Fall 2017 ● THIS ISSUE: Ensuring High-Quality Care

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Any health information in this newsletter is strictly for informational purposes and is not intended as medical advice. It should not be used to diagnose or treat any condition.
Research underlies high-quality patient care

One of the primary goals at the Office of Research and Development is to ensure that our research translates into improving health care for our Veterans. In so doing, we are joined with many initiatives that are focused on providing high-quality care.

One example is the Veterans Crisis Line, which provides immediate telephone access, 24/7, to skilled responders trained in suicide intervention. It is only one of the ways that VA is addressing the critical problem of Veteran suicide. In partnership with Johnson & Johnson, VA recently launched its #BeThere suicide prevention campaign to encourage everyone in the community to “be there” for Veterans who are going through a difficult time.

In this issue of VARQU, we highlight research from several state-of-the-art conferences that brought VA investigators and their academic partners together to share best practices and brainstorm new research and clinical applications.

The October 2017 special edition of Brain Injury features research and commentary growing out of the 2015 VA traumatic brain injury (TBI) conference. Review articles by VA researchers cover topics ranging from fluid biomarkers of TBI to neuroimaging of deployment-associated TBI to clinical practice guidelines for treatment of TBI. Investigators also discuss the important role that family plays in taking care of Veterans with TBI. While it can be rewarding to care for a family member with TBI, it can also cause financial and emotional difficulties. It is an injury that affects the whole family. That’s why VA is investigating additional ways to support family caretakers.

In our “Chat with the Experts” feature, VARQU speaks with Dr. Steve Martino and Dr. Marc Rosen, researchers at the VA Connecticut Healthcare System. They are co-investigators on a study that looks at the effectiveness of a brief pain intervention that is delivered when Veterans report for a VA
compensation and pension exam. Oftentimes, Veterans are not aware of the range of health services that VA can provide. By reaching out to Vets early, investigators hope to cut short unhelpful ways of dealing with pain, like substance misuse.

In an interview with Dr. Melissa Garrido, a Career Development Awardee, VARQU highlights her work on palliative care in seriously ill Veterans. She is a researcher and health economist at the James J. Peters VA Medical Center in the Bronx, New York. In light of the growing numbers of Veterans who are aging, there will be more need for palliative care for patients with a life-limiting illness like metastatic cancer or advanced heart failure. Because many Veterans experience mental illness along with serious physical illness, Dr. Garrido is investigating the effects of providing counseling for depression and anxiety in the ICU setting.

Also in this issue of VARQU, we summarize a number of editorials that bring light to the many ways VA is improving the quality of care we provide for our Veterans. In one such piece, Dr. Hal Wortzel at the VA Rocky Mountain MIRECC in Denver and his coauthors maintain that suicide risk assessment is still a useful tool as part of an integrated approach to suicide prevention. At the MIRECC, Dr. Wortzel and his colleagues pair innovative suicide risk assessment with concurrent mental health evaluation and treatment. By doing so, they are bringing all of the tools available to them to address the tragically high rates of Veteran suicide.

As President Abraham Lincoln said so long ago, it is our solemn charge “to care for him who shall have borne the battle ...” We are committed to continually improving the care that we provide our Veterans. And one important way that we do that is through research.

Rachel B. Ramoni, D.M.D., Sc.D.
Chief Research and Development Officer
VA traumatic brain injury conference findings

VA’s 2015 traumatic brain injury conference findings were published in the October 2017 issue of Brain Injury. The state-of-the-art conference was focused on combat-related TBI that occurred during operations Enduring Freedom (OEF), Iraqi Freedom (OIF), and New Dawn (OND).

In 2014, the National Research Action Plan (NRAP) brought together major research funding agencies to develop a better understanding of TBI and how they could improve care and support for Veterans and their families. Building off the NRAP platform, the 2015 VA TBI conference held group sessions that looked into injury mechanisms and their complications; injury detection screening and diagnosis; complex sensory-related comorbidities; and late clinical care and rehabilitation.

This issue of Brain Injury includes 10 review articles by VA researchers that focus on topics important to the current understanding of TBI and its treatment. Researchers discussed TBI-related topics ranging from identifying fluid biomarkers to medical imaging to clinical guidelines for treatment of TBI. Investigators also discussed the impact that TBI can have on caregivers of Veterans with TBI, many of whom experience depression and financial burdens.

In one review article, investigators described current methods for identifying the cause of hearing problems in Veterans following a TBI. They say it is easier to find the cause of hearing problems in instances where material thrown from a blast penetrates the head, rather than in mild head injuries, where the skull is intact. The problem is a lack of imaging technology that can tell which closed-head injuries are likely to cause hearing issues. The study authors recommend further research in this area.

In another article, the authors reviewed the current state of research on effects that come from TBI and blast injuries on the vestibular system, which controls balance and spatial orientation.
Dizziness is a common problem for people who experience a concussion or mild TBI. It can be caused by a number of reasons, which means physicians must first identify the problem before they can adequately treat it. In Veterans who received a war-related TBI, damage to the inner ear is one common cause of dizziness and imbalance. Researchers say that delicate sensory cells within the inner ear appear to be very sensitive to blast damage. They advise new treatment approaches may be necessary to treat this problem.

Interagency grant to study non-drug approaches to treat pain

The U.S. Departments of Health and Human Services, Defense, and Veterans Affairs have jointly funded $81 million in research projects to investigate non-drug approaches to pain management for service members and Veterans. The National Center for Complementary and Integrative Health, which is part of the National Institutes of Health, is the lead agency on the research initiative, called the NIH-DoD-VA Pain Management Collaboratory.

“We are so pleased to work alongside our federal partners to develop effective ways to treat pain in our service members and Veterans that do not expose them to the risks of opioids,” said VA’s chief research and development officer, Dr. Rachel Ramoni, in a NCCIHI press release. “This work reflects the VA’s commitment to reducing opioid overuse and expanding alternative pain management.”

The grant encompasses 12 research projects that over the next six years will focus on developing and testing large-scale, real-world solutions for the treatment of chronic pain through non-drug approaches like mindfulness meditation and behavioral interventions. Seven projects have been awarded by HHS/NIH thus far, with five more to be awarded by DoD and VA. Of the projects awarded by NIH, three involve researchers at the VA Connecticut Healthcare System in West Haven, Connecticut:
Dr. Robert Kerns at the VA Pain Research, Informatics, Multimorbidities, and Education Center (PRIME) in West Haven, Connecticut, assisted by partners at VA, DoD, and Yale University, will create the Pain Management Collaboratory Coordinating Center. The center will serve as a national resource for development of innovative tools and best practices to support clinical trials on non-drug approaches to pain management in the VA and military health care systems.

Dr. Alicia Heapy, associate director of the VA PRIME Center in West Haven, Connecticut, has been awarded a grant to study the effectiveness of an interactive voice response form of cognitive behavioral therapy for management of chronic pain.

Dr. Marc Rosen, director of addiction recovery services, and Dr. Steve Martino, chief of psychology, both at VA Connecticut Healthcare System in West Haven, have been awarded a grant to study the effectiveness of a brief intervention for pain management in Veterans.

*To learn more about this study, read “Brief screening key to referral for VA chronic pain treatment.”*

According to the medical literature, 45 percent of service members and 50 percent of Veterans deal with pain on a recurring basis. In one NCCIH study, researchers found that Veterans experience more severe pain at higher rates than do non-Veterans. Chronic pain can often worsen the experience of other conditions that occur more often in Veterans, like PTSD and traumatic brain injury. Veterans also experience high rates of substance use disorders. According to the National Center for PTSD, one in 10 Veterans from the wars in Iraq and Afghanistan has a problem with alcohol or other drugs.

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**VA health care equity conference affirms commitment to all Veterans**

The VA Center for Health Equity Research and Promotion (CHERP) is an HSR&D Center of Innovation devoted to research on health equity within the VA health care system. Along with the Health Equity and Rural Outreach Innovation Center (HEROIC), CHERP co-hosted a state-of-the-science conference in 2016. The conference brought together 100 research investigators and partners to address strategies to improve health equity for minorities, homeless Veterans, and LGBT Veterans.
In September 2017, the journal *Medical Care* published a special supplement devoted to research growing out of that conference, titled “Advancing Health Equity in the VA Health Care System.”

The supplement included a systematic review of interventions to reduce disparities in at-risk Veteran populations, and a discussion of the role that implementation science can play in advancing health equity research.

Five original research studies focused on detecting, understanding, or improving health equity for racial and/or ethnic Veteran minorities. In a study that looked at polysubstance use disorder in Veterans, researchers reviewed a national sample of more than 472,000 Veterans. They found that affected Veterans were more likely to be African American and homeless, and have greater use of medical services than Veterans who had a single substance use disorder.

Two studies focused on the experiences of Veterans with military sexual trauma. In one study, researchers reviewed the records of nearly 486,000 Operation Enduring Freedom and Operation Iraqi Freedom (OEF/OIF) Veterans who utilized VA health care. They found that a positive screen for military sexual trauma was associated with greater health care use and costs. In a survey of 407 OEF/OIF Veterans, close to two-thirds of both men and women reported intimate partner violence within the last six months. Physical and sexual IPV was associated with more severe mental health symptoms in women, and physical IPV was associated with lower health-related quality of life in men.

Two studies focused on health care use among homeless Veterans. One group of researchers looked at the effectiveness of long-acting, reversible contraceptives in 41,747 long-term homeless women Veterans. They found that these Veterans had higher rates of physical and mental health conditions. However, long-acting contraceptive use was higher in the long-term homeless sample, demonstrating modest success in helping vulnerable women Veterans.
Brief screening key to referral for VA chronic pain treatment

Dr. Steve Martino is chief of psychology at the VA Connecticut Healthcare System and professor of psychiatry at Yale School of Medicine. He specializes in the treatment of patients with substance use disorders, including those with co-occurring conditions. He also does research in the area of implementation science and how to move best practices into real-world clinical settings.

Dr. Marc Rosen is an addiction psychiatrist at the VA Connecticut Healthcare System and professor of psychiatry at Yale School of Medicine. He is the director of addiction recovery services at VA Connecticut, and conducts research on substance use disorders and related problems for affected Veterans.

KEY POINTS:

• Dr. Rosen and his team conducted a pilot study that used the VA compensation and pension exam to engage Veterans who were applying for a service-connected disability because of musculoskeletal pain.

• The pilot study showed that Veterans assigned to brief counseling were more likely to obtain pain treatment at a VA facility than those receiving the usual compensation and pension exam without additional counseling.

• The pilot study also showed that when Veterans with risky substance use were assigned to counseling, they were significantly less likely to engage in risky use than those not assigned to this counseling.

• The new study involves delivering the counseling by phone from a single hub site to Veterans having compensation exams throughout New England.

VARQU spoke with the two researchers about their work on chronic pain management among Veterans.

Continued on next page
The Department of Defense, National Institutes of Health, and VA have just co-funded a large grant to study non-drug approaches to pain management. What is the significance to the VA health system?

Dr. Rosen: This project has the potential to engage Veterans early in non-opioid pain treatment, and interrupt what can really be a harmful and dangerous course.

How did VA Connecticut become part of the larger grant?

MR: There are about 600,000 post-9/11 Veterans who are service-connected for back or neck pain. We had a developmental grant to intervene with people who were applying for service connection for musculoskeletal disorders. In the pilot study, most of the Veterans applying for service-connection for musculoskeletal disorders had considerable pain and impairment, and a high proportion were engaged in risky substance use. We found that they were amenable to intervention and that it helped them engage in VA pain-related treatment.

Dr. Martino: In addition, we also found that as a result of the early intervention, Veterans reduced their risky substance use, as well. So we thought that this was a very promising approach to bring forward to the grant application.

Can you tell us about your study, “Screening, Brief Intervention, and Referral to Treatment for Pain Management”?

MR: That’s the title of the study, actually; it’s not the title of the grant. I like the title of the grant better, it’s more descriptive. The title is actually a pretty good summary: “Engaging Veterans Seeking Service Connected Payments in Pain Treatment.”

So why is that a good point in time to have this discussion with Veterans? Why not in the clinician’s office?

SM: Well one of the main reasons is these Veterans may not be in the health service system of the VA. They are reporting problems they are experiencing, and may not be aware of the services they could avail to help themselves. There’s traditionally been a limited amount of information provided to Veterans at the point at which they are seeking a disability compensation exam, just because the nature of the exam is really determination for disability, not a clinical assessment.
Marc’s work has been fairly innovative in trying to use this as a point to provide Veterans who are seeking disability evaluations an opportunity to learn more about what is available to them and try to engage them in various services. And so that’s why we think this is a great opportunity to work with Veterans who are experiencing chronic pain and who may have risky substance use—to try and get them engaged in services that they currently are not participating in.

Can you walk us through a brief description of this intervention?

MR: We talk to the Veterans a little bit about their claim: We ask them about their pain and inform them of the variety of services available at the VA health care system. We explain that pain treatment can involve not only medication, but also attending to other aspects of whole-body health. We then allow that many people in pain drink or use drugs to relieve their pain, and ask the Veteran about the extent of his or her substance use.

There’s a format for this type of brief substance use counseling that Dr. Martino is an expert in. We follow that format to engage Veterans in reducing their substance use. That style of working with people is based on motivational interviewing. And so a large part of what we are doing is to motivate Veterans to participate in non-drug treatments, and commit to reducing or stopping their risky substance use. And engaging in specialized addiction services if that makes sense and they are willing to do so.

Part of the counseling involves not giving people exactly what they are expecting. The Veterans are coming for a compensation claim, and we are trying to say, “Hey, there are also some treatments available here that you are entitled to—that you’ve earned.” We are also taking Veterans whose presenting complaint is pain and saying, “Substance use is something that could make your pain worse. Here are some ways you might want to think about that.” We think that Veterans who have filed a claim are at a teachable moment.

How is motivational interviewing different from a traditional doctor/patient interaction?

SM: Motivational interviewing has been around for several decades. It began in the risky alcohol use field, and then has cut across all types of behavioral problems where motivation is part of the issue—particularly in the medical...
field. So the style of interaction really involves being very patient-centered, being empathic, collaborative, being compassionate to the needs of patients, and in particular being attentive to the ways in which patients speak about their problems that might support them making a change.

So what people do when using motivational interviewing as a framework is try to illicit or draw out people’s reasons for change and get people to elaborate more about those matters, such that they talk themselves into changing based on their own motivation. It’s a way of helping people talk themselves into changing based on what is unique about their own experiences.

You mentioned whole-body wellness earlier. Many studies show that opioids are not effective for long-term pain. What are some of the other treatments that might help patients deal with their pain?

MR: There are non-opioid medications. There are various physical treatments like physical therapy, exercise and activity, chiropractic services. There are mind-body based treatments like yoga and mindfulness. And there are psychological treatments like cognitive behavioral therapy and relaxation techniques. And finally, treating other issues that make pain worse: poor sleep makes pain worse, depression makes pain worse. Treating conditions that we know how to treat well can make a big difference.

SM: The mantra is that people need multi-modal pain care, and that the idea of medication as the sole form of treatment for chronic pain relief is misguided. We are trying to help people find a variety of ways in which they can approach pain treatment in order to get the best possible outcomes.

MR: There is a vicious cycle that people in pain can get into, in which they become less active, which is depressing. They don’t sleep well which worsens their overall physical condition, which worsens their pain. A lot of these treatments involve interrupting that vicious cycle.

Can you tell us about the different phases of your study?

SM: For all of these grants, there is an initial preparation phase where we have to meet certain milestones to prepare for the pragmatic trial. That’s a two year process. And at the end of the two years, those grantees who are successful in meeting their milestones presumably will continue to be funded for a four-year pragmatic trial. And we fully expect to be successful and be funded for pragmatic trial.
We have several things that we will be doing in phase one. First because we will be moving from the pilot trial which was done at VA Connecticut to all eight medical centers in VISN 1, we will get a grip on how pain care services and addiction services are delivered at each of those medical centers.

We will be doing semi-structured interviews and qualitatively analyzing them, to appreciate the various factors that are at play at each medical site. We’ll be talking with community medical providers and administrators and primary care folks, including nurse care managers, and anyone else who can tell us what’s unique about their medical center.

We will also be pilot testing this early intervention with five Veterans at each of the medical centers. The original trial was done face-to-face, in person. For this trial we will be using a hub-and-spoke model—so they’ll be clinicians based in VA Connecticut who will be delivering the intervention entirely by phone. We want to see how that goes and if there are any adjustments that we need to make before we go to the full trial.

Another key feature of the two-year preparation phase is it is very hard to characterize Veterans’ use of non-drug treatments. There aren’t codes for many of these treatments in the electronic medical record. So we have partnered with investigators from George Washington University to use what’s called natural language processing, to develop algorithms that will basically use computer programs to screen CPRS (Computerized Patient Record System) for Veteran’s use of non-drug treatment modalities.

Another important piece of this study is the cost-effectiveness. How much is this all going to cost? And what kind of impact will this have on the budgets of medical centers, if they wanted to implement this if we were to be successful? So we also have a health economic component to this, and we will also be devising our methods for costing out everything for the trial.

If this all works, would it be something that the clinicians could provide at the different medical centers, or would it be delivered through telehealth?

SM: One of the reasons why we decided to do this within a VISN is because the VA is organized in regions—networks of medical centers organized together. Our hope would be if we could demonstrate this hub-and-spoke model, centered in a VISN, is effective, then it could be replicated in many other VISNs across the country. So we would be advocating for a telehealth
means of administering this, which would provide greater access to people who may not be able to physically get to a medical center or who receive most services at rural sites across the country.

MR: One feature of the VA that would facilitate the adoption of this is that VA regions receive capitated payments for each Veteran, but the amount of payment is based on what services the Veteran receives. So if a Veteran comes to a hospital and only has a compensation and pension exam, that region gets a limited amount of money. If providers engage the Veteran in treatment, the region gets more money for that Veteran. So unlike in some other health care systems, the region doesn’t lose money by providing more comprehensive care.

**What are your long-term goals for this study?**

MR: Our first goal is to test the intervention as proposed. We tested this at a single site: It was done through face-to-face encounters, and it was promising. This next study is needed to see if it works in a setting in which we are treating many more people by phone, which is likely going to be less expensive and more easily spread throughout the region.

So the first goal is to evaluate the cost and benefits of this intervention, and see what works in the real world, not just in a research setting.

If it does works, then we would like to see it rolled out nationwide. We are not testing in some super complicated, super expensive form that couldn’t be done anywhere else. We are testing it as a relatively simple phone call and evaluation and referral. The hope is, if the results merit it, that this will be adopted in other regions.

SM: That last point I think is very important. The way we are studying this is consistent with the way that services are often delivered in VA. So we are hoping that this will make it attractive to the broader health care system because they will be able to relate to it. From an implementation standpoint, it won’t be discrepant with what is commonly done here.

MR: Sometimes it is hard to get health care systems to do things that will bring long-term benefits because the problems are subtle or the harms are long term. The harm from the opioid epidemic isn’t subtle, and there’s a real consensus that we need to treat pain better, and intervene early. In this case, I don’t think it will be hard to convince decision makers that early, better
pain treatment is necessary; this is a cause that people have embraced.

SM: The other feature of this study that I think will be attractive to providers is we are creating a model where the providers are not going to be asked to do much more than what they are already doing. We are creating a system that complements what they are doing. One of the things that you hear constantly when you try to bring more behavioral interventions into medical centers is “We are too busy.” They are very taxed. Asking them to do one more thing that is often seen as outside of their usual scope of practice is a difficult ask. So this is something that we think clinicians have not only embraced as a goal, but have embraced because it is not taxing all the other duties and responsibilities that they have.

Find out about the latest in VA research by listening to the ‘Voices of VA Research’ podcasts. Visit our website or subscribe on iTunes.

VA researcher leads landmark study on prostate cancer

Mike Richman of VA Research Communications interviews Dr. Timothy Wilt, a physician-researcher at the Minneapolis VA Health Care System, about his 20-year landmark study on prostate cancer, the second-leading cause of cancer deaths among men. The study focuses on the best way to treat early stage prostate cancer, whether it’s surgical removal of the prostate—the first choice of many patients—or observation, which involves monitoring using the prostate-specific antigen (PSA) blood test, and delayed surgery to reduce possible symptoms. The trial finds that surgery does not significantly reduce all-cause or prostate cancer deaths for men in the early stages of the disease.

Read more: “Study shows surgery for prostate cancer no better than watchful waiting.”

Listen (14:34), Transcript
Spotlight on Career Development Awardees

The impact of mental illness on palliative care outcomes for seriously ill Veterans

Melissa M. Garrido, Ph.D., is a health services researcher and health economist with the Geriatric Research Education and Clinical Center (GRECC) at the James J. Peters VA Medical Center in the Bronx, New York, and with the Partnered Evidence-Based Policy Resource Center (PEPReC) in Boston, Massachusetts. In addition, she is an associate professor of geriatrics and palliative medicine at the Icahn School of Medicine at Mt. Sinai in New York City.

KEY POINTS:

Garrido is the recipient of a Career Development award from the VA Office of Research and Development to help her examine the quality of mental health care provided to Veterans with serious physical illnesses, such as advanced cancer or congestive heart failure. The goals of her research award are threefold:

• To understand the relationship between mental health care and health care utilization for seriously ill patients, such as in ICU admissions.

• To identify which Veterans would benefit most from different types of consultations.

• To use existing data to help VA target resources to seriously ill patients with the greatest need for services.

VARQU spoke with Garrido about the work she is doing to improve palliative care for seriously ill Veterans.

Welcome Dr. Garrido. Can you tell us why you chose to study mental health care needs in seriously ill Veterans?

I chose this line of investigation for my CDA because there is a high prevalence of comorbid mental illness and serious physical illness among Veterans. There’s really not a lot of evidence to guide care for psychological distress and mental illness at the end of life.
The VA has placed a high priority on coordinating physical and mental health care. I think this coordination is especially important in the context of serious physical illnesses. There are unique psychosocial issues resulting both from these diagnoses as well as concern over the impact of both depression and anxiety on physical health status and on care use.

Sometimes there’s a tendency to think that depression and anxiety are normal if you have a life-limiting illness, but they are not normal consequences—they have effective treatments. It’s important to figure out the best way to address these issues in seriously ill patients.

Also, a range of providers, from social workers to the National Cancer Policy Board, have called for the development and use of evidence-based guidelines and algorithms to identify who should receive what types of mental health care near the end of life.

**Can you give us a brief definition of palliative care? What does that involve?**

Palliative care is team-based care that focuses on symptom management, facilitation of transitions of care across settings—for instance ensuring that there are services at home that are set up after a patient has been discharged from the hospital. It also includes eliciting and communicating goals of care. One way to think of it is as an extra layer of support. So it is addressing the needs of the whole patient and their family while the patient is undergoing those other disease-targeted treatments.

**So palliative care is not synonymous with hospice care, correct?**

That’s correct. Hospice care is one specific part of palliative care. Palliative care is a broader focus on symptom management, and ensuring that people are informed about what care decisions might mean and ensuring that they get goal-concordant care. Hospice is focused on the very end of life, where palliative care can begin at the time of diagnosis.

**What do you mean by the term life-limiting illness? Does this require end-of-life care?**

It’s a bit broader than end-of-life care, but what I mean is serious physical illness that limits a patient’s life expectancy. So these are patients for whom a provider may say no when asked, “Would you be surprised if this patient were to pass away in the next year?” So it is not the imminent end of life,
but it’s near the end of life. Some of these patients might improve, but it’s a broad term that encompasses things like metastatic cancer, advanced heart failure, or chronic obstructive pulmonary disease, or maybe AIDS with comorbidities such as cirrhosis or cancer.

**How do anxiety and depression affect chronic physical illness? Do they go hand-in-hand with a serious, life-limiting illness?**

I think what’s important to note is that there will always be some concern about a serious illness; that’s entirely normal. But clinical levels of mood disorders should not be expected for all patients. So this becomes a case where stress is interfering with daily life and affecting a patient’s ability to do anything else.

Anxiety and depression are associated with symptom exacerbation, poor pain control, reduced quality of life, and also, poor treatment adherence. There’s a reciprocal relationship between pain and depression. Worse pain can precipitate depression, but if a person has depression they may also report worse pain. The same happens with anxiety. Patients with anxiety might report more pain. There are other symptoms such as dyspnea, or shortness of breath, that can lead to greater anxiety.

I think one type of anxiety, PTSD, really deserves special attention—especially in the VA. Serious illness symptoms, such as shortness of breath, can remind patients of experiences that they endured in the military, and might actually reactivate PTSD. The highest demand right now for PTSD care in the VA is from Vietnam Veterans. And their risk of serious illness will increase with age. It’s important to note that sometimes patients don’t experience many symptoms until they are informed of a terminal prognosis. PTSD symptoms might include things like paranoia, hallucination-like episodes, or confrontational behavior. But in a life-limiting illness, these symptoms might be misdiagnosed and treated as delirium.

PTSD coping mechanisms also include avoidance. So this might lead a patient to ignore physical symptoms or try to avoid contact with clinicians or family caregivers, which might make their physical illness/situation worse.

**Can you tell us what the goals of your study are? What are some of the things you hope to find out?**

One goal of my study is to characterize the relationships among depression and anxiety and cost of care and ICU use among seriously ill, hospitalized
Veterans. Another goal is to understand whether palliative care and/or treatment of depression and anxiety would lower these costs. And finally, we aim to identify which Veterans would benefit the most from different types of consultations: palliative care or palliative care plus specialty mental health care, in terms of symptom burden and ICU admissions.

But what’s been really surprising, however, is that we’ve not seen evidence of a relationship among depression and anxiety and costs or ICU use in our national sample. What we do know is that mental illness diagnoses are common among seriously ill hospitalized Veterans in our sample. At the time of hospitalization, at least one-quarter of the sample had any diagnosed mental illness, and 11 percent had depression at the time of hospitalization. But when we look at the year before the time of hospitalization, these numbers go up. One-fifth of the sample had a diagnosis of depression in the year before hospitalization. I think that suggests that it’s important that providers look at a patient’s history of mental illness, as well as what’s currently diagnosed.

**Can you tell us how you structured your study?**

We took a national sample—we are using existing data from the VA, data from the medical record that has been compiled into national data sets. We are looking at data from hospitalizations for Veterans who had diagnoses of advanced cancer, heart failure, or chronic obstructive pulmonary disease (COPD), who had a history of being hospitalized a couple of times in the past year, or had at least one ICU admission in the past year.

The idea was to look at that single hospitalization, at that single snapshot, and explore what information we could see about the Veteran that would predict his cost of care or likelihood of ICU admission. We were looking at current diagnoses of mental illnesses, history of mental illnesses, comorbid physical illness burden, socio-demographic characteristics, and then types of mental health treatment that patients have received.

**What would be a future line of investigation?**

Given that we are not finding the hypothesized relationships that we had expected, which was surprising, we are wondering—given that mental illnesses are not always recorded in the medical record—if we might need more sensitive measures to identify which patients need additional mental health care or need additional palliative care.
Using existing data to improve the provision of care for Veterans is part of the VA’s whole learning health-care system initiative. There’s this wealth of information in the medical record, but we need to figure out the best ways to use it to ensure that the VA is providing high-quality, high-value care.

When we’ve looked at chart review data, looking at the actual medical records in a much smaller local sample of Veterans, we did identify potential areas of improvement for mental health care. There was a disconnect between reports of psychological distress and documented receipt of mental health care.

But we are not seeing these relationships in the large administrative datasets with the current measures that we have. So this might be an opportunity to use something like natural language processing to try and get at more of the nuanced data that is in the text of a medical record, that’s not in the administrative files.

Is there anything else you’d like to add about the direction of your research?

I think there is one other potential next step, beyond focusing on psychological distress in the text of the medical records. The study that I’m doing now does not look at spiritual distress or the role of chaplains in addressing both psychological and spiritual distress.

A lot of Veterans prefer to seek psychological support from chaplains rather than psychologists, because chaplaincy has a large role in the military. Chaplains are frequently assigned to commands and they are held to strict confidentiality standards, stricter than those for psychologists. So, it may make them a less stigmatizing source for emotional support. I think a more systematic investigation into what exactly chaplains are doing for different patients, and what elements of that care are the most effective in improving distress and end-of-life care quality, would be an interesting and important next step.
Use of performance measures for selecting community surgical providers

The VA Office of Community Care is considering using performance metrics to make it easier to select qualified orthopedic and cardiac surgical providers for inclusion in the Veterans Choice program. Unfortunately, while there are many indirect indicators of patient well-being following surgery, they are not enough to predict good surgical outcomes.

To address this problem, VA researchers from the Evidence-based Synthesis Program Coordinating Center in Portland, Oregon, conducted a rapid evidence review to find out if the medical literature supported an association between performance metrics and health outcomes.

They concluded that the all-cause 30-day hospital readmission rate was a moderately strong indicator of death within 30 days for coronary bypass surgery. It is a weaker indicator of death after hip replacement, but is a consistent metric. Also, the researchers noted that it would be relatively easy to collect data on this metric, as Medicare providers are required to report on 30-day readmissions.

Despite some limitation, the researchers proposed that 30-day readmission is the best indicator of surgical outcomes and could be included as a prerequisite for participation in the Veterans Choice surgical program. In addition, they suggested that these metrics should also be included as minimum requirements for inclusion in the Choice program:

- An acceptable performance on national rankings.
- The use of compatible operational infrastructure.
- The ability to comply with an agreed-upon wait-time threshold.

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The Veterans Choice program was created in 2014 to give Veterans better access to health care by approving community care in certain circumstances—i.e., when there are long wait times to see a VA provider or patients live more than 40 miles from a VA health care facility. The Choice program also stipulated that community providers must maintain the same credentials as VA providers and enter into agreements with VA to furnish care, rather than use a voucher-like system.

Veteran reengagement in PTSD psychotherapy

Dr. Katherine Buchholz and a team of researchers at the VA Ann Arbor Healthcare System in Michigan and Kent State University in Ohio conducted a study that looked for ways to encourage Veterans with PTSD to return to psychotherapy. They found that any interaction with the VA health care system increased the odds that a Veteran would return to complete psychotherapy for PTSD.

The study was published in the September 2017 issue of General Hospital Psychiatry.

Using VA health data, the researchers conducted a study of 24,492 Veterans who had been diagnosed with PTSD during the period 2008–2009, and who had attended five or fewer psychotherapy sessions. From that group, they compared 9,649 Veterans who returned to psychotherapy by the end of 2012 with those who did not.

Using statistical models, the researchers teased out the effects of factors like age and gender, mental health status, and the number of health care visits on the likelihood that Veterans would return to psychotherapy. They concluded that offering Veterans a broad range of health care services could help them return to complete psychotherapy for PTSD. They suggested that educating health care providers across all settings—primary care, specialty care, mental health care—could have an important impact on helping these Veterans.

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VA takes a multi-disciplinary approach to helping Veterans who experience PTSD. There are a number of trauma-focused psychotherapies that are helpful for PTSD. However, Veterans with PTSD typically under-use these services—a majority do not complete the full course of recommended psychotherapy. Current guidelines recommend a course of therapy over eight to 15 sessions, with eight sessions considered the minimum for adequate treatment.

Reduced mortality from staph infections at VA hospitals

A team of VA researchers led by Dr. Michihiko Goto at the Iowa City VA Health Care System published a study in *JAMA Internal Medicine* that demonstrated the potential benefit of using specific care measures to prevent deaths related to staph infections in the bloodstream. *Staphylococcus aureus* is a bacterial infection commonly referred to as a “staph infection.” When it occurs in the bloodstream it is called *staphylococcus aureus bacteremia* (SAB). Once it infects the blood, it can travel to internal organs and cause infections in places like the heart, joints, or even implanted surgical devices. It is typically associated with poor outcomes, especially among hospitalized patients whose immune systems have already been weakened by other illnesses or surgery.

Goto and his team examined the health records of nearly 37,000 patients who had positive blood cultures for SAB at 124 VA hospitals during 2013 and 2014. Slightly more than half of the Veterans were infected with an antibiotic-resistant strain of SAB, and 47.6 percent were infected with a strain of SAB that responded to antibiotics.

Anecdotal evidence has suggested that eliminating the source infection early on, imaging the heart to look for endocarditis (infection of the inner lining of the heart), using appropriate antibiotic prescribing practices, and consulting an infectious disease specialist could improve outcomes for patients with SAB. However, it was unknown whether these practices could

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be responsible for a large-scale reduction in patient deaths from SAB.

After adjusting the study results for variables like patient characteristics, age, and different care practices, the researchers concluded that the above-mentioned interventions were associated with a 57.3 percent reduction in mortality from SAB infection during the study period. They also found that the interventions had an additive effect: the more evidence-based care a Veteran received, the lower his or her chances were of dying from SAB.

Because staph organisms are very resilient, they are hard to disinfect and can easily be transmitted person to person, or even through contact with a contaminated surface like a countertop. Staph can also become resistant to antibiotics. A case in point is methicillin-resistant *staphylococcus aureus*, or MRSA—a major problem for hospitals and patients.
Editorials from VA Research Scientists

A research agenda for communication between health care professionals and patients living with serious illness

James A. Tulsky, M.D.; Mary Catherine Beach, M.D., MPH; Phyllis N. Butow, Ph.D.; Susan E. Hickman, Ph.D.; Jennifer W. Mack, M.D., MPH; R. Sean Morrison, M.D.; Richard L. Street, Ph.D.; Rebecca L. Sudore, M.D.; Douglas B. White, M.D., MAS; Kathryn I. Pollak, Ph.D. JAMA Internal Medicine.

Dr. Richard L. Street, chief of the Health Decision-Making and Communication Program at the Michael E. DeBakey VA Medical Center in Houston, and his colleagues met to outline the role that poor communication can play in worsening the experience of patients with serious illness.

In an article published in JAMA, the researchers noted that poor communication can leave providers unsure of patient values, which can result in care that is not in sync with patient goals and is correlated with higher use of invasive care at the end of life. Patients may also not completely understand the extent of their illness and the treatment options open to them, say the study authors, if providers do not take the time to communicate in a meaningful way.

The research team identified evidence gaps and suggested five areas where further research could benefit patient care: measuring the quality of provider-patient communication, identifying provider behaviors that inspire patient trust, promoting advance care planning that focuses on better communication, teaching provider communication skills, and finding approaches to motivate clinicians to change their communication behavior.

Towards more proactive approaches to safety in the electronic health record era


Dr. Hardeep Singh is chief of the Health Policy, Quality and Informatics Program at the Michael E. DeBakey VA Medical Center. Together with his colleague Dr. Dean Sittig, he recently...
updated the electronic health record (EHR) patient safety guidelines known as the SAFER Guides—Safety Assurance Factors for EHR Resilience. They were developed to share best practices in health information technology to ensure patient safety. The guides’ purpose are to assist both health care organizations and EHR developers in conducting recurring IT risk assessments.

The authors suggest in their article that by taking a proactive approach to EHR risk assessment, health care professionals will be better able to mitigate technology-related patient care errors and learn from system vulnerabilities identified during SAFER assessments. They recommend that patient safety professionals, rather than IT staff, spearhead this process, so that risk assessments do not fall by the wayside.

To learn more about Dr. Singh’s work on ways to improve patient safety via the technology, read “The Power and Perils of Electronic Health Records.”

**Why suicide risk assessment still matters.**


VA has made suicide prevention one of its key areas of focus and improvement in recent years. Unfortunately, the rate of death by suicide has remained relatively stable over the past 10 years, despite efforts aimed at risk assessment, says Dr. Hal S. Wortzel, director of neuropsychiatric services for the VA Rocky Mountain MIRECC in Denver. He and his co-authors argue that despite the seemingly limited effectiveness of suicide risk assessments, they still can be of value to clinicians and their patients, in an editorial published in the *Journal of Psychiatric Practice.*

The team cautions that when suicide risk assessment is done in a vacuum it can be of limited value, because it does not take into account the varied and unique attributes that each patient possesses. They recommend that risk assessment take place in concert with a comprehensive mental health
Editorials from VA Research Scientists

assessment and treatment plan. Doing so may enhance the therapeutic relationship between provider and patient, help identify treatment targets, improve care, and perhaps, save a life.

Curing hepatitis C virus infection: Best practices from the U.S. Department of Veterans Affairs

Pamela S. Belperio, PharmD.; Maggie Chartier, PsyD, MPH; David B. Ross, M.D., Ph.D., MBI; Poonam Alaigh, M.D.; David Shulkin, M.D. Annals of Internal Medicine.

VA is the nation’s largest provider of care for hepatitis C, having treated more than 92,000 Veterans since direct-acting antiviral (DAA) therapy became available in January 2014. VA Secretary Dr. David Shulkin and his coauthors suggest that VA’s program of care for hepatitis C (HCV) could be a model for national efforts to combat the disease, in an article published in the Annals of Internal Medicine.

Recommendations put forth by the National Academies of Sciences, Engineering, and Medicine that emphasize prevention, screening, and universal treatment closely mesh with VA guidelines that embrace aggressive treatment of HCV. The VA health system uses an integrated approach to care delivered through multidisciplinary HCV Innovation Teams. It also tracks care for Veterans using population health tools like data registries that can identify patterns of access to care, a task closely aligned with improved patient outreach.

VA treatment approaches like the use of nonphysician providers, telehealth technologies, and integrated care practices that address mental health and substance use issues could be effectively adopted in the private sector, say the authors.

Choosing Wisely: How to fulfill the promise in the next 5 years

Eve Kerr, M.D.; Jeffrey Kullgren, M.D.; Sameer Saini, M.D. Health Affairs.

In 2012, the American Board of Internal Medicine Foundation and Consumer Reports developed the Choosing Wisely campaign. Their goal was to reduce
the incidence of “low value” care by encouraging physicians and their patients to talk about potentially unnecessary medical testing and procedures, and by issuing 45 clinical recommendations that have now grown to 500 at the end of 2016. Unfortunately, the targeted decreases in low-value care have not yet fully materialized.

In a commentary published in the journal *Health Affairs*, three authors with the Center for Clinical Management Research at the VA Ann Arbor Healthcare System in Michigan—Drs. Eve Kerr, Jeffrey Kullgren, and Sameer Saini—discuss the progress that the Choosing Wisely campaign has made, and suggest future areas of improvement.

The researchers say new efforts should start by identifying top-priority clinical targets, developing theory-based interventions, and applying clinically meaningful metrics to evaluating present interventions. They propose that one way forward could include collaboration between medical societies to develop standardized clinical recommendations for common tests and procedures among different patient populations.
Awards & Career Milestones

Dr. Rory Cooper named 2017 AAAS Fellow

VA researcher Dr. Rory A. Cooper has been named a 2017 Fellow of the American Association for the Advancement of Science in the discipline of engineering. Cooper was singled out for his “distinguished contributions to the field of bioengineering and health and rehabilitation sciences, particularly for applications for people with disabilities,” according to the AAAS.

Cooper, himself a wheelchair user, is founder and director of the Human Engineering Research Laboratories, a collaboration between the VA Pittsburgh Healthcare System and the University of Pittsburgh. Over several decades he has been instrumental in developing novel innovations in wheelchair design. He and his team at HERL hold 25 patents related to wheelchair design and assistive technologies.

Cooper’s inventions are being used by more than a quarter million individuals with disabilities, according to Dr. Brad Dicianno, chief operating officer and medical director for HERL. The innovations range from using newer, lighter materials that make wheelchairs easier to maneuver to robotic extensions that can reach objects for the wheelchair’s user.

Earlier this year, Cooper received the Samuel J. Heyman Public Service Award for exceptional public service in Science and Environment.

This year, 396 AAAS members were named fellows through a process that involves nomination by colleagues within the association. The newly elected fellows will be presented with an official certificate and rosette pin at the AAAS 2018 annual meeting in Austin, Texas, on Feb. 17.

The American Association for the Advancement of Science is the world’s largest general scientific society and publisher of the journal Science. Joining the company of distinguished AAAS fellows Thomas Edison and Margaret Mead, five AAAS fellows were named 2017 Nobel laureates: Michael Rosbach, physiology or medicine; Joachim Frank, chemistry; Rainer Weiss, physics; Kip Thorne, physics; and Barry Barish, physics.
VA researcher Dr. Eve Kerr elected to National Academy of Medicine

Dr. Eve A. Kerr, director of the VA Center for Clinical Management Research at the VA Ann Arbor Healthcare System in Michigan, has been elected to membership in the National Academy of Medicine.

Each year the academy elects up to 70 domestic members and 10 international members, based on their professional excellence and commitment to service, education, and research.

“These newly elected members represent the most exceptional scholars and leaders in science, medicine, and health in the U.S. and around the globe,” said National Academy of Medicine President Victor J. Dzau in a news release. “Their expertise will help our organization address today’s most pressing health challenges and inform the future of health and health care to benefit us all.”

Kerr, who is also the Louis Newburgh Research Professor of Internal Medicine at the University of Michigan Health System in Ann Arbor, is an internationally acknowledged expert on methods to assess and improve the quality of patient care.

She is the author or coauthor of over 100 peer-reviewed journal articles, including a study published in JAMA in 2015 that found that many physicians failed to reduce medication levels in response to changes in older patients’ blood sugar or blood pressure levels.

Kerr is active in numerous organizations that are dedicated to improving patient care both in the U.S. and internationally. She is immediate past-chair of the American College of Physicians’ Committee on Performance Measurement and a member of VA’s Performance Accountability Workgroup, to name a few. She is also active in Choosing Wisely International, an international campaign devoted to reducing the number of unnecessary medical tests and procedures.

In May 2017, Kerr received the VA Under Secretary of Health’s Award for Outstanding Achievement in Health Services Research. It is the highest honor that VA’s Health Services Research and Development (HSR&D) bestows.
Awards & Career Milestones

The National Academy of Medicine (formerly the Institute of Medicine) is an independent organization composed of noted experts in health and medicine, and the natural, social, and behavioral sciences. It serves in collaboration with the National Academies of Science and Engineering to advise the United States and the international community on matters important to medicine and public health.

The 2017 elected class will be inducted next year at the National Academy of Medicine’s annual meeting to be held October 13-15, 2018, in Washington D.C.

VA researcher receives the 2017 American Legion Distinguished Service Medal

Dr. Apostolos Georgopoulos, director of the Brain Sciences Center at the Minneapolis VA Medical Center, was awarded the American Legion Distinguished Service Medal for his work on Gulf War illness at the Legion’s national convention, in Reno, Nevada. He has been active in neurological research for more than 20 years and is internationally known for his work on PTSD and Gulf War illness in Veterans.

Georgopoulos studied medicine and physiology at the University of Athens in Greece, where he earned his M.D. and Ph.D. After coming to the U.S., he studied neurophysiology at Johns Hopkins University and eventually joined the faculty, becoming professor of neuroscience in 1986.

In 1991, Georgopoulos accepted the American Legion Brain Sciences Endowed Chair at the University of Minnesota, where he has been engaged ever since in conducting brain research on PTSD, Gulf War illness, Alzheimer’s disease, schizophrenia, and other neurological conditions that affect Veterans.

Using a medical imaging technique called magnetoencephalography (MEG), Georgopoulos is able to “see” inside the brains of Veterans to look for abnormal brain activity. The MEG machine records magnetic fields normally produced within the brain and takes only minutes to do its work. Fewer than 70 of these machines exist in the world, according to the Minnesota Veterans Medical Research and Education Foundation.

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Awards & Career Milestones

Gulf War illness affects roughly one-third of the Veterans who served in the Persian Gulf in 1990 to 1991, according to Georgopoulos. His research into the condition suggests that different parts of the brain are not communicating correctly, possibly explaining the deficits in thinking and mood that accompany the disease.

“I’m here with rays of hope for successful treating … Gulf War illness, a very complex and debilitating disease that affects the Veterans who served in the Persian [Gulf],” said Georgopoulos as he accepted the Distinguished Service Medal.

The Minnesota American Legion raised over $1 million to establish the Brain Sciences Endowed Chair to promote research, teaching, and training into brain diseases and disorders, said Charles E. Schmidt, the American Legion national commander.

The American Legion Distinguished Service Medal recognizes outstanding service to the nation and programs of the American Legion. Previous recipients include President George W. Bush, the U.S. Army 3rd U.S. Infantry Regiment (The Old Guard), and the Boys Scouts of America.

*Listen to Dr. Georgopoulos speak about his research involving Veterans with Gulf War illness.*

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VA researcher receives Louis V. Avioli Founders Award for advancing bone health

Dr. Subburaman Mohan, a VA senior research career scientist and director of the Musculoskeletal Disease Center at the VA Loma Linda Healthcare System in California, was awarded the 2017 Louis V. Avioli Founders Award from the American Society for Bone and Mineral Research (ASBMR).

Mohan, who is also a research professor at Loma Linda University, is internationally known for his significant contributions to skeletal biology research. His work has provided important contributions to the understanding of factors that influence bone development, bone loss, and remodeling (the process of rebuilding bone) in the human skeleton.

One of the major research accomplishments of Mohan and his team relates to the discovery of two new insulin-like growth factor (IGF) binding proteins Continued on next page
that are pivotal in maintaining a healthy musculoskeletal system. The discovery was made during research that was investigating the potential use of growth hormone (GH) and IGF to treat osteoporosis, a condition that involves low bone mass.

“Age-related loss of bone mass occurs, in part, due to a decrease in components of the GH/IGF system. Therefore, supplemental anabolic GH and IGF-I therapies for the treatment of age-related bone loss and osteoporosis show great promise,” said Mohan in a press release.

He has also made significant contributions to the understanding of several novel genes that are important to the process of bone regeneration and maintenance.

The human skeleton is a dynamic structure and undergoes changes throughout a person’s lifetime. Peak bone mass, or maximum strength, is achieved around the age of 30 years old. Thereafter, both men and women lose bone mass as they age—but for women that process is accelerated when they reach menopause.

Mohan is a well-funded investigator and is a recipient of a number of professional awards. He has published nearly 400 papers and continues to serve on the editorial boards of several scientific journals, scientific organizing committees, and grant review panels.

His current work is centered around genetic regulation of peak bone mass, vitamin C deficiency-induced skeletal fractures, and the long-term consequences of mild traumatic brain injury on bone, among other subjects.

The Avioli Founders Award is given annually to an ASBMR member in recognition of exemplary research in basic bone and mineral metabolism. It was established in 2010 in memory of Louis V. Avioli, M.D., the first president of the ASBMR society.

The award presentation took place in Denver at the 2017 Annual Meeting of the ASBMR in September.