2015	Computational and Integrative Biomedical Research Center (CIBR) Seed Grant Awards from Baylor College of Medicine.
Haneef, Zulfi	"Patterns of Network Connectivity in Temporal Lobe Epilepsy"	06/2014	06/2015	Baylor College of Medicine Junior Faculty Seed Funding Program Grant
Haneef, Zulfi	"Lateralization of TLE using fcMRI and DTI"	01/2012	12/2015	Epilepsy Foundation of America Grant (Research Grants Program
Yoshor, Daniel	"Multisensory Processing of Human Speech Measured with msec and mm Resolution"	10/01/2014	09/30/2017	VA Merit Review Award
Yoshor, Daniel	"Visual Form Perception Produced by Electrically Stimulating Human Visual Cortex" c NIH R01EY023336	09/01/2013	08/31/2017	National Eye Institute National Institutes of Health

Fellowships:

The Michael E. DeBakey VA Medical Center (MEDVAMC) supports 2 FTE for the Clinical Neurophysiology & Epilepsy Fellowship programs. The fellows rotate at the MEDVAMC approximately 1/3 of their fellowship.

<i>Name</i>	<i>Fellowship</i>	<i>VA FTE</i>	<i>Start Date</i>	<i>End Date</i>
Murphey, Dona	Clinical Neurophysiology	0.33	July 1, 2014	June 30, 2015
Ram, Aarthi	Clinical Neurophysiology	0.33	July 1, 2014	June 30, 2015
Robles, Liliana	Clinical Neurophysiology	0.33	July 1, 2014	June 30, 2015
Hina Dave	Epilepsy	0.33	July 1, 2015	June 30, 2016
Chutima Saipetch	Epilepsy	0.33	July 1, 2015	June 30, 2016
Sikawat Thanaviratananich	Clinical Neurophysiology	0.33	July 1, 2015	June 30, 2016
Holly Rutherford	Clinical Neurophysiology	0.33	July 1, 2015	June 30, 2016

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FY15 Accomplishments:

- Recruited 2 epilepsy fellowship trained full-time VA staff neurologists.
- Neuropsychology ECoE providers initiated a psychoeducation group for patients diagnosed with psychogenic non-epileptic seizures. This now includes patient being referred to the group by ECoE providers and the group being conducted within the neuropsychology outpatient clinic.
- Establishment of an ACGME-accredited Epilepsy Fellowship position with 0.33 FTE funding from VA, and sizing of the ACGME-accredited Clinical Neurophysiology Fellowship to 0.67 FTE funding from VA. Fellows participate in two half-day ECoE clinics.
- Availability of all intravenous anticonvulsants in the formulary.
- Started to offer 24-hour ambulatory EEG studies with 2 machines.
- Started to offer continuous inpatient video-EEG monitoring in ICUs and Intermediate Care unit with routine observation by nursing and twice-daily EEG technologist check-ups.

Future Initiatives / FY16 Goals:

- Recruit and hire Nurse Practitioner for Epilepsy to fill the ECoE Program Coordinator position with matching hospital funds.
- Recruit and hire our second EEG Technologist, replacing a recent retirement after more than 30 years of service.
- Obtain approvals and policy procedures for operation of our Epilepsy Monitoring Unit (EMU).
- Implement outside video-EEG review using a secured Citrix-based utility in the CAG access.
- Implement new IMED consent form for EMU patients.
- Obtain approvals for hiring 2 additional EEG Technologists for opening our EMU.
- Improve work-space of Epilepsy and Neurophysiology Fellows.
- Obtain REEGT certification by our lead EEG technologist.
- Expand quantify of epilepsy surgeries and VNS implantations performed within the San Antonio ECoE.
- Develop a procedure for brief baseline neuropsychological assessment for all patients who are new to the clinic or newly diagnosed with epilepsy. This will help to track cognitive effects of medications and cognitive decline related to epilepsy, aging, and/or other neurodegenerative disorders.
- Conduct process improvement evaluation to determine the effectiveness of the non-epileptic psychoeducational group in terms of reducing number of episodes/attacks, reducing number of emergency room visits, and increasing engagement in mental healthcare.

Publications / Manuscripts / Chapters:

- Barron DS, Fox PT, Pardoe H, Lancaster J, Price LR, Blackmon K, Berry K, **Cavazos JE**, Kuzniecky R, Devinsky O, Thesen T. Thalamic functional connectivity predicts seizure laterality in individual TLE patients: application of a biomarker development strategy. *Neuroimage Clin.* 2015 7:273-80. eCollection 2015. PMID: 25610790
- Wang Z, Li X, Powers A, **Cavazos JE**. Outcomes associated with switching from monotherapy to adjunctive therapy for patients with partial onset seizures. *Expert Rev Pharmacoecon Outcomes Res.* 2015 Apr; 15(2):349-55. PMID: 25474187
- Lie OV, Papanastassiou AM, **Cavazos JE**, Szabó CÁ. Influence of intracranial electrode density and spatial configuration on interictal spike localization: a case study. *J Clin Neurophysiol.* 2015 Jan 9. [Epub ahead of print] PMID: 25580803
- Jaramillo CA, Cooper DB, Wang CP, Tate DF, Eapen BC, York GE, **Pugh MJ**. Subgroups of US IRAQ and Afghanistan veterans: associations with traumatic brain injury and mental health conditions. **Brain Imaging Behav.** 2015 Sep; 9(3):445-55. PMID: 25963862
- Rohde NN, Baca CB, Van Cott AC, Parko KL, Amuan ME, **Pugh MJ**. Antiepileptic drug prescribing patterns in Iraq and Afghanistan war veterans with epilepsy. *Epilepsy Behav.* 2015 May; 46:133-9. Epub 2015 Apr 21. PMID: 25911209
- Bollinger MJ, Schmidt S, Pugh JA, Parsons HM, Copeland LA, **Pugh MJ**. Erosion of the healthy soldier effect in veterans of US military service in Iraq and Afghanistan. *Popul Health Metr.* 2015 Mar 18;13:8. PMID: 25798075
- Hanchate AD, Ash AS, Borzecki A, Abdulkarim H, Stolzmann KL, Rosen AK, Fink AS, **Pugh MJ**, Shokeen P, Shwartz M. How pooling fragmented healthcare encounter data affects hospital profiling. *Am J Manag Care.* 2015 Feb; 21(2):129-38. PMID: 25880362
- Pugh MJ**, Parko K. Research using archival health care data: Let the buyer beware. *Epilepsia.* 2015 Feb; 56(2):321-2. PMID: 25708477
- Finley EP, Bollinger M, Noël PH, Amuan ME, Copeland LA, Pugh JA, Dassori A, Palmer R, Bryan C, **Pugh MJ**. A national cohort study of the association between the polytrauma clinical triad and suicide-related behavior among US Veterans who served in Iraq and Afghanistan. *Am J Public Health.* 2015 Feb; 105(2):380-7. PMID: 25033126
- Pugh MJ**, Orman JA, Jaramillo CA, Salinsky MC, Eapen BC, Towne AR, Amuan ME, Roman G, McNamee SD, Kent TA, McMillan KK, Hamid H, Grafman JH. The prevalence of epilepsy and association with traumatic brain injury in veterans of the Afghanistan and Iraq wars. *J Head Trauma Rehabil.* 2015 Jan-Feb; 30(1):29-37. PMID: 24695268
- Hanlon JT, Aspinall SL, Handler SM, Gellad WF, Stone RA, Semla TP, **Pugh MJ**, Dysken MW. Potentially suboptimal prescribing for older veteran nursing home patients with dementia. *Ann Pharmacother.* 2015 Jan; 49(1):20-8. PMID: 25380592
- Lilly SM, Mortensen EM, Frei CR, **Pugh MJ**, Mansi IA. Comparison of the risk of psychological and cognitive disorders between persistent and nonpersistent statin users. *Am J Cardiol.* 2014 Oct 1; 114(7):1035-9. PMID: 25212545

Research:

- Novel Strategies Targeting Signaling Molecules of Neurons and Astrocytes to Prevent Acquired Epilepsies. DOD-CDMRP Protocol #: 15089x – 11/01/15 – 10/31/18
- A Retrospective, Prospective Study of How AEDs Impact Bone Health in Men – IRB #: HSC200770472H – Study part of San Antonio VA Epilepsy Center of Excellence (ECoE) – VA Project # 009
- Effects of CYP450-Inducing AEDs on Cholesterol Levels in Patients on Statin Therapy for Hyperlipidemia – IRB #: HSC20080277E – Study part of San Antonio VA Epilepsy Center of Excellence (ECoE) – VA Project # 010
- Efficacy of Certain Dual Therapy Combinations of Anti-Epileptic Drugs (AEDs) in patients with Epilepsy – IRB # HSC20080301H – Study part of San Antonio VA Epilepsy Center of Excellence (ECoE) – VA Project # 011.

Fellowships:

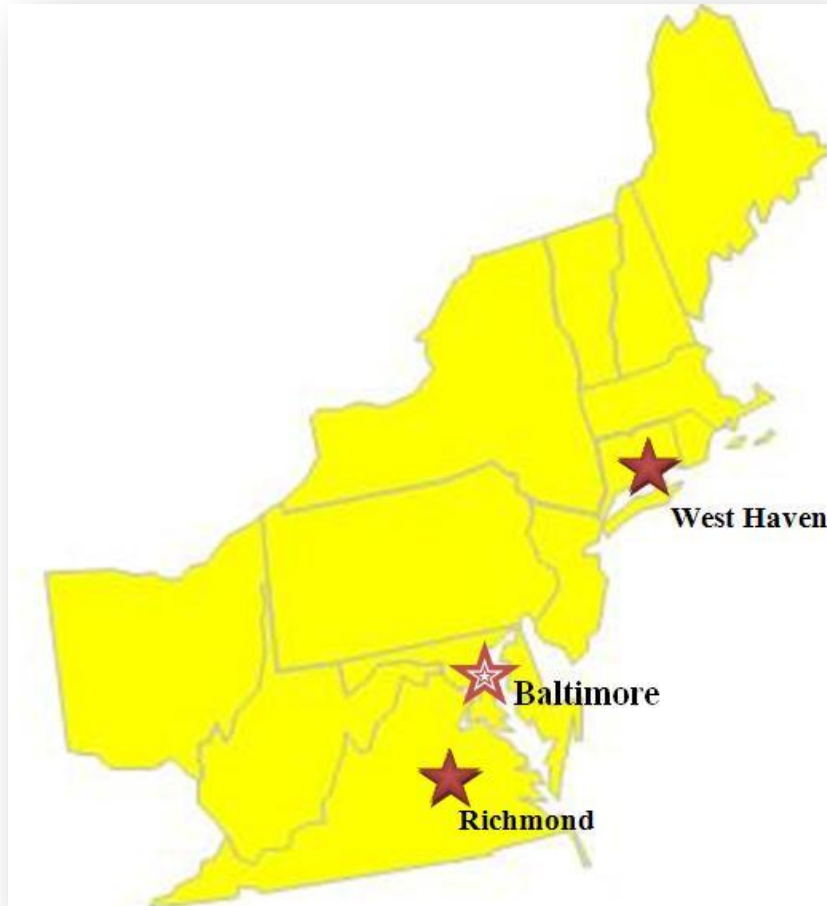
The Audie L. Murphy VA Medical Center (ALM VAMC) supports 1 FTE for the Clinical Neurophysiology & Epilepsy Fellowship programs. The fellows rotate at the ALM VAMC approximately 1/3 of their fellowship.

<i>Name</i>	<i>Fellowship</i>	<i>VA FTE</i>	<i>Start Date</i>	<i>End Date</i>
Alick-Ortiz, Sasha	Clinical Neurophysiology	0.33	July 1, 2014	June 30, 2015
Koneru, Sreekanth	Clinical Neurophysiology	0.33	July 1, 2014	June 30, 2015
Shams, Tanzid	Clinical Neurophysiology	0.33	September 1, 2014	August 30, 2015
Alick-Ortiz, Sasha	Epilepsy	0.33	July 1, 2015	June 30, 2016

Katragadda, Somya	Clinical Neurophysiology	0.33	July 1, 2015	June 30, 2016
Porto, Mariano	Clinical Neurophysiology	0.33	July 1, 2015	June 30, 2016

NORTHEAST REGION

Allan Krumholz, MD, Northeast ECoE Regional Director
R. Andrew David, MS, MHSA Northeast ECoE Regional Administrative Director



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FY15 Accomplishments:

- Worked with local Mental Health mentoring and providing training opportunities to neuropsychology fellows
- Completed and closed out Epilepsy Home Automated Telemanagement (E-HAT) study
- Established Interfacility Consult with DCVAMC
- Established EMU referral relationship with Lebanon (PA) VAMC
- Held virtual Northeast Advisory Board meeting in December 2014
- Established remote video EEG access for our Epilepsy Monitoring Unit
- Co-sponsored Epilepsy Symposium with the Epilepsy Foundation or the Chesapeake Region: Treating the Whole Person in Epilepsy Care.

Future Initiatives:

- Increase EMU referrals
- Expand EMU
- Increase telehealth volumes
- Expand e-consults
- Relocate EEG Laboratory

Publications / Manuscripts / Chapters:

- Krumholz A, Wiebe S, Gronseth GS, Gloss DS, Sanchez AM, Arif A. Kabir, MD, Liferidge, AT, Martello JP, Kanner AM, Shinnar S, Hopp JL, French JA. Evidenced-based guideline: Management of an unprovoked seizure in adults: Report of the Guideline Development Subcommittee of the American Academy of Neurology and the American Epilepsy Society. Neurology 2015;84:1705-1713
- Cohen M, Testa M, Pritchard J, Zhu, J, Hopp JL. Overlap between dissociation and other psychological characteristics in patients with psychogenic nonepileptic seizures. Epilepsy and Behavior, 2014 Mar 25;34C:47-49

- Ting TY, Jiang W, Lionberger R, Wong J, Jones JW³, Kane MA, Krumholz A, Temple R, Polli JE. Generic lamotrigine versus brand-name Lamictal bioequivalence in patients with epilepsy: A field test of the FDA bioequivalence standard. *Epilepsia*. 2015 Jul 23. doi: 10.1111/epi.13095.
- Sanchez A and Krumholz A. Accidents in Epilepsy. In John W. Miller and Howard Goodkin Eds. *Epilepsy (Neurology in Practice Series)*. John Wiley & Sons, Ltd, West Sussex. United Kingdom. 2014 Chapter 34;248-252
- Wechsler R, Hauser RA, French J and Krumholz A as part of the Clinical Investigator Collaborative. Who is helping whom? Manuscript support and transfer of value. *Annals of Neurology* 2015;77:353-355.
- Yang S, Emiliani V, Tang C-M. The kinetics of multibranch integration of the dendritic arbor of CA1 pyramidal neurons. *Frontiers in Cellular Neuroscience*, 8 (127): doi: 10.3389/fncel.2014.00127, 2014
- Pritchard, JM & Hopp, JL. Clinical Review: Psychogenic Nonepileptic Seizures. *Journal of Clinical Outcomes Management*. 2014 June; Vol 20, No. 6: 271-9.



Abstracts / Posters / Presentations:

- Kabir A, Bedra M, Cooper L, Krumholz A, Finkelstein J. Acceptance of a telemanagement system to support epilepsy self-care. *Neurology* (P3.204) Presented at the American Academy of Neurology. Washington DC 2015
- Tricia T, Jiang W, Wong J, Jones J, Krumholz A, Kane M,¹ Polli J (S31.003) Generic versus brand-name lamotrigine bioequivalence in generic-sensitive epilepsy patients: a field test of the public bioequivalence standard. *Neurology* (S31.003). Presented at a Platform session at the American Academy of Neurology. Washington DC 2015
- Krumholz A, Georgsson H, Sanchez, Kabir A. Nocturnal frontal lobe epilepsy: preliminary experience with lacosamide as a novel agent for treatment. Presented at Sleep 2015 the annual meeting of the American Academy of Sleep Medicine. Seattle Washington 2015
- Arif Kabir, University of Maryland Grand Rounds: Marijuana and Epilepsy
- Epilepsy Symposium with the Epilepsy Foundation or the Chesapeake Region: Treating the Whole Person in Epilepsy Care. ECoE Presenters: Lanai Copper RN; Arif Kabir MD; Allan Krumholz MD

Research:

<i>Principle Investigators</i>	<i>Grant/Study Title</i>	<i>Project Start Date</i>	<i>Project End Date</i>	<i>Name of Funding Source</i>
Kabir, Arif	Epilepsy Home Automated Telemanagement (E-HAT)	05/2013	10/2016	Multiple Sclerosis Center of Excellence East
Krauss, Gregory (A. Krumholz, J. Hopp Co-investigators)	Identifying risk factors for motor vehicle crashes in patients with seizures	07/2009	07/2016	Rosen Family Foundation
Pritchard, Jennifer (site PI)	Critical Care EEG Monitoring Research Consortium	07/2014		American Epilepsy Society Infrastructure Award
Tang, Cha-Min	Study of NMDA receptor mediated feed forward memory	10/2013	10/2017	VA BLR&D Merit Review

Fellowships:

<i>Name</i>	<i>Fellowship</i>	<i>ACGME</i>	<i>VA FTE</i>	<i>Start Date</i>	<i>End Date</i>
Joseph Brown, MD	Clinical Neurophysiology	No	0.0	July 1, 2013	June 30, 2015
Channiaiah Mysore, MD	Clinical Neurophysiology	No	0.0	July 1, 2014	June 30, 2015

Hlynur Georgsson, MD	Clinical Neurophysiology	No	0.0	July 1, 2014	June 30, 2015
David Miller, MD	Clinical Neurophysiology	No	0.0	July 1, 2015	June 30, 2016
Chalita Atallah, MD	Clinical Neurophysiology	No	0.0	July 1, 2015	June 30, 2016
Christopher Laohathai, MD	Polytrauma/ TBI	No	1.0	September 1, 2015	August 31, 2016

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FY15 Accomplishments:

- Increased referrals and expanded CVT program
- Neuro-volumetric studies continuing
- Educational programs- Hans Berger and Epilepsy Awareness Day
- Initiate national SCAN-ECHO Neuro provider education
- Established local ECoE website
- Hiring dedicated EMU tech
- Continued clinical and research collaboration with the Richmond Polytrauma Program

Future Initiatives

- Clinical Neurophysiology and Clinical Polytrauma/Epilepsy Fellowships
- Expand CVT patient sites with store and forward capabilities
- Collaborate with VCU dense array providers
- Initiate a support group
- Organize Neuroradiology joint projects

Publications / Manuscripts / Chapters:

- Pugh MJ, Orman JA, Jaramillo CA, Salinsky MC, Eapen BC, Towne AR, Amuan ME, McNamee SD, Kent TA, McMillan KK, Hamid H, Roman GC, Grafman JH. The Prevalence of Epilepsy and Association with Traumatic Brain Injury in Veterans of the Afghanistan and Iraq Wars. *Journal of Head Trauma Rehabilitation*. 30 (1): 29-37, January/February 2015.
- Waterhouse, Elizabeth; Section Editor (Epilepsy), *Current Treatment Options in Neurology*, Volume 16, 2015.
- Fountain NB, Williams K, Liow K, Laccheo I. Epilepsy, Smart Medicine Module, American College of Physicians 2015.
- Laccheo I, Sonmezturk H, Bhatt AB, et al. Non-convulsive status epileptics and Non-convulsive seizures in Neurological ICU Patients. *Neurocritical Care* 2015 Apr;22(2):202-211.
- Waterhouse, EJ. Ictal Cognitive Impairments Due to Non-convulsive Status Epilepticus. In: Epilepsy and the Inter-Ictal State: Comorbidities and Quality of Life in Epilepsy. St. Louis EK, Ficker DM, O'Briend TJ (Eds). Wiley Blackwell, 2015

Abstracts / Posters / Presentations:

- Epilepsy Awareness Day: ECoE sponsored March 26, 2015

- Hodges, H & Browning, K. "Epilepsy" Critical Care Nursing Courses, Richmond, VA
- Towne, A. "Epilepsy and TBI: Myths and Reality." 43rd Annual Hans Berger Clinical Neurophysiologic Symposium presentation. Richmond, VA May 2015
- Madson, C. "Neuroprotective Measures in the Operating Room." 43rd Annual Hans Berger Clinical Neurophysiologic Symposium presentation. Richmond, VA May 2015
- Towne, A. "Headache Diagnosis and Management." National Specialty Care Access and Network
- Towne, A. "Epilepsy and Traumatic Brain Injury, Polytrauma Grand Rounds, McGuire VHA, Richmond, VA
- Towne, A. "Neurological Sequelae of Traumatic Brain Injury in OEF/OIF Veterans, SCI Grand Rounds, McGuire VHA, Richmond, VA
- Towne, A. "Post-traumatic Epilepsy, PM&R Grand Rounds, VCU, Richmond, VA
- Waterhouse, E. "Name that Pattern." 43rd Annual Hans Berger Clinical Neurophysiologic Symposium presentation. Richmond, VA May 2015
- Waterhouse, E. EEG Review for the RITE Exam, Presentation for Neurology House Staff, Department of Neurology, VCU Medical Center, Richmond VA

Research:

<i>Principle Investigators</i>	<i>Grant/Study Title</i>	<i>Project Start Date</i>	<i>Project End Date</i>	<i>Name of Funding Source</i>
Towne, Alan R	Chronic Effects of Neurotrauma Consortium (CENC) Award. Study 1. Longitudinal case-controlled cohort study of OEF-OIF Veterans to evaluate for the late effects of combat-related mTBI.	10/01/14	10/01/19	DOD
Towne, Alan R	Quality of Life and Seizure Severity Outcomes in Traumatic Brain Injury and Posttraumatic Epilepsy Treatment with VNS Therapy	09/01/15	09/30/17	Cyberonics

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FY15 Accomplishments:

- Started to admit patients in new fixed Video EEG inpatient unit
- Expanded tele-seizure clinic, which is now staffed by
- Expanded outpatient seizure service but adding seizure clinics staffed by Dr. Qurashi and Ms. Bottomley
- Increased the number of referring sites from outside our facility

Future Initiatives:

- Pilot UPLIFT program for Veterans with depression
- Conduct system redesign project to improve outreach to outside facilities



Publications / Manuscripts / Chapters:

- LaFrance CW & Hamid H. Psychogenic Nonepileptic Seizures in Wyllie's Treatment of Epilepsy: Principles and Practice. Ed. Elaine Wyllie. Philadelphia:Wolters Kluwer 2015

Abstracts / Posters / Presentations:

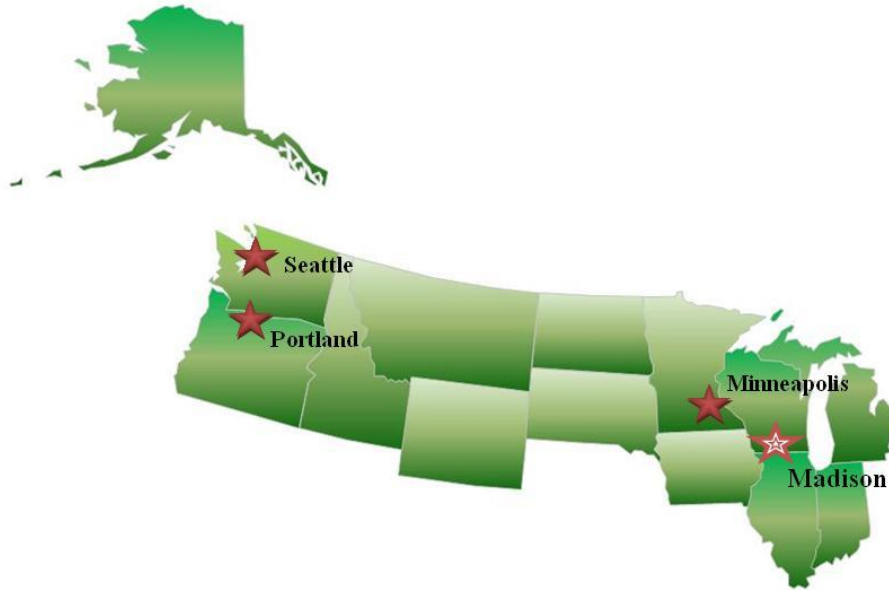
- VA HSRD 2015 National Meeting

Research:

Principle Investigators	Grant/Study Title	Project Start Date	Project End Date	Name of Funding Source
Altalib, Hamada	VHA VISN-1 CDA/ Psychogenic Nonepileptic Seizures in the VA Healthcare System	07/01/2014	06/30/2016	VA

NORTHWEST REGION

Paul Rutecki, MD, Northwest ECoE Regional Director
VACANT, Northwest ECoE Regional Administrative Officer



FY15 Accomplishments:

- Established telemental health and CBT training
- Continued to grow telehealth clinics and services
- Began SCAN-ECHO monthly meetings
- Piloted mental health provider presence in Epilepsy clinics.
- Participated in Anita Kaufmann Foundation Purple Day Walk for Epilepsy and Brain Games
- In-service training on "Safety in the Epilepsy Monitoring Unit" provided to nursing staff

Fututre Initiatives:

- Develop home teleheath visits for epilepsy patients
- Increase telemental health services
- Enroll epilepsy patients in the 1 million veteran program
- Establish mental health presence in outpatient epilepsy clinics
- Increase e-consultations and care coordination with consortium sites
- Fill vacant positions

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Vacant	Psychiatrist		608.256.1901 x17728	0.125

FY15 Accomplishments:

- Implemented telemental health to provide CBT for epilepsy and PNES
- Funding for Dr. Kotloski's research career development award approved
- Participation in regional SCAN-ECHO presentations
- VA ECoE Table at Mall of America in Minneapolis for Purple Day (March 26, 2015). Ryan, Amy, Ronda, Dr. Holloway – Cassidy Meghan (Founder of Purple Day)
- 2015 ASET presentation - combined effort of Amy Childers, Ronda Tschumper and Rosario Carballo (Miami VA).
- Established ability for remote log on to review EEG data



Future Initiatives:

- Grow telemental health service
- Re-establish psychiatry presence in epilepsy clinic
- Enroll epilepsy patients in the 1 million veteran program
- Develop home telehealth visits for epilepsy patients
- Develop performance improvement measures in epilepsy clinic

Publications / Manuscripts / Chapters:

- Kerstenetzky L, **Gidal B**. Pediatric seizures and vaccines. J Am Pharm Assoc (2003). 2015 Jul 1;55(4):457-60. doi: 10.1331/JAPhA.2015.15522.
- PMID: 26161490
- Gefroh-Grimes HA, **Gidal BE**. Antiepileptic drugs in patients with malignant brain tumor: beyond seizures and pharmacokinetics. Acta Neurol Scand. 2015 May 21. doi: 10.1111/ane.12437.PMID: 25996875
- **Gidal BE**, Laurenza A, Hussein Z, Yang H, Fain R, Edelstein J, Kumar D, Ferry J.

- Perampanel efficacy and tolerability with enzyme-inducing AEDs in patients with epilepsy. *Neurology*. 2015 May 12;84(19):1972-80. doi: 10.1212/WNL.0000000000001558. PMID: 25878177
- Welty TE, Luebke A, **Gidal BE**. Cannabidiol: promise and pitfalls. *Epilepsy Curr*. 2014 Sep;14(5):250-2. doi: 10.5698/1535-7597-14.5.250.
- Privitera M, Welty T, **Gidal B**, Carlson C, Pollard J, Berg M. How Do Clinicians Adjust Lamotrigine Doses and Use Lamotrigine Blood Levels?-A Q-PULSE Survey. *Epilepsy Curr*. 2014 Jul;14(4):218-23. doi: 10.5698/1535-7597-14.4.218.
- **Gidal BE** P-glycoprotein Expression and Pharmacoresistant Epilepsy: Cause or Consequence? *Epilepsy Curr*. 2014 May;14(3):136-8. doi: 10.5698/1535-7597-14.3.136.
- **Gidal BE**, Majid O, Ferry J, Hussein Z, Yang H, Zhu J, Fain R, Laurenza A. The practical impact of altered dosing on perampanel plasma concentrations: pharmacokinetic modeling from clinical studies. *Epilepsy Behav*. 2014 Jun;35:6-12. doi: 10.1016/j.yebeh.2014.03.013. Epub 2014 Apr 27.
- Fine PG, Bradshaw DH, Cohen MJ, Connor SR, Donaldson G, Gharibo C, **Gidal BE**, Muir JC, Tselentis HN. Evaluation of the performance improvement CME paradigm for pain management in the long-term care setting. *Pain Med*. 2014 Mar;15(3):403-9. doi: 10.1111/pme.12339. PMID: 24423103
- Stapleton-Kotloski JR, **Kotloski RJ**, Boggs JA, Popli G, O'Donovan CA, Couture DE, Cornell C, Godwin DW. Localization of interictal epileptiform activity using magnetoencephalography with synthetic aperture magnetometry in patients with a vagus nerve stimulator. *Front Neurol*. 2014 Nov 27;5:244. doi: 10.3389/fneur.2014.00244. eCollection 2014.
- **Kotloski RJ**, Sutula TP. Environmental enrichment: evidence for an unexpected therapeutic influence. *Exp Neurol*. 2015 Feb;264:121-6. doi: 10.1016/j.expneurol.2014.11.012. Epub 2014 Dec 4.
- Liu G, **Kotloski RJ**, McNamara JO. Antiseizure effects of TrkB kinase inhibition. *Epilepsia*. 2014 Aug;55(8):1264-73. doi: 10.1111/epi.12671. Epub 2014 Jun 5.
- Heck CN, King-Stephens D, Massey AD, Nair DR, Jobst BC, Barkley GL, Salanova V, Cole AJ, Smith MC, Gwinn RP, Skidmore C, Van Ness PC, Bergey GK, Park YD, Miller I, Geller E, **Rutecki PA**, Zimmerman R, Spencer DC, Goldman A, Edwards JC, Leiphart JW, Wharen RE, Fessler J, Fountain NB, Worrell GA, Gross RE, Eisenschenk S, Duckrow RB, Hirsch LJ, Bazil C, O'Donovan CA, Sun FT, Courtney TA, Seale CG, Morrell MJ. (2014) Two-year seizure reduction in adults with medically intractable partial onset epilepsy treated with responsive neurostimulation: Final results of the RNS System Pivotal trial. *Epilepsia*, 55(3):432–441, 2014.
- Pan, YZ and **Rutecki, PA**. (2014) Enhanced excitatory synaptic network activity following transient group I metabotropic glutamate activation. *Neuroscience*, 275:22-32. 275C:22-32. doi: 10.1016/j.neuroscience.2014.05.062.
- Bergey, G K, Morrell, M, Mizrahi, E, Goldman, A, King-Stephens, D, Nair, D, Srinivasan, S, Jobst, B, Gross, R E, Shields, D, Barkley, G, Salanova, V, Olejniczak, P, Cole, A, Cash, S, Noe, K, Wharen, R, Worrell, G, Murro, A, Edwards, J, Duchowny, M, Spencer, D, Smith, M, Geller, E, Gwinn, R, Skidmore, C, Eisenschenk, S, Berg, M, Heck, C, Van Ness, P, Fountain, N, **Rutecki, P**, Massey, A, O'Donovan, C, Labar, D, Duckrow, R, Hirsch, L, Courtney, T, Sun, F, Seale, C. (2015) Long-term treatment with responsive brain stimulation in adults with refractory partial seizures. *Neurology* 84:1-8.
- King-Stephens D, Mirro E, Weber PB, Laxer KD, Van Ness PC, Salanova V, Spencer DC, Heck CN, Goldman A, Jobst B, Shields DC, Bergey GK, Eisenschenk S, Worrell GA, Rossi MA, Gross RE, Cole AJ, Sperling MR, Nair DR, Gwinn RP, Park YD, **Rutecki PA**, Fountain NB, Wharen RE, Hirsch LJ, Miller IO, Barkley GL, Edwards JC, Geller EB, Berg MJ, Sadler TL, Sun FT, Morrell MJ. (2015) Lateralization of mesial temporal lobe epilepsy with chronic ambulatory electrocorticography. *Epilepsia*. 56(6):959-67. doi: 10.1111/epi.13010. Epub 2015 May 19. PMID: 2598884

Book chapters

- Kotloski, RJ and Gidal, BE "Antiepileptic drugs: Third generation and development."
- In Hussain, AM and Tran, TT (Eds.) Department of Veterans Affairs Epilepsy Manual, Epilepsy Centers of Excellence Department of Veterans Affairs, 166-76, 2014
- Tortorice, K and Rutecki, P. "Principles of Treatment" Department of Veterans Affairs Epilepsy Manual, Epilepsy Centers of Excellence Department of Veterans Affairs, 121-7, 2014.

Abstracts / Posters / Presentations:

- Ziad Hussein, **Barry Gidal**, Haichen Yang, Betsy Williams, Dinesh Kumar, Antonio Laurenza, Jim Ferry and Kimford Meador – Pharmacokinetic, pharmacodynamics and cognitive effects of adjunctive perampanel in adolescents with inadequately controlled partial-onset seizures, 2014 AES annual meeting
- Michel Berg, Francisco Diaz, P. Bolger, Barbara Dworetzky, E. Elder, **Barry Gidal**, W. Jiang, Ron Krebill, Nichol McBee, A LeBron Paige, John Pollard, Jerzy Szaflarski, Timothy Welty, David Ficker and Michael Privitera – Equivalence among generic AEDs (EQUIGEN)-single dose study, 2014 AES meeting

- Diane Smith, Michel Berg, Nancy Cohen, Nichelle Llewellyn, Meryl Lozano, Donna Schwieterman, Jeri Sieren, P. Bolger, Francisco Diaz, Barbara Dworetzky, E. Elder, **Barry Gidal**, W. Jiang, Ron Krebill, Nichol McBee, A LeBron Paige, John Pollard, Michael Privitera, Jerzy Szaflarski, Timothy Welty and David Ficker – Subject unrecognized medication adherence errors in the equivalence among generic AED chronic dose trial, 2014 AES meeting
- David Ficker, Michel Berg, P. Bolger, Francisco Diaz, Barbara Dworetzky, E. Elder, **Barry Gidal**, W. Jiang, Ron Krebill, Nichol McBee, A LeBron Paige, John Pollard, Michael Privitera, Jerzy Szaflarski and Timothy Welty – Patients reporting problems after generic antiepileptic drug switches are unlikely to participate in a generic bioequivalence trial. 2014 AES meeting
- **Barry Gidal**, Annie Clark and Bob Anders-Is half-life a clinically relevant measure for extended release drugs? Data comparing IR vs XR topiramate (USL255; Qudexy™ XR). 2014 AES meeting
- Michael Privitera, Francisco Diaz, Barbara Dworetzky, Patrick Bolger, Ron Krebill, **Barry Gidal**, Ed Elder, A LeBron Paige, Jerzy Szaflarski, Timothy Welty, John Pollard, Wenlei Jiang, Nichol McBee and Michel Berg – Bioequivalence testing of disparate generic lamotrigine products using chronic dosing in people with epilepsy: The EQUIGEN study. 2014 AES meeting
- **Robert Kotloski**, Gumei Liu and James McNamara: Antiseizure effects of TrkB kinase inhibition. 2014 AES annual meeting
- **Dr. Rutecki** Chaired Nanosymposium Epilepsy: Circuits, Mechanisms, and Potential Therapies.at Society for Neuroscience 2014 meeting
- Pan, YZ, Sutula, T, **Rutecki, PA**: Evidence for use-dependent and presynaptic actions of 2DG on abnormal synaptic network activity in the CA3 region of the hippocampus, presented at 2014 Society for Neuroscience
- **Paul Rutecki**, Aamr Herekar, Paul Van Ness, Gregory Bergey, Carl Bazil, David King-Stephens, Felice Sun, Ritu Kapur and Martha Morrell – Responsive neuromodulation in patients with periventricular nodular heterotopia. 2014 AES annual meeting

Research:

<i>Principle Investigators</i>	<i>Grant/Study Title</i>	<i>Project Start Date</i>	<i>Project End Date</i>	<i>Name of Funding Source</i>
Salinsky, M Co-investigator Rutecki, P	Psychogenic Non-epileptic Seizures in U.S. Veterans	01/01/2013	12/30/2016	VA CSR&D
Rutecki, P	Mechanisms of 2DG Anti-epileptic Effects	07/01/2014	06/30/2017	VA BLR&D
Sutula, T Co-investigator Rutecki, P	IND-enabling Preclinical Studies of 2DG for Prevention of Post-traumatic Epilepsy in Plasticity Susceptible Rats	09/01/2014	8/31/2017	CURE

Fellowships:

<i>Name</i>	<i>Fellowship</i>	<i>ACGME</i>	<i>VA FTE</i>	<i>Start Date</i>	<i>End Date</i>
Robert Kotloski	Susan S Spencer Clinical Research Training Fellowship		2/8ths	07/01/2013	06/30/2015

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FY15 Accomplishments:

- Establish GS-10 Technologist Supervisor Position
- Hired and Trained two new EMU Monitor Techs
- Trained New Nursing Staff in EMU
- Increased Clinic visit and reduce wait times
- Increased E-consults and Tele-Health
- Participated in Anita Kaufmann Foundation Purple Day Walk for Epilepsy and Brain Games
- Met with Epilepsy Advocacy & Employment Group

Future Initiatives:

- Hire another Epileptologist
- Implement Off site EMU review
- Establish Employment Training Program with local Epilepsy Advocacy Group to help Veterans with Epilepsy overcome barriers for employment and find jobs
- Collaborate with local VA TBI/DVBIC Groups
- Establish formal Neurophysiological evaluation as part of EMU and patient care
- Collaborate with the Minnesota Epilepsy Foundation to bring additional resources to veterans with epilepsy
- Increase Clinic Visits and Decrease Patient Wait Times
- Increase Tele-Health and E-consults
- Increase EMU Evaluation
- Improve coordination of care with consortium sites

Abstracts / Posters / Presentations:

- Scan-Echo presentation of EEG Topography and Analysis

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FY15 Accomplishments:

- Continued expansion of Telemedicine Clinics (Boise and Roseburg), Tele-EEG (Boise, Spokane, Walla Walla), telephone, e-consult, and outpatient clinics
- Ongoing funded, multi-center research
 - Submission of ECoE VA cooperative study (LOI)
- Continuation of NW Epilepsy SCAN-ECHO provider education
- Creation of Veterans with Epilepsy Support Group

Future Initiatives / FY16 Goals:

- Recruitment of supervisory EEG technologist
- Recruitment of Nurse Practitioner
- Recruitment of Administrative Support Assistant
- Expansion of NW Epilepsy SCAN-ECHO provider education
- Further access to care expansion via additional Telehealth and Tele-EEG offerings

Publications / Manuscripts / Chapters:

- Can Statins Prevent Seizures After Stroke?
Motika, P. Neurology; 2015; *pending publication*
- Quigg M, Sun F, Fountain NB, Jobst BC, Wong VSS, Mirro E, Brown S, Spencer DC (2015) Interrater reliability in interpretation of electrocorticographic seizure detections of the responsive neurostimulator. *Epilepsia* 56(2):968-971.
- King-Stephens D, Mirro E Weber P...**Spencer DC** et al (2015) Lateralization of mesial temporal lobe epilepsy with chronic ambulatory electrocorticography. *Epilepsia* 56(6): 959-967.



- Bergey GK, Morrell MJ, ...**Spencer DC** et al (2014) Long-term treatment with responsive brain stimulation in adults with refractory partial seizures. *Neurology* 84(8): 810-7
- Heck, CN, King-Stephens D, Massey AD, Nair DR, Jobst BC, Barkley GL, Salanova V, Cole AJ, Smith MC, Gwinn RP, Skidmore C, Van Ness PC, Bergey GK, Park YD, Miller I, Geller E, Rutecki PA, Zimmerman R, **Spencer DC**, Goldman A, Edwards JC, Leiphart JW et al (2014) Two-year seizure reduction in adults with medically intractable partial onset epilepsy treated with responsive neurostimulation: Final results of the RNS System Pivotal trial *Epilepsia*, 55(3):432-44
- **Spencer DC** (2015) Auras Are Frequent in Patients With Generalized Epilepsy. *Epilepsy Currents* 15(2): 75-77
- **Spencer DC** (2014) B(1)RD Watching: A Way to Stratify Seizure Risk? *Epilepsy Currents* 14(6): 341-342
- Traumatic brain injury and psychogenic seizures in veterans. **Salinsky M**, Storzbach D, Goy E, **Evrard C**. *J Head Trauma Rehabil.* 2015 Jan-Feb;30(1):E65-70. doi: 10.1097/HTR.0000000000000057.
- The prevalence of epilepsy and association with traumatic brain injury in veterans of the Afghanistan and Iraq wars. Pugh MJ, Orman JA, Jaramillo CA, **Salinsky MC**, Eapen BC, Towne AR, Amuan ME, Roman G, McNamee SD, Kent TA, McMillan KK, Hamid H, Grafman JH. *J Head Trauma Rehabil.* 2015 Jan-Feb;30(1):29-37. doi: 10.1097/HTR.0000000000000045.
- Ruskin KJ, Caldwell, JA, Caldwell, JL, and **Boudreau EA**, Screening Pilots for Sleep Apnea, review and position paper, accepted pending revisions, *Aerospace Medicine and Human Physiology*. **(Sleep)**
- Boudreau E, Cameron M. Multiple Sclerosis and Sleep. Veterans Affairs MS Center of Excellence Patient Newsletter, Fall 2015 pending publication

Abstracts / Posters / Presentations:

- Van Ness P, Mizrahi E, King-Stephens D ...**Spencer, D** et al (2015) Long-term outcome of adults with medically intractable mesial temporal lobe seizures treated with responsive neurostimulation. American Epilepsy Society Meeting, Philadelphia, PA.
- **Spencer DC**, Sun FT, Brown SN, Jobst BC, Fountain NB, Wong VSS, Mirro EA, Quigg M (2015) Circadian patterns of epileptiform activity from long-term intracranial recordings in ambulatory subjects. American Epilepsy Society Meeting, Philadelphia, PA.
- Jobst B, Kapur R, Barkley G...**Spencer D** et al (2015) Long-term outcome of adults with medically intractable frontal lobe seizures treated with responsive neurostimulation. American Epilepsy Society Meeting, Philadelphia, PA.
- Skarpaas T, Duckrow RB, Herekar A, Heck C, Skidmore C, **Spencer DC**, Bergey GK, Shields DC, Nair D, King-Stephens D, Morrell MJ (2014) Responsive neurostimulation in patients with mesial temporal lobe epilepsy and prior temporal lobectomy. American Epilepsy Society Meeting, Seattle, WA.
- Strowd RE, Wong VSS, Garcia RA, Haut S, Kass J, Mays M, Ford B, London Z, **Spencer DC**, Milligan TA, Price RS, Reynolds PS, Elkind MSV (2014) Mentored peer review of standardized manuscripts for teaching neurology residents biostatistics, research methodology, and peer review. American Academy of Neurology Meeting, Philadelphia PA.
- **Salinsky M**, Storzbach D, Goy Elizabeth, **Evrard C**, **Boudreau E** (2015) Psychogenic Seizures in US Veterans; Health Care Utilization Following Diagnosis. Portland VA Medical Center and Oregon Health & Sciences University, Portland, OR.
- Sleep Apnea and the Commercial License. OHSU Sleep Conference, Portland, OR, 10/8/14. (sleep)
- Molecular Medicine and Bioinformatics, OHSU Neurology Resident Education Series, Portland, OR 10/17/14. (bioinformatics)
- This is Aerospace Medicine, OHSU Lecture for Preventive Medicine Residents, 10/31/14. (clinical)
- Neurophysiology of Sleep, OHSU Neurology Resident Conference, Portland, OR, 11/14/14. (sleep)
- Neurophysiology and Pharmacology of Sleep. OHSU Sleep Fellow Conference, Portland, OR, 12/15/14. (sleep)

Research:

<i>Principle Investigators</i>	<i>Grant/Study Title</i>	<i>Project Start Date</i>	<i>Project End Date</i>	<i>Name of Funding Source</i>
Salinsky, M	Psychogenic Seizures in US Veterans	02/01/2013	01/31/17	VA Merit Review
Salinsky, M	Emergency Department Neuroimaging for Non-index Seizures	05/01/2014	05/01/2016	Unfunded

Fellowships:

<i>Name</i>	<i>Fellowship</i>	<i>ACGME</i>	<i>VA FTE</i>	<i>Start Date</i>	<i>End Date</i>
Amro Abdulsattar, MD		Clinical Neurophysiology	0.500	07/01/15	7/1/16
Matthew McCaskill, MD	VA Polytrauma/Traumatic Brain Injury Rehab - Clinical Advanced Fellowship		1.000	07/01/15	7/1/16

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FY15 Accomplishments:

- Judy Ozuna chaired a work group to establish Seizure and Epilepsy Clinical Practice Guidelines, American Association of Neuroscience Nurses.
- First full year of telehealth clinics in Yakima, WA; Lewiston, ID; Boardman, Enterprise and La Grand, OR.
- Judy Ozuna continued chairmanship of the Nursing Workgroup.
- Judy Ozuna was the faculty presenter for "Seizure Identification and Workup" for the CME Provider video series.
- Local neuropsychology provider Kati Pagulayan, PhD has begun training to provide CBT for veteran's with PNES.
- Chris Ransom and Nik Dembrow served as co-chairs for Basic Science workgroup.
- Seattle ECoE staff have presented didactic lectures and clinical cases in newly established NW ECoE SCAN-ECHO.
- Improved safety in our EMU by establishing 24 hour video monitoring of EMU patients.
- EEG lab has updated software with improved automated detection capabilities (Persyst), new labeling conventions for EEG studies have been implemented.
- Improved accessibility and timeliness of EEG interpretation for ICU patients by establishing 6 networked ICU beds to allow remote access to video-EEG records.
- In-service training on "Safety in the Epilepsy Monitoring Unit" provided to nursing staff.
- Frank Smith, RN and Larissa Ronich, R-EEG Tech provided education on Epilepsy to patient's and staff on Epilepsy Awareness Day.

Future Initiatives:

- Partnership with University of Washington in establishing an ACGME-accredited epilepsy fellowship with training component at the VA Puget Sound.
- Initiating a new research project with neuropsychologists at the University of Washington on "Self Management of Epilepsy in Veterans."
- Expand our telehealth clinics to provide more remote site clinic visits at existing sites and establish telehealth clinics in Anchorage, AK.
- Enhanced training of cardiac monitor techs assigned to monitor EMU patients.
- EEG technologists plan to present a case to ECoE EEG technologist teleconference workgroup.
- Expand networking capabilities for remote access of ICU video-EEG studies to all ICU beds.
- Formalize practice of instructing patients' family members/care givers to use personal smart phone to video spells/seizures (especially for suspected psychogenic seizures). Explore the feasibility of implementing a procedure to incorporate this important diagnostic information in a viewable fashion within the patient's medical record (with input from ethics, legal, & CPRS administration).

Publications / Manuscripts / Chapters:

- Ransom, CB, Ozuna, J. Second generation antiepileptic drugs. VA Epilepsy Manual. Ed, A. Husain, T. Trung. Epilepsy Centers of Excellence, San Francisco, 2014.
- Tao, W., Spain, W.J., Ransom, C.B. Trafficking of extrasynaptic GABA_A receptors in dentate gyrus granule cells is dependent on PKA- and PKC-dependent signaling pathways, in preparation for Journal of Neuroscience.
- Ransom C.B., Ye Z., Spain, W.J., Richerson G.B. Modulation of tonic GABA currents by anion channel blockers, in preparation for Neuropharmacology.



Abstracts / Posters / Presentations:

- Tao, W, Spain WJ, Ransom CB: GABA_B receptors regulate trafficking of extrasynaptic GABA_A receptors in dentate gyrus granule cells via PKA- and PKC-dependent signaling pathways. American Epilepsy Society, Seattle, WA, 12/2014.
- Ransom CB. Regulation of extrasynaptic GABA_A receptors. Winter Conference on Brain Research, Big Sky, MT, 1/2015.
- Ransom CB. Tuning the tone of extrasynaptic GABA_A receptors in health and disease. University of Iowa Neurology Grand Rounds, Iowa City, IA, 5/2015.
- The roles of Kv2 channels in regular and burst firing of action potentials in layer 5a and 5b neocortical pyramidal neurons. G. S. Newkirk, D. Pathak, N. C. Dembrow, R. C. Foehring, W. J. Spain; 2015-S-15262-SfN Society for Neuroscience, Oct. 2015
- Integration of synaptic input during active firing in the L5 pyramidal neurons of mouse motor cortex. N. C. Dembrow, G. S. Newkirk, W. Spain; 2015S15272SfN Society for Neuroscience, Oct. 2015

Research:

<i>Principle Investigators</i>	<i>Grant/Study Title</i>	<i>Project Start Date</i>	<i>Project End Date</i>	<i>Name of Funding Source</i>
Spain, William	Mechanisms of synaptic integration in central neurons.	11/01/2013	10/30/2017	Veterans Administration Merit Review
Spain, W.: PI on Subcontract; R. Foehring: Overall PI	Slowly inactivating K ⁺ channels in neocortical pyramidal neurons.	07/01/2012	06/30/2017	NIH (NINDS) RO1
Ransom, Christopher	GABA transporter type 1 (GAT1) function in epilepsy.	01/01/2012	12/31/2014	Veterans Administration Career Development Award
Ransom, Christopher	Regulation of extrasynaptic GABA _A receptors in health and disease	10/01/2015	09/30/2019	Veterans Administration Merit Review

SOUTHEAST REGION

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FY15 Accomplishments:

- Facilitated national critique and assessment of the National Epilepsy Clinical Template/Registry.
- Begin mining national data from the Clinical Template/Registry.
- Facilitated the expansion of telemedicine for epilepsy in the Southeast region.
- Made progress in development/improvement of model for the movement of patients within the region or to the region for access to specialized epilepsy care.
- Facilitated collaboration surveillance projects for the review of algorithm for the identification of epilepsy patients.



Future Initiatives:

- Installation and implementation of Clinical Template/Registry version 2.
- Continued expansion of Telemedicine for epilepsy.
- Improve paradigm for patient movement within the region for better access to specialized epilepsy resources.
- Collaboration research and surveillance projects.

Abstracts/Posters/Presentations

- R. Rehman, P. Kelly, A. Husain (2014). Creation of an Epilepsy Registry in the Veterans Health Administration. P2.077 AES
- P. Kelly, R. Rehman, A. Husain (2014). Leveraging Technology to Improve Access-Epilepsy Centers of Excellence Capitalizes on the tele-medicine opportunity. P2.048 AES
- T. Tran, R. Rehman, A. Husain (2014). Prescribing Trends of Antiepileptic Drugs for Epilepsy within the Veterans Health Administration. P4.265 AAN



Publications

- R. Rehman, P. Kelly, A. Husain & T. Tran (2015). Characteristics of Veterans Diagnosed with Seizures within the Veterans Health Administration. To appear in next issue of JRRD.
- Kelly, P., and Chinta, R. (2015). Do Centers of Excellence excel in patient outcomes: An empirical study of Veterans Health Administration Centers for Epilepsy. International Journal of Management Excellence, 4(3). 529–538.
- Kelly, P., Chinta, R., and Privitera, G (2015). Do Centers of Excellence reduce health care costs?: Evidence from the US Veterans Administration Centers of Epilepsy. Global Business and Organizational Excellence (September–October 2015). 18–29.

DURHAM VA MEDICAL CENTER

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FY15 Accomplishments:

- Implemented new home tele-epilepsy clinic and maintained remote CBOC tele-epilepsy growth.
- Expanded tele-EEG: current sites in Greenville, Salisbury & Orlando
- Increased intracranial monitoring admissions and epilepsy surgical resections.
- Improved referral paradigm for out-of-state epilepsy cases.
- Implemented new paradigm for continuous and overnight EEG monitoring in ICU.
- Neuropsychologist completed Cognitive Behavioral Therapy (CBT) training process; improved service delivery for psychogenic non epileptic seizures (PNES) cases .



Future Initiatives:

- Increase collaborations with remote-site Greenville CBOC to improve patient access.
- Continue to expand tele-medicine clinics, including tele-EEG, tele-epilepsy (CVT) and tele-epilepsy (home).
- Maintain steady cases of intracranial epilepsy admissions.
- Expand CBT treatment to groups and tele-medicine to improve access.

BRUCE W. CARTER DEPARTMENT OF VA MEDICAL CENTER

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ECoE Miami Staff

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Michael Perez	EEG Tech			
Dennis Thomas	EEG Tech			
Carlton Gass, M.D	Staff Psychologist	Carlton.Gass@va.gov		

FY15 Accomplishments:

- Expanded services to the MICU to include cEEG in ICU.
- Successfully operated 2 weekly epilepsy clinics.
- Monthly telehealth epilepsy clinics.
- Submitted a QUERI grant proposal.
- Recruited and hired Chief EEG technologist and another EEG tech needed.
- Maintained an easy access to outpatient clinics.
- Continue training EEG tech students at Institute of Health sciences EEG School.
- Dr. Lopez was awarded The best teacher of the year by University of Miami Neurology Department 2015.
- Established educational session for nurses and sitter to get safety in our EMUs.
- Hired a nurse practitioner to work in the epilepsy clinic providing patient education.
- The EEG chief tech presented the mask project at the 2015 Annual ASET meeting.
- Hired a new epileptologist part time.



Future Initiatives:

- Submit a Merit pilot proposal during the winter integrating the psychiatrist in the treatment of psychiatric comorbidities in patients with epilepsy.
- Expand epilepsy clinic to the Broward county.
- Upgrade EEG equipment software.

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Gainesville ECoE Staff

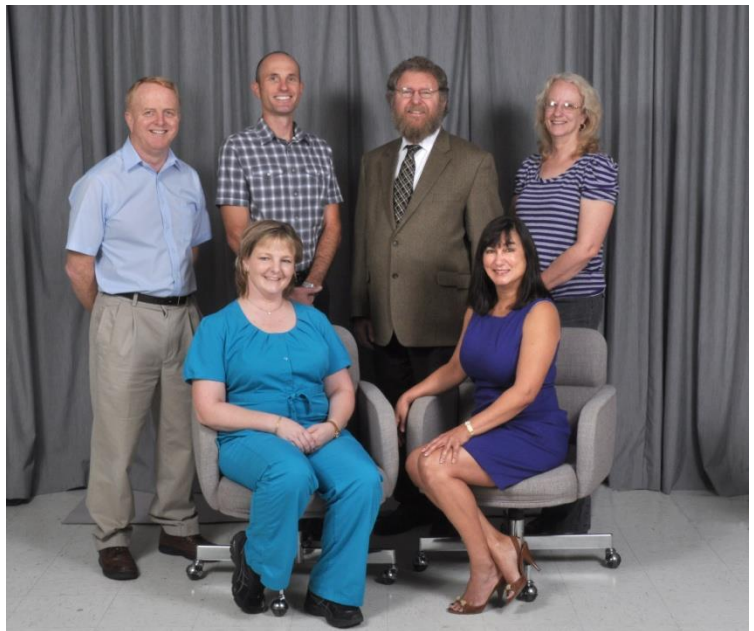
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FY15 Accomplishments:

- Opening of two additional telemedicine clinics.
- Establishment of tele-EEG in Tallahassee and Lake City.
- Expansion of Orlando VAMC referral service.
- Production of national educational video: "Seizure First Aid".
- Marking 6 years of long-term EEG-video monitoring without losing any data during events due to equipment malfunction or technologist error.
- Initial year of training for Neurophysiology Fellows (two fellows completed the program).
- Established Clinical Neurophysiology Seminar for postdoctoral trainees.

Future Initiatives:

- Establish Tele-EEG services in Tallahassee.
- Establish Pharmacy Anticonvulsant Consult and Follow-up Clinics.
- Plans to begin Cognitive Behavior Therapy for epilepsy.



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FY15 Accomplishments:

- Increased volume of long term video EEG monitoring (both EMU and ICU studies).
- Integrated Clinical Neurophysiology Fellows into VA clinics and EEG/EMU rounds.
- Participated in monthly Southeast Regional Surgical Case Conferences.
- Referred first patient for intracranial monitoring to regional center (Durham).
- Successfully recruited two new physician hires who are fellowship trained in Clinical Neurophysiology/Epilepsy (set to start in October 2015).
- Acquired one new ambulatory EEG machine.

Future Initiatives:

- Expand the number of epilepsy specialty clinics.
- Expand video-tele health and e-consult capabilities.
- Establish capabilities for V-Tel for CBT for PNES patients.
- Participate in EEG store-forward reading.
- Acquire remote EEG reading capabilities.
- Expand EMU Nursing Educational series.
- Partner with local Epilepsy Foundation to improve outreach and services for Veterans with epilepsy.

Abstracts/Posters/Presentations

- Khan T, Gandy C, Robertson D, Frontera AT. Spinal Dural Arteriovenous Fistula Related Myelopathy. To be presented at the American Society of Neuroimaging Annual Meeting January 2016.
- Rong L, Frontera AT, benbadis SR. Effects of Tobacco Smoking on EEG. Presented at the American Clinical Neurophysiology Society Annual Meeting 2014.

Publications

- Osborn, KE, Shytle RD, Frontera AT, Soble JR, Schoenberg MR. Addressing the potential role of magnesium dyshomeostasis to improve treatment efficacy for epilepsy: A re-examination of the literature. J Clin Pharmacol. 2015 Aug 27.
- Heekin RD, Catalano MC, Frontera AT, Catalano G. Anti-NMDA Receptor Encephalitis in a Patient with previous Psychosis and Neurological Abnormalities: A Diagnostic Challenge. Case Rep Psychiatry. 2015.
- Rong L, Frontera AR, benbadis SR. Tobacco smoking, epilepsy and seizures. Epilepsy Behav. 2014 Feb;31:210-8.

NATIONAL WORKGROUPS

WORKLOAD STANDARDIZATION WORKGROUP

Chair: Nina Garga, MD, Chair

Administrative Support: R. Andrew David (temporary), SW Regional AO after hire

<i>Workgroup Members</i>		
Karen Parko, ECoE National Director	Holloway, Stephen, MD Chief, Neurology	McMonigal, Kimberly DSS Mgmt Analyst
Nina Garga, San Francisco ECoE Director	Hrachovy, Richard A, Deputy Executive	Osborne , David, MD , Operations Mgr.
Ryan Rieger, ECoE National Admin Director	Husain, Aatif M, MD, Director SE ECOE	Zufall, Ellen, HSS Office of Finance SFVAMC
Ayers, Michael L. ,Program Analyst	Jelks, Laura E., DSO Management Analyst	Rehman, Rizwana, SE ECoE Regional Statistician
Bishop, Deanna, VSSC Clinical Reporting	Johnson, Mary F, HIM Specialist	Ridley, David, Program Analyst (Portland)
Bishop, Melinda, VSSC, Mgmt Prog Analyst	Johnson, Nancy (DSS) Lead Clinical Analyst	Moran, Eileen, VHA (OPES)
Childers, Amy, NW Regional Admin Officer	Kelly, Pamela, SE Regional Admin Officer	Smith, Denise C., Program Analyst
David, R. Andrew, NE Regional Admin Officer	Kenneally, Karen, VHA (OPES)	Tung, Tran, MD Epileptologist Durham
Dent, Lynda, Admin Officer	Lancaster, Betsy, VSSC Mgmt Prog Analyst	Wilson, Steven, Program Analyst
Elayidathukudiyil, Joseph MAS, Coder, DUR	LaPointe, Nancy, DSS Director clin user support	Young, Margaret, Technical Director, NDC X
Finley, Winona, SE Admin Support		

FY15 Accomplishments:

- New CHAR4 code approved for NES CBT clinics (NDTR), to be added to all stop code combinations applicable (i.e. to face-to-face visits and telehealth visits hosted in either an ECoE or mental health department)
- Workgroup initially merged with Clinical Procedures workgroup at start of FY15, but has since been deactivated pending resolution of more pressing matters for the ECoE

Future Initiatives:

- Implement CHAR4 code NDTR as listed above for NES CBT clinics
 - No specific instructions needed, other than adding code to clinic set up document (after primary and secondary stop codes). Code will be used for workload capture, but won't necessarily change costing by MCAO.
 - Finalize CHAR4 guidance document on this code and with which stop code pairs it can be combined, minimum requirements of clinics using the code
- Implement CHAR4 code ECOE for ICU/non-EMU continuous EEG recordings
 - Finalize CHAR4 guidance document on this code and with which stop code pairs it can be combined, minimum requirements of clinics using the code
 - Perform research on RVUs of most appropriate CPT code, and use this to determine default clinic length to be used by MCAO in costing this service.
- Roll-out ICD-10 encounter forms developed by our workgroup for epilepsy (NEEF) in October 2015, with clear instructions to sites on how to adopt.
 - Consider brief ICD-10 epilepsy code training module (powerpoint) for providers, including basic translation of commonly used ICD-9 codes to ICD-10.
 - Clarify the epilepsy codes in ICD-10 that will be associated with the higher VERA reimbursement.

PHARMACY WORKGROUP

Aatif Husain, MD, Co-Chair
Kathy Tortorice, PharmD, BCPS, Co-Chair

<i>Workgroup Members</i>		
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Poon, Linda Hue-Ma	Clinical Pharmacist	415.221.4810 x4375
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Rutecki, Paul MD	National ECoE Director	608.256.1901
Tran, Tung MD	Chief Neurology & ECoE Director (Durham)	919.286.0411 x4663

FY15 Accomplishments:

- Provided input and recommendations (specific to epilepsy) for national formulary inclusions
- Proposed a pilot project to compare how enzyme-inducing AEDs (EI-AEDs) change the prescribing patterns of psychiatric medications, compared to non-enzyme-inducing AEDs. The project involves analysis of VA prescribing trends over several years. If there are differences, then VA prescriber should be aware that their choice of seizure medication impacts Veterans taking medications for mood disorders. This study may provide further guidance on how to best treat the common Veteran population who has both seizure and psychiatric disorders. (IRB approved)
- Distributions of AED tables nationally
- Addition of a workgroup to address the use of antiepileptic medications in pregnancy and during child bearing years

Future Initiatives:

- Continue to assist in the review and recommendations for national formulary as it relates to AED's
- Complete (EI-AED) research project
- Characterization of AED use in the Veteran population with epilepsy

DATABASE WORKGROUP

Aatif Husain, MD, Chair
Pamela Kelly-Foxworth & Winona Finley, Administrative Support

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Zuleta, Alexander	Program Support Clerk	305-575-7000 x7008

FY15 Accomplishments:

- Implemented at all 16 ECoE sites nationally
- Information retrieved for assessment of data quality, messiness and logical checks of errors
- Collected critique of first version of the template from contributing 16 ECoE sites, for the purpose of proposing updated iteration including ICD-10 code changes

Future Initiatives:

- Complete second iteration of clinical templates in CPRS
- Installation and Implementation of version 2 of National Patch 2.03.0
- Completion of surveillance activities utilizing data obtained from template

CLINICAL RESEARCH WORKGROUP

Alan Towne, MD, MPH, Chair
Linda Benson, MPH, Administrative Support

<i>Workgroup Members</i>		
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Linda L. Benson, Richmond, Admin	Ryan Rieger, San Francisco	Katharine K. McMillan, San Antonio
Curt LaFrance, Providence	Paul Rutecki, Madison	Jackie Pugh, San Antonio
Hamada Hamid, West Haven	Martin Salinsky, Portland	Chris Ransom, Seattle
Tung Tran, Durham	Allan Krumholz, Baltimore	Maria Lopez, Miami
Rizwana Rehman, Durham	R. David Andrew, Baltimore	

FY15 Accomplishments:

- Expanded use of national ECoE epilepsy monitoring unit database
- Pugh - Data collection re the role of mild TBI in epilepsy
- Developed protocol for post-traumatic epilepsy (PTE) and vagus nerve stimulation therapy (VNS) multi-site study
- Obtain normalized volumetric NeuroQuant data from brain MRI's in patients with TBI
- Towne Co-PI of CENC Epidemiology Project Aim #3
- Continued to actively seek appropriate sponsored device trials
- LaFrance and Hamid PNES initiative

Future Initiatives:

- Develop and submit abstract from EMU database
- Collaborative efforts with CENC to examine TBI and epilepsy
- Partnership with active duty (DVBIC & USUHS) for projects affecting both active duty and Veterans
- Propose research to distinguish symptoms of mild TBI from posttraumatic stress disorder

BASIC SCIENCE RESEARCH WORKGROUP

Christopher Ransom, MD, MPH, Chair
VACANT, Administrative Support

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Christopher B. Ransom MD, PhD / Seattle	Alan Towne MD / Richmond	Cha-Min Tang MD, PhD / Baltimore
William Spain MD / Seattle	Robert Kotloski MD, PhD / Madison	Claude Wasterlain MD / Los Angeles
Nikolai Dembrow PhD / Seattle	Jose Cavazos MD, PhD / San Antonio	Jack Parent MD / Michigan
Paul Rutecki MD / Madison		

FY15 Accomplishments:

- ECoE Basic Science Workgroup Teleconference calls FY2015
 - **“Effects of serotonergic signaling on respiration, seizures, and SUDEP”** - Gordon Buchanan, MD, PhD. Dept of Neurology, University of Iowa.
 - **“Epilepsy and Alzheimer’s disease”** - Haakon Nygaard, MD, PhD. Dept of Neurology, University of British Columbia.
 - **“JAK/STAT inhibition in epileptogenesis”** - Amy Brooks-Kayal, MD. Dept of Pediatrics, University of Colorado. Director, Neuroscience Institute.
 - **“Subtype-specific dendritic processing of long range inputs in the medial prefrontal cortex”** - Nik Dembrow, PhD. VA Puget Sound ECoE, Dept Physiology and Biophysics, Univ. Washington.
 - **“Insight into pathophysiology and therapy from mouse models of Dravet syndrome”** - John Oakley, MD PhD. Depts of Neurology and Pharmacology, Univ. Washington.
 - **“Muscarinic excitation of parvalbumin positive interneurons contributes to the severity of pilocarpine-induced seizures”** - Josh Lawrence, PhD. Dept of Pharmacology and Neuroscience, Texas Tech University
 - **“Granule cell birthdating and aberrant neurogenesis in experimental temporal lobe epilepsy”** - Jack Parent, MD. Dept of Neurology, University of Michigan
 - **“Adenosine signaling and epilepsy”** - Detlev Boison, PhD. Dow Chair of Neurology and Director of Neurobiology Research, Legacy Health, Oregon Health Sciences University
- Workgroup members are actively engaged in basic science research projects, accomplishments are listed by site elsewhere in annual report.
- Monthly teleconferences with basic science research presentations by VA- and non-VA investigators. These teleconferences have been very well received.
- National audience for monthly teleconferences is expanding.

Future Initiatives:

- Nikolai Dembrow PhD will transition to basic science workgroup chair over the next year with continued assistance from Chris Ransom.
- Continue to expand the national audience with goal of providing richer discussion and new perspectives on basic science topics through broader participation.
- Discuss plans and strategies to develop collaborative research efforts between sites, with focus on TBI-related epileptogenesis using blast-injury or cortical impact models.

EDUCATION WORKGROUP

Ryan Rieger, MHPA, Chair

<i>Workgroup Members</i>		
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Denise Riley, Gainesville	Stephanie Chen, San Francisco	David Chen, Houston
Nina Garga, San Francisco	Tung Tran, Durham	Mary Jo Pugh, San Antonio
Aatif Husain, Durham	Sean Gamble, EES	Pamela Kelly, Durham
Winona Finley, Durham	Heather Holshouser, EES	Guiomar Scheid, San Francisco
Karen Parko, San Francisco	Ellen Matthiesen, Houston	Derecus Slade, Portland
Barry Gidal, Madison	Angela Vargas, San Francisco	Amy Childers, Madison
Judy Ozuna, Seattle	Angela Young, Durham	Maria Lopez, Miami
Ann Carncross, Madison	J. Chris Sackellares, Gainesville	

FY15 Highlights and Accomplishments:

- Patient / Caregiver:
 - Filming of 6 videos complete on “Veterans and Epilepsy: Basic Training”
 - Introduction to Epilepsy and Seizures – San Francisco
 - Diagnosis and Treatment – San Francisco
 - Medications – Los Angeles
 - Psychosocial Issues – Portland
 - Traumatic Brain Injury – Seattle
 - First Aid – Gainesville and San Francisco
 - Continued development of educational content on www.epilepsy.va.gov website.
 - Distribution of ECoE Patient Education QuickSeries Handbook.
 - Distributed National ECoE promotional materials, including brochure, business cards, logo stickers, lapel pins, seizure first aid postcard.
 - Continued partnership with Anita Kaufmann Foundation for “Heads Up for Veterans” initiative that included TBI, PNES, and seizure first aid flyer, websites, and Purple Day Awareness campaign.
 - Support local/regional educational offering and collaborations with Epilepsy Foundation and University affiliates.
- Healthcare Provider:
 - Completed, printed, and distributed VA Epilepsy Manual to ECoE and Consortium sites, total of 500 originally printed and distributed.
 - Printed, and distributed AED pocket card for VA providers
 - Worked to edit and finalize epilepsy healthcare provider video series in Portland featuring 12 topics targeted to primary care providers, neurologists, and epileptologists.
 - Continued to develop educational content on National ECoE SharePoint intranet portal for document sharing and calendar updates.

FY16 Goals and Initiatives:

- Complete “Veterans and Epilepsy: Basic Training” video series and post to YouTube and ECoE website. Film additional videos on “Epilepsy Surgery” and “PNES”.
- Publish epilepsy healthcare provider video series and make available for CME credit on the internet.
- Complete printing “Coping With Seizures” QuickSeries Handbook.
- Complete and print patient/caregiver education brochures written by San Francisco and Madison student interns.
- Development of info card for addressing pregnant women concerns with Women Veterans Workgroup.
- Development of curriculum for EMU nursing staff training with Nursing Workgroup.

NURSING WORKGROUP

Judy Ozuna, NP, Chair
VACANT, Administrative Support

<i>Workgroup Members</i>		
Judy Ozuna, Seattle	Esmeralda Sanchez, San Antonio	Ann Carncross, Madison
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Pamela Kelly, Durham	Sharon Bottomley, West Haven	Brooke L Keenan, Madison
Ronda J Tschumper, Madison	Linda Benson, Richmond	Margaret Young, Durham
Sheela Sajan, Durham	Denise Riley, Gainesville	Winona Finley, Durham
Romay Franks, Houston	Mary Jo Pugh, San Antonio	Huda Terraz, San Antonio
Nikki Caraveo, Kansas City	Frank Smith, Seattle	Kathy Browning, Richmond
Natalya Kan, West LA	Elise Boucher, San Antonio	Carol Riley- Boston
Laura Schueller, Minneapolis	Amy Childers, Madison	Roanna Bamford- Boston
Margaret Young, Durham		

FY15 Accomplishments:

- Completed a safety survey of epilepsy monitoring units of 14 ECoE and one ancillary site
- Published and distributed booklet “Self-Management in Epilepsy” a guide for health professionals
- Contributed to development of Patient Video Series

Future Initiatives:

- Ensure the final version of the EMU consent form is downloaded into iMed Consent for CPRS and is used at all sites
- EMU Safety
 - Identify gaps in EMU safety based on the EMU survey
 - Include EMU safety, consent and nursing issues in the ECoE Handbook
 - Collaborate with NAEC re: guidelines for EMU safety
- Contribute to development of SUDEP patient education materials:
- Develop an epilepsy nursing curriculum for EMU and outpatient nursing staff

EEG TECHNOLOGISTS WORKGROUP

**Ronda Tschumper, R.EEG/EP T., CLTM, Chair
VACANT, Administrative Support**

Aldana, Jared	David, Andrew	Krasne, Valerie	Rodriguez, Dominic
Barreda, Joaquin	Dennis, Debra	Leatherman, Patty	Ronich, Larissa
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Brame, Josie	Finley, Winona	Martinez, Paz	Young, Margaret
Brewer, Katherine	Goozner, Debbie	Mattice, Juba	Thomas, Dennis
Broughton, Janice	Gregoire, George	McMillian, Kathryn	Tran, Tung
Burroughs, Diane	Groves, Phenita	Ocansey, Mary	Tschumper, Ronda
Cabralles, Victor	Hanson, Debra	Parko, Karen	Vera, James
Calahan, Betty	Hayes, Susan	Pedigo, Stacy	Wade, Dana
Carballo, Rosario	Holt, Christopher	Perez, Michael	Walker, Harold
Castaneda, Steven	Jackson, Cynthia	Perkins, Deborah	Wharry, Diane
Coleman, James	Kelly, Pamela	Reznicek, Jeffery	Wilson, Brenda
Crew, Paula	Khutoryan, Galina	Rieger, Ryan	

FY15 Accomplishments:

- VA ECoE Table at Mall of America in Minneapolis, Minnesota for Purple Day (March 26, 2015). Dr. Holloway, Ryan Rieger, Amy Childers, Ronda Tschumper – Cassidy Meghan (Founder of Purple Day)
- 2015 ASET presentation - combined effort of Amy Childers, Ronda Tschumper and Rosario Carballo (Miami VA).
- Incorporated case studies with each call for continuing learning opportunities and discussing “Best Practices”
- Introduced ABRET standardization policy and procedures for the LTM across all sites
- Initiated and completed several Medical Instrument Technicians Functional Statements
- Worked with various ECoE sites regarding appropriate Professional Standards Board Grading
- Several Technologists became Registered in EEG

Future Initiatives / FY16 Goals:

- Develop National SOPs for EEG and EMU procedures
- Continued efforts to increase consortium and non-consortium site involvement
- Continued efforts to provide and discuss information for MIT Registration in EEG and LTM
- ABRET policy and procedures for outpatient & LTM – continued knowledge and training
- Scan Echo – review challenging EEGs (Epileptologist involvement)
- Promote EEG and EMU Lab Accreditation through ABRET

PSYCHOGENIC NON-EPILEPTIC SEIZURE TREATMENT WORKGROUP

Hamada Hamid, DO & David Chen, MD, Chair
R. Andrew David, Administrative Support

Workgroup Members		
Bottomley, Sharon	Hamid, Hamada	Parko, Karen
Chen, David	Jung, Yoon	Rieger, Ryan
David, R. Andrew	LaFrance, Curt	

FY15 Accomplishments:

- Workgroup was established in FY15
- Conducted needs assessment of PNES services within ECoE regions to establish a baseline of PNES treatment availability
- Identified at least one individual in each ECoE region to perform CBT-informed therapy for PNES
- Facilitated creation of clinics in each to region to provide CBT intervention as a clinical service to patients
- Ensured availability of 1 to 1 psychotherapy with local provider in three of the four ECoE regions
- Dr. LaFrance reviewed processes involved coordinating National Telemental Health Center (NTMHC) and provision of care on ECoE director's meeting
- Have completed treatment on first patient with epilepsy with CBT-informed therapy, to address underlying emotional distress and support coping mechanism; NTMHC Tele-Seizures Clinic is now accepting referrals for Veterans with epilepsy to receive CBT-informed therapy intervention
- Ongoing research by group members into treatment and management of non-epileptic seizures

Future Initiatives:

- Increase access to CBT-informed therapy for PNES through telehealth and additional trained local therapy providers in each region
- Expand CBT-informed therapy access to patients with epilepsy who are motivated to work with a therapist
- Monitor utilization of PNES services
- Monitor patient satisfaction of telemental health services for PNES
- Will continue to explore delivering home-CVT for CBT-informed therapy in conjunction with NTMHC
- NTMHC is combining tele-PNES & Tele-epilepsy care under one umbrella as tele-seizures care

INTEGRATING MENTAL HEALTH WORKGROUP

Hamada Hamid, DO, Chair
R. Andrew David, Administrative Support

<i>Workgroup Members</i>		
David, R. Andrew	Jung, Yoon	Rutecki, Paul
Hamid, Hamada	Lopez, Maria	Schied, Guiomar
Houston, Christine	Rieger, Ryan	Spencer, Janet

FY15 Accomplishments:

- Workgroup was established in FY15
- Primary goal in FY15 was to author a white paper describing current mental health services available to Veterans with epilepsy within VA and make recommendations for enhancing mental health services
- White paper drafted and being circulated to stakeholders for review and concurrence

Future Initiatives:

- Finalize white paper with feedback from stakeholders
- Present white paper at ECoE advisory meeting
- Develop system for monitoring progress towards recommendations

WOMEN VETERANS HEALTH WORKGROUP

Anne Van Cott, MD, Chair
Pamela Kelly-Foxworth & Winona Finley, Administrative Support

<i>Workgroup Members</i>		
Bearden, LaRae	Garga, Nina	Harper, Kirsten
Dergalust, Sunitra	Gidal, Barry	Kelly-Foxworth, Pamela
Finley, Winona	Hamid, Hamada	Lopez, Maria
Nguyen, Quynh-Nhu	Poon, Linda Hue-Ma	Rieger, Ryan
Parko, Karen	Pugh, Mary Jo	Riley, Denise
Patel, Jignasa	Rehman, Rizwana	Tortorice, Kathy
Van Cott, Anne (Chairperson)		

FY15 Accomplishments:

- Established mission “address issues unique to WVE with the goal of improving clinical care and educating patients, caregivers and healthcare providers”
- ECoE Sharepoint Site to facilitate communication and share resources
- Establish interdisciplinary and geographically diverse membership
- Explore available information & VA resources about WVE
 - Existing publications, educational material
 - ECoE database query
 - AED teratogenicity alerts on electronic medical record
 - Establish 3 Workgroup “teams”
 - AED teratogenicity (Dr. Lopez)
 - Bone Health (Dr. Van Cott)
 - “Support” Group (Dr. Hamid)

Future Initiatives:

- Utilize expertise within ECoE
- Expand membership
 - Women Veterans Health Care Initiative-Primary Care
- AED teratogenicity
 - VA CPRS alerts
 - Provider/veteran education materials
 - June 2015 FDA Guidelines
- Bone Health
 - Clinical consensus for evaluation and treatment of bone loss in WVE
 - Provider/veteran education materials
- “Support” Group
 - UPLIFT: Using Practice and Learning to Increase Favorable Thoughts

NATIONAL ADVISORY COMMITTEE

The National Advisory Committee is an important part of the ECoE overall team. The National Advisory Committee is responsible for providing guidance and direction to the ECoEs. It will assist in the planning phases of the ECoE to maximize cooperation between the facilities and enhance referral patterns across the VA healthcare system. The National Advisory Committee will also assist in the collaboration between VA sites and affiliate universities. It will establish performance measures with an emphasis on measurable outcomes for the ECoE and will provide oversight of all clinical, educational, and research related activities within the ECoE.

NATIONAL ADVISORY COMMITTEE MEMBERS

Marc Dichter, MD, PhD, University of Pennsylvania, ECoE Advisory Committee Chair
Michael Amery, Legislative Counsel, American Academy of Neurology
Susan Axelrod, C.U.R.E.
John Booss, MD, American Academy of Neurology
David Cifu, VA Poly-Trauma Centers Director
Tony Coelho, Epilepsy Foundation
Ramon Diaz-Arrastia, MD, Uniformed Service University
Sandy Finucane, Executive Vice President, Epilepsy Foundation
Glenn Graham, MD, VA Deputy Director of Neurology
COL Jamie B Grimes, MD, MC, USA, Uniformed Service University, Department of Neurology Chair
Donald Higgins, MD, VA National Director of Neurology
Patty Horan, Military Officers Association of America
David Labiner, MD, University of Arizona, National Association of Epilepsy Centers
Richard Mattson, MD, Yale Epilepsy Program
Shane McNamee, MD, VA Poly-Trauma Centers
Angela Ostrom, Chief Operating Officer & Vice President Public Policy, Epilepsy Foundation
Jack Pellock, MD, Virginia Commonwealth University
Robert Ruff, MD, VA Director of Neurology - Retired
Brien Smith, MD, Spectrum Health Medical Group, Michigan State University
William Theodore, MD, Chief of the Clinical Epilepsy Section, NINDS
Kathy Tortorice, Clinical Pharmacist, VA Pharmacy Benefits Management
Michael Flowers, LTCOL, USMC (Retired)
Ann Marie Bezuyen, Director of Special Projects, Anita Kaufmann Foundation
Phil Gattone, CEO, Epilepsy Foundation
Jan Buelow, VP of Programs & Research, Epilepsy Foundation
Princess Katana, Senior Director for Programs, Epilepsy Foundation
Rosemarie Kobau, MPH, MAPP, Centers for Disease Control and Prevention, Epilepsy Division
Tim Tilt, ECoE Veteran Patient
Ed Perlmutter, Congressman, Representing 7th District of Colorado
Karen Parko, MD, Former ECoE National Director

NATIONAL ADVISORY COMMITTEE FY14 REPORT



Marc A. Dichter, M.D., Ph.D.
Professor of Neurology

ECOE National Advisory Committee Meeting Report Friday, December 5, 2014 9:00am – 12:00pm

Board Members Present: Marc Dichter MD PhD(Chair), Jack Pellock MD (American Epilepsy Society), David Labiner MD(National Association of Epilepsy Centers), Glenn Graham MD (Deputy Director of Neurology, VA Central Office), Mike Amery Esq (American Academy of Neurology), Angela Ostrom (Government Relations, Epilepsy Foundation), Richard Mattson MD(PI past VA Cooperative Studies), William Theodore MD (National Institutes of Health)

VA Staff Present: Ryan Rieger, Karen Parko MD, Paul Rutecki MD, Amy Childers, Mary Jo Pugh PhD, Stephen Holloway MD PhD, William Spain MD PhD, Rizwana Rehman PhD, Aatif Hussain MD, Tung Tran MD, David Chen MD, Stephanie Chen NP, Andrew David

The meeting began with Dr. Dichter congratulating Drs. Parko and Ruff on receiving the American Epilepsy Society Service Award that recognized their work in developing the Epilepsy Centers of Excellence

Dr. Graham reviewed changes at VA Central Office (VACO) over the past year that included a new Secretary of the Department of Veteran Affairs, Robert “Bob” McDonald. In July, Dr. Ruff retired as National Director of Neurology. Dr. Pogach is now acting director of Neurology and Dr. Graham is Deputy Director of Neurology. Over the past year, the VA Epilepsy Centers of Excellence (ECoEs) have been audited without any major issues identified. In the wake of change, VACO has instituted a hiring freeze that has limited the ability to fill vacancies that have developed in the past year. The Epilepsy Centers received approximately \$550-600,000 in funds for telehealth equipment and implementation in the past fiscal year. Overall the ECoEs in the NW and NE collaborated in an integrated neurology project that developed a telemedicine framework (tele-EEG and tele-clinics) to provide specialized epilepsy care to more remote sites.

The Veterans Care and Accountability Act was reviewed that includes funding for outsourcing medical care to the private sector (approximately 10 billion dollars) and hiring new providers (approximately 5 billion dollars). The specialized care in epilepsy provided by the ECoEs, including epilepsy monitoring evaluations and surgical therapies, clearly save more than the 6.1 million dollars that supports their operation.

Dr. Parko reviewed the accomplishments of the past year. This included the growth of a hub and spoke model to provide epilepsy care at both ECoEs but also consortium VAMCs, the establishment of an administrative infrastructure for day-to-day operations and support for work groups with specific goals, and the beginning of SCAN-ECHO programs to interact with other neurologists. Clinically the ECoEs expanded tele-health services, instituted a CPRS template for an epilepsy note that included all NIH common elements for epilepsy, began offering cognitive

behavioral therapy for psychogenic non-epileptic seizures, and maintained an EMU data base that provides an overview of the patients evaluated. A patient satisfaction survey showed that 93% of responders were satisfied with their epilepsy health care.

Mr. Rieger reviewed some of the educational programs that were implemented in the past year including an anti-epileptic drug quick reference card, a manual for epilepsy care aimed at the VA general neurologist and primary care physician, and the nursing work group video on EMU safety. In addition patient directed education with quick notes was introduced. Lastly a series of videos of patients explaining their condition is being rolled out and entitled “Epilepsy Basic Training”.

Research in the epilepsy centers continues and includes Merit review funding and collaborative funding for evaluation of Veterans with Epilepsy and Psychogenic Non-epileptic Seizures (PNES) and HSR& D funding evaluating the impact of the ECoEs (MJ Pugh’s RECORD grant).

Goals for the next fiscal year 2015 included clinical goals of training and offering cognitive behavioral therapy for patients with psychogenic non-epileptic seizures in all four regions, evaluate patient safety in EMUs, growing telehealth care, evaluating pharmacy databases to understand clinically important drug interactions with anti-epileptic drugs, and developing the ability to provide Veterans with new treatment technologies (Neuropace and Visualase).

Research goals included assessment of mental health care for patients with epilepsy, establishment of a EMU database registry, continued collaborative research including a letter of intent to evaluate cognitive behavioral therapy for PNES.

Educational goals are to provide CME credit for providers regarding epilepsy evaluation and treatment, development of an advanced nursing curriculum, and producing videos for patients regarding epilepsy and the challenges of living with epilepsy.

Outreach goals include continuing to grow the hub and spokes model of epilepsy care including increasing consortium members and providing SCAN-ECHO sessions for referring centers, enhancing the use of e-consultations, and disseminating best practice guidelines to primary care and general neurologists.

Overall the Board members whom widely represent the neurology and epilepsy professional groups in the United States were impressed by the continuing success of the ECoEs in multiple domains:

1. Ability to provide tele-health services, something that is difficult to do in the private sector in part because of re-imbursement issues.
2. The development of the CPRS which will be a great addition to the VA’s ability to administer state of the art care for individuals with epilepsy or who are at high risk for developing epilepsy after TBI and may also be extended to the private sector. Dr. Labiner is interested in partnering with the CPRS data base that includes the NIH common elements and implement the data base structure for the National Association of Epilepsy Centers.
3. The Board also was impressed by the ECoEs attention to mental health and treatment for PNES.
4. The Board was greatly impressed by the manual for epilepsy care created by multiple members of the ECoEs. This is essentially a modern “textbook” of epilepsy care for neurologists and general physicians that hopefully will be widely distributed within the VA system.

The main suggestion was to create a short list of successes that can be used to highlight the ECoEs and help to maintain and grow the centers. Continued interaction with the polytrauma centers and evaluation of traumatic brain injury, post-traumatic stress disorder, and epilepsy as co-morbidities was recommended. The Board was also concerned that the ECoEs develop a stronger support system within VA Central Office in order to both disseminate the positive accomplishments and receive support for ongoing goals and initiatives.

Overall the ECoEs appear to be exceeding the expected overall goals of the VA to provide excellent care, be Veteran-centric and innovative, and strive for the highest quality in the evaluation and treatment of veterans with epilepsy.

Respectively submitted by:

A handwritten signature in cursive script that reads "Marc A. Dichter".

Marc A. Dichter, MD, PhD
Chairman, VA Epilepsy Centers of Excellence National Advisory Board
Professor of Neurology and Pharmacology
Former Director of the Mahoney Institute of Neuroscience
Former Director, Penn Epilepsy Center
University of Pennsylvania Perelman School of Medicine

NORTHEAST ADVISORY COMMITTEE

December 15, 2014

Attendees:

Advisory Members

Richard Mattson, MD
Christopher Bever, MD, MBA
William "Joel" Culpepper, PhD
Jennifer Pritchard, MD
Glenn Graham, MD, PhD
S. Marc Testa, PhD

ECoE Attendees

Allan Krumholz, MD	Lania Cooper, RN
Alan Towne, MD, MPH	Regina McGuire, NP
Hamada Hamid, DO	Arif Kabir, MD
George Gregoire	Elizabeth Barry, MD
Huned Patwa, MD	Ryan Rieger, MHPA
Heather Hodges, RN	Karen Parko, MD
Linda Benson, MPH	
Andrew David, MS, MHSA	

Comments of the Northeast Advisory Committee

The Advisory Committee wishes to compliment the ECoE on the great progress that has been made in the relatively short time frame since the founding of the ECoE. The Committee also wishes to compliment Dr. Karen Parko on the work she has done leading the ECoE and compliment her on her recent American Epilepsy Society Service Award (along with Dr. Robert Ruff).

Clinical Recommendations

1. Facility Outreach

The ECoE has done a great job recruiting members to the ECoE Consortium. The presentation did not contain information on how the ECoE continues to network with the consortium members and what value the consortium memberships brings to the constituents. The Committee encourages the ECoE to reach out to the consortium sites & clinicians in a meaningful way, providing clinical and educational resources and helping to broker relationships between VA Medical Centers in need of clinical resources and those with the necessary resources.

2. Home Telehealth

ECoE has worked hard to establish telehealth from the VA Medical Centers to Community Based Outpatient Clinics and other VA Medical Centers. The Committee encourages the ECoE to establish explicit outlines on what patients and types of visits are appropriate for clinical video telehealth visits and begin rolling out telehealth programs that reach out to the Veterans' homes. Due to the co-morbidities and travel issues associated with epilepsy, this type of service would be of great benefit to epilepsy patients.

3. Program Growth

Following in the recommendations of (1) facility outreach and (2) home telehealth, the Committee recommends that the ECoE look into methods to grow their portfolio of services. Some sites look to have reached their maximum clinic load possible under current resources, and the Committee would like them to investigate what their growth potential is, what their resource needs are, and what non-traditional methods can be used to expand their program. The Committee would specifically like to see the ECoE expand their telehealth offerings, both in variety of services available and the overall workload of existing services.

4. Tele-EEG

The Committee recognizes the work that Richmond has done to roll-out Tele-EEG in their portion of the region. The Committee encourages all sites begin to work on Tele-EEG, following the lessons learned and best practices from Richmond.

5. EMU Diagnosis Database

The large "inconclusive" group could be misconstrued to mean that EMU is not a useful diagnostic test. A way to further break this group out could be to include "probably non-epileptic," "no attack recorded," "probable epilepsy," etc. While the committee understands that the diagnostic grouping criteria are fairly strict, that may not translate well to people outside of epilepsy and/or healthcare.

Research

1. Collaborative Studies

As the chair of the Clinical Research Workgroup, the Committee encourages Dr. Alan Towne to work on bringing together research studies that take advantage of the ECoE network. Specifically, a prospective cooperative study on Post-Traumatic Epilepsy would take advantage of the existing infrastructure (ECoE network, TBI clinics, VA network, DoD records), and be highly unique.

2. Epilepsy Home Automated Telemanagement (HAT)

While Epilepsy HAT was mentioned briefly, the Committee would like to know more about the specific outcomes of the E-HAT project. This type of asynchronous telehealth is very valuable and could greatly contribute to clinical recommendation number three, program growth. It is understood that the project is closed out, along with previous recommendations, the committee strongly recommend that the ECoE work on growing their program through new and innovative telehealth and education modalities.

NORTHWEST ADVISORY COMMITTEE



School of Medicine
and Public Health

UNIVERSITY OF WISCONSIN-MADISON

Department of Neurology

January 15, 2015

To: Paul Rutecki, MD

From: Bruce Hermann, PhD (ECoE Advisory Board)

Re: Review of Northwest ECoE Progress for 2014

The ECoE Advisory Board convened by phone on September 3rd, 2014 and reviewed progress on the FY14 goals in the area of clinical service, research and educational activities. Participating in the conference call were Paul Rutecki, NW Regional Director (Madison site); Amy Childers, NW Regional Administrative Officer (Madison site); Ronda Tschumper, EEG Technologist Workgroup Chair (Madison site); William Spain, Seattle Director; Martin Salinsky, Portland Director; Elizabeth Cooper, Portland Administrative Assistant; Stephen Holloway, Minneapolis Director; Laura Schuller, Minneapolis NP, and members of the ECoE Advisory Panel (Bruce Hermann, PhD, Ilo Leppick, MD, Vicki Kopplin).

The Advisory Group reviewed the FY14 goals with the ECoE. Summarized below is the progress and advances toward the clinical, research and educational goals.

Clinical

- **Expand tele-EEG (remote EEG acquisition) to several additional VAMCs (Spokane, Walla Walla, Anchorage) as part of the VISN 20 pilot project. Scheduled for Q1-2 2014.**

This has continued to grow in FY14 as proposed, but full progress has been limited due to the fact that the VISN 20 project was only temporarily funded (for the past fiscal year). Successful completion of this goal will remain dependent on the nature and degree of funding for the VISN 20 project.

- **Expand Telehealth and e-consult services to all sites.**

This goal has been met. All sites now have established Telehealth for epilepsy in place. Electronic consults are now offered to consortium members, this service resulting in significantly improved access to specialty epilepsy care.

- **Develop partnership with the neuropsychology service at the VA Puget Sound in order to establish treatment for patients with psychogenic nonepileptic seizures.**

Initiation of this partnership and service has been slowed by limited funding, but while delayed it will be operational in FY15.

- **Implement the CITRIX server for the Madison ECoE.**

This goal has been met, but altered by the fact that the VA is no longer supporting CITRIX networking, now supported by remote desk top access.

- **In Minneapolis, hire a neuropsychologist and an epileptologist who will be assigned to the ECoE.**

This overall goal has been affected by the hiring freeze. However, the neuropsychologist was hired before the freeze but the epileptologist position remains vacant until the hiring freeze is lifted.

- **Establish an employment training program for Veterans with Epilepsy in collaboration with the local Epilepsy Advocacy and Employment Group, Inc. which is based in Minneapolis**
This was not accomplished in FY14 but has retained as a goal for FY 15. In part, progress is dependent on the Minnesota Epilepsy Foundation developing the program.

Education

- **Organize a regular SCAN-ECHO program throughout the Northwest region.**
This goal has been met as the SCAN-ECHO program has been established throughout the Northwest region program and is successful.
- **Create a new educational information program regarding epilepsy co-morbidities for patients and families.**
This goal has been essentially achieved as the program has been developed but with plans for initiation in FY 15.

Research

- **Submit a VA ECoE multicenter grant focused on TBI and Psychogenic Seizures (Salinsky).**
This goal has been altered and strengthened. After critical review, the proposed project has evolved into a clinical trial format that will compare the efficacy of cognitive-behavioral therapy vs. standard care for psychogenic non-epileptic seizures. When completed, the results of this project will provide information of important clinical value in treating this complicated patient group.

SUMMARY AND CONCLUSIONS

Overall, the Advisory Panel was extremely pleased with the Northwest ECoE's achievements in regard to their FY14 clinical, research and educational goals. It is clear that major progress has been achieved in providing timely comprehensive care to veterans with known or suspected epilepsy, expanding the treatment team to include pertinent specialties (e.g., neuropsychology), improving access to specialty services through telemedicine, creating novel educational services for other care providers and patients and families, and expanding the research portfolio in a fashion that will improve and enhance care to veterans presenting for specialty care.

There remain barriers to further progress that are intrinsic to the VA system (e.g., hiring freeze) for which the ECoE has no control. We would urge the Central Office to address these barriers as they prevent the ability of the Northwest ECoE to provide additional specialized services to veterans with this complicated neurological disorder.

Respectfully submitted,



PUBLIC LAW S. 2162

One Hundred Tenth Congress of the United States of America

AT THE SECOND SESSION

Begun and held at the City of Washington on Thursday, the third day of January, two thousand and eight

An Act

To improve the treatment and services provided by the Department of Veterans Affairs to Veterans with post-traumatic stress disorder and substance use disorders, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

TITLE IV—HEALTH CARE MATTERS

Sec. 404. Epilepsy Centers of Excellence.

(a) In General.—Subchapter II of chapter 73 is amended by adding at the end following new section:

‘§ 7330A. Epilepsy centers of excellence

(a) ESTABLISHMENT OF CENTERS.—

(1) Not later than 120 days after the date of the enactment of the Veterans’ Mental Health and Other Care Improvements Act of 2008, the Secretary shall designate at least four but not more than six Department health care facilities as locations for epilepsy centers of excellence for the Department.

(2) Of the facilities designated under paragraph (1), not less than two shall be centers designated under section 7327 of this title.

(3) Of the facilities designated under paragraph (1), not less than two shall be facilities that are not centers designated under section 7327 of this title.

(4) Subject to the availability of appropriations for such purpose, the Secretary shall establish and operate an epilepsy center of excellence at each location designated under paragraph (1).

(b) DESIGNATION OF FACILITIES.—

(1) In designating locations for epilepsy centers of excellence under subsection (a), the Secretary shall solicit proposals from Department health care facilities seeking designation as a location for an epilepsy center of excellence.

(2) The Secretary may not designate a facility as a location for an epilepsy center of excellence under subsection (a) unless the peer review panel established under subsection (c) has determined under that subsection that the proposal submitted by such facility seeking designation as a location for an epilepsy center of excellence is among those proposals that meet the highest competitive standards of scientific and clinical merit.

(3) In choosing from among the facilities meeting the requirements of paragraph (2), the Secretary shall also consider appropriate geographic distribution when designating the epilepsy centers of excellence under subsection (a).

(c) PEER REVIEW PANEL.—

(1) The Under Secretary for Health shall establish a peer review panel to assess the scientific and clinical merit of proposals that are submitted to the Secretary S. 2162—18 for the designation of epilepsy centers of excellence under this section.

(A) The membership of the peer review panel shall consist of experts on epilepsy, including post-traumatic epilepsy.

(B) Members of the peer review panel shall serve for a period of no longer than two years, except as specified in subparagraph(C).

(C) Of the members first appointed to the panel, one half shall be appointed for a period of three years and one half shall be appointed for a period of two years, as designated by the Under Secretary at the time of appointment.

(3) The peer review panel shall review each proposal submitted to the panel by the Under Secretary for Health and shall submit its views on the relative scientific and clinical merit of each such proposal to the Under Secretary.

(4) The peer review panel shall, in conjunction with the national coordinator designated under subsection (e), conduct regular evaluations of each epilepsy center of excellence established and operated under subsection (a) to ensure compliance with the requirements of this section.

(5) The peer review panel shall not be subject to the Federal Advisory Committee Act.

(d) EPILEPSY CENTER OF EXCELLENCE DEFINED.—

In this section, the term ‘epilepsy center of excellence’ means a health care facility that has (or in the foreseeable future can develop) the necessary capacity to function as a center of excellence in research, education, and clinical care activities in the diagnosis and treatment of epilepsy and has (or may reasonably be anticipated to develop) each of the following:

(1) An affiliation with an accredited medical school that provides education and training in neurology, including an arrangement with such school under which medical residents receive education and training in the diagnosis and treatment of epilepsy (including neurosurgery).

(2) The ability to attract the participation of scientists who are capable of ingenuity and creativity in health care research efforts.

(3) An advisory committee composed of Veterans an appropriate health care and research representatives of the facility and of the affiliated school or schools to advise the directors of such facility and such center on policy matters pertaining to the activities of the center during the period of the operation of such center.

(4) The capability to conduct effectively evaluations of the activities of such center.

(5) The capability to assist in the expansion of the Department’s use of information systems and databases to improve the quality and delivery of care for Veterans enrolled within the Department’s health care system.

(6) The capability to assist in the expansion of the Department telehealth program to develop, transmit, monitor, and review neurological diagnostic tests.

(7) The ability to perform epilepsy research, education, and clinical care activities in collaboration with Department medical facilities that have centers for research, education, and clinical care activities on complex multi-trauma associated S. 2162—19 with combat injuries established under section 7327 of this title.

(e) NATIONAL COORDINATOR FOR EPILEPSY PROGRAMS.—

(1) To assist the Secretary and the Under Secretary for Health in carrying out this section, the Secretary shall designate an individual in the Veterans Health Administration to act as a national coordinator for epilepsy programs of the Veterans Health Administration.

(2) The duties of the national coordinator for epilepsy programs shall include the following:

(A) To supervise the operation of the centers established pursuant to this section.

(B) To coordinate and support the national consortium of providers with interest in treating epilepsy at Department health care facilities lacking such centers in order to ensure better access to state-of-the-art diagnosis, research, clinical care, and education for traumatic brain injury and epilepsy throughout the health care system of the Department.

(C) To conduct, in conjunction with the peer review panel established under subsection (c), regular evaluations of the epilepsy centers of excellence to ensure compliance with the requirements of this section.

(D) To coordinate (as part of an integrated national system) education, clinical care, and research activities within all facilities with an epilepsy center of excellence.

(E) To develop jointly a national consortium of providers with interest in treating epilepsy at Department health care facilities lacking an epilepsy center of excellence in order to ensure better access to state-of-the-art diagnosis, research, clinical care, and education for traumatic brain injury and epilepsy throughout the health care system of the Department. Such consortium should include a designated epilepsy referral clinic in each Veterans Integrated Service Network.

(3) In carrying out duties under this subsection, the national coordinator for epilepsy programs shall report to the official of the Veterans Health Administration responsible for neurology.

(f) AUTHORIZATION OF APPROPRIATIONS.—

(1) There are authorized to be appropriated \$6,000,000 for each of fiscal years 2009 through 2013 for the support of the clinical care, research, and education activities of the epilepsy centers of excellence established and operated pursuant to subsection (a)(2).

(2) There are authorized to be appropriated for each fiscal year after fiscal year 2013 such sums as may be necessary for the support of the clinical care, research, and education activities of the epilepsy centers of excellence established and operated pursuant to subsection (a)(2).

(3) The Secretary shall ensure that funds for such centers are designated for the first three years of operation as a special purpose program for which funds are not allocated through the Veterans Equitable Resource Allocation system.

(4) In addition to amounts authorized to be appropriated under paragraphs (1) and (2) for a fiscal year, the Under Secretary for Health shall allocate to such centers from other funds appropriated generally for the Department medical services account and medical and prosthetics research account, as appropriate, such amounts as the Under Secretary for Health determines appropriate.

(5) In addition to amounts authorized to be appropriated under paragraphs (1) and (2) for a fiscal year, there are authorized to S. 2162—20 be appropriated such sums as may be necessary to fund the national coordinator established by subsection (e).”.

(b) CLERICAL AMENDMENT.—The table of sections at the beginning of chapter 73 is amended by inserting after the item relating to section 7330 the following new item: “7330A. Epilepsy centers of excellence.”