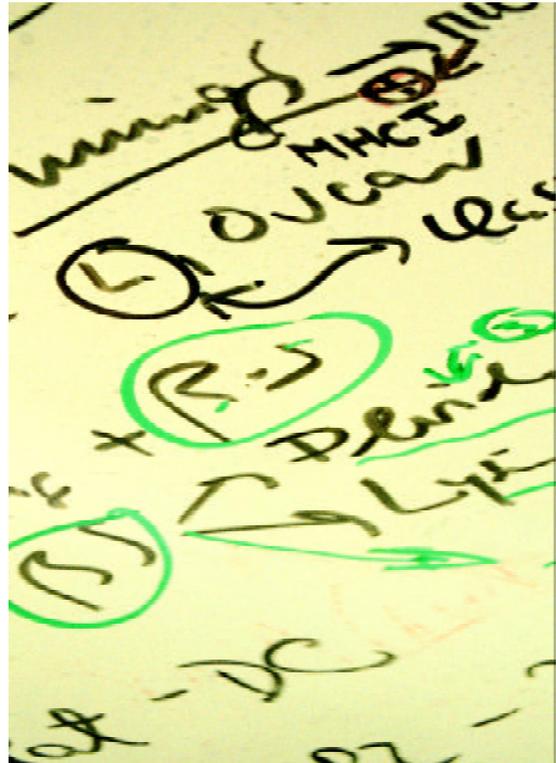


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**Translating  
Research  
Into Practice**

1998 Annual Report



**Office of Research and Development**

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## Preface

Amid sweeping transformation, VA continues to keep its sights focused on one constant and overriding goal: its mission of providing excellent health care for America's veterans. Critically important to guiding and supporting this mission is VA's research program managed by the Office of Research and Development.

The Office of Research and Development focuses on those health problems that affect veterans most, its highly successful programs spanning the entire range of biomedical, clinical, health services, rehabilitation and epidemiologic research. It also produces technology assessments on new medical treatments, devices, and techniques. VA researchers have long played key roles in developing important health care innovations, and are dedicated to keeping VA at the cutting edge of science and medicine.

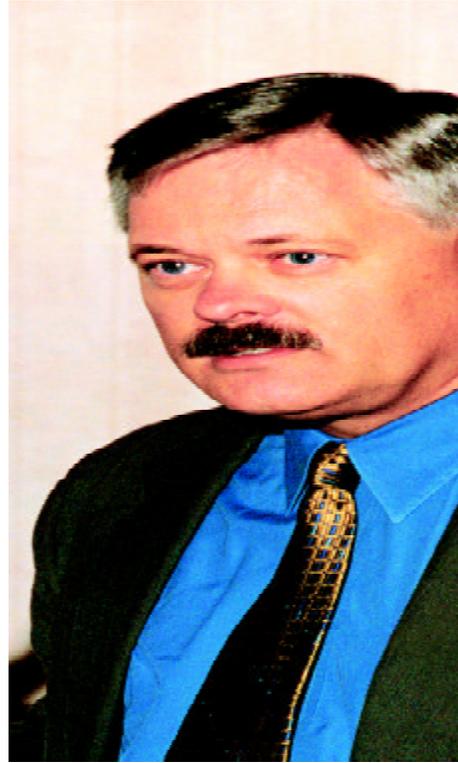
Under the leadership of Chief Research and Development Officer John R. Feussner, M.D., the VA research enterprise is strengthening its connection with patient care, so that lessons gleaned from newly acquired knowledge are quickly put into practice where they can benefit veterans.

This second annual VA research report provides an overview of the Office of Research and Development, including details of its evolving structure and highlights of its recent contributions to improving veterans' health care. More than anything, this report underscores the commitment of VA research to helping VA provide the best possible care for our patients. I am happy to share this document with you and hope you will find it a useful resource.

Kenneth W. Kizer, M.D., M.P.H.  
Under Secretary for Health

## 6 Translating Research Into Practice

*“No other research program  
in the United States has  
as much opportunity  
to directly improve  
the lives of patients  
as does the VA’s  
Office of Research and  
Development.”*



John R. Feussner, MD  
Chief Research and Development Officer

## Translating Research Into Practice

No other research program in the United States has as much opportunity to directly improve the lives of patients as does the VA's Office of Research and Development. As one of the largest integrated health care systems in the United States, the VA provides care to nearly 3.5 million veterans. Nested within this dynamic and evolving health care system, the Office of Research and Development is able to put into practice the findings of its scientific investigations and trials and observe their effects. Here, the discovery and the application of new health care knowledge go hand in hand.

Shortly after World War II the modern VA research program began with a \$1 million appropriation to fund prosthetic research, education, and training to meet the needs of amputees returning home from the battlefield. The foundation of the fledgling program was built on affiliations between VA medical centers and schools of medicine and on models of care used in academic medicine. In the late 1950s, research became embedded in VA's authorizing legislation. As a result, research increasingly became an integral part of VA medical center operations. This, in turn, nurtured the environment for excellence in patient care for America's veterans.

Today, the scope of the VA research portfolio extends from basic laboratory research on the cause, treatment, and cure for a variety of diseases, disorders, and disabilities to research on patient care management. Although the program's emphasis is on diseases and disorders that affect veterans, the results of VA research are applicable to the health of all Americans.

The mission of the VA research enterprise is "to discover knowledge and create innovations that advance the health and care of veterans and the nation." In its strategic plan, the Office of Research and Development identified a number of goals, objectives and strategies in support of this mission. Key among these are goals to:

- Sustain an environment of inquiry that is conducive to the highest quality of research, education, and patient care.
- Integrate basic, clinical, and applied research in the best way to meet the health care needs of veterans.
- Ensure that new research results reach clinical care and health system operations settings, where they can make a difference in veterans' health.

These goals reinforce VA's commitment to research as it charts a course through the dramatic changes that are reshaping health care delivery not only in VA, but also throughout the country. As the focus of VA's clinical care enterprise shifts from hospital-based services to patient-centered, ambulatory-based care, VA's research activities will play an increasingly important role in informing and effecting that transformation.

The Office of Research and Development at VA National Headquarters oversees research within VA through its four service areas:

**The Medical Research Service** provides knowledge of the fundamental biological processes to form an understanding of disease pathology, diagnosis, and treatment.

**The Cooperative Studies Program** applies the knowledge gained from medical research to patients by determining the effectiveness of novel or unproved therapies using multicenter clinical intervention trials.

**The Health Services Research and Development Service** contributes to improving the quality, effectiveness, efficiency, and accessibility of health care services for veterans.

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## Designated Research Areas

### Acute and Traumatic Injury

- *Amputation (due to injury or disease)*
- *Bone fractures and joint injuries (including repair and replacement)*
- *(Traumatic) brain injury*
- *Multi-organ failure*
- *Shock (including sepsis)*

### Military & Environmental Exposures

- *Emerging pathogens*
- *Post-traumatic stress disorder (PTSD)*
- *Psychological stress (including violence, sexual abuse)*
- *Thermal exposure (burns, hypothermia)*
- *Toxins and irritants (e.g., dermal, reproductive, and respiratory)*

### Chronic Diseases

- *Bone and joint disorders (including chronic low back pain,*

*osteoarthritis and osteoporosis)*

- *Cancers (adult leukemia/lymphoma, and solid tissue tumors; including cancer pain)*
- *Cardiovascular, cerebrovascular and peripheral vascular diseases (including related acute events such as myocardial infarction, stroke, and heart failure)*
- *Chronic infectious diseases (HIV/AIDS, hepatitis)*
- *Chronic lung disease*
- *Chronic renal disease*
- *Dementia & neuronal dysfunction (including Alzheimer's Disease, Parkinson's)*
- *Diabetes & major complications*
- *Gastrointestinal disorders (including bowel and liver disorders)*
- *Spinal cord injury & regeneration*

### Sensory Disorders and Loss

- *Hearing disorders*
- *Vision disorders*
- *Disorders of taste and smell*

### **The Rehabilitation Research and Development Service**

addresses the minimization of disability and restoration of function in veterans disabled by trauma or disease.

While each of these four services have particular foci and expertise, the new strategic plan for VA research streamlines and combines appropriate goals and objectives into one integrated effort. Built into this plan, Designated Research Areas identify primary research targets prevalent in the veteran patient population. (See below for detailed listing). These Designated Research Areas cut across the

traditional boundaries of VA's four research services to achieve a new synergy. Major initiatives in the coming years will reflect the conviction that solving complex health problems requires not only specialized expertise but continuing synthesis, re-examination of important issues, and communication among disciplines.

Through this dynamic program, VA conducts an array of research activities concentrating on some of the most difficult health care challenges facing society today. Following is a more in-depth description of these activities and recent VA research achievements.

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#### Mental Illness

- *Anxiety disorders*
- *Behavioral disorders*
- *Depression and mood disorders*
- *Schizophrenia*
- *Specialized VA mental health services (behavioral and medical interventions)*

#### Substance Abuse

- *Alcohol*
- *Drug*
- *Tobacco*
- *Dual diagnosis (e.g., alcohol and drugs)*
- *Specialized substance abuse services (behavioral and medical interventions)*

#### Special (Underserved, High Risk) Populations

- *Veterans with permanent disabilities (e.g., blind and paralyzed)*
- *Veteran cohorts defined by shared military experience (e.g., prisoners of war,*

#### *Persian Gulf veterans)*

- *Historically underserved veterans (e.g., women, racial, ethnic and cultural minorities, rural veterans)*
- *Veterans whose living arrangements pose challenges to their health (e.g., homeless or homebound)*

#### Aging and Age-Related Changes

- *Normal age-related changes*
- *Aging syndromes (e.g., frailty, immobility, falls)*
- *Compound problems and comorbidities (e.g., coexisting diabetes and coronary artery disease, dementia and hip fracture)*
- *Care of elderly veterans*
- *End of life issues*



# Science at the Cutting Edge

## The Medical Research Service

VA researchers play key roles in developing new medical innovations—the cardiac pacemaker, the CT scan, magnetic resonance imaging, and modern drug therapy for mental illness resulted from VA research. VA surgeons performed the first kidney transplant in the United States.

A world leader in the care and treatment of the elderly, VA is deeply involved in studies of the aging process, including Alzheimer's disease, prostate disease, and osteoporosis. VA cares for approximately 6 percent of the adult AIDS population in the United States and has made great strides in research on drug therapy and survival rates. Drug addiction, alcoholism, schizophrenia, spinal cord injury, post-traumatic stress disorder, and tissue regeneration are other areas of VA Medical Research.

VA Medical Research continues to make important advances that benefit not only veterans, but all Americans. Recently, for example, VA investigators in Seattle, in collaboration with an international team, discovered the first human gene associated with aging—a major advance in efforts to determine how the aging process leads to age-related diseases. The researchers identified the gene that causes Werner's Syndrome, a rare

inherited disorder marked by premature aging. Additionally, VA investigators collaborated to identify a gene that plays a key role in development of Alzheimer's disease—a discovery that may allow researchers to better understand how the disorder develops in people who carry the gene. Another major contribution from VA Medical Research is the recent discovery of a gene that plays a major role in schizophrenia, one of the most common causes of disability among veterans. Although other schizophrenia genes have been discovered, this gene is the first to be found in a majority of families studied and has been linked to two different physiological defects found in schizophrenics and their families. The gene codes for a brain receptor activated by nicotine and helps explain why schizophrenics as a group tend to be heavy smokers. Although well documented, the high incidence of smoking among schizophrenics had been overlooked as a possible link to the root cause of schizophrenia.

Among other recent Medical Research Service achievements, investigators in Portland have paved the way for new treatments of brain tumors. In protecting brain tissue, the blood-brain barrier prevents chemotherapy drugs from reaching tumors from the bloodstream. The Portland team found that a sugar solution temporarily

shrinks barrier cells to open spaces through which drugs can enter. Meanwhile, researchers in Minneapolis and Nashville found a way to reduce chronic pain without destroying the normal pain sensations that help protect against serious injuries. Their work may play a key role in the development of new treatments for chronic pain. Another group of investigators in San Diego recently advanced the understanding of how inflammation causes atherosclerosis—clogging of the arteries. If they can stop immune system cells from attacking artery walls in reaction to inflammation, they may be able to prevent the condition that is a leading cause of death in the United States.

Additionally, the Medical Research Service has established a new program that allows VA scientists to take novel approaches to studying biomedical problems common among veterans. The Research Enhancement Awards Program (REAP) supports multidisciplinary research, pilot studies, and research training for young investigators. Thus far, 18 proposals have been approved for funding in research areas including lung disease, bone disease, Parkinson's disease, heart disease and heart failure, kidney disease, gastrointestinal disorders, spinal cord injury, ulcer wound healing, cancer, multiple sclerosis, Hepatitis C, Alzheimer's disease, and depression.

## Applying New Knowledge

### The Cooperative Studies Program

During the past 22 months, the Cooperative Studies Program has launched 22 large new multicenter clinical trials on problems as diverse as heart disease, atherosclerosis, cardiac revascularization, heart failure, arrhythmia, pulmonary nodules, thromboembolism, hernia repair, post-traumatic stress disorder, schizophrenia, alcohol abuse, and substance abuse. This represents a major expansion of VA's clinical trials program.

VA research clearly improves the survival and quality of life for veteran patients. Studies compare surgery or other invasive treatment with medical treatment, evaluate the most appropriate use of health care services, and assess the cost-effectiveness of competing treatment strategies. For example, a VA study compared the use of subcutaneous versus intravenous human recombinant erythropoietin for treating anemia in patients with end-stage kidney disease. VA researchers demonstrated that the subcutaneous route was much more cost effective while maintaining equal quality of care. The study results will influence policy decisions and prescribing patterns for end stage renal disease patients in VA and other federally supported health care programs.

Another recent VA clinical trial, VANQWISH, evaluated medical management strategies for patients

with a common type of heart attack (non-Q wave). It found that most of these patients did not benefit from routine, early invasive management—a conclusion counter to conventional practice. This study will influence health policy and clinical practice in the VA and may improve practice strategies in the private sector as well.

Other Cooperative Studies identified a better treatment for refractory schizophrenia with clozapine, established the optimal medical management for benign prostatic enlargement, and affirmed definitively the effectiveness of urologic surgery for prostate enlargement.

Three Epidemiology Research and Information Centers are the newest addition to the Cooperative Studies Program. The Centers, located in Boston, Durham and Seattle, are studying the incidence, distribution and control of diseases among various subgroups of veterans. Many clinical research questions related to the cause of disease, application of health risk assessment, identification of risk profiles, quantification of prognostic variables, and disease surveillance and control techniques can be informed by this epidemiologic research. These new Centers are conducting numerous investigator-initiated epidemiology research projects on problems such as post-traumatic stress disorder, osteoporosis in men, prostate and colon cancer, ischemic heart disease, diabetes, HIV infection, and spinal cord injury.



## Delivering Quality Care

### The Health Services Research and Development Service

Health Services Research examines the impact of the organization, financing, and management of health care services on the delivery, quality, cost, access to, and outcomes of those services. The overarching objectives of the Health Services Research and Development Service (HSR&D) are to improve the quality of patient care and to increase the efficiency of health care delivery. Examples of issues under investigation by health services researchers include the shift from inpatient to outpatient care, use of non-physician professionals, telephone care and telemedicine, home care strategies, health care technology assessment and appropriate techniques for disseminating research findings. For example, researchers studying a Home Based Primary Care (HBPC) model found potential for lowering total health care and hospital readmission costs among severely disabled and terminally ill patients while increasing patient satisfaction. In an ongoing study of a telephone-based disease management program for diabetic patients, investigators are looking at the use of an automated voice messaging system (AVM) with nurse telephone follow-ups. The AVM calls patients weekly to monitor their health status. Nurses use the patient's responses to the system to decide appropriate follow-up. Thus

far, the system has shown potential to serve as a “clinician extender” bringing monitoring, diabetes education, and behavior support services into the homes of VA patients with diabetes.

HSR&D’s technology assessment efforts inform VA technology-related policy and decision making. For example, VA owns 10 positron emission tomography (PET) imaging facilities that require a commitment of significant resources to maintain and operate. When the question of whether VA should acquire additional PET capacity arose, HSR&D’s Technology Assessment Program conducted a systematic review of the literature to evaluate what is known about the usefulness of PET in diagnosing diseases important to the veteran population. The assessment found that diagnostic applications of PET were not supported in the literature and VA decided not to invest in additional PET centers. In another technology assessment, the effectiveness and appropriateness of stereotactic pallidotomy, a surgical procedure for the treatment of Parkinson’s disease, was reviewed. The report concluded that the quality of existing evidence was fair to poor with few data on long term outcomes. Most recently, a prospective cooperative trial in 15 VA Medical Centers has been approved for planning to compare the efficacy, safety, and costs of pallidotomy for relieving symptoms of Parkinson’s disease.

A highly productive component of VA’s Health Services Research and Development Service is its complement of 11 Centers of Excellence throughout the United States. These centers have major program expertise in areas such as primary care, care of the elderly, mental health, quality of care, evidence-based medicine, practice management, provider behavior, management of chronic disease, management systems research, and organizational research. In addition, the Management Decision and Research Center bridges research with managers, policy-makers and clinicians. Our newest center, the VA Information Resource Center provides information about reliability and validity of VA data sources.

During the past two years, Health Services Research has announced dozens of new research initiatives. These cover a broad array of outcomes research priorities, including access to care, the impact of managed care practices, primary care and complementary roles of generalists and specialists, implementation of clinical practice guidelines, ethnic and cultural variation in the use of health care services, and a nursing research initiative. Just this year, VA announced new solicitations in patient safety and qualitative research projects in patient-centered care.



VA health services researchers recently published the comprehensive results of VA's National Surgical Quality Improvement Program, a collaborative effort of VA's Health Services Research and the Office of Quality Management. Through this initiative, VA has demonstrated its leadership in capturing information on the quality of surgical care, patient-based mortality, morbidity, and health services use. This project began in 1992 and showed a consistent decline in hospital length of stay accompanied by a significant decrease in surgical mortality and morbidity. The program serves as a tremendous resource for VA managers in enhancing the quality of surgical care, and its many contributions have been acclaimed by the non-VA surgical community as well.

In May 1998, VA began extending its research activities in evidence-based medicine to explore strategies for translating research results into clinical practice and health policy. Initially, this new Quality Enhancement Research Initiative (QUERI) will target such high-priority issues for veterans as ischemic heart disease, congestive heart failure, stroke, diabetes, spinal cord injury, prostate disease, prostate and colon cancer, AIDS, depression, schizophrenia, and substance abuse. Over the next several years, QUERI projects will seek to identify best practices in additional priority areas for veterans' health care and facilitate the implementation of those practices.



# Improving Quality of Life

## The Rehabilitation Research and Development Service

Rehabilitation Research is dedicated to promoting the health of American veterans with disabilities through a wide spectrum of research activities. Rehabilitation Research Service portfolio is designed to elucidate the pathophysiology of, and implement new, restorative treatments for chronic impairment including paralysis, hearing and vision loss, amputation, and cognitive defects. Rehabilitation engineers create accessible environments and apply novel technologies to the care of veterans with disabilities. Individual investigators focus on a wide array of relevant areas ranging from amputation prevention and joint replacement to optimal wheelchair propulsion, orientation techniques for people who are blind, and early detection of hearing loss.

Rehabilitation Research funds six Centers of Excellence nationally in areas such as aging with a disability, spinal cord injury, functional electrical stimulation, limitations in mobility, geriatric rehabilitation, amputations and prosthetics, and sensory impairment. Recently, the Center of Excellence in Cleveland, which focuses on functional electrical stimulation, was honored for creating an award-winning innova-

tion, a hand-grasp neuroprosthesis known as the Freehand System. This implantable, pacemaker-like device allows people with spinal cord injury to grasp, hold, and release objects of various sizes and shapes. A solicitation for establishing new Centers was just released in November and expands Rehabilitation R&D's areas of special interest to include low vision, upper extremity prostheses, traumatic and other brain injury, Parkinson's Disease (novel rehabilitation interventions), stroke and neurologic repair, multiple sclerosis, and spinal cord injury/disease.

Rehabilitation investigators at the New York VA Medical Center Rehabilitation Research Team won first place in the health care category at the 1998 Microsoft Windows World Open with the VA Pedorthic CAD/CAM System. This computer-aided design and manufacture method for custom orthopedic footwear benefits the growing veteran population at risk for amputation from problems such as peripheral vascular disease and diabetes. In 1998, the AdVantage Arm became available on the commercial market, leapfrogging upper extremity prosthetic technology out of its stagnant state. Developed with Rehabilitation R&D

funding, the veteran population was the first to benefit from the lighter weight and increased range of motion of this prosthesis. More than 100,000 veterans stand to benefit from VA developed liquid-crystal, dark-adapting eyeglasses which improve functional mobility, contrast sensitivity, and acuity for people with low vision. Three companies are pursuing plans to manufacture and market this product.

New initiatives planned for Fiscal Year 1999 include technology transfer educational workshops, organizing cooperative trials and research opportunities to advance treatment of Multiple Sclerosis. Rehabilitation R&D and Medical Research are in the process of forming a collaborative panel for evaluating new initiatives in neurorehabilitation to promote research efforts which bridge the gap between the laboratory and the clinical arena for veterans with conditions such as stroke, Parkinson's Disease, and spinal cord injury.



# Making a Difference

## Dissemination

Dissemination is key to translating research into practice. The Office of Research and Development has a two-pronged commitment to dissemination:

- Disseminate information from research as broadly as possible using a variety of approaches, and;
- Identify and utilize the most appropriate evidence based dissemination methods to ensure effectiveness and efficiency.

Our goal is to disseminate information that is timely, audience specific, appropriate and easily accessible.

Each of the four research services, Cooperative Studies Program, Health Services Research, Medical Research, and Rehabilitation Research, are encouraged to develop dissemination plans and materials for their service. Funded investigators within each of the services are also encouraged to develop dissemination plans for their research findings. From this information flow, Research and Development produces targeted dissemination pieces such as those listed below.

### **Examples of Research and Development Publications**

*IMPACTS*, a document produced annually by each of the four Research and Development Services, provides brief lay language summaries of important current impacts from research studies.

*R&D Catalog*, a biannual document, provides an overview and research focus of all Research and Development funded centers with contact information. The catalog also includes a summary of new initiatives and funding opportunities.

*Priority Research Initiatives*, a biannual document providing an overview of all Office of Research and Development research activities to address areas of unique or special concern to veterans.

*VA Research and Development Annual Report*, an annual piece reporting on the status of Research and Development funding, emphasis areas and significant accomplishments.

*Journal of Rehabilitation Research and Development*, a quarterly publication providing multidisciplinary coverage of rehabilitation research.

*Rehabilitation Research and Development Progress Reports*, an annual compendium of all research being carried out in the area of disability management.

*Reports*, such as the *Annual Report of Activities on VA Efforts on Gulf War Veterans' Illnesses*, are written to inform particular audiences such as the Secretary, Under Secretary for Health, Congress, Special Committees or constituent groups about a specific research effort.

*VA Practice Matters*, a semi-annual document addressing an important health care issue in a concise, easy to read format. The product is targeted at health care providers and clinical managers providing them with the most recent research evidence, and suggestions for implementation based on the evidence. Topics addressed this year were Acute Stroke Treatment and Diagnosis and Management of Benign Prostatic Hyperplasia.

*VA Research and Development Web Page*, contains current information about Research and Development, the services, funding priorities and solicitations as well as a number of publications and reports that can be downloaded.

*Rehabilitation Research and Development Clinical Guides* have successfully relayed research results to veterans and clinicians alike. Areas such as physical fitness for persons with disabilities and practical hearing aid selection continuously require reprints and have even entered the university classroom as teaching tools. Upcoming guides will include a focus on gait analysis.

### **External Publications**

The work of VA Research and Development-funded investigators is published in numerous peer-reviewed journals, books, and monographs, making a major contribution to the research literature. From October 1997 through September 1998, VA-funded researchers published over 4000 articles in over 950 journals. VA researchers' work appears in a broad cross section of the most highly regarded peer reviewed journals. Basic medical research was well represented in the highly regarded basic sciences journals: *Proceedings of the National Academy of Sciences*, *Journal of Biological Chemistry*, *Advances in Experimental Medicine and Biology*, *Brain Research*, *American Journal of Physiology*, *Biochimica et Biophysica Acta*, *Biochemical & Biophysical Research Communications*, *Biochemical Journal*, and the *Journal of Immunology*. VA clinical research also appeared in many of the upper echelon clinical research journals: *JAMA*, *Journal of Clinical Investigation*, *Annals of Internal*

*Medicine*, *New England Journal of Medicine*, *Journal of the American College of Cardiology*, *Journal of the American Geriatrics Society*, plus *AJR-American Journal of Roentgenology*, and *Archives of Internal Medicine*. Rehabilitation research appeared in the *Journal of Applied Physiology*, *Archives of Physical Medicine & Rehabilitation*, *Journal of Biomedical Materials Research*, *Journal of Rehabilitation Research and Development*, and *American Journal of Physical Medicine and Rehabilitation*. VA's Health Services Research Development investigators are well represented in the *New England Journal of Medicine*, *Medical Care*, *Inquiry and Health Services Research*.

### **Conferences, Workshops and Seminars**

Many VA Research and Development investigators are leaders in their fields of study and, as such, are invited to conduct presentations at conferences, workshops and seminars throughout the United States.



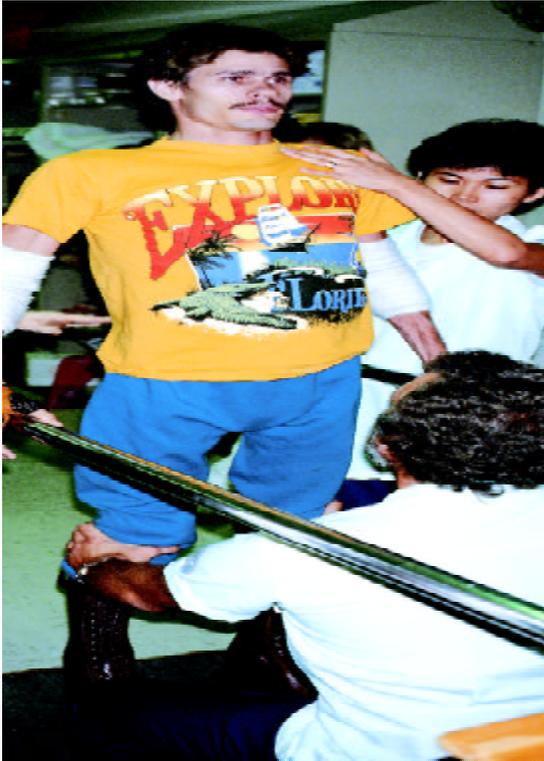
## Enhancing Research Efforts

### Research Collaborations

The Office of Research and Development enhances its work through collaborative relationships with other government, non-government, as well as private industry organizations. VA Research works with the Department of Defense on important areas such as Mechanisms of Emerging Pathogens; Combat Casualty and Wound Repair; Stress Related Chronic Illnesses (including Post-Traumatic Stress Disorder and Related Gulf War Illnesses) and Prostate Disease, including Prostate Cancer. In addition, VA Research has a number of collaborative activities with the National Institutes of Health and the Agency for Health Care Policy and Research.

On the private industry side, VA Research has collaborations with a number of leading biotechnology and pharmaceutical companies including: Amgen, Astra Merck, Aviron, Bayer Corporation, Berlex Laboratories, Boehringer Ingelheim, Bristol Myers Squibb & Sanofi, DuPont, Eli Lilly, Fujisawa, Glaxo-Wellcome, Hoescht Marion Roussel, Hybritech, Intercardia, Johnson & Johnson (Ortho), KOS, Marion Merrell Dow, Merck, Pfizer, Reckitt/Colman, Rhone-Polenc Rorer, Sandoz, Schein Pharmaceuticals, Schering Schwartz Pharmaceuticals, Smith Kline Beecham, Warner Lambert/Parke-Davis, and Wyeth-Ayerst.

In the area of diabetes, VA Research and Development has funded three Diabetes Research Centers jointly with the Juvenile Diabetes Foundation.



## Funding for Research

The number of Research and Development funded research projects is contingent on the level of appropriated resources, and the average cost per project. The Office of Research and Development administers the research appropriation for Medical Research, Rehabilitation Research, Health Services Research, and Cooperative Studies. During fiscal year 1998, VA Research funds supported research projects conducted by over 2000 VA Medical Center employees in 109 VA facilities. These projects are initiated on the basis of a VA employee's own scientific interest or in response to a solicitation from the Research and Development Services in VA Headquarters. Figure 1 shows the recent growth in the Research and Development budget appropriation to support the direct costs of this work. VHA allocates Medical Care dollars to support the research infrastructure or indirect costs such as laboratory facilities, ancillary support services, and physician/clinician salaries. Given the high quality of VA investigators and the overall quality of the research program, VA Research and Development funded investigators have been successful in augmenting the research effort through partnering with other federal agencies, private foundations and industry. Figure 2 provides a summary of all budgetary resources for the past three years and a projection for fiscal year 1999.

## Budget Appropriation and Summary of Budget Resources

Figure 1

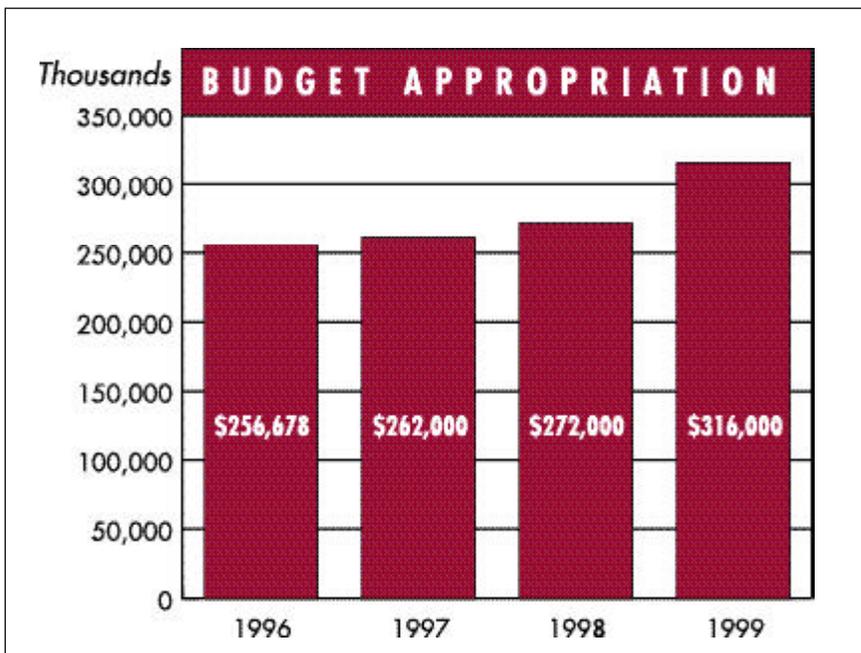


Figure 2

SUMMARY OF BUDGETARY RESOURCES				
(dollars in thousands)	1996 Actual	1997 Actual	1998 Actual	1999 Estimate
Medical and prosthetic research appropriation	\$256,678	\$262,000	\$272,000	\$316,000
Medical Care Support	\$334,700	\$319,793	\$310,665	\$353,910
Other*	\$331,615	\$402,767	\$430,073	\$474,648
Total budgetary resources.	\$922,993	\$984,560	\$1,012,738	\$1,144,558

\*Includes federal grants, NIH, DOD, private foundations and industry

# Opportunities and Challenges

## Future Outlook

The outlook for health related research is quite promising in the near term. Support for enhanced federal investment in health related research is strong at both executive and legislative levels. Recognition of the value provided by health related research to the country's global competitiveness seems to be at a new high.

## Our Opportunities

Within VA, research and scientific opportunities are outstanding. The VA research program couples scientific opportunities with clear prioritization of research activities to reflect the burden of disease characterizing the veteran population we serve. Currently, more than 99% of the VA research portfolio is devoted to health problems facing veterans

## Our People

The greatest resource within the Office of Research and Development is our people. We strive to attract and retain the best and the brightest investigators to conduct research that will improve the health and quality of life of our veterans. We will continue working to assure that competitive investigators receive the time obligated in their grants to do their research work.

Additionally, VA continues to redouble its support for the training of future investigators, especially clinician investigators. During FY 1999, VA's investment in research career development will approach 10% of its entire research appropriation. This is a level of investment not matched in this decade. VA research has observed a gratifying increase in applicants for its career development awards including new awardees in surgical specialties as well as physician investigators in medicine and psychiatry.

## Our Programs

In the coming years, VA will focus on many new initiatives critical to improving the health of our veteran patients.

Medical Research will experience continued growth of the new program in epidemiology research. Basic research focusing on the biology of Hepatitis C infection will be an increasing priority as this pathogen threatens to emerge in epidemic dimensions. New initiatives focus on fundamental research on neuro-degenerative diseases, especially Parkinson's disease, with possible new collaboration with the National Parkinson Foundation.

New collaborations between medical and rehabilitation research on neural regeneration and basic research initiatives concerning spinal cord injury will receive additional funding. Rehabilitation research recently released a call for applications for additional Centers of Excellence, focusing on such high priority areas as upper extremity prostheses, low vision, traumatic brain injury, spinal cord injury, and rehabilitation for patients with stroke and multiple sclerosis.

Health Services Research continues to focus on implementation of research results that demonstrate improvements in patient outcomes and systems efficiencies. The goal of the Quality Enhancement Research Initiative (QUERI) is to create new synergy among innovators such as researchers, clinicians, experts in informatics, managers, and policy-makers. QUERI will become fully operational in FY 1999 and will produce near-term quality improvements while planning new research projects to facilitate future improvements in health care. Heart disease, stroke, cancer, diabetes, AIDS/HIV, schizophrenia, depression, substance abuse, and spinal cord injury are initial focus areas.

The Cooperative Studies Program has released program announcements in several areas resulting in exciting new projects in 1999. Notable among them are three new projects investigating Gulf War illnesses. These include completion of the congressionally mandated survey of Persian Gulf veterans, Phase III; and two treatment trials focusing on antibiotic treatment and non-pharmacological treatments. New and ambitious treatment trials for Parkinson's disease are in the planning stages.

Prostate cancer remains a high priority for VA research. Efforts to prevent this cancer may lead to new collaborations with the National Cancer Institute. VA's minority patients, especially Hispanic and African American men, add a new dimension to the NCI research effort. Other anticipated collaborations with the National Institutes of Aging include treatments of problems especially prevalent among aging Americans. This research effort is building on the strengths of both institutions to conduct research that neither could accomplish efficiently alone.

### **Our Challenge**

VA shares many challenges in common with our academic affiliates. For the immediate future, these concerns include sustaining executive and legislative support for health related research. We will work to secure support for research infrastructure, especially the research equipment and wet-laboratory space needed for VA research to remain world class.

Hopefully, the outlook for health related research will remain bright. Research will continue to add value to the quantity and quality of life for veterans, and all Americans, if we focus on illnesses prevalent in the population we serve, and work purposefully to translate the research discoveries to enhance patient outcomes and health systems efficiencies.

We remain optimistic and enthusiastic about our future.



# Research and Development

## Career Development Awardees 1998

*The VA Office of Research and Development is committed to supporting and strengthening the development of its investigators in the early, mid and advanced stages of their careers in order to attract and retain the best and the brightest. Career development awards within the Health Services, Medical and Rehabilitation Research Services provide salary support for investigators. This salary support frees up time for the investigators to conduct their research or obtain specific training to enhance their research skills. Following is a list of investigators who received Career Development Awards during the 1998 Fiscal Year.*

### Health Services Research and Development Service

David A. Asch, M.D., M.B.A.,  
Philadelphia, PA

Steven Asch, M.D.,  
Los Angeles, CA

Brenda Booth, Ph.D.,  
Little Rock, AR\*

Samuel Bozzette, M.D., Ph.D.,  
San Diego, CA

John Concato, M.D., M.S., M.P.H.,  
West Haven, CT

Kendon Conrad, Ph.D.,  
Hines, IL\*

David Edelman, M.D.,  
Durham, NC

Nathan R. Every, M.D., M.P.H.,  
Seattle, WA

Vincent Freeman, M.D.,  
Hines, IL

Terri Fried, M.D.,  
West Haven, CT

Alan Garber, M.D., Ph.D.,  
Palo Alto, CA

Raul I. Garcia, D.M.D., M.Med.Sc.,  
Boston, MA

Megan Gerety, M.D.,  
San Antonio, TX

Mary K. Goldstein, M.D., M.S.,  
Palo Alto, CA

Howard Gordon, M.D.,  
Houston, TX

Paul Heidenreich, M.D., M.P.H.,  
Palo Alto, CA

Timothy Hofer, M.D., M.Sc.,  
Ann Arbor, MI

Susan Hughes, D.S.W.,  
Hines, IL\*

T. Michael Kashner, Ph.D., J.D.,  
M.P.H.,  
Dallas, TX\*

Lewis E. Kazis, Sc.D.,  
Bedford, MA\*

Eve Kerr, M.D.,  
Ann Arbor, MI

JoAnn Kirchner, M.D.,  
Little Rock, AR

Richard A. Marotolli, M.D., M.P.H.,  
West Haven, CT

Rudolph Moos, Ph.D.,  
Palo Alto, CA\*

Richard Owen, M.D.,  
Little Rock, AR

Douglas Owens, M.D., M.Sc.,  
Palo Alto, CA

John Peabody, M.D.,  
West Los Angeles, CA

Laura Petersen, M.D., M.P.H.,  
Houston, TX\*

Dawn Provenzale, M.D.,  
Durham, NC

Linda Rabeneck, M.D., M.P.H.,  
Houston, TX

Jaya Rao, M.D.,  
Indianapolis, IN

M. Carrington Reid, M.D., Ph.D.,  
West Haven, CT

Kenneth Rosenfeld, M.D., M.P.H.,  
West Los Angeles, CA

Gary Rosenthal, M.D.,  
Cleveland, OH

Lisa Schwartz, M.D., M.S.,  
White River Junction, VT

Alfredo Selim, M.D., M.P.H.,  
Boston, MA

Paul Shekelle, M.D., Ph.D.,  
Los Angeles, CA

James Tulskey, M.D.,  
Durham, NC

Peter A. Ubel, Ph.D., M.D.  
Philadelphia, PA

Morris Weinberger, Ph.D.,  
Indianapolis, IN\*

John Whited, M.D.,  
Durham, NC

Mary Whooley, M.D.,  
San Francisco, CA

John Williams, M.D., M.H.S.,  
San Antonio, TX

Steven Woloshin, M.D., M.S.,  
White River Junction, VT

\*HSR&D Research Career Scientist

## **Medical Research Service**

Sherry L. Abboud, M.D.,  
San Antonio, TX

Carlos L. Arteaga, M.D.,  
Nashville, TN

Raj Batra, M.D.,  
West Los Angeles, CA

Peter Bloom, M.D.,  
Baltimore, MD

Douglas Bremner, M.D.,  
West Haven, CT

Matthew D. Breyer, M.D.,  
Nashville, TN

Blase A. Carabello, M.D.,  
Charleston, SC

Paul J. Christensen, M.D.,  
Ann Arbor, MI

Melissa P. Clark, M.D.,  
Nashville, TN

Robert J. Coffey, Jr., M.D.,  
Nashville, TN

Mark E. Dibner-Dunlap, M.D.,  
Cleveland, OH

Lois J. Geist, M.D.,  
Iowa City, IA

Scott D. Gitlin, M.D.,  
Ann Arbor, MI

Martin Gluck, M.D.,  
Bronx, NY

Carla Greenbaum, M.D.,  
Seattle, WA

Michael C. Heinrich, M.D.,  
Portland, OR

Karl P. Houglum, M.D.,  
San Diego, CA

Arif Hussain, M.D.,  
Baltimore, MD

F. Frank Isik, M.D.,  
Seattle, WA

Randy H. Kardon, M.D., Ph.D.,  
Iowa City, IA

Carolyn J. Kelly, M.D.,  
San Diego, CA

William J. Kovacs, M.D.,  
Nashville, TN

Michael Kozal, M.D.,  
Iowa City, IA

Arthur M. Krieg, M.D.,  
Iowa City, IA

David J. Kusner, M.D., Ph.D.,  
Iowa City, IA

H. Jeffrey Lawrence, M.D.,  
San Francisco, CA

Steven R. Lentz, M.D., Ph.D.,  
Iowa City, IA

Daniel E. MacDonald, D.M.D.,  
Sc.D.,  
Bronx, NY

Richard Macko, M.D.,  
Baltimore, MD

Rama K. Mallampalli, M.D.,  
Iowa City, IA

Peter J. Mannon, M.D.,  
Durham, NC

Stephen E. McGowan, M.D.,  
Iowa City, IA

Barbara E. Menzies, M.D.,  
Nashville, TN

Joseph M. Moates, M.D.,  
Nashville, TN

James C. Oates, M.D.,  
Charleston, SC

Terrence X. O'Brien, M.D.,  
Charleston, SC

Mohammed B. Omary, M.D., Ph.D.,  
Palo Alto, CA

Dan Oren, M.D.,  
West Haven, CT

John H. Peters, M.D.,  
West Los Angeles, CA

Joseph Pisegna, M.D.,  
West Los Angeles, CA

Barbara A. Ramlo-Halsted, M.D.,  
San Diego, CA

Michael Reale, M.D.,  
West Haven, CT

Robert F. Reilly, M.D.,  
West Haven, CT

Jane E. B. Reusch, M.D.,  
Denver, CO

George Sachs, M.D.,  
West Los Angeles, CA

Barbara E. Scanley, M.D., Ph.D.,  
West Haven, CT

Andrew V. Schally, Ph.D.,  
New Orleans, LA

Jeremiah E. Silbert, M.D.,  
Bedford, MA

Catherine Stehman-Breen, M.D., M.S.,  
Seattle, WA

Richard T. Stravitz, M.D.,  
Richmond, VA

Roger H. Unger, M.D.,  
Dallas, TX

Douglas E. Vaughan, M.D.,  
Nashville, TN

Margaret E. Wierman, M.D.,  
Denver, CO

## **Rehabilitation Research and Development Service**

Linda Auther, Ph.D.,  
Nashville, TN

Anne S. Carter, Ph.D.,  
Mountain Home, TN

Graham Creasy, M.D.,  
Cleveland, OH

Margot S. Damaser, Ph.D.,  
Hines, IL

Steven A. Gard, Ph.D.,  
Chicago, IL

Carolynn Patten, M.S., Ph.D.,  
Palo Alto, CA

Karen L. Perell, Ph.D.,  
West Los Angeles, CA

Lisa Riolo, Ph.D.,  
Atlanta, GA

# Summary of 1998 Research and Development Projects

*Following is a summary of all VA Research and Development funded studies during Fiscal Year 1998. Studies are organized by research service, (Cooperative Studies Program, Health Services Research and Development Service, Medical Research Service and Rehabilitation Research and Development Service) , and then alphabetically by investigator.*

## Cooperative Studies

Vitamin E Treatment of Tardive Dyskinesia  
Adler, Lenard, M.D.  
\$4,086

Reducing the Efficacy-Effectiveness Gap in Bipolar Disorder  
Bauer, Mark S., M.D.  
\$1,084,377

VA Non-Q-Wave Infarction Strategies In-Hospital (VANQWISH)  
Boden, William E., M.D.  
\$52,166

The Clinical and Economic Impact of Olanzapine Treatment on Refractory Schizophrenia  
Charney, Dennis S., M.D.  
Rosenheck, Robert, M.D.  
\$454,138

Evaluation of GEM Units and Geriatric Follow-Up  
Cohen, Harvey J., M.D.  
Feussner, John, M.D.  
\$692,855

Beta-Blocker Evaluation of Survival Trial (BEST)  
Eichhorn, Eric J., M.D.  
Domanski, Michael, M.D.  
\$872,865

National Health Survey of Persian Gulf Veterans and their Families  
Eisen, Seth, M.D.  
Kang, Han  
Murphy, Frances  
\$1,601,280

Warfarin and Aspirin in Secondary Prevention  
Fiore, Louis, M.D.  
Ezekowitz, Michael, M.D., Ph.D.  
\$1,896,905

F-Fluorodeoxyglucose (FTP) Positron Emission Tomography (PET) Imaging in the Management of Patients with Solitary Pulmonary Nodules  
Fletcher, James W., M.D.  
\$499,158

Group Treatment of PTSD for Vietnam Theater Veterans (TOP)  
Friedman, Matthew J., M.D., Ph.D.  
Schnurr, Paula, Ph.D.  
\$1,216,341

Registry to Obtain Long Term Patency Data on Saphenous Vein and Internal Mammary Artery Grafts  
Goldman, Steven, M.D.  
\$181,931

RCT to Assess the Efficiency of Prevention from Natural Influenza Virus of Live Attenuated and Inactivated Influenza Virus Vaccines in Patients with Chronic Obstructive Pulmonary Disease  
Gorse, Geoffrey, M.D.  
\$728,385

Processes, Structures, and Outcomes of Care in Cardiac Surgery  
Hammermeister, K. E., M.D.  
Glover, Frederick  
\$166,279

Oral Anticoagulant Therapy to Improve Patency of Small Caliber Prosthetic Bypass Grafts  
Johnson, Willard, M.D.  
\$131,489

Naltrexone in the Treatment of Alcoholism  
Krystal, John, M.D.  
Rosenheck, Robert, M.D.  
\$1,027,693

NIDCD/VA Hearing Aid Trial  
Larson, Vernon D., Ph.D.  
\$541,165

Natural History of Large Abdominal Aortic Aneurysms  
Lederle, Frank A., M.D.  
\$30,922

Aneurysm Detection and Management (ADAM)  
Lederle, Frank E., M.D.  
Wilson, Samuel A., M.D.  
\$672,939

Effect of Polyunsaturated Lecithin on Liver Fibrosis  
Lieber, Charles W., M.D.  
\$1,498,372

Prospective Evaluation of Risk Factors for Large (>1 cm) Colonic Adenomas in Asymptomatic Subjects  
Lieberman, David, M.D.  
\$373,344

The Coronary Artery Revascularization Prophylaxis Trial (CARP Trial)  
McFalls, Edward O., M.D., Ph.D.  
\$297,669

Colchicine in the Treatment of Alcoholic Cirrhosis of the Liver  
Morgan, Timothy R., M.D.  
\$1,189,700

Urgent Revascularization in Unstable Angina (AWESOME)  
Morrison, Douglass, M.D.  
Gulshan, Sethi, M.D.  
\$891,963

Trial of Varicella Vaccine for the Prevention of Herpes Zoster and its Complications  
Oxman, Michael N., M.D.  
\$312,937

Treatment of Seizures in the Elderly Population  
Rowan, A. James, M.D.  
Ramsay, R. Eugene, M.D.  
\$1,228,933

The VA HDL Intervention Trial (HIT):  
Secondary Prevention of Coronary Heart  
Disease in Men with Low HDL-Cholesterol  
and Desirable LDL-Cholesterol  
Rubins, Hanna, M.D., M.P.H.  
Robins, Sander, M.D.  
\$1,174,093

The Effects of Antiarrhythmic Therapy in  
Maintaining Stability of Sinus Rhythm in  
Atrial Fibrillation  
Singh, Steven N., M.D.  
Singh, Bramah N., M.D., Ph.D.  
\$1,002,809

Comparison of Anterior and Posterior  
Chamber Lens Implants After Vitreous Loss  
in Attempted Extracapsular Cataract  
Extraction  
Smith, Thomas, M.D.  
\$116,356

Follow-Up Study of the Medical and  
Surgical Therapies for Gastroesophageal  
Reflux Disease  
Spechler, Stuart, M.D.  
\$172,485

A Genetic Linkage Study of Schizophrenia  
Tsuang, Ming, M.D., Ph.D.  
\$264,826

A Multi-Site Randomized Trial of Team  
Managed Hospital Based Home Care  
Weaver, Frances, Ph.D.  
Cummings, Joan, M.D.  
Hughes, Susan, D.S.W.  
\$692,855

VA Topical Tretinoin Chemoprevention  
Trial  
Weinstock, Martin, M.D., Ph.D.  
\$228,014

Costs and Outcomes of  
Telephone Care Pilot  
Welch, H. Gilbert, M.D., M.P.H.  
\$332,679

Normative Evaluation of a Computer-  
Assisted Neuropsychological Screening  
Battery Pilot  
White, Roberta, Ph.D.  
\$499,149

Prostate Cancer Intervention Versus Obser-  
vation Trial (PIVOT): A Randomized Trial  
Comparing Radical Prostatectomy versus  
Pattiative Expectant Management for the  
Treatment of Clinically Localized Prostate  
Cancer  
Wilt, Timothy J., M.D., M.P.H.  
Brawer, Michael, M.D.  
\$1,252,693

The Iron (Fe) and Atherosclerosis Study  
(FeAST) - Pilot  
Zacharski, Leo R., M.D.  
\$23,400

## **Health Services Research And Development Service**

Preventing Progression to Chronic Back Pain  
Atkinson, Joseph, M.D.  
\$157,300

Rehabilitation Issues of Concern for Women with Spinal Cord Injuries  
Bach, Carol Ann, Ph.D.  
\$43,164

Developmental Projects Program at Providence, RI: Ambulatory Care, Mental Health  
Bauer, Mark, M.D.  
\$100,000

Quality of Life and Patient Utility for Veterans with Prostate Cancer  
Bennett, Charles, M.D., Ph.D.  
\$190,752

Pressure Ulcer Care in Nursing Homes: Effect of Clinical Guidelines  
Berlowitz, Dan, M.D., M.P.H.  
\$282,200

Enhancing Access to Primary Care for Veterans with Psychiatric Illness  
Bozzette, Samuel A., M.D., Ph.D.  
\$122,700

Developmental Projects Program at Baltimore, MD: Outcomes, Geriatrics  
Bradham, Douglas, M.D., Ph.D.  
\$97,128

Veteran Women's Alcohol Problems: Prevalence, Screening and Self Help  
Bradley, Katherine A., M.D., M.P.H.  
\$131,096

Pain Management and Behavioral Outcomes in Patients with Dementia  
Buffum, Martha, D.N.Sc.  
\$68,939

Psychophysiology of PTSD in Female Nurse Vietnam Veterans  
Carson, Margaret, R.N., Ph.D.  
\$200,000

The Effect of Managed Care on VA Hospital Costs  
Cary, Kathleen, Ph.D.  
\$135,200

Reducing Lower Back Injuries in VAMC Nursing Personnel  
Caska, Barbara, Ph.D.  
\$95,385

Comprehensive Outcomes of Nonmelanoma Skin Cancer  
Chren, Mary-Margaret, M.D.  
\$40,666

Prostate Cancer Outcome Measures: Age and Race Effects  
Clark, Jack, Ph.D.  
\$149,454

Informal Caregivers of Veterans with Dementia: Cost, QOL and Service Use  
Clipp, Elizabeth, Ph.D.  
\$168,656

Outcomes Assessment for Dementia Care: Development of a Module  
Cody, Marisue, Ph.D., R.N.  
\$11,709

Exercises Effect on Aerobic Capacity and QOL in Heart Failure  
Collins, Eileen, Ph.D., R.N.  
\$120,900

Effectiveness of Screening for Prostatic Cancer: A Cohort Study  
Concato, John, M.D.  
\$121,025

Risk Mortality in Prostate Cancer  
Concato, John, M.D.  
\$148,470

Educational Efforts to Reduce the Cultural and Ethnic Variation in Cardiac Procedure Use  
Coniglieri, Joseph, M.D., M.P.H.  
\$153,446

Home Walking Exercise Training in Advanced Heart Failure  
Corvera, Teresita, R.N., M.N.  
\$124,250

Ethnic/Cultural Variations in the Care of Veterans with Osteoarthritis  
Covinsky, Kenneth, M.D., M.P.H.  
\$109,800

Migration Patterns of U.S. Veterans  
Cowper, Diane, M.A.  
\$49,000

Familial Patterns in Prostate Cancer  
Cunningham, Glenn, M.D.  
\$101,537

SAFE-GRIP Fall/Injuries Interventions: A Randomized Trial  
Devito, Carolee, Ph.D., M.P.H.  
\$186,700

Nurse Counseling for Physical Activity in Primary Care Patients  
Dubbert, Patricia, Ph.D.  
\$122,675

Processes, Structure, and Outcomes of Post-Stroke Rehabilitation Care  
Duncan, Pamela W., Ph.D.  
\$436,124

Treatment of Depression in Patients with PTSD  
Dunn, Nancy Jo, Ph.D.  
\$189,803

A Follow-up Investigation of the Effectiveness and Efficiency of GEM Care  
Engelhardt, Joseph, Ph.D.  
\$21,800

Developmental Projects Program at Decatur, GA: Quality, Cost, Performance Measures  
Etchason, Jeff, M.D.  
\$108,300

Evaluation of Subacute Rehabilitation Care  
Evans, Ron, M.S.W.  
\$90,050

An Evaluation of the Organization of Subspecialty Cardiac Care within VA  
Every, Nathan, M.D.  
\$236,360

Ambulatory Care Quality Improvement Project: (ACQUIP)  
Fihn, Stephan, M.D., M.P.H.  
\$780,365

Cost-Effectiveness of Lung Volume Reduction Surgery  
Fihn, Stephan, M.D., M.P.H.  
\$23,500

Schizophrenia Outcomes Module:  
Enhancement and Field Testing  
Fischer, Ellen, Ph.D.  
\$269,451

Decision Making for Depression in Women  
Veterans: Patient and Physician Factors  
Frayne, Susan, M.D., M.P.H.  
\$28,300

A Pilot Study: Effectiveness of Telecare in  
the Management of Diabetes  
Gaehde, Steven, M.D.  
\$34,762

Gait and Balance Training in Reducing  
Occurrence and Fear of Falls in the Elderly  
Galindo-Ciocon, Daisy, Ph.D.  
\$93,350

Assessment of Respiratory Function in  
Chronic Spinal Cord Injury  
Garshick, Eric, M.D., M.O.H.  
\$62,212

Practice Patterns and Variations in  
Care of VA Patients with Acute MI  
Gaziano, Michael J., M.D., M.P.H.  
\$238,100

Utility of PTF Data in Monitoring  
Outcomes of Surgical Care  
Geraci, Jane, M.D., M.P.H.  
\$82,451

Improved Management of Patients  
with Chronic Airflow Obstruction  
Goldman, Michael, M.D.  
\$37,900

Costs, Quality of Life and Functional  
Outcomes in Veterans Treated for MS  
with Beta-Interferon 1-B (Beta seron)  
Guarnaccia, Joseph, M.D.  
\$178,051

Using Pain Resource Nurses to Improve  
Cancer Patient Pain Outcomes  
Hagan, Susan, M.S.  
\$65,850

Ethnicity and Veteran Identity as  
Determinants of VA Ambulatory Care Use  
Harada, Nancy, Ph.D.  
\$200,700

Effectiveness of Team Treatment of  
Depression in Primary Care  
Hedrick, Susan, Ph.D.  
\$168,529

Evaluating HEDIS 3.0 for VHA  
Hendricks, Ann, Ph.D.  
\$209,200

Evaluating Quality of Care Screens from  
Laboratory Databases  
Hofer, Timothy, M.D.  
\$244,047

Guidelines for Drug Therapy of  
Hypertension: Closing the Loop  
Hoffman, Brian, M.D.  
\$53,175

Developmental Projects Program at  
Lexington, KY: Pulmonary  
Rehabilitation Treatments, Cost  
and Physician-Patient Preferences  
Holleman, Donald, M.D.  
\$25,000

Clinical Management and Outcomes of Veterans with Strokes at VAMC  
Horner, Ronnie, Ph.D.  
\$54,780

Protocols to Manage Resistance to Care in Veterans with Alzheimer's Disease  
Hurley, Ann, R.N., D.N.Sc.  
\$95,382

Database Resource Center  
Hynes, Denise, Ph.D.  
\$68,861

Oral Health and Quality of Life in Older Veterans  
Jones, Judith, D.D.S.  
\$122,400

A Randomized Trial to Implement the AHCPR Smoking Cessation Guideline  
Joseph, Ann, M.D., M.P.H.  
\$6,842

Cultural Factors in Adaptation to Chronic Illness  
Katz, Murray, M.D.  
\$137,800

Developmental Projects Program at Tucson, AZ: Special Populations  
Katz, Murray, M.D.  
\$18,750

Health Related Quality of Life in Veterans: A Pilot Study  
Kazis, Lewis, Sc.D.  
\$310,963

Toward Gender-Aware VA Health Care: Staff Ideology, Sensitivity, & Knowledge  
King, Lynda, Ph.D.  
\$79,900

Proactive Diabetes Case Management  
Krein, Sarah, Ph.D., R.N.  
\$600

Mental Health Outcomes Associated with Bosnia Peacekeeping Mission  
Litz, Brett, Ph.D.  
\$94,482

Nurse Managed Clinic for Dementia Patients and Family Caregivers  
Maddox, Melitta, M.S.N., R.N.C.S.  
\$24,550

Impact of Provider Substance Abuse Education on Guideline Implementation  
McCormick, Richard, Ph.D.  
\$221,700

Development of Individual-Patient Physical Health Profiles with IRT  
McHorney, Colleen, Ph.D.  
\$71,887

Area Variation in Length of Stay, Pre and Post-hospital Care and Survival  
Menke, Terri, Ph.D.  
\$114,602

Developmental Projects Program at Augusta, GA: Tech Assessment (Telemedicine)  
Middleton, III, Henry, M.D.  
\$64,040

Determinants of VA and Non-VA Health Care Use Among Elderly Veterans  
Morgan, Robert, Ph.D.  
\$71,200

Gender Differences in Compensation and Pension Claims Approval for PTSD  
Murdoch, Maureen, M.D., M.P.H.  
\$109,160

<p>Developmental Projects Program at Tampa, FL: Labor Management Issues, Outcomes, Rehabilitation Nelson, Audrey, R.N., Ph.D. \$99,996</p>	<p>Appropriateness and Necessity of Cardiac Procedure Use After AMI in VHA Petersen, Laura, M.D., M.P.H. \$78,964</p>
<p>Redesigning Patient Handling Tasks to Prevent Nursing Back Injuries Nelson, Audrey, R.N., Ph.D. \$132,800</p>	<p>Factors that Influence the Demand for Outpatient VA Services Phibbs, Ciaran S., Ph.D. \$103,200</p>
<p>Evaluating Society's Costs for Veterans' Healthcare Through VHA Nugent, Gary, M.H.A. \$818,662</p>	<p>Automated Calls with Nurse Follow-up to Improve Diabetes Ambulatory Care Piette, John, Ph.D. \$197,600</p>
<p>Race, Patient Preference and Stroke Risk Reduction Oddone, Eugene, M.D., M.H.Sc. \$339,867</p>	<p>Predicting Inpatient Service Use Among VA Substance Abuse Patients Piette, John, Ph.D. \$29,700</p>
<p>A Multi-site Study of Strategies for Implementing Schizophrenia Guidelines Owen, Richard, M.D. \$211,982</p>	<p>Developmental Projects Program at Columbia, MD: Labor Management Issues, Managed care Pillinger, Carole, M.D. \$122,170</p>
<p>The Quality of Medication Management for Schizophrenia Owen, Richard, M.D. \$202,648</p>	<p>VA and Non-VA Resource Use and Outcomes in HIV Infected Men Rabeneck, Linda, M.D., M.P.H. \$24,162</p>
<p>Are Clinical Vignettes Better than Chart Abstraction to Measure Quality? Peabody, John W., M.D., Ph.D. \$93,174</p>	<p>Developmental Projects Program at Cincinnati, OH: Outcome Measurement, Cost, Quality, Access, Satisfaction Render, Marta, M.D. \$107,064</p>
<p>Evaluation of a Comprehensive Advance Care Planning Intervention Pearlman, Robert, M.D. \$164,414</p>	<p>Effect of Activity on Sleep of Cognitively-Impaired Veterans Richards, Kathleen, Ph.D., R.N. \$165,542</p>

Coronary Angioplasty Outcomes-  
Veterans and the Private Sector  
Ritchie, James L., M.D.  
\$92,231

Ambulatory Case Mix Measures:  
Implications for VA Managed Care  
Rosen, Amy, Ph.D.  
\$196,100

Decline in Functional Status as a Quality  
Indicator for Long-Term Care  
Rosen, Amy, Ph.D.  
\$167,025

Practice Patterns in Care of Chronically  
Mentally Ill and Homeless Veterans  
Rosenheck, Robert, M.D.  
\$233,458

Impact of Outsourcing VA Cardiac Surgery  
on the Cost and Quality of Care  
Rosenthal, Gary E., M.D.  
\$29,700

A Regional Market-Based Analysis of  
Patient Outcomes in a VA Hospital  
Rosenthal, Gary, M.D.  
\$100,700

A Casefinding and Referral System for  
Older Veterans Within Primary Care  
Rubenstein, Laurence, M.D., M.P.H.  
\$188,680

Efficacy of Telepsychiatry in the Treatment  
of Depression  
Ruskin, Paul E., M.D.  
\$108,705

A Prospective Study of Patient Preferences  
for Prostatic Cancer Treatment  
Schapira, Marilyn, M.D.  
\$25,169

The Impact of a Specific Drug  
Program on Alcoholics  
Schuckit, Marc, M.D.  
\$78,776

Implementing Smoking Cessation  
Guidelines: Randomized Trial of  
Evidence Based Quality Improvement  
Sherman, Scott, M.D.  
\$40,198

Effect of Behavioral Management on  
Quality of Life in Heart Failure  
Shively, Martha, Ph.D.  
\$52,150

Quality of Life in Women Veterans  
Using VA Ambulatory Health Care  
Skinner, Catherine, Ph.D.  
\$51,137

Effectiveness and Cost Impact of  
Telecommunications System in COPD  
Sparrow, David, D.Sc.  
\$62,664

Randomized Control Trial of Exercise  
Training in Patients with COPD  
Sparrow, David, D.Sc.  
\$93,785

Developmental Projects Program at Buffalo,  
NY: Outcomes, Chronic Diseases  
Spaulding, Steven, M.D.  
\$102,159

PTSD Among VA Ambulatory Care Patients  
Spiro, Arron, III, Ph.D.  
\$165,000

Developmental Projects Program at  
Omaha, NE: Customer Satisfaction, Cost,  
Chronic Diseases, Special Populations  
Spurzem, John R., M.D.  
\$99,684

Objective Measurement of Daily  
Activity in COPD  
Steele, Bonnie, Ph.D.  
\$79,012

Causes of Protein-Energy Undernutrition  
Among Elderly Patients  
Sullivan, Dennis M.D.  
\$23,170

An Integrated Model of Primary Care in  
Mental Health  
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Manual Wheelchair User Upper  
Exremity Pain  
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Restoration of Forearm and Elbow  
Functions by FNS  
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Biochemical Analysis of Synovial  
Activation in Joint Dysfunction  
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Soft Tissue Attachment to Proximal  
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\$162,000

Functional Restoration of Grasp in  
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Hentz, Vincent R., M.D.  
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A Study of VA Stroke Rehabilitation  
Services and Patient Outcomes  
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Impact of Occupational Therapy on  
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Changes in Auditory Abilities  
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Gonadal Steroids as Rehabilitative Agents After Partial Spinal Cord Injury  
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Static Versus Dynamic FES Exercise and Heart Disease Risk Factors in SCI  
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Comparing Off-Loading Modalities to Heal Diabetic Foot Wounds  
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The Effect of Exercise Training on Hemoglobin A1c's of Type II Diabetics in a Controlled Randomized  
Leach, Carol, M.H.A.  
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Physical Exercise Strength Training to Improve the Health of Dialysis Patients  
Leaf, David, M.D.  
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Biomechanics of the Patellofemoral Joint  
Lee, Thay Q., M.S.  
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Biomechanics of Patellofemoral Joint  
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Lee, Thay Q., M.S.  
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Effect of the Bankart Lesion on  
Anterior Joint Stability with Simulated  
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Physiological Basis of Strength  
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Lieber, Richard L., Ph.D.  
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Functional Magnetic Cough in Patients  
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Lin, Vernon W., M.D.  
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Functional Magnetic Micturition in  
Patients with Spinal Cord Injury  
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High-Frequency Magnetic Stimulation  
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Acute Effects of Spinal Cord Injury on  
Sperm Function  
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Factors Leading to Disuse of Low Vision  
Devices by Visually Impaired Elderly  
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Redesign & Evaluation of a Device  
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Use of Tretinoin to Prevent Pressure  
Ulcers in Spinal Cord Injury Patients  
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Problem Solving Strategies of Brain Injured and Normal Subjects  
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FES Mobility in Paraplegia: RF-Controlled Implanted System  
Marsolais, E. Byron, M.D.  
\$272,650

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Massof, Robert, Ph.D.  
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Long-Term Evaluation of Maxillary Sinus Bone Grafts with Dental Implants  
McAnear, Jon Tom, D.D.S.  
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Development of Quality of Life Measures for Use in Dysphagia  
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Optimized Surface Bonding and Stiffness of Femoral Endoprostheses  
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Fracture Prediction for Femurs with Wear Particle-Induced Osteolytic Lesions Associated with  
Orr, Tracy, Ph.D.  
\$122,827

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Patwardhan, Avinash G., Ph.D.  
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Microphotodiode Tiles as Prostheses for the Restoration of Visual Function  
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FES Control of the Upper Extremity in SCI  
Peckham, P. Hunter, Ph.D.  
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Improvements in a New Technique for Increasing Movement after Stroke  
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Outcome of Lower Extremity Constraint-Induced Therapy after Stroke  
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Cognitive Rehabilitation of Dementia by Stimulation-Induced Normalization of the EEG Power Spectrum:  
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\$22,179

Exercise Testing and Training of Multiple Sclerosis Patients  
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Effects of Medications on Spasticity in Spinal Cord Injury: A Quantitative Study  
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\$123,300

Evaluation of Non-Auditory Factors Which Affect Hearing Aid Use in Elderly Veterans  
Rappaport, Bruce Z., Ph.D.  
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Clinical Trial of Footwear in Patients with Diabetes  
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