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## **DEPLOYMENT HEALTH CLINICAL TRAINING SERIES**

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Good Morning, I'm Lieutenant. Colonel Charles Engel, the Director of the Deployment Health Clinical Center, and today we're gonna be running through the Deployment Health Training Series sponsored by the Deployment Health Clinical Center.

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The Deployment Health Clinical Center is a center mandated by public law in the Strom Thurmond National Defense Authorization Act of 1999. The Deployment Health Clinical Center itself is one of three centers for deployment health.

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Our mission in the clinical center is to improve post-deployment health care. Other centers are the surveillance center, responsible for gathering health-related data from automated sources and the research center, responsible for organizing and carrying forward analytic epidemiologic study of risk factors to health related to various deployments that have already occurred. Together the three centers constitute an organized approach to facilitating health in people who've participated in various deployments.

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Today we're gonna be focusing more on the clinical part. As I mentioned, the broad Deployment Health Clinical Center mission is improving post-deployment care. Some of the more details related to that mission include:

- Providing assistance to veterans and their families

- Consulting with and learning from and teaching clinicians and administrators such as those of you taking advantage of this broadcast as it pertains to post-deployment care, the development and implementation of a clinical practice guideline, actually several clinical practice guidelines relating to post-deployment care. You'll be hearing more about that today; and

- Providing specialized health care services for people with deployment-related, but treatment refractory, difficulties;

- We also are responsible for collaborating with the VA and easing transitions across the two organizations; as well as

- Doing command consultation, assisting unit commanders and other military leaders as is appropriate.

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The purpose of this training series is to cover best practices of post-deployment healthcare within the framework of the Post-Deployment Clinical Practice Guideline, so that you in your settings can take active steps to improve post-deployment care. You'll learn more about the Deployment Health Clinical Center, which I've just briefly introduced. You'll learn more about the (re- and Post-deployment Health Assessment process. You'll also learn about specific deployment-related health concerns and conditions, Such as, for example, the anthrax vaccination or leishmaniasis, and you'll also learn about various post-deployment clinical practice guidelines that DoD and VA have put into effect and are actively implementing.

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Why do we focus on post-deployment care? Depending upon your perspective it may seem obvious or may seem that post-deployment care in many ways is just primary care provided in a different setting. Well one of the things that we learned after the 1991 Gulf War, is that after deployments people not only develop, as we've learned previously, conditions such as post traumatic stress disorder and various mental disorders and more obvious wounds such related to traumatic injuries suffered on the battlefield. But they also leave the battlefield with a variety of different health concerns. These are not necessarily diseases, although they may be related to diseases that they're suffering from. And after the Gulf War in 1991, we saw literally thousands of the seven hundred thousand veterans who deployed who returned with various and sundry symptoms and concerns. When we looked more closely however, we found that there was no increase in mortality among Gulf War veterans versus those veterans who were in the military at the time but didn't deploy, and we also found that there was no consistently increased incidence of hospitalization among these veterans. However, even though some used that data to suggest that there was nothing wrong, that there was no quote "Gulf War Syndrome" among Gulf War veterans, studies that looked at more subjective health issues such as symptoms and concerns in health-related quality of life, consistently found that there were decrements in health-related quality of life and systematic increasing in symptoms among those who deployed versus those who didn't deploy.

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So while, what this highlights really, is that even while there may not be issues that are acutely life-threatening, that essentially when people go on deployments, they encounter various and sundry exposures, they return, the exposures become a source of concern to them. When they develop symptoms, they relate those symptoms to those health concerns and they often present to their doctor asking questions about those health concerns. And the reality is that in a post-deployment context, we never really have enough timely data to provide completely relevant information to the patient. We have, we're often generalized from studies done in animals or in other settings so we feel often that we can be reassuring with patients, but in reality we have to wait for data to come back. And in that context clinicians often need some assistance in how to communicate uncertainty around various exposures to their patients in ways that acknowledge real scientific areas of uncertainty, but to do so without distressing their patients unnecessarily.

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After the Gulf War, there was many different suggestions with regard to what the nature of the problem was, this Gulf War Syndrome. Some felt that it was physical problem related to toxic exposures or vaccinations, and others felt that it was a purely psychological problem, some sort of alternative manifestation and post-traumatic stress disorder or somatization disorder. The reality was that we really didn't know. In one study that was done by Richardson and colleagues in a Pacific Northwest VA setting found interestingly that general internists tended to view both the cause and the treatment of Gulf War Syndrome to be psychological and behavioral in nature while psychiatric professionals tended to view the problem as more medical and requiring of medical treatment. And of course in this kind of a context, if a patient sees the internist and then is referred to the psychiatrist for psychological treatment, hears the message of the psychiatrist, you ultimately have a very confused patient. It also highlights the fact that even across disciplines there's disagreement about these sorts of medically unexplained symptoms that can crop up after deployments.

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The problems after the Gulf War caused a lot of reflection on the part of medical scientists within DoD and the VA and elsewhere. It also caused historians to jump in and look back at various conflicts in the past and essentially rediscover that there has been a long history of post-war syndromes, syndromes such as battle shock, combat fatigue, shell shock, neurasthenia and others. More recently of course, there's been post-traumatic stress disorder after Vietnam and Agent Orange health-related health concerns after Vietnam and of course the Gulf War Syndrome. So this, it's safe to say that we will see these sorts of health concerns and symptom syndromes and disease complexes occurring after future deployments, and there will always be ongoing studies to look at these to try and understand them better, and it's the

responsibility of the clinician and ultimately the administrative support personnel as well to provide the proper tools for both patients and clinicians that they're seeing so that information as best we know it at that time can be communicated to patients.

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Some might say, "Well that's all in the past but medical science is getting better all the time and we certainly in the future will be able to discover more quickly what these sorts of syndromes are", and there have been many more recent instances of these sorts of post-traumatic event or post-exposure syndromes that have occurred that only highlight the fact that in fact as information flows more quickly through the media and over the internet and through television, the television lens, that the imperative to have accurate information quickly about these sorts of situations only increases, and that the occurrence of these syndromes also increase.

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When we look at these episodes of illness occurring in a post-deployment or post-traumatic event or post-exposure context we have found some commonalities that occur and can be relevant for the clinician, and certainly the clinician needs to pay attention to what news is out there about these events not simply for medical edification but also to understand the perspective that their patient may bring to them when they present with post-deployment health concerns. Some of these common factors: First, the obvious, that there is a war or deployment or disaster that occurs. Secondly that there is the subsequent onset of symptoms or/and concerns. Those who practice in primary care settings know that medically unexplained or idiopathic physical symptoms are a common occurrence, occurring in as many as a third or more patients routinely seen in primary care setting. So these kinds of problems will occur, and when they occur in a post-deployment context, there's also a certain amount of suspicion and mistrust that arises related to the Department of Defense and the government in general and even the VA with regard to whether the truth is being told about these exposures, and questions arise as to whether the patient can trust you, the clinician, when you come face to face with them and provide them information and/or reassurance. So this source of suspicion and mistrust becomes very disruptive to the delivery of care and to getting our messages out to our population that we're charged with taking care of. Feeding into the suspicion and mistrust is active debate regarding causes that occur at societal level, debate that may be valid involving scientists with differing perspective. It may also be debate that occurs in the public eye for political purposes and with people making arguments for political reasons. There are also debates that occur in the local media about whether something is caused by this or that exposure and what the risks might be to that exposure to an individual who has encountered that exposure. All of this debate creates greater uncertainty, greater distress in the population. Frequently greater mistrust for the organizations like the Department of Defense or big industry in similar cases who are charged with doing the right thing for the people involved. Often there's an investigation that occurs with varying levels of scientific rigor, certainly great rigor after the Gulf War, and we find that these sorts of investigations are consistently inconclusive leaving the clinician again holding the bag with the patient, trying to communicate that uncertainty to the patient. And ultimately an issue that effects your capacity to develop trust and rapport with your patient is the resulting loss of credibility that those of us in the various services experience who are trying to provide good medical care but our patients upon reading this sort of information may question the extent to which we're trying to serve them versus trying to serve the larger military.

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So all of this has resulted in the development of a clinical practice guideline, and as you'll hear later, subsequent guidelines that come out of this essentially umbrella guideline. The guideline is called the DoD/VA clinical Practice Guideline on Post-Deployment Health Evaluation and Management.

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A brief history of the guideline goes back to the late 1990's when the Institute of Medicine reviewing the VA and DoD's post Gulf War registries recommended that there be a comprehensive approach to quality

improvement integrated into these registries and clinical evaluations that both services were performing, the VA and their Persian Gulf Veterans registry, and the Department of Defense with its Comprehensive Clinical Evaluation Program. The IOM further recommended that future efforts to do this kind of post-deployment clinical surveillance in care in addition to occurring within the context of active quality improvement should focus on primary care. And that the net effect of focusing on primary care is to foster more collaborative and trusting relationships between patients and clinicians providing care so that an environment is nurtured that allows good information and accurate information to be passed back and forth for the betterment of the patient's ultimate health.

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In addition to focusing on primary care, there's also an emphasis that the Institute of Medicine brought to the need for active clinical evidence that is applicable to the primary care setting, and this guideline not only serves as a way of improving healthcare, but it also serves to highlight areas where we need more information to guide post-deployment clinical practices.

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The Guideline was developed using a very rigorous methodology that both the VA and the Department of Defense have followed with a variety of different conditions, specific guidelines such as asthma, diabetes and back pain, with previous efforts. The Guideline is the result of inter-agency collaboration obviously between Department of Defense and VA. It's also a collaboration between clinicians in those agencies as well as civilian experts and experts from academia. It's highly multi-disciplinary in its development emphasis. Veterans were involved in the development of the clinical practice guideline, and some fairly careful field-testing was carried out, and the result of the field-testing was used to improve the guideline before ultimate dissemination of the guideline in early 2002.

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As I mentioned, there's a multi-disciplinary emphasis and a variety of disciplines, particularly primary care disciplines such as family practice and internal medicine as well as behavioral health disciplines, preventive medicine were all involved in the development of this guideline. Nursing and the clergy were involved in the development of the guideline as well as non-clinical disciplines such as risk communicators who are active teachers of various communicators on how best to communicate about risks, particularly risks that occurs in a context in which some suspicion or high level of concern exists. And then finally there was toxicology input as well, because these health concerns often relate to difficult to quantify or low dose toxic environmental exposures.

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I also mentioned that the guideline very assertively involved veterans. And one reason I believe this is a very important thrust is that it is a public thrust. It essentially allows us in the Department of Defense and VA to bring the patients that we care for and their families into the process of developing their care, again having the effect of creating collaboration and trust.

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The Guideline was field-tested in three sites involving the Marine Corps, the Army and the Air Force. The sites were chosen as high deployment sites so that we could get a feel for how the Guideline would function in that context. There were providers and clinic staff trained in the use of the Guideline and implemented the guideline using tool kits and the guideline algorithms, the website which you'll learn more about, and various forms. As I mentioned, as a result of the pilot testing some fine-tuning occurred, and the expectation is that we will continue to do this sort of fine-tuning on the Guideline. Every two years the Guideline is to be re-looked and revised, and in the coming year an important emphasis of the Center, the Deployment Health Clinical Center, will be to again take a close look at how the Guideline is

structured, where our successes have been and where our inadequacies have been, in an effort to gradually make the Guideline better.

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The Guideline has a variety of specific goals that pertain to both clinical care as well as clinical surveillance, knowing that our responsibility is to identify as soon as possible illnesses that occur in a post-deployment context. The main guideline goal is to aid primary care providers in evaluating patients with post-deployment health concerns. One thrust of the guideline helps them to optimize risk communication as I've already spent a fair bit of time discussing. The hope is that this will result in improved satisfaction on the part of the patient and more positive attitudes regarding post-deployment care on the part of medical and other clinical personnel, and that there would be supportive patient education materials and tools that can be used both for the clinician and that the clinician can use to inform their patient. As I mentioned, the surveillance angle is important and built into the guideline is a coding strategy which will allow us to do hypothesis generation in the early period after any deployment and determine whether we're seeing unusual levels of a specific type of, for example, infectious disease or other illness that a rapid response needs to be brought to, and we are using this guideline as a way also of developing preventive strategies for future deployments.

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There are a variety of tools not only for clinicians but for clinic administrators who are working with their clinicians to improve post-deployment care. For example, Rand developed with the Department of Defense a manual called "Putting Practice Guidelines to Work in the Department of Defense Medical System", which speaks considerably to the issue of how best to implement this and the other VA and DoD guidelines that have been developed.

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In a more microscopic way, the goals and objectives of the clinical practice guideline are:

- To identify and address deployment-related health concerns;
- To integrate deployment-related health with overall healthcare;
- To improve satisfaction and process of care for deployment-related care;
- To facilitate clinical risk communication;
- To establish a clinical surveillance system;
- To track post-deployment health concerns in the future; and ultimately we hope,
- To reduce unnecessary healthcare that's driven by unrealistic or magnified health concerns and to reduce functional impairment that can occur from idiopathic symptoms as well as more easily diagnosed diseases.

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The ultimate thrust of the Guideline in a global sense is to create a collaborative care environment. Collaborative in that unlike the usual clinical situation wherein you have the meeting of an expert physician for example, with a lay patient, that we are creating an environment that involves the meeting of two experts. That is the person who is an expert on clinical care and the person who is an expert on their own body and the way that it's functioning and the way that it feels. Within the collaborative framework, instead of the doctor prescribing specific strategies that the patient is then to quote "comply with", that the effort really is to have the two parties negotiate the most important goals of care, the most important priorities and through that negotiation develop a strategy that is follow-up intensive. Where often what's done for the patient after the first visit that follow-up and follow through may in fact be more therapeutic and more important than any diagnostic work done in that initial setting.

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There are a number of key guideline elements to review. The first involves screening and triage. The second involves clinical evaluation. The third involves clinical management and follow-up. The fourth involves a stepped approach to risk communication. The next is outcomes management. And the last is medical surveillance which is heavy on how to best code various kinds of ailments and symptoms syndromes that providers encounter. On the screening and triage part of this, this is perhaps the most important first step in implementing the guideline, deployment-relatedness or as we've often called it "military unique vital sign" is asked, and the thrust of that vital sign is essentially to ask the patient whether their visit that day is driven by a deployment-related health concern. In response to that question, the provider marks yes, no or maybe in the record. It's very important to understand that this is not something that the provider is to mark based on their own assessment. They need to ask the patient about this because the response to the vital sign is essentially pulling for the patient's own assessment, own level of concern about deployment-relatedness, not any particular objective parameter on the part of the clinician.

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And then based on the response to that question, if someone notes that their visit is driven by a deployment-related health concern or that it may be driven by a deployment-related health concern, then there are algorithms within the Guideline that the patient's care shifts to and offers guidance to the clinician on what specifically should be done for that particular patient. So there are essentially three algorithms that after the patient marks the military unique vital sign positively they would be quote "triaged" to or their care would move to. The first is for patients who are asymptomatic but have health concerns and are receiving a primary care based medical assessment. Then there are those who after a primary care based medical assessment have definitively diagnosed diseases. And then the third is an algorithm for patients who have medically unexplained symptoms that they are concerned may be related to a previous deployment. And for all of these sorts of patients there is information on a website. The address you see on your screen that tells you where to go to find more information.

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As I mentioned earlier, the Post-Deployment Guideline is an umbrella guideline of sorts. It's a guideline that is designed to help the clinician with the initial assessment, but there are subsequent guidelines for once the assessment is complete, and these guidelines are to help the clinician drive the therapy for patients with various and sundry post-deployment problems. Other guidelines that have been specifically created for the post-deployment context is a guideline on medically unexplained symptoms, a guideline on major depressive disorder. There is within the guideline on major depressive disorder a detailed guideline on suicide and suicidal ideation as well as substance abuse. And there's a guideline which is soon to be released on post-traumatic stress disorder. And there's also guidance that can be obtained on our website with regard to leishmaniasis depleted uranium, malaria and various vaccinations, problems that seem to repeatedly come up in a post-deployment context because they are routinely either encountered or perceived to be encountered in that deployment, in various deployments that we perform.

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On the outcomes management side of the clinical practice guideline, we have a variety of different tools that can be used to measure patient status and measure symptom severity as well as determine diagnosis. These include measures that you see on the screen. The Post-Deployment Clinical Assessment Tool which is a broad overall assessment. Patient Health Questionnaire which is a more focused mental health assessment. The SF36 which is a generic functional status measure that allows you to compare the functional status of patients across a wide variety of ages and illness conditions. The Post-Deployment Health Tracking Database which is essentially an administrative tool that allows you to keep track of who has received the Post-Deployment Health Assessments that you'll be hearing about more later in this series of presentations, and that tracking database is aimed at helping you to be aware whether people have filled out the form in the past or whether you need to implement it, and if they filled it out in the past, whether there are any red flag indicators that you need to be taking care of based on responses to that Post-Deployment Health Assessment.

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In all of this, the Deployment Health Clinical Center stands in a place dedicated to supporting you and your clinic staff in implementing these guidelines and improving post-deployment healthcare. We provide training and clinical guidance from our multi-disciplinary team of health care providers. We also have a toll free help-line, an e-mail help for you if you have questions. We have clinical tools available on our website at [www.pdhealth.mil](http://www.pdhealth.mil). We also have informatics and risk communication support information there for both clinicians and for patients, and we provide healthcare. We are a referral center for tertiary care referrals, these are patients that typically to the best of your ability you have not been able to definitively care for their symptoms or concerns, and we run a program to help those folks, a rehabilitative program on site here at Walter Reed.

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Our history as a center grew out of the Gulf War is suggested by the history of the Guideline that I presented to you earlier. We were the Gulf War Health Center, and in that role we provided tertiary referral as well as guideline assistance within the Comprehensive Clinical Evaluation Program, a care program that was specifically devised for Gulf War veterans within DoD,

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and we had a degree of success doing that and have evolved into the Deployment Health Clinical Center where we're now attempting to capture lessons from subsequent deployments that relate to healthcare upon people's return, and to provide clinical care, to provide education resources as well as to do good research related to healthcare delivered under the Guideline.

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Our referral program that I alluded to a moment ago is called the Specialized Care Program. It is a worldwide referral program. It is tri-service and multi-disciplinary and its main focus is chronic idiopathic physical symptoms, for example, fibromyalgia, chronic fatigue syndrome, multi-chemical sensitivity and related types of chronic symptom syndromes that may or may not be in association with more easily diagnosed diseases. Our emphasis is on supportive person-centered care that's non-confrontational and collaborative, attempts to physically activate patients so they can achieve better levels of functioning while at the same time being very education intensive, making sure that they know how best to find information related to their health concerns and working with them so that they can make positive gains in learning more about the issues that are the focus of their health concerns.

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Our posture is one of advocacy at all times, and we are based on the best available science on how to do rehabilitation for patients of this sort, and our effort, our goal for the future, is to promote a shift from medical care, a passive waiting for medical therapies in these patients to a more active self-management on the part of the patient. We also do ambulatory care and clinical consultation as part of the program.

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Well without further ado, let's move to an introduction of the subsequent training modules that are available for you to watch to improve post-deployment care in your setting. We have a presentation on screening and evaluation, one on management and follow up, a third on clinical health risk communication, a fourth on coding and documentation, and one on the pre- and post-deployment health assessment process. The hope is that by watching these and learning these sections that you'll be in an excellent position to provide top quality care for people with post-deployment health concerns.

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Along the way, we will also be talking about associated topics. Some of them are related to guidelines that I have mentioned such as medically unexplained symptoms in a post-deployment context, major depressive disorder, post-traumatic stress disorder and emerging health concerns such as leishmaniasis and depleted uranium and other militarily relevant health issues. I thank you for tuning in and watching these educational programs, and I hope that you find them helpful.

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On your screen please note that there are phone numbers, addresses and emails for how you can reach us. Again our commitment is to be here for you so that you can do a better job for the folks who are returning from deployment, folks who have served their nation in a time of need and really deserve the very best care that we can offer them.