

GERIATRIC RESEARCH, EDUCATION AND CLINICAL CENTER

Annual Report: Fiscal Year 2007

Part II: Accomplishments

NOTE: The **GRECC Annual Report** reflects status and accomplishments of **GRECC Core Staff** * (as defined below) only. The **“Report Year”** is from October 1, 2006 through September 30, 2007.

You are welcome to use this report format for your own internal reporting purposes, in which case you may exceed the recommended limits of numbers of responses and their length (“list no more than...” “Describe the three most important...” “limit your response to five lines or fewer”)

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Please limit to ten pages or fewer the version SUBMITTED TO VACO.

***GRECC Core Staff** is limited to either **Primary Core**, **Affiliated Core**, or **Research Core**:

- **Primary Core** = positions authorized by the original GRECC allocation plus any addition in ceiling from VA Central Office specifically designated for GRECC.
- **Affiliated Core** = Staff who work full- or part-time in direct support of the GRECC’s research, education or clinical activity.
 - May be either “contributed” by the VA Medical Center or
 - May have been acquired through centralized enhancements/awards for programs (e.g., Home-Based Primary Care, Geriatric Evaluation and Management Program, etc.)
 - To be considered Affiliated Core, staff must be organizationally aligned under the GRECC or specifically identified by the Medical Center as **“GRECC-affiliated staff.”**
- **Research Core** = Full-or part-time staff who devote 51% or more of their total time to GRECC research and whose salaries are supported by research funds (either VA or non-VA). Includes all GRECC staff whose salaries are paid from research funds, e.g.:
 - Associate Investigator
 - Assistant Research Scientist
 - Senior Research Career Scientist
 - Research Career Scientist
 - Advanced Research Career Scientist

IMPORTANT: Throughout this report, please **AVOID/MINIMIZE JARGON**. Each response is much more likely to be included in secondary communications derived from the Annual Reports if it can be readily understood by a non-technical readership.

1. GRECC NAME/LOCATION

- a. **GRECC Name:** SLC GRECC
- b. **Location** (*Salt lake City, VISN*): VASLCHCS, UT, VISN 19

2. CONTACT PERSON

- a. **Name:** Charlene R. Weir, Ph.D.
- b. **Position:** Associate Director Education and Evaluation, GRECC
- c. **Phone:** 801-582-1565, ext 5114
- d. **e-mail:** Charlene.weir@med.va.gov

3. GRECC FOCUS AREA(S)

NOTE: Please succinctly list your GRECC's Focus Area(s), one per line below. After each focus area listed, please indicate with a check mark (✓) which of the research type(s) suitably describes the work conducted (including planning, implementation, analysis, and dissemination/publication) within that focus during the Report Year. Add additional lines by positioning your cursor at the lower right side of the table and striking the "Tab" key.

GRECC Focus Area	Research Type				
	Basic Biomedical	Applied Clinical	Health Services	Rehabilitation	
Altered inflammatory status in peripheral tissues and in the brain	X				
Emphasis on interactions among cholinergic systems, inflammatory cytokine systems and anti-inflammatory modalities	X				
Patient-oriented studies to determine neuro-humoral and genetic characteristics of geriatric hypertension and contributors to vascular stiffness		X			
Testing interventions to improve outcomes			X		
Acquiring new knowledge about care and disease processes			X		
Medical informatics and computerized clinical systems with respect to decision support tools and collection of data for surveillance, analysis, and program evaluation.			X		
Effects of exercise and aging on vascular blood flow regulation		X			

4. ADMINISTRATION

a. **GRECC Impact on Host VAMC in Report Year:** *list the most important ways in which the GRECC has had specific impact on host VAMC's research, staff education, program evaluation, or clinical care improvements for elderly veterans (i.e., how the GRECC has "made a difference" in these areas within the entire host VAMC) during the Report Year. Please limit your response to 5 or fewer "ways"; and please limit your description of each of the five "ways" to five lines or fewer.*

- **Care Coordination Telemedicine Systems:** GRECC was instrumental in the successful application of a VISN 19 grant to implement a Care Coordination system at the local station. This clinical demonstration has been successful to the point of adoption by the VISN and local station. The care coordination system uses CPRS to identify high resource utilization patients for enrollment. There is an average daily census of approximately 400 high-risk patients who receive coordinated care utilizing numerous methods.
- **Poly-pharmacy Telemedicine:** Most telemedicine tracking systems focus on single disease entities, while most veterans have multiple simultaneous disease processes. The poly-pharmacy module of care coordination allows tracking symptoms and pharmacy issues regardless of specific diagnoses. Patients are targeted based on previous high resource utilization. In addition to tracking symptoms and pharmacy, pharmaco-economic issues are addressed, such as redundant medications and refilling of discontinued medications. We presented some of these data at the plenary session of the American Geriatric Society meeting in Seattle this year.
- **MOVE! Program:** The GRECC has been highly instrumental in creating, implementing, and evaluating the MOVE! Obesity and Exercise Program at VASLCHCS. GRECC staff assisted in the development and testing of key program quality indicators to monitor the Program as well as analyzing the results for a presentation to a national MOVE! conference in September, 2007. In addition, SLC GRECC staff took the lead in organizing a literature review on issues of providing

MOVE! to patients over the age of 75.

- **FALLS Program:** GRECC staff participate in the Falls Committee, a patient safety program charged with evaluating the incidence and causes of falls every quarter. The ADEE for GRECC leads the evaluation activities of the committee, which are reported to both Medical Center and VISN leadership. In addition, she assists in the design and implementation of educational programs targeted at nursing and physician staff.

b. **GRECC Impact on VISN in the Report Year:** *list the most important ways in which the GRECC has had specific impact on the host VISN's research, staff education, program evaluation, or clinical care improvements for elderly veterans (i.e., how the GRECC has "made a difference" in these areas within the entire host VISN) during the rating period. **Please limit your response to 5 or fewer "ways"; limit your description of each of the five "ways" to five lines or fewer.***

- **VISN Education Committee:** The SLC GRECC actively participates in the VISN 19 Education Committee. This committee establishes priorities for education initiatives within VISN 19, identifies educational implications of the VISN strategic plan and provides feedback to VISN leadership regarding educational issues. GRECC participates in geriatric educational needs assessments and advises on geriatric related educational programs.
- **Rocky Mountain Geriatric Conference:** The 5th Annual Rocky Mountain Geriatric Conference was held September 7-9th in Keystone, CO. It was advertised widely throughout VISN 19. Eighty-four physicians, nurses, psychologists and social workers attended. One third (27) the attendees were from the VA. Evaluations were very positive.
- **AGE QI (AGE Quality Improvement):** The Division of Geriatrics and the SLC GRECC collaborated on an educational intervention funded by DW Reynolds to improve geriatric care in the community setting. Primary care clinics from VISN 19, as well as the University of Utah and the Intermountain Health Care are being targeted for a six-month intervention that starts with a 2-hour educational session, followed by a 1-hour quality improvement seminar and 5 months weekly support. Community based outpatient clinics in Ogden (north of SLC) and St. George (south of SLC) have been enrolled to date.

c. **GRECC Trend-Setting Innovations since October 1, 2002:** *list the most significant GRECC research, education or clinical innovations in the past five years. For each item, provide date or date range, GRECC core staff responsible, and a description. **Please limit your response to 5 or fewer innovations; and limit each of the five innovation descriptions to five lines or fewer.***

- **Targeted Research Enhancement Program (TREP).** The TREP program application was initiated by John Hurdle, Ph.D and Jonathan Nebeker, MD, as co-PIs with collaboration from Charlene Weir, PhD, Jennifer Hoffman, PharmD, and Byron Bair, MD. The name for the TREP is *IDEAS* (Informatics, Decision Enhancement, and Surveillance) and the current director is Matt Samore, MD. *IDEAS* has energized Health Services Research both in the GRECC as well as in SLC VAMC in general. It has also strengthened the relationship between the University of Utah and the VA by increasing collaboration and research interactions.
- **AGE QI Curriculum.** The GRECC has collaborated with the University of Utah Division of Geriatrics with the support of a DW Reynolds Grant to develop a comprehensive curriculum to enhance geriatric care in the primary care setting. The curriculum focuses on implementing geriatric assessment and interventions through a QI process with the support of the Reynolds team. Each clinic receives a 2-hour educational session, followed one-month later by a 1-hour quality improvement seminar. Finally, the Reynolds team interacts regularly with each clinic group for the next 6 months to provide support in data analysis, implementation and evaluation.

- **The Collaborative Dementia Treatment Monitoring Clinic**. This new clinic was designed and implemented by the SLC GRECC and was created to improve the quality of care for veterans with dementia. The focus of the clinic is to reduce the use of ineffectual and expensive medication by implementing collaboration of care protocols similar to the Coumadin clinic model. In this model, patients will be followed by a non-MD, specifically a PharmD, in collaboration with the Primary Care Provider and in consultation with geriatricians from the GRECC. Initial enrollment will focus on the 756 veterans currently being treated with anti-dementia medications. Evaluation will consist of assessing clinically significant effects of anti-dementia drugs using the Clinical Impression of Global Change Plus Care Giver Input (CIBIC Plus) tool as well as measuring the overall cost of drugs.
- **G-HELP**: The Geriatric High-risk Evaluation and Liaison Program was developed and implemented by SLC GRECC and is now a component of regular care at the SLC VAMC. G-HELP targets frail older adults in transition using previous patterns of high resource utilization from administrative data. The team identifies patients in the hospital, emergency room, and clinic settings and provides a multidisciplinary evaluation within 72 hours of referral prior to discharge. Targeted areas for evaluation include pharmacy, specific education concerning medical conditions, decision-making capacity, and home safety. Evaluated patients receive various types of care coordinating services. G-HELP was initiated by Dr. Byron Bair with the assistance of Carol Hughes, NP and James Brandy, SW.

5. RESEARCH

a. **Key Findings Published in the Report Year on projects for which GRECC Core Staff was PI or Co-PI:** *List five or fewer; for each item provide GRECC Core Staff name(s), journal reference, and description of topic/ method/results/clinical significance. Please limit each response to 5 lines or fewer.*

1. **Key Finding**: The first direct evidence for intramuscular free radical accumulation and lipid peroxidation following acute exercise in humans was established in this study by Dr. Richardson's lab. Their research examined the effect of acute exercise on free radical formation in human skeletal muscle. Vastus lateralis biopsies were obtained in a randomized balanced order from six males at rest and following single-leg knee extensor exercise performed for 2 min at 50% of maximal work rate (WR(MAX)) and 3 min at 100% WR(MAX). EPR spectroscopy revealed an exercise-induced increase in mitochondrial ubiquinone.

GRECC Core Staff: Richardson, RS (P.I.)

Publications: Bailey, D.M., L. Lawrenson, J. Mceneny, I.S. Young, P.E. James, S.K. Jackson, R. Henry, O. Mathieu-Costello, J. McCord and R.S. **Richardson** (2007) Electron paramagnetic spectroscopic evidence of exercise-induced free radical accumulation in human skeletal muscle Free Radical Research 41: 182-190.

2. **Key Finding**: Free radicals may not always have a negative effect on metabolism. This study demonstrates that necessary vasodilatation with exercise was diminished with high dose of antioxidants. These results suggest that free radicals have a positive role in maintaining effective blood supply.

GRECC Core Staff: Richardson, RS (P.I.)

Publications: Richardson, RS, Donato, AJ, Uberoi, A, Wray, DW, Lawrenson, L, Nishiyama, S, Bailey, DM. (2007). Exercise-induced brachial artery vasodilatation: role of free radicals. Am J Physiol Heart Circ. 292(3):H1516-22.

3. **Key Finding**: The receptors that respond to drugs used to treat Alzheimers are known as *neuronal nicotinic acetylcholine receptors* (nAChR). These authors have demonstrated earlier that there is a genetic component of the response of these receptors to the drugs used to treat Alzheimers. In this

set of studies of inbred mouse strains, we found that neurons with a high susceptibility to the effects of nicotine were more likely to be lost in early stages of age-related dementia. This demonstrates that the mouse model can be used to dissect the underlying genetic contribution towards traits that individualize rates of aging and susceptibility to addiction.

GRECC Core Staff: Gahring, L.C. and S.W. Rogers (PI)

Publications: Gahring, L.C. and S.W. Rogers. (2007). Nicotinic acetylcholine receptor expression in the hippocampus of 27 mouse strains reveals novel inhibitory circuitry. *Hippocampus* (in press).

4. **Key Finding:** Computerized Provider Order Entry (CPOE) with electronic documentation, and computerized decision support has dramatically changed the information environment of the practicing clinician. Prior work patterns based on paper, verbal exchange and manual methods are replaced with automated, computerized and potentially less flexible systems. These changes have the potential for increasing error and decreasing the efficiency and quality of care, especially for at-risk, complicated patients. In this qualitative study of how primary care clinicians have adapted to the computerized environment, key decision-making strategies using the VA's CPOE system was identified.

GRECC Core Staff: Weir, C (PI) and Nebeker, J.

Publications: Weir, C, Hicken, BL, Nebeker, J, Campo, R, Drews, F and LeBar, B (2007). A cognitive tasks analysis of information management strategies in a computerized provider order entry environment. *J Am Med Inform Assoc.*, January-February; 14(1):65-75.

5. **Key Finding:** This is the first application of hierarchically optimal classification tree analysis to a claims database to investigate adverse drug events. The investigators analyzed a table approximately 4000 rows by 4000 columns with most of the cells being empty. Using this technique they developed jackknife- and bootstrap-stable models that predicted drug-induced delirium and drug-induced bleeding. This is a novel and rapid approach for developing safety indicators such as adverse drug events.

GRECC Core Staff Co-PI: Nebeker, JR

Publications: Nebeker JR, Yarnold PR, Soltysik R, Xu W. Developing Indicators of Adverse Drug Events via Non-Linear Analysis of Administrative Data. HSR&D Annual Meeting, Feb 21, 2007, Arlington, VA.

- d. **Key Findings Published in the Report Year on work in which GRECC Core Staff served as Co-Investigators to a Non-GRECC PI:** List five or fewer; for each item provide GRECC Core Staff name(s), journal reference, and description of topic/method/results/clinical significance. Please limit each response to 5 lines or fewer.

1. **Key Finding:** The Food and Drug Administration (FDA) and pharmaceutical manufacturers do most post-marketing pharmaceutical safety investigations using data mining methods. This approach was found to have limited validity as compared with the methods used by the "Research on Adverse Drug Event reporting (RADAR)" project. These authors found that proactive safety efforts conducted by RADAR investigators were more comprehensive than those conducted by the FDA, but resulted in less timely notifications.

GRECC Core Staff Co-PI: Nebeker, J

Publications: Bennett CL, Nebeker JR, Yarnold PR, Tigue CC, Dorr DA, McKoy JM, Edwards BJ, Hurdle JF, West DP, Lau DT, Angelotta C, Weitzman SA, Belknap SM, Djulbegovic B, Tallman MS, Kuzel TM, Benson AB, Evens A, Trifilio SM, Courtney DM, Raisch DW. (2007) Evaluation of serious adverse drug reactions: A proactive pharmaco-vigilance program (RADAR) vs safety activities conducted by the food and drug administration and pharmaceutical manufacturers. *Archives of Internal Medicine*. 167 (10): 1041-9.

2. **Key Finding:** Daclizumab, an interleukin 2 receptor alpha chain humanized monoclonal antibody, was found to be effective in treating active multiple sclerosis (MS). Daclizumab reduced contrast-enhancing lesions and improved clinical scores in patients with relapsing and remitting multiple sclerosis (MS) with active disease not controlled by interferon therapy. This result is a promising new finding for treating active MS.

GRECC Core Staff Co-PI: Carlson, N

Publications: Rose, JW, Burns, JB, Bjorklund, J, Klein, J, Watt, HE, and **Carlson**, NG. (2007). Daclizumab phase II trial in relapsing and remitting multiple sclerosis: MRI and clinical results. Neurology. Aug 21;69(8):785-9.

3. **Key Finding:** Computerized protocols vary in the degree to which they are prescriptive, detailed and multi-disciplinary. Implementing these guidelines may be difficult because of the large impact they have on clinical processes, interdisciplinary collaboration and role responsibilities. However, these highly detailed and prescriptive protocols have been shown to be more successful in impacting patient outcomes, especially patients with complicated and acute problems, than the more generally used guidelines. In this study, factors associated with adoption of guidelines associated with fluid management in hospitalized patients were examined. Changes in role responsibilities, efficacy and communication were identified as key factors in adoption.

GRECC Core Staff Co-PI: Weir, CR

Publications: Phansalkar, S, **Weir**, CR, Morris, A, Warner, H. (April, 2007). Clinicians' perceptions about use of computerized protocols: A multi-center study. International Journal of Medical Informatics. (Epub ahead of print).

4. **Key Finding:** Maximal strength training may have a therapeutic role in the treatment of COPD. A diminished mechanical efficiency (work/O₂ consumed) accompanies chronic obstructive pulmonary disease (COPD), and increased mechanical efficiency has been attained by maximal strength training (MST) with an emphasis on the maximal rate of force mobilization in the concentric phase in healthy subjects. Our study combined these observations and evaluated the impact of short-term MST on patients with COPD. Neither group changed either peak oxygen consumption (VO₂peak) or body mass. In combination with the observed improvement in FEV₁, these data certainly support the therapeutic role for MST in the treatment of COPD.

GRECC Core Staff Co-PI: Richardson, RS

Publications: Hoff, J., A.E. Tjonna, S. Steinshamn, M. Hoydal, R.S. **Richardson**, and J. Helgerud (2007) Maximal strength training of the legs in COPD: a therapy for mechanical inefficiency Med. Sci. Sports Exerc. 39: 220-26.

6. EDUCATION

NOTE: DO NOT list trainee and conference data here—report them in the GRECC Electronic Database.

NOTE: You may list educational activities here even if they were supported by funds that qualified for inclusion in the ePROMISE (RDIS) database if you wish.

- a. **Innovations in Educational Activities Implemented during the Report Year** (list five or fewer. Please limit each item to 5 lines or fewer and include clarification of how each activity is innovative.)

1. **AGE QI.** The GRECC collaborated with the Division of Geriatrics at the University of Utah to develop geriatric curriculum targeted at practicing physicians in the ambulatory setting. Curriculum development was funded by a grant from DW Reynolds to Dr. Mark Supiano (GRECC director). The curriculum includes geriatric assessment, medication review, end-of-life care, mental status assessment, as well as Quality Improvement material. Significant piloting was conducted to validate the content, which includes written material, a bibliography and power-point slides.

2. **Quality Improvement and Evidence-Based Practice Primary Care Curriculum**. GRECC staff has developed and implemented a weekly continuous series on QI in Primary Care targeted at Primary Care providers. The series of seminars included lectures with power-point presentations, group discussion and analyses of pilot projects. The sessions are regularly well-attended with 3-9 participants at any one setting. Current projects include implementing protocols for hypertension management and increasing Coumadin monitoring for nursing home patients.
3. **Delirium in the Hospitalized Patient**. The SLC GRECC designed new curriculum to support mandatory requirements for Nursing Staff for identification and management of patients with acute mental status changes. The program was created in a power-point format and uploaded to the VISN 19 web-based educational program and has been well-received.
4. **Keeping the Hospitalized Patient Safe**: A one-day conference on safety issues for the aging hospitalized patient was offered in September, 2007. This conference was targeted at Nursing, Social Work and other clinicians. Topics included how to develop and implement a Falls program, managing hypertension in the hospitalized elderly patient, adverse drug events in the elderly and preventing delirium.
5. **Video Streaming Grand Rounds**: The GRECC in collaboration with the Division of Geriatrics has instituted a video streaming educational program for the monthly Geriatric Grand Round presentations that provides CME to anyone who is remotely logged on. The project has just started in August, 2007, so evaluation results are not in. However, there has been substantial interest in the VISN 19 CBOCs and the project is supported by the VISN 19 Education Committee.

b. **Exportable Educational Products First Available for Distribution in Report Year** List five or fewer of the most important products. For each item, limit the response to five lines summarizing content, target audience, format, and product evaluation plan and results. **Include educational products developed in previous years ONLY if this is the first year they have been available for distribution.**

1. **Delirium Power-point Training Module**: SLC GRECC designed new curriculum this year to support mandatory requirements for Nursing Staff regarding identification and management of patients with acute mental status changes. The program was provided in a power-point presentation and uploaded to the VISN 19 web-based education module and was well-received.
2. **Video Streaming Grand Rounds**: The GRECC, in collaboration with the Division of Geriatrics, has instituted a video streaming educational for the monthly Geriatric Grand Round presentations that provides CME to anyone who is remotely logged on. The program is available nationally. The project has just started in August, 2007, so evaluation results are not in. However, there has been substantial interest in the VISN 19 CBOCs and the project is supported by the VISN 19 Education Committee.
3. **AGE QI**. The GRECC participated in development of geriatric curriculum targeted at practicing physicians in the ambulatory setting. Curriculum development was funded by a grant from DW Reynolds to Dr. Mark Supiano (GRECC director). The curriculum includes geriatric assessment, medications, end of life care, mental status, as well as Quality Improvement material. Significant piloting was conducted to validate the content, which includes written material, a bibliography and power-point slides.

c. **Educational programs offered by your GRECC during the report year that were evaluated for impact, as described in Performance Measure 7.** *Describe at least TWO, each of which had at least 25 participants: one in which the majority of participants was from your GRECC's host facility; and one in which the majority of participants were from VAs other than your GRECC's host facility. For each, describe the educational intervention briefly and then the evaluation, including in your description of*

the latter the evaluation methodology, findings, and conclusions. Limit your description of each intervention and its evaluation to one-half page.

1. **Associated Health Trainee Orientation**: This program is presented three times per year to all paid Associated Health Trainees. The program is jointly produced by the GRECC and the Chief of Staffs office and consists of orientation to interdisciplinary training, geriatric issues and concerns and introduction to quality improvement principles. The last program was held in September, 2007 with 27 attendees. Evaluation results were overwhelmingly positive, with mean approval ratings of 4.8 on a 5-point scale (with 5 being excellent) for content (4.8), presentation clarity and organization (4.7), usefulness (4.8) and overall quality (4.9). Follow-up evaluation is ongoing and consists of an e-mail sent to participants, asking them if they have found the information to be applicable to their work (3 questions on a 1 to 5 Likert scale) and open-ended comments about the program overall.
2. **Keeping the Hospitalized Patient Safe**: This conference organized and developed by GRECC staff focused on issues of keeping the aging patient safe while in the hospital. Thirty-eight attended, 27 from the local VA. All ratings from the initial evaluation of how the program compared with others and whether it met the overall objectives were both in the excellent or good category. Ratings of individual presenters were also consistently high with 90% respondents rating speakers as either excellent or good. Follow-up evaluation consists of e-mails given to participants asking if they found the program useful, examples of how it might have impacted their work and requested suggestions for improvement. Final results are pending.
3. **Rocky Mountain Geriatric Conference**: The 5th Annual Rocky Mountain Geriatric Conference was held September 7-9th in Keystone, CO. It was advertised widely throughout VISN 19. Eighty-four physicians, nurses, psychologists and social workers attended. One third (27) the attendees were from the VA. Initial evaluations were very positive. Follow-up evaluation is ongoing and consists of an e-mail sent to participants, asking them if they have found the information to be applicable to their work (3 questions on a 1 to 5 Likert scale) and open-ended comments about the program overall. Results are pending.

7. CLINICAL DEMONSTRATION PROJECTS

NOTE: *A clinical demonstration program is defined as:*

- *An ongoing, clinical, cooperative collaboration between the GRECC and host VA medical center; that carries out and evaluates assessment strategies, management approaches and/or specialized investigations of a targeted or focused group of elderly patients with the intention that findings will be disseminated for the advancement of the field.*

A clinical demonstration program is comprised of one or more clinical demonstration projects, each of which is defined as:

- *a set of one or more clinical activities*
- *integrated and coordinated under a specified protocol*
- *designed to permit evaluation(s) of processes and/or outcomes.*

Evaluation of a clinical demonstration program may be a comprehensive assessment of the activity and/or the clinical outcomes. Alternatively, evaluation may concentrate on a prioritized and feasible set of more focused or specific, project-related questions, e.g. related to improved diagnosis, quality of care, patient satisfaction, drug compliance, functional status, etc. Ongoing and subsequent modifications of the care model may also be evaluated as may be the practicability and outcomes of exporting new clinical models or variations of models to general care settings and/or smaller, more resource-limited VA medical centers or outpatient facilities.

- a. **Clinical Demonstration Projects Underway in Report Year**: *list all GRECC Clinical Demonstration Projects underway. For each item, indicate whether New or Ongoing in Report Year. You may include up to five lines of descriptive text for each Project. **NOTE:** The number of Projects*

listed should be equal to the number of Clinical Demonstration Projects you have listed and named in the GRECC Electronic Database.

1. **Poly-pharmacy Telemedicine (O)**: Most telemedicine tracking systems focus on single disease entities, while the majority of veterans have multiple simultaneous disease processes. The poly-pharmacy module of care coordination allows tracking of symptoms and pharmacy issues regardless of specific diagnoses. Patients are targeted based on previous high resource utilization. In addition to tracking symptoms and pharmacy, pharmaco-economic issues are assessed, such as redundant medications and refilling of discontinued. This innovation continues to expand and initial results are favorable.
2. **Dementia Treatment Tracking Clinic (N)**: This clinic is being implemented within the structure of the Geriatric Primary Care Clinics. It is designed to improve clinic efficiency and provide improved care to veterans with dementia. The clinic format is based on the Coumadin clinic model and PharmD's are used to track the effectiveness of FDA approved treatments for dementia in a real world setting. The VISN has provided funding for the clinic via the GRECC / VISN memorandum of understanding.

b. **Evaluation of Clinical Demonstration Projects**: *for each GRECC Clinical Demonstration Project listed in 7a above, summarize the evaluation activity. If no evaluation results are available, be explicit as to the focus of the planned evaluation, and when it is anticipated to occur. If the project has been completed during the Report Year, provide key findings and their significance..*

1. **Poly-pharmacy Telemedicine (QI)**: The poly-pharmacy clinic is being evaluated using a quality improvement design, similar to the QUERI model. Over 3000 separate symptoms and patient preferences are being tracked and linked to medication regimes. Patients enrolled in the Poly-pharmacy Telemedicine care coordination program show very high compliance with medication regimens (98%) and high increased satisfaction with their primary care provider. This demonstration is being adopted by the station and VISN and is available for national distribution.
2. **Dementia Treatment Tracking Clinic Evaluation**: Evaluation for this program focuses on appropriate care, cost and adverse events. The specific data elements to be tracked for individually enrolled veterans for the dementia treatment tracking clinic include: 1) all medication deletions and additions, 2) all changes in anti dementia medications, 3) changes in antipsychotic medications, 4) all associated medication costs, 5) prescription refills as a compliance surrogate, 6) CBIC Plus tracking scores for clinical decision making, and 7) the presence of CPRS documentation for antipsychotic use in dementia by authorized proxy.

c. **New Clinical Models developed at your GRECC that were exported in the report year** *(list up to five examples, up to two lines each; provide name of new clinical model, name of VA or non-VA facility to which it was exported, and method of export, such as "Falls Clinic protocol sent to X VAMC"):*

1. **Dementia Treatment Tracking Sheet**: This instrument is designed to assist clinicians evaluating the effectiveness of FDA dementia treatments in a busy clinical setting and has been modified and updated for enhanced clinical use. It has been exported electronically as a clinical reminder in CPRS to VISN 19 sites and is available on the SLC GRECC web site and continues to be available.
2. **Early Screen for Impaired IADL Tool**: This tool tracks functional (IADL) changes over the prior 5 years and has been recently updated. It is designed to be used in the primary care clinic waiting rooms and evaluated by the clinician during the visit. It is available on the GRECC web site and is continuously exported as a clinical reminder in CPRS.

8. CONSULTATION AND OUTREACH

NOTE: *Consultation* = GRECC staff going to sites **within host VAMC** or having those staff come to the GRECC, to assist in development of research, education or clinical programs at those sites. **Outreach** = GRECC staff going to **non-host VAMC facilities** or having those staff come to the GRECC (in person or by video or other technology) to assist in development of research, education or clinical programs at those sites.

- a. **Current Year Activity Outcomes** (list up to five examples, up to two lines each; summarize specific outcomes realized from current year **consultation**, e.g., “Host VAMC instituted a Falls Clinic after consultation from GRECC staff;” or **outreach**, e.g., X VAMC instituted a Falls Clinic after GRECC outreach via series of videoconferences):
1. **Rocky Mountain Conference.** The SLC GRECC continued a collaborative effort to host a national Geriatrics Conference in conjunction with the University of Utah and University of Colorado. Many regional and national VA sites were represented, such as Denver, Montana, and Sheridan were directly influenced via this 3-day event hosted in Keystone, CO.
 2. **MOVE! Poster at the National MOVE! and Patient Safety Conference.** The Salt Lake City GRECC directed the evaluation activities for the local MOVE program and designed a poster detailing those results. The poster was presented at a national conference attended by representatives from nearly all VAMCs.
 3. **Delirium MIND ICU Research Project:** Dr. Wes Ely from Nashville GRECC has received funding from VA Research on a grant studying delirium in ICU. SLC GRECC staff is participating in the research project and data collection.
 4. **“Tele-Health Care Management of High-Utilizing Veterans”** presentation given by Dr. Rand Rupper at the VA Health Services Research National Meeting, Washington D.C. The presentation was given as part of the plenary to the full HSR&D conference and identified practices and evaluation results of the SLC Tele-Health program.
- b. **Previous Years’ Activities Outcomes** (list up to five examples, up to two lines each; summarize specific outcomes realized from previous years’ **consultation to host VAMC** or **outreach to non-host facilities**, where results were first realized in the current year.)
1. **Comprehensive Geriatric Clinic.** The SLC GRECC consulted with the Grand Junction VA concerning the establishment of a Comprehensive Geriatric Outpatient clinic in conjunction with Denver VA in FY06. An ongoing consultation relationship was established as needed. The new Geriatric outpatient clinic is functioning well at present.
 2. **Dementia and Patient Safety.** We had continuing consultation with Sheridan VA concerning the development of the Driving and Firearms and dementia CPRS protocol. The protocol was further modified to make it easier to complete in a primary care clinic setting. The program has been postponed as of 10/1/07.
 3. **HBPC Consultation.** The Salt Lake City GRECC provided consultation concerning HBPC to the Leavenworth Kansas VA. This was a new HBPC program in Kansas and the GRECC volunteered to provide medical consultation for the new HBPC program. Consultation has continued and the new program is enrolling patients.
 4. **Delirium Research Project (MIND ICU):** The MIND ICU project is now well-underway at the SLC VAMC. Research assistants have been hired and a committee formed. Piloting and training of data collections methods have been conducted and about 5 patients enrolled.