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*Chief Research and Development Officer*

## A Message from the Chief Research and Development Officer

The Office of Research and Development's Cooperative Studies Program (CSP) conducts large scale definitive clinical research on health issues vital to our nation's veterans. These national research studies influence the course of disease and improve the survival and quality of life of our veteran patients. They not only inform our patients and providers about the best treatment choices, but also inform our policy makers and managers about the cost and consequences of new and existing treatments.

The Veterans Health Administration's many facilities and twenty-two Veterans Integrated Service Networks provide an ideal place to conduct large scale cooperative research. The Cooperative Studies Program's strength lies in its ability to organize multiple medical centers within VHA to conduct more definitive research than may be achieved in single-site studies.

Below are brief descriptions of recent and important Cooperative Studies that have significant impact on the practice of medicine both within the VA system and in the larger health care community. These important Cooperative Study impacts are organized by health care categories particularly prevalent in the veteran population that we serve such as aging and age-related changes, special populations (e.g., women veterans, permanently disabled veterans, Persian Gulf veterans, homeless veterans, etc.), health systems (e.g., health care delivery, organization, quality and outcomes), chronic diseases, mental illness, substance abuse and addictive disorders, sensory disorders and loss, acute and traumatic injury, and military and environmental exposures.

VA's Office of Research and Development strives to answer the pressing health care questions that will ultimately allow us to provide the best possible care for those who have served our country. We are pleased to share some recent highlights of this work with you.

## ■ Aging and Age-Related Changes

### **Aggressive treatment of moderate hypertension works well for older patients**

Hypertension (high blood pressure) should be treated in all patients to prevent serious complications such as stroke, heart failure and kidney disease. However medications for controlling hypertension can interfere with quality of life, particularly among elderly patients. This CSP study demonstrated that aggressive treatment of mild to moderate hypertension can benefit elderly patients without adversely affecting their daily lives. Researchers measured the effectiveness of different blood-pressure drugs and their impact on patients' activities of daily living, mental acuity, cognitive function, sense of well-being and mood. In general, the drugs were found to be effective and without significant negative impact on quality of life.

*Cushman WC, et al. Treatment of hypertension in the elderly. III. Isolated systolic hypertension: response to various doses of hydrochlorothiazide. Archives of Internal Medicine, 151:1954-1960, 1991.*  
CSP 213

### **Major trial launched to test new vaccine against shingles**

Shingles in older people can be extremely painful and disabling. There is no effective treatment for people who suffer from shingles lasting more than a month; nor is there an effective method to prevent shingles. This study, jointly funded by CSP and Merck, will test a promising new vaccine for its ability to prevent shingles or reduce its severity and complications. The randomized, controlled trial will enroll 35,000 older veterans for a minimum of three years. If the vaccine proves successful, it will supply a safe and cost-effective means for reducing the severe impact of shingles and its complications on the health of older veterans.

CSP 403

### **Outcomes of specialized care for elderly patients evaluated**

The proportion of veterans over age 65 will increase from 26 percent in 1990 to 46 percent in 2020, and

VA must be prepared to serve the needs of this growing population. A large, multi-outcome study will determine whether specialized inpatient and outpatient units are the best way for VA to care for elderly patients. The impact of this study will extend far beyond VA, as millions of older Americans come under managed care. No other study is likely to provide the conclusive and incontrovertible evidence needed to guide policy in this critical area.

CSHS 6

### **Study to compare drug treatments for elderly epilepsy patients**

New-onset epilepsy occurs among 45,000 to 50,000 elderly people every year. These patients are especially vulnerable to side effects from drug treatments and often have other conditions for which they take medication. This study will compare the effects of two drugs recently approved for the treatment of seizures, gabapentin and lamotrigine, with a standard drug, carbamazepine, in elderly patients. Identification of a more effective drug for elderly people would allow these patients to live better, more seizure-free lives with fewer side effects.

CSP 428

## ■ Chronic Diseases

### **VA trial questions early aggressive treatment for many heart attack survivors**

A major study by VA challenges the benefits of early angioplasty and heart bypass for survivors of a certain type of heart attack, who may actually be harmed by these procedures. In fact, early aggressive treatment for these patients was associated with a 34 percent higher death rate than conservative treatment, VA researchers found.

Results from the VA Non-Q-Wave Infarction Strategies in Hospital (VANQWISH) Trial may have a major impact on treatment for many heart attack survivors. About half of the 1.5 million heart attacks in the U.S. each year are non-Q-wave myocardial infarctions (MIs). The standard treatment approach for this type of heart attack involves routine catheter-

ization followed by myocardial revascularization, which is done either through a heart bypass or angioplasty. Researchers observed that management of non-Q-wave MIs has become more aggressive during the past decade, based on the unproven assumption that invasive treatment is superior to a conservative strategy that relies on clinical management to guide intervention.

The VANQWISH trial randomized 920 patients recovering from non-Q-wave MI at 15 VA medical centers to receive either early aggressive treatment or conservative management. Long-term clinical outcomes – such as reinfarction or death – were assessed during an average follow-up of 2.5 years. For long-term outcomes, researchers identified 80 deaths and 70 MIs among the invasive treatment group, compared with 59 deaths and 79 MIs in the conservative management group. Only 1.3 percent of patients treated conservatively died during the first two weeks after hospitalization, compared with a three-fold higher early death rate in the invasive treatment group.

*Boden W. Long term outcomes in non-Q-wave infarction patients randomized to an invasive versus conservative strategy: results of the multicenter VA non-Q-wave infarction in-hospital (VANQWISH) trial. American College of Cardiology Scientific Session, Anaheim, CA, March, 1997. CSP 368*

### **VA study links smoking to abdominal aortic aneurysms**

Abdominal aortic aneurysms kill 150,000 Americans each year. About 65 percent of patients die immediately when an aneurysm ruptures, and only half of those who make it to surgery survive. Because many people with aneurysms show no symptoms, it is critical to identify risk factors for developing aneurysms.

A major study by VA did just that, showing that smokers are more than five times as likely as non-smokers to develop abdominal aortic aneurysms.

This research, which was published in the *Annals of Internal Medicine*, clearly demonstrates the link between smoking and aneurysms and suggests that screening efforts for this disease target older male

smokers. The research also highlights the importance of smoking cessation.

The study, which was conducted at 15 VA medical centers, involved ultrasound screening of 73,451 patients ages 50 to 79 with no history of abdominal aortic aneurysms. Subjects also completed a questionnaire designed to determine risk factors.

Researchers found that veterans with a longer history of smoking were at greater risk for developing aneurysms. In addition, veterans who quit smoking reduced their risk for aneurysm. Veterans with a family history of aneurysm were twice as likely to develop it themselves. Women, African Americans and diabetics were found to have lower risks for developing aneurysms.

*Lederle F, Johnson G, et al. Prevalence and associations of abdominal aortic aneurysm detected through screening. Annals of Internal Medicine, 126:441-449, 1997. CSP 379*

### **Landmark prostate cancer trial will illuminate treatment options**

The management of localized prostate cancer in older men has generated considerable debate because of the risks and potential benefits associated with different treatment options. Prostate cancer is the second most frequent cause of cancer deaths in men. Yet research has shown that patients' treatment preferences vary significantly, depending on the risk associated with surgery, their life expectancy, their symptoms and their tolerance for their symptoms. As a result, patient preference and experience are critical factors in making treatment decisions for prostate cancer.

Still, important questions remain concerning long-term outcomes for prostate cancer treatment. VA, in collaboration with the National Cancer Institute (NCI) and the Agency for Health Care Policy and Research (AHCPR), is addressing these questions through a landmark study that compares the two most widely used treatment methods: radical prostatectomy, in which the prostate is surgically removed, and expected management or "watchful waiting," in which only the disease symptoms are treated. The Prostate Cancer Intervention Versus Observation Trial

(PIVOT) is a 15-year, randomized study involving 2,000 men from approximately 80 VA and NCI medical centers throughout the country. All patients will be followed for at least 12 years. The results will supply information on treatment-specific survival rates, complications and quality of life.

When completed, this study will provide more definitive answers on the best treatment for early-stage prostate cancer. The treatment implications are substantial. If expected management is as effective as surgery, millions of health care dollars could be saved every year by avoiding unnecessary surgery. On the other hand, results favoring surgery would highlight the need for early detection and treatment of this disease.

*Wilt TJ, Brawer MK. The prostate cancer intervention versus observation trial (PIVOT). Oncology 11:1133-1143, 1997.*  
CSP 407

### **Heart valve study identifies key differences**

This long-term VA study compared results from two types of replacement heart valves, a mechanical valve and an animal valve. Veterans who received the mechanical valve had more bleeding, but the mechanical valve lasted longer than the animal valve. These results, which were published in the New England Journal of Medicine, provide critical guidance for physicians and patients on what type of heart valve is best suited for particular medical conditions. The study is also producing information on when it is best to operate on patients who need new heart valves.

*Hammermeister KE, et al. A comparison of outcomes in men 11 years after heart-valve replacement with a mechanical valve or bioprosthesis. New England Journal of Medicine, 328:1289-1296, 1993.*  
CSP 90

### **Angioplasty can help patients with mild heart disease**

Patients with blocked heart arteries can have chest pain or heart attacks or even die. This VA study was the first to evaluate angioplasty for opening blocked arteries in patients with mild heart disease. Researchers observed that patients who received angioplasty

had less pain and were able to exercise for longer periods of time than patients who received only heart medications. Angioplasty patients, however, did not live any longer than people who took medications. These results, which were published in the New England Journal of Medicine, are being followed up with a cost-benefit analysis.

*Parisi AF, et al. A comparison of angioplasty with medical therapy in the treatment of single-vessel coronary artery disease. Veterans Affairs ACME Investigators. New England Journal of Medicine, 326:10-16, 1992.*  
CSP 267

### **Impact of bypass surgery on patients with chest pain assessed**

Breakthrough research by VA showed that most patients with chest pain from blocked arteries fared better with heart drugs to stop the pain than with immediate coronary bypass surgery. VA researchers found that although surgery helps a small number of patients with very bad hearts, most don't need surgery right away. These results had a major impact on establishing which patients should receive bypass surgery in this country. This landmark study generated more than 50 journal articles.

*The VA Coronary Artery Bypass Surgery Cooperative Study Group. Eighteen-year follow-up in the Veterans Affairs cooperative study of coronary artery bypass surgery for stable angina. Circulation, 86:121-130, 1992.*  
CSP 4

### **Pivotal trial of digitalis in CHF treatment**

Approximately 70 percent of patients with congestive heart failure (CHF) regularly use digitalis, despite the availability of newer treatments for CHF and controversy regarding the appropriateness of digitalis in treating CHF patients. CSP, in collaboration with the National Heart, Lung and Blood Institute, is conducting a major randomized trial to identify the role of digitalis in CHF treatment. With more than 300 participating medical centers in the U.S. and Canada, this was the largest international congestive heart failure trial ever conducted. It was also the first randomized clinical trial on the effects of digitalis.

*The Digitalis Investigation Group. The effect of digoxin on mortality and morbidity in patients with heart failure. New England Journal of Medicine, 336:525-533, 1997.*  
CSP 995

### **Researchers evaluate use of beta-blockers for chronic heart failure patients**

This major study, jointly funded by the National Heart, Lung and Blood Institute and InterCardia Corporation, will determine whether beta-blockers can extend the lives of patients with chronic heart failure. The implications of this trial, which involves 2,800 patients with moderate to severe congestive heart failure, are substantial. In addition to prolonging patients' lives, researchers conservatively predict that the successful use of these drugs will save the VA system \$9.4 million a year.

CSP 395

### **Beta-blocker drugs investigated as intervention for heart failure**

The development of new therapies for heart failure will require basic scientific understanding of the effects of treatment on the shape of the heart muscle and the activation of genes that send chemical signals through the blood. Recent progress in heart failure treatment has come from exploiting such understanding to relieve the burden on the failing heart. Beta-blocker drugs are a promising new therapy that offers the exciting opportunity to help the heart repair itself. Studies by CSP will determine if this treatment works by returning the heart muscle to a more functional shape and controlling the harmful overstimulation of the heart by hormones in the blood.

CSP 395 substudy

### **Researchers develop less invasive method for diagnosing heart attacks**

The diagnosis and subsequent treatment of suspected heart attack involves a series of life-and-death decisions to employ increasingly risky and expensive diagnostic procedures. In this study, CSP researchers are developing a method for obtaining as much information as possible from electrical signals produced by the heart during an exercise test. Such a breakthrough would help avoid unnecessary surgical procedures, save money and improve care in thousands of veterans. The impact of this study will

extend beyond VA, as suspected heart attacks are among the most common and costly reasons for seeking emergency care in the U.S.

CSP 395 substudy

### **DNA study targets genetic basis of heart failure**

Understanding the genetic basis of vulnerability to heart failure is essential to developing new, targeted therapies. CSP is establishing a large bank of DNA samples from patients with heart failure so that researchers may study the genes that govern the heart's response to stress. This study holds promise for breakthrough therapies to treat heart disease.

CSP 395 substudy

### **Study examines ways to improve cholesterol levels in patients with CHD**

Coronary heart disease (CHD) affects more than 7 million people in the U.S. and is a major concern among veterans. This CSP study of 2,500 veterans will determine the best treatment for patients with low values for "good" cholesterol (HDL) and high levels of triglycerides. Patients with these levels of blood lipids (fats) are at high risk for heart attack even though their overall cholesterol level is relatively normal. The results of this study, which will follow patients for five years, are expected to have important cost and quality implications for the treatment of CHD.

CSP 363

### **Can warfarin prevent deaths from heart attack?**

About 1.5 million people in this country have a heart attack each year and 500,000 of them die. Aspirin is commonly used to treat people with heart attacks. This VA study is evaluating whether giving people a blood thinner called warfarin in addition to aspirin will increase their chances for survival. Eight thousand people will be followed for six years to determine whether this combination of drugs works better than aspirin alone.

CSP 387

**Study will evaluate two drugs in treatment of irregular heart beat**

Atrial fibrillation (irregular heart beat) affects more than 1 million Americans and is responsible for 75,000 strokes a year. It is a risk factor for congestive heart failure, impairs the ability to exercise and may produce disabling palpitations and other symptoms. The best approach to standardized therapy for atrial fibrillation remains uncertain. This study will compare two of the most promising agents – amiodarone and sotalol – to determine how effective they are in maintaining normal heart rhythm in patients with atrial fibrillation.

CSP 399

**Cardiac study will examine processes, structures and outcomes of care**

About 5,000 veterans undergoing cardiac surgery at 14 VA medical centers are participating in a major study examining the links between processes and structures of cardiac care and outcomes. CSP researchers will identify which structures and processes of care are important in producing good and adverse outcomes. This is essential information for VA health care managers to improve patient care and, as a result, the health and quality of life of veterans.

CSHS 5

**CSP trial identifies strategies for hypertension control**

Although more than 40 million Americans have hypertension (high blood pressure), less than half are adequately treated. A landmark trial by CSP that compared six classes of antihypertensive drugs found striking differences in the beneficial effects of these drugs, depending on patient age and race groups. These findings have provided physicians with invaluable guidance for tailoring blood-pressure drugs according to their patients’ characteristics – helping to optimize blood pressure control while minimizing side effects.

*Materson BJ, et al. Single-drug therapy for hypertension in men: a comparison of six antihypertensive agents with placebo. The Department of Veterans Affairs Cooperative Study Group on Antihypertensive Agents. New England Journal of Medicine, 328:914-921, 1993.*  
CSP 290

**Surgery can prevent stroke in patients with a blocked carotid artery**

Cerebral infarction related to blockage of the carotid artery is a common form of stroke. Two major studies by CSP demonstrated that a surgical procedure called carotid endarterectomy, which clears blocked carotid arteries, is an effective method for preventing stroke. Prior to this research, this surgery was widely used although its effectiveness had not been proven. Findings from these studies have helped lead to consensus on surgically treating patients with especially high levels of carotid blockage to prevent stroke. Carotid endarterectomy is now the standard of care for these patients.

*Hobson RW, et al. Efficacy of carotid endarterectomy for asymptomatic carotid stenosis. The Veterans Affairs Cooperative Study Group. New England Journal of Medicine, 328:221-227, 1993.*  
CSP 167 & CSP 309

**Blood-thinning drug prevents strokes in patients with irregular heartbeats**

Irregular heartbeat (atrial fibrillation) is a common condition that affects as many as 9 percent of the elderly. Patients with this condition are at high risk for stroke. CSP researchers found that low doses of a blood-thinning drug called warfarin decreased by 79 percent the rate of strokes among these patients, without increasing the risk of bleeding. This low-cost treatment, which prolongs life, improves quality of life and substantially reduces the cost of caring for stroke patients, has become accepted as the standard of care throughout the world.

*Ezekowitz MD, et al. Warfarin in the prevention of stroke associated with nonrheumatic atrial fibrillation. New England Journal of Medicine, 327:1406-1412, 1992.*  
CSP 308

**FeAST study tests new theory on link between iron and arteriosclerosis**

A major study by CSP will test a controversial new theory that excessive levels of iron in the blood leads to hardening of the arteries. Iron is regarded as a nutrient that requires supplementation in the elderly. However, the Ferritin Adjustment Study (FeAST) will investigate the hypothesis that most adult men have too much iron in their blood. This surplus iron, the

theory goes, promotes chemical reactions that cause arterial and venous plaques that block blood flow. If FeAST supports these conclusions, the results would be revolutionary findings with implications for the prevention of circulatory diseases and in human nutrition. For example, excess iron levels could be removed by regular blood donation, a safe and simple procedure.

CSP 410

### **Blood-thinning drug holds promise for patients with peripheral vascular disease**

Older veterans are at high risk for developing peripheral vascular disease, particularly in their legs. Although vascular reconstruction can be performed, the grafts have a high failure rate. This study will evaluate whether a blood-thinning drug, warfarin, improves the patency of bypass grafts. Results of this study could substantially improve the lives of patients undergoing these operations and reduce costs by eliminating the consequences of failed grafts.

CSP 362

### **Evaluation of graft materials for blocked vessels may prevent leg amputations**

Many veterans suffer from blockages of leg arteries, a painful condition that can cause tissue death and lead to amputation. This study will determine whether Dacron, Teflon, umbilical vein or the patient's own vein is a more effective material for surgical grafts that bypass these blockages. Results will lead to more successful operations, and fewer patients will have to lose their legs.

CSP 141

### **Treatments for life-threatening epileptic seizures evaluated**

Prolonged epileptic seizure (status epilepticus) is a neurological emergency that may result in death or severe, permanent brain damage. Between 60,000 and 250,000 of these seizures occur in the US every year, many of them involving veterans. This study will compare the relative efficacy and toxicity of four standard intravenous treatment regimens as the initial

treatment for these seizures. This study will provide more definitive evidence on the preferred treatment for this life-threatening condition.

CSP 265

### **Alternative drug treatment identified for epilepsy**

Epilepsy is a chronic, disabling medical condition that afflicts approximately 2 million people in the U.S., including at least 50,000 veterans who are being treated in VA medical centers for seizure disorders. The CSP study demonstrated the effectiveness of a new anti-seizure drug, divalproex sodium, which was found to be equally effective as the standard drug, carbamazepine, for the treatment of grand mal seizures. These findings, which were published in the *New England Journal of Medicine*, are important because as many as 10 percent of patients cannot tolerate carbamazepine. However, carbamazepine was found to be more effective than divalproex sodium for petit mal seizures.

*Mattson RH, et al. A comparison of valproate with carbamazepine for the treatment of complex partial seizures and secondarily generalized tonic-clonic seizures in adults. The Department of Veterans Affairs Epilepsy Cooperative Study Group. New England Journal of Medicine, 327:765-771, 1992.*

CSP 264

### **New method of administering drug could cut costs of treating dialysis patients**

Most dialysis patients experience anemia. Recombinant human erythropoietin, which is administered intravenously, effectively combats this anemia, but its costs are substantial. Several small studies have shown that this drug may be given in lower doses by injection with the same beneficial effects. However, this method also appears to increase patient discomfort. This large-scale, multi-center trial will investigate these findings further by comparing the effects of these methods for administering erythropoietin. If the injection method can be used without sacrificing therapeutic effect, savings for VA could reach \$3.5 million and potential savings for Medicare approximately \$110 million.

CSP 392

**Lecithin may hold key to preventing cirrhosis**

Cirrhosis of the liver is a leading cause of death in the US. Currently, there is no way to prevent or cure it. However, highly successful animal studies suggest that a vitamin called lecithin may act as a preventive agent against cirrhosis. This CSP study will test that observation further. If lecithin is found to be effective against cirrhosis, it will be the first treatment ever to provide an effective but simple approach to preventing cirrhosis. The impact on suffering, death and associated health care costs would be enormous.

CSP 391

**Disease staging helps determine treatment changes for HIV**

Findings from this study provided evidence-based guidance to physicians on when to change treatment for patients infected with HIV. VA researchers analyzed a method for measuring viral load and relating it to changes in disease development. They found that changes in patient blood values can predict illness. With that knowledge, physicians may determine proper treatment courses more efficiently and effectively.

*O'Brien W, Hartigan P, Daar ES, et al. Changes in plasma HIV RNA levels and CD4+ lymphocyte counts predict both response to antiretroviral therapy and therapeutic failure. The Department of Veterans Affairs Cooperative Study Group on AIDS. Annals of Internal Medicine, 126:939-945, 1997.*  
CSP 298A

**Sepsis study demonstrates need for long-term treatments**

Severe sepsis, an infection in the bloodstream, which is strongly associated with in-hospital mortality, may cause death up to five years after hospitalization, according to a major study by VA researchers. Patients with sepsis who also have one or more malfunctioning organs, such as the heart, lungs, kidney, liver or brain, are more likely to die in the first year after infection, the study also found. These results highlight the need for treatments that address the long-term effects of sepsis, and not just their short-term, in-hospital effects. VA researchers are confident such treatments will save lives and reduce health care costs.

*Quartin A, Schein R, Kett D, et al. Magnitude and duration of the effect of sepsis on survival. JAMA, 277:1058-1063, 1997.*  
CSP 209

**Some patients with prostate disease may benefit from watchful waiting**

This major CSP trial concluded that watchful waiting may be an acceptable alternative to surgery for patients with moderate symptoms of benign prostate disease. The study was the first to compare transurethral resection of the prostate (TURP) in a controlled trial with a treatment strategy of watchful waiting. Prior to this study, considerable disagreement existed on whether the benefits of surgery outweighed the risks for men with moderate symptoms of prostate disease, and whether watchful waiting was a reasonable alternative. The results, which were published in the New England Journal of Medicine, showed that TURP was highly effective in relieving disease symptoms, with few complications or side effects. However, watchful waiting was also an effective treatment strategy for men who were able to cope with their symptoms and preferred not to have surgery.

*Wasson JH, et al. A comparison of transurethral resection to watchful waiting in men with moderate symptoms of benign prostatic hyperplasia. New England Journal of Medicine, 332:75-79, 1995.*  
CSP 246

**Study identifies optimal medical treatment for prostate disease**

Enlarged prostate is a common problem in older men. This CSP study evaluated medications for the treatment of benign prostate disease, and found that one drug (terazosin) effectively relieved symptoms, while another drug (finasteride) did not. This landmark study, which was published in the New England Journal of Medicine, defined the optimal medical treatment for prostate disease, providing older men with an effective alternative to surgery.

*Lepor H, et al. The efficacy of terazosin, finasteride, or both in benign prostatic hyperplasia. Veterans Affairs Cooperative Studies Benign Prostatic Hyperplasia Study Group. New England Journal of Medicine, 335:533-539, 1996.*  
CSP 359

**Non-surgical treatment of advanced throat cancer improves quality of life**

Standard treatment for advanced throat cancer is surgical removal, resulting in loss of a patient's natural voice. This CSP study showed that non-surgical



treatment consisting of chemotherapy and radiation therapy can completely eliminate tumors and allow patients to keep their voice boxes. These findings, which were published in the *New England Journal of Medicine*, have had a tremendous impact on the quality of life of patients afflicted with this cancer.

*The Department of Veterans Affairs Laryngeal Cancer Study Group. Induction chemotherapy plus radiation compared with surgery plus radiation in patients with advanced laryngeal cancer. New England Journal of Medicine, 324:1685-1690, 1991.*

CSP 268

### Researchers seek to identify risk factors for colon cancer

Colon cancer is a leading cause of cancer death in the US. Mortality remains high because most colorectal cancers are not detected until after they have spread, making surgical removal impossible. Because colorectal screening is very expensive, it is important to focus screening resources on those patients known to have the highest risk for colon cancer. This is the first large study to examine historical and environmental risk factors for colon cancer. Targeted screening would be the most efficient and powerful program for prevention of colon cancer; this CSP study will advance that goal.

CSP 380

### Implantable insulin pump shows good results in multi-center trial

A large-scale, multi-center trial by CSP gave new hope for ending diabetic patients' need for daily insulin injections when study results found substantial benefits from an implantable, computer-controlled insulin pump. Congress had asked CSP to evaluate the safety and efficacy of the implantable insulin pump in patients with adult-onset diabetes. Study results, which were published in the *Journal of the American Medical Association*, showed that patients implanted with the pump had better blood sugar control, better weight control and significantly better quality of life.

*Saudek CD, et al. Implantable insulin pump vs multiple-dose insulin for non-insulin-dependent diabetes mellitus: a randomized clinical trial. JAMA 276:1322-1327, 1996.*

CSP 344A

## Health Services and Systems

### Home-based primary care model goes under the microscope

This multi-site, randomized trial is evaluating the effectiveness of team-managed, home-based primary care (HBPC) in the VA system. Researchers are comparing this approach in terms of cost, satisfaction and patient outcomes with other types of post-acute care for veterans. Positive results could lead to the establishment of additional HBPC programs and expansion of existing programs, so that more patients may benefit from needed services.

*Hughes S, Ulasevich A, Weaver F, et al. Impact of home care on readmission days: a meta-analysis. Health Services Research, 32:415-432, 1997.*

CSHS 3

### Hospital-based home care model eyed for savings, better outcomes

Hines VA Hospital achieved overall net cost savings of 13 percent after it implemented a team-managed hospital-based home care model for severely disabled and terminally ill patients. In addition, patient and caregiver satisfaction increased significantly. Now a multi-site study will determine whether the benefits of this model can be duplicated at VA programs nationwide. Findings that this model is more cost-effective and produces better patient outcomes and higher satisfaction than traditional forms of care could revolutionize VA's home care program.

CSHS 3

### Intensive primary care for chronically ill did not improve post-discharge outcomes

Rapid access to high-quality primary care for patients discharged from the hospital with severe chronic illnesses greatly improves patient satisfaction with care but increases the likelihood of hospital readmission, this CSP study found. In a randomized, controlled trial at nine VA medical centers, 1,396 severely ill veterans with diabetes, chronic lung disease or congestive heart failure received either usual care or an intensive primary care intervention that involved close follow-up by a nurse and primary care physician. Although they received more intensive primary care than the control group, patients in the intervention groups had significantly higher rates of readmission

and more days of rehospitalization. Patients receiving intensive primary care were more satisfied with their care, but there was no difference between the study groups in quality-of-life scores, which remained very low. These findings were published in the *New England Journal of Medicine*.

*Weinberger M, Oddone EZ, Henderson WG, et al. Does increased access to primary care reduce hospital readmissions? New England Journal of Medicine, 334:1441-1447, 1996.*

CSHS 8

### **Computerized reminders dramatically improve outpatient data collection**

A new computerized reminder program designed to improve compliance with clinical standards of care has had a dramatic impact on data collection efforts at VA outpatient clinics. As a result, the VA has adopted the scannable encounter forms used in this study as the preferred data collection method for VA outpatient clinics.

CSHS 9

### **Telephone care may replace frequent clinic visits**

CSP is investigating whether telephone care can provide a cost-effective alternative to frequent clinic care. Researchers expect that telephone care will be less expensive than frequent care and that patients' outcomes will be just as good. In fact, because telephone care will provide patients with more frequent contact, patient satisfaction may increase. If a significant number of clinic visits can be replaced by telephone contact, VA will be able to deploy scarce resources more efficiently.

CSHS 20

### **Study compares methods for surgical anesthesia in major abdominal operations**

Major abdominal surgery may be performed under general or regional anesthesia. This study will determine which of these methods of administering anesthesia results in lower rates of death and major complications. Special focus will be given to patients at higher risk for poor surgical outcomes. The results of this study will provide evidence needed by physicians and patients to make informed decisions regarding anesthesia.

CSP 345

## **■ Mental Illness**

### **Search for schizophrenia gene will improve treatment options**

CSP researchers are hunting for the gene responsible for schizophrenia, in a landmark study that will greatly expand understanding of the genetics of schizophrenia and hopefully result in the development of better treatments for this devastating disease. Investigators are combining their efforts with those of other researchers and collaborating with the private sector to ensure the study results in useful products.

CSP 366

### **Vitamin E holds promise for treating side effect in schizophrenia**

Schizophrenia is a severe and chronic mental disorder that afflicts about 1 percent of all Americans and is commonly treated with anti-psychotic medications. These drugs may produce a severe side effect called "tardive dyskinesia" characterized by debilitating symptoms of involuntary, disfiguring facial movements. Up to now, this condition has been untreatable, but a new study by CSP will determine if a promising new vitamin E treatment can help. If the results are positive, this study will represent a long-awaited advance in the treatment of a catastrophic mental illness made even more unbearable by a disfiguring side effect of medication.

CSP 394

## **■ Military and Environmental Exposures**

### **Researchers look to group treatment model for relief of PTSD**

Despite the often devastating effects of post-traumatic stress disorder (PTSD) on veterans, there is no proven, effective method to treat this condition. This randomized clinical trial will test what VA considers to be the most promising approach for treating PTSD, trauma focus group therapy (TFGT). This study will evaluate the efficacy of TFGT for treating PTSD symptoms and its effect on other psychiatric

symptoms, functional impairment, physical health and utilization of medical and mental health services. If this intervention is found to be effective and feasible, VA will have at least one proven therapy for veterans with this debilitating combat-related illness.

CSP 420

### Improved diagnostic tests sought for PTSD

Post-traumatic stress disorder (PTSD) is a serious health problem for many veterans, including those who served in Vietnam and the Persian Gulf. This study is developing psychological and physiological tests that can provide the means to accurately diagnose this condition and evaluate the progress of patients who are being treated.

CSP 334

## ■ Sensory Disorders and Loss

### Cochlear implants compared for their ability to help deaf patients

Cochlear implants are electronic devices implanted into patients who are completely deaf for the purpose of enabling them to hear again. Results after implantation vary greatly among patients. Because there are several types of cochlear implants, it is important to scientifically evaluate their effectiveness. CSP researchers conducted the first large-scale trial comparing the effectiveness of these devices. They found that multi-channel implant devices were superior to the single-channel device. One particular multi-channel device, when used in conjunction with a new speech processor, stood out as most effective. This study demonstrated the potential value of this new and exciting technology.

*Cohen NL, et al. A prospective randomized study of cochlear implants. The Department of Veterans Affairs Cochlear Implant Study Group. New England Journal of Medicine, 328:233-237, 1993.*

CSP 304

### Hearing aids are compared in large-scale trial

More than 14 million Americans with hearing impairment could benefit from a hearing aid. However, there are few sound scientific data on the relative safety and efficacy of different types of hearing aids. This study, jointly funded by the VA and by the

National Institute on Deafness and other Communication Disorders, will compare three types of hearing aids to determine which aids work best for certain patients. This unique trial will provide unbiased, scientific findings on hearing aids that could have a tremendous impact on quality of life for people with hearing impairment.

CSP 418

### Multi-center trial seeks effective response to vitreous loss

Cataract extraction is the most common surgical procedure in the US; about 1.2 million of these operations are performed annually. Vitreous loss, the most common complication of cataract surgery, occurs in about 1,000 VA patients every year. About one-third of these patients experience visual handicap for the rest of their lives. This multi-center trial will identify the most effective response to vitreous loss caused by cataract surgery. Improved vision for patients with this complication could save VA \$500,000 per year and have an enormous impact on outcomes of cataract surgery.

CSP 338

## ■ Substance Abuse and Addictive Disorders

### Long-term use of naltrexone for alcoholism investigated

Alcoholism is a tenacious, chronic illness with devastating physical and mental health consequences. Naltrexone is the most promising new medication in the search for an effective treatment for alcoholism. Although naltrexone was approved for short-term use by the Food and Drug Administration, knowledge about the long-term use of this treatment is limited. This major, multi-hospital trial will evaluate the efficacy, effectiveness and durability of naltrexone in the treatment of alcohol-dependent veterans. The study results may have an enormous impact on the health of alcohol-dependent veterans and others, and on the significant health care costs associated with alcoholism.

CSP 425

**Sclerotherapy shows good results for treating esophageal varices**

Alcoholics who have liver disease may develop veins in the throat called esophageal varices, which can burst, leading to hospitalization and death. The use of sclerotherapy in treating alcoholic patients with bleeding esophageal veins reduced the need for in-hospital medical care. This treatment enhanced efforts to stop bleeding, reduced the number of blood transfusions and hours required in intensive care and improved inpatient survival. However, post-discharge longevity was not increased.

*The Veterans Affairs Sclerotherapy Group. Sclerotherapy for actively bleeding varices in male alcoholics with cirrhosis. Gastrointestinal Endoscopy, 46:1-7, 1997.*

CSP 237

**Colchicine may provide first effective treatment of cirrhosis**

This study will serve as the definitive test of a drug, colchicine, for the treatment of alcoholic cirrhosis of the liver, a highly fatal condition for which abstinence and proper nutrition are the only known treatments. Because alcoholic cirrhosis is a disabling disease with high rates of morbidity and mortality, identification of an effective treatment will have a significant impact on both quality of life and health care costs.

CSP 352

**NIDA taps CSP for help in combating cocaine addiction**

Mounting a medical response to the national epidemic of cocaine abuse, the National Institute on Drug Abuse (NIDA) has enlisted CSP's help to produce a statistical infrastructure that will support rapid development of new drug abuse treatments. CSP's unique clinical and scientific resources will help NIDA evaluate treatment compounds more efficiently. The goal is to produce new treatment options and renew hope of reversing this scourge.

CSP 1010 and 1008E, G, I, AND M

**Combination drug treatment for opiate abuse under examination**

Opiate abuse is a major health service issue in VA and in the country. VA researchers, with funding from the National Institute on Drug Abuse, are investigating the efficacy and safety of a combined buprenorphine and naloxone product that could expand treatment options for opiate dependence. If approved by the Food and Drug Administration, this tablet product could be dispensed at general health care clinics for patients to take home instead of special substance abuse clinics, possibly increasing treatment among patients who are negative for HIV and hepatitis.

CSP 1008