

**CLINICAL PRACTICE GUIDELINE FOR
POST-DEPLOYMENT HEALTH
EVALUATION AND MANAGEMENT**

**VERSION 1.2
SEPTEMBER 2000/
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Department of Defense

Veterans Health Administration

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**CLINICAL PRACTICE GUIDELINE FOR
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PREFACE

In response to potential health concerns among Gulf War veterans, the Department of Veterans Health Affairs (VHA) initiated the Gulf War Health Examination Registry (PGR) on November 4, 1992. The PGR offers to every Gulf War veteran a complete physical examination and basic laboratory studies with referral to the Uniform Case Assessment Protocol (UCAP) for specialty consultation if a diagnosis is not made. Additionally, a complete medical history is obtained and documented in the veteran's medical record. The Department of Defense (DoD) initiated a similar program, the Comprehensive Clinical Evaluation Program (CCEP), on June 7, 1994. The CCEP expanded upon routine medical care of Gulf War veterans and provided a more systematic evaluation strategy modeled after the VHA PGR.

The DoD and VHA asked the Institute of Medicine (IOM) to evaluate the adequacy of the current clinical evaluation programs for veterans of the Gulf War, since both evaluation programs have evolved over time. The IOM Committees evaluating the adequacy of the PGR, UCAP, and CCEP endorsed the systematic, comprehensive set of clinical practice guidelines (CPGs) set forth in these diagnostic programs. In their report, *Adequacy of the Comprehensive Clinical Evaluation Program: A Focused Assessment*, the IOM Committee concluded, "The CCEP is a comprehensive effort to address the clinical needs of the thousands of active duty personnel who served in the Gulf War" (IOM, 1997). The CCEP and PGR have assisted clinicians in determining specific diagnoses for thousands of patients. However, the IOM emphasized the need to focus evaluation and care of deployed forces at the primary care-level, both to enhance the continuity of care and foster the establishment of ongoing therapeutic relationships. In the report, *Adequacy of the VA Persian Gulf Registry and Uniform Case Assessment Protocol*, the IOM further recommended "...to the extent possible, use an evidence-based approach to develop and continuously reevaluate clinical practice guidelines for the most common presenting symptoms and the difficult-to-diagnose, ill-defined, or medically unexplained conditions..." (IOM, 1998). Since research studies indicate a high prevalence of psychosocial problems among deployed forces, the IOM recommended that standardized guidelines address the need for screening, assessing, evaluating, and treating this population. The IOM clearly stated that "the goal of implementing a uniform approach to the diagnosis of ... veterans' health problems is admirable and should be encouraged" (IOM, 1998). The IOM recommendations are based on research findings, lessons learned through PGR and CCEP implementation, and advances made in the field of clinical practice evaluation.

Based on the experiences encountered after the Vietnam and Gulf Wars, the IOM emphasized that the post-deployment period is a crucial time for carrying out medical evaluations and providing appropriate care for returning service members. In addition, DoD and VHA clinicians have identified the need for standardized guidelines for assessing, evaluating, and treating returning service members who may have deployment related health concerns. Providing post-deployment medical care in the absence of service connection provides a valuable opportunity to ascertain the health needs of this population, including those with medically unexplained symptoms. Rather than naming a special deployment-specific registry, the IOM concluded that veterans should receive evaluation and care as needed, with evaluation, follow-up, and patient management focused in the primary care setting. The IOM's recommendations serve as the basis for the *Clinical Practice Guideline For Post-Deployment Health Evaluation and Management* and other supporting management CPGs.

REFERENCES

1. Institute of Medicine, Committee on the Evaluation of the Department of Defense Comprehensive Clinical Evaluation Program, Division of Health Promotion and Disease Prevention. *Adequacy of the Comprehensive Clinical Evaluation Program: A Focused Assessment*. Washington, DC: National Academy Press. 1997.
2. Institute of Medicine, Committee on the Evaluation of the Department of Veteran Affairs Uniform Case Assessment Protocol. *Adequacy of the VA Persian Gulf Registry and Uniform Case Assessment Protocol*: Washington, DC. National Academy Press. 1998.
3. Institute of Medicine, Division of Health Promotion and Disease Prevention. *Committee on a National Center on War-Related Illnesses and Post-deployment Health Issues*. Washington, DC: National Academy Press. 1999.
4. Institute of Medicine, Medical Follow-Up Agency. *Strategies to Protect the Health of Deployed U.S. Forces: Medical Surveillance, Record Keeping, and Risk Reduction*. Washington, DC: National Academy Press. 1999.

**CLINICAL PRACTICE GUIDELINE FOR
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INTRODUCTION

Deployment of forces in hostile or unfamiliar environments is inherently risky. The changing missions and increasing use of U.S. forces around the globe in operations other than war call for greater attention to threats of non-battle-related health problems—including infections, pathogen- and vector-borne diseases, exposure to toxicants, and psychological and physical stress—all of which must be avoided or treated differently from battle casualties (IOM, 2000). The health consequences of physical and psychological stress, by themselves or through interaction with other threats, are also increasingly recognized.

Although symptoms and health concerns after a deployment may be indistinguishable from those reported in routine primary health care settings, deployment presents unique and often difficult challenges for military members, veterans, and their families. The military members may experience physical or psychological trauma resulting from a variety of factors, such as combat, environmental extremes, illness or infectious disease, injury, weapons of mass destruction, and potential environmental threats. Deployment may create or exacerbate existing family problems and strain already fragile family relationships and coping mechanisms.

The DoD and VHA have expended a great deal of time and effort since the Gulf War in developing and implementing diagnostic programs for Gulf War veterans. Opportunities for change and improvement have emerged as a result of lessons learned through CCEP and PGR implementation, research studies, and feedback from veterans (IOM, 1998). Change is part of a natural evolutionary process and is important in developing good screening instruments for diagnosis. In evaluating the adequacy of the CCEP, UCAP, and PGR, the IOM concluded that CPGs for the evaluation and management of deployed forces health issues should be developed (IOM, 1998).

GUIDELINE DEVELOPMENT PROCESS

Overview

In early 1999, the Assistant Secretary of Defense for Health Affairs and the Under Secretary for Health for Veterans Affairs initiated development of the *Clinical Practice Guideline for Post-Deployment Health Evaluation and Management* for evaluating armed forces personnel and veterans returning from deployment. The following objectives were established:

- Achieve satisfaction and positive attitudes regarding post-deployment medical care
- Identify and support decision-making for elements of care essential to all post-deployment evaluations
- Support patient education and communication
- Optimize data collection
- Focus on prevention in subsequent deployments
- Support provider education

The DoD and VHA define CPGs as:

“Recommendations for the performance or exclusion of specific procedures or services derived through a rigorous methodological approach that includes the following:

1. Determination of appropriate criteria, such as effectiveness, efficacy, population benefit, or patient satisfaction
2. Literature review to determine the strength of the evidence (based in part on study design) in relation to these criteria.”

The Guideline was developed to assist clinicians in primary care settings in determining specific diagnoses for individuals seeking care for potentially deployment related experiences or exposures. The Guideline provides a structure, clinical tools, and linked resources allowing clinicians to evaluate and manage patients with deployment related health concerns. The Guideline also applies to non-deployed individuals who are experiencing health concerns which they relate to a deployment; e.g., family members of recently deployed personnel.

The development process for the Guideline is evidence-based whenever possible. Evidence-based practice integrates clinical expertise with the best available clinical evidence derived from systematic research. Where evidence is ambiguous or conflicting, or scientific data are lacking, the clinical experience within the multidisciplinary group guides the development of consensus-based recommendations.

The Guideline is not intended to provide strict indications or contraindications to health care because multiple other considerations may be relevant for an individual patient, including past medical history, family setting, occupational needs, and lifestyle preferences. The reader is reminded that the Guideline does not supersede the clinical judgment of the clinician.

Guideline Development

The Guideline and algorithms are designed to be adapted to an individual facility's needs and resources. They will be updated periodically, or when relevant research results become available and user feedback is obtained through DoD and VHA field trials. The Guideline should be used as a starting point for innovative plans that improve collaborative efforts and focus on key aspects of care. The system wide goal is to improve local management of patients with post-deployment health concerns, thereby improving patient outcomes.

The Guideline is the product of many months of diligent effort on the part of clinical experts from the DoD, VHA, academia, a team of guideline development specialists, and an experienced moderator who facilitated the multidisciplinary panel. Internal Medicine, Family Practice, Preventive and Occupational Health, Public Health, Sports Medicine, Primary Care Physicians, Epidemiologists, Surgeons, Psychologists, Psychiatrists, Nurses, Nurse Practitioners, Physician Assistants, Quality and Risk Managers, Risk Communicators, and expert consultants in the field of algorithm and guideline development contributed to the Guideline. Policy-makers and civilian practitioners joined these experts from the DoD and VHA.

The clinical experts subjected all decision points in the algorithm to simulation exercises. Hypothetical "patients" were run through the algorithm to test whether it was likely to work in a real clinical situation. If an irregularity was encountered, changes were made. Therefore, the clinical experts are reasonably confident that the algorithm will prove to be useful and valid in real clinical encounters.

The Guideline will be integrated with other existing evidence-based CPGs for the evaluation of more readily apparent and clinically defined diagnoses that include stress-related psychological conditions, such as depression, anxiety, and tension headache, and musculoskeletal disorders. Work also continues within the DoD and VHA to develop supporting CPGs for management of specific deployment related illnesses among armed forces personnel and veterans. Guidelines are available on-line on the Internet.

Literature Search

The literature supporting the decision points and directives in the Guideline is referenced throughout the document. Prior to a review of the literature, the work group leaders provided input on focal issues.

A search was carried out using the National Library of Medicine's (NLM) MEDLINE database. Boolean "AND" expressions were used in conjunction with the targeted MEDLINE Medical Subject Headings (MeSH) "descriptor" categories, including but not limited to, those listed below:

- Anxiety
- Mental disorders, including anxiety and depression
- Pharmacotherapies
- Fatigue syndrome
- Fibromyalgia
- Medically unexplained symptoms
- Multiple chemical sensitivities
- Post-Traumatic Stress Syndrome
- Post War Risk Factors

MeSH "qualifiers" (e.g., meta-analysis), were also utilized to request specific types of publications, such as peer reviewed journals and tutorials, using two discreet query delimiters:

- Articles published between 1996 and 1999, with some exceptions
- English language only

Each work group participant received a reference package of relevant literature, including journal abstracts/articles, texts, and publications and several sample health evaluation screening tools.

Format

The Guideline is presented in an algorithmic format. There are indications that this format improves data collection and clinical decision-making and helps to change patterns of resource use. A clinical algorithm is a set of rules for solving a clinical problem in a finite number of steps. It allows the clinician to follow a linear approach to critical clinical information needed at the major decision points in the disease management process and stepwise evaluation and management strategies that include the following:

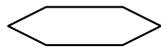
- Ordered sequence of steps of care
- Required observations to be made
- Decisions to be considered
- Actions to be taken

It is recognized, however, that clinical practice often requires a nonlinear approach and must always reflect the unique clinical issues in an individual patient-clinician situation. The use of guidelines must always be considered as a recommendation within the context of a clinician's medical judgment in the care for an individual patient.

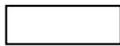
A clinical algorithm diagrams a guideline into a step-by-step decision tree. Standardized symbols are used to display each step in the algorithm (Society for Medical Decision Making Committee on Standardization of Clinical Algorithms, 1992).



Rounded rectangles represent a clinical state or condition.



Hexagons represent a decision point in the guideline, formulated as a question that can be answered Yes or No.



Rectangles represent an action in the process of care.



Ovals represent a link to another section within the guideline.

Annotations

A letter within a box of an algorithm refers the reader to the corresponding annotation. The annotations elaborate on the recommendations and statements that are found within each box of the algorithm. These annotations include a reference, when required, and evidence-grading for each recommendation, when available. The strength of the recommendation (SR) and the quality of the evidence (QE) are both noted and followed by a brief discussion of the underlying rationale.

The reference list at the end of each annotation includes all the sources used—directly or indirectly—in the development of the annotation text. A complete bibliography is provided at the end of the document.

Evidence Rating

The work group reviews the articles for relevance and grades the evidence using the rating scheme published by the U.S. Preventive Services Task Force (U.S. PSTF, 1996). The experts themselves, after an orientation and tutorial on the evidence-grading process, formulate QE and SR ratings. Each reference is appraised for scientific merit, clinical relevance, and applicability to the populations served by the Federal health care system. Recommendations are based on consensus of expert opinions and clinical experience, only when scientific evidence is unavailable. Table I includes the Evidence Grading Table, which is based on the U.S. Preventive Services Rating Scheme, U.S. PSTF, 1996.

Table I: Evidence Grading Table	
<i>Quality of Evidence (QE)</i>	
Grade	Description
I	Evidence is obtained from at least one properly randomized controlled trial.
II-1	Evidence is obtained from well-designed controlled trials without randomization.
II-2	Evidence is obtained from well-designed cohort or case-control analytic studies, preferably from more than one center or research group.
II-3	Evidence is obtained from multiple time series with or without the intervention. Dramatic results in uncontrolled experiments could also be regarded as this type of evidence.
III	Opinions of respected authorities are based on clinical experience, descriptive studies in case reports, or reports of expert committees.
<i>Strength of Recommendation (SR)</i>	
Grade	Description
A	There is <i>good</i> evidence to support the recommendation that the condition be specifically <i>considered</i> .
B	There is <i>fair</i> evidence to support the recommendation that the condition be specifically <i>considered</i> .
C	There is <i>insufficient</i> evidence to recommend for or against the inclusion of the condition, but a recommendation may be based on other grounds.
D	There is <i>fair</i> evidence to support the recommendation that the condition be <i>excluded</i> from consideration.
E	There is <i>good</i> evidence to support the recommendation that the condition be <i>excluded</i> from consideration.

The Guideline for the management of post deployment health is a novel effort. There are very limited research studies for this topic in the literature. Often, the most basic patient management questions and well-accepted care strategies have not been tested in randomized control trials. For example, no randomized clinical trials are likely to be conducted to evaluate the importance of a medical history and physical examination in management of patients after deployment. For many recommendations, there is insufficient evidence to determine whether or not routine interventions will improve clinical outcomes. Lack of evidence of effectiveness does not mean that there is evidence of ineffectiveness. Therefore, the recommendations for these well-accepted care strategies do not include grading of the strength of the evidence. The specific language used to formulate each recommendation conveys panel opinion of both the clinical importance attributed to the topic and strength of available evidence. It is expected that this Guideline will encourage future research that will generate practice-based evidence for inclusion in future versions of the Guideline.

The assembled experts were an invaluable source of additional information and suggested numerous references that were distributed to participants on an as-needed basis. It must be noted that this document does not, however, include reference to any publications dated after December 1999. More recent information will be included in future Guideline updates.

Guideline Content

The *Clinical Practice Guideline for Post-Deployment Health Evaluation and Management* is a single module consisting of three parts that address three aspects of related care:

- A1: Assessment of Post-Deployment Health Concern
- A2: Decision and Triage of the Patient With Unexplained Symptoms
- A3: Management of the Patient with an Established Diagnosis

The Guideline also contains appendices that provide more information on the work group participants, the CCEP and the PGR, and standard health assessment tools. In addition, a bibliography and list of acronyms are included.

REFERENCES

1. Institute of Medicine. *Protecting Those Who Serve: Strategies To Protect the Health of Deployed U.S. Forces*. National Academy Press: Washington, DC. 2000.
2. Society for Medical Decision Making Committee on Standardization of Clinical Algorithms. "Proposal for Clinical Algorithm Standards." *Medical Decision Making*. 1992. 12(2): 149-154.
3. *The U.S. Preventive Services Task Force Guide to Clinical Preventive Services*, Second Edition. 1996. 15-38.
4. VA 1996 External Peer Review Program, Contract No. V101 (93) P-1369.
5. VHA Directive 96-053. *Roles and Definitions for Clinical Practice Guidelines and Clinical Pathways*. August 29, 1996.
6. Woolf, S. H. "Practice Guidelines, A New Reality in Medicine II. Methods of Developing Guidelines." *Archives of Internal Medicine*. May 1992. 152: 947-948.
7. Woolf, S. H. "Practice Guidelines, A New Reality in Medicine III. Impact on Patient Care." *Archives of Internal Medicine*. Dec 1993. 153: 2647-55.

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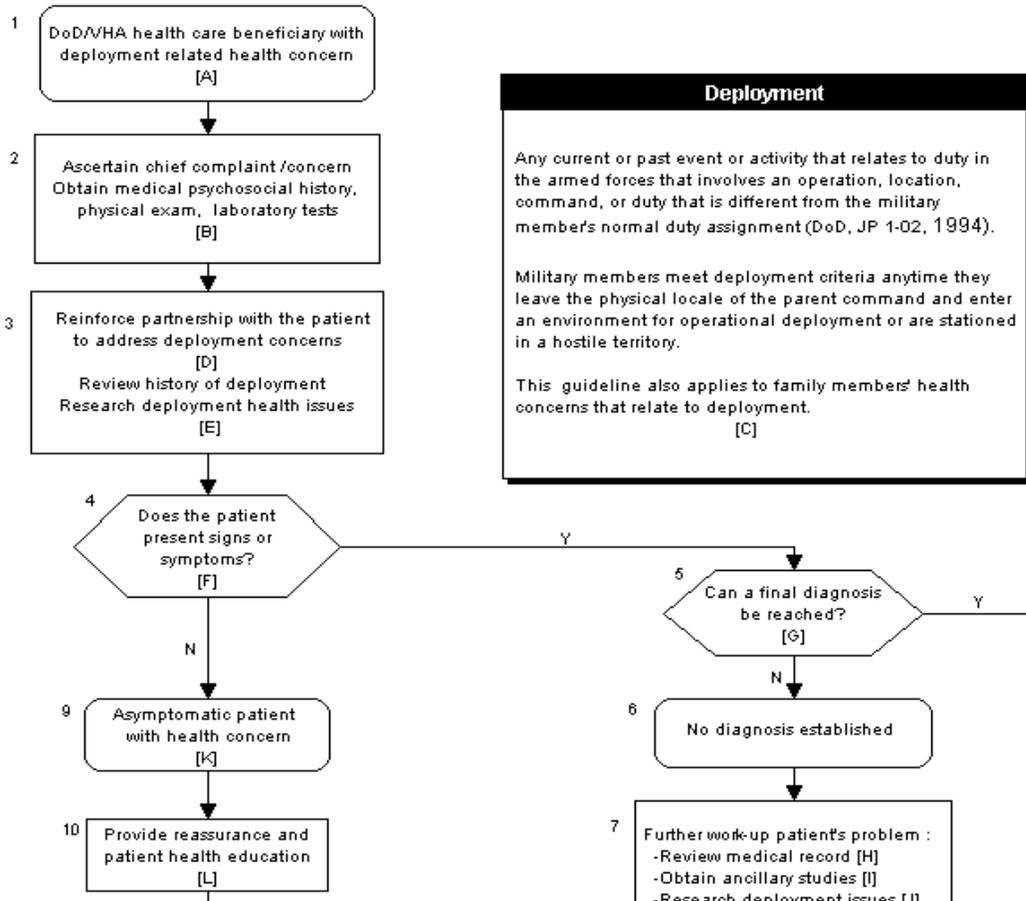
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ALGORITHM AND ANNOTATIONS**

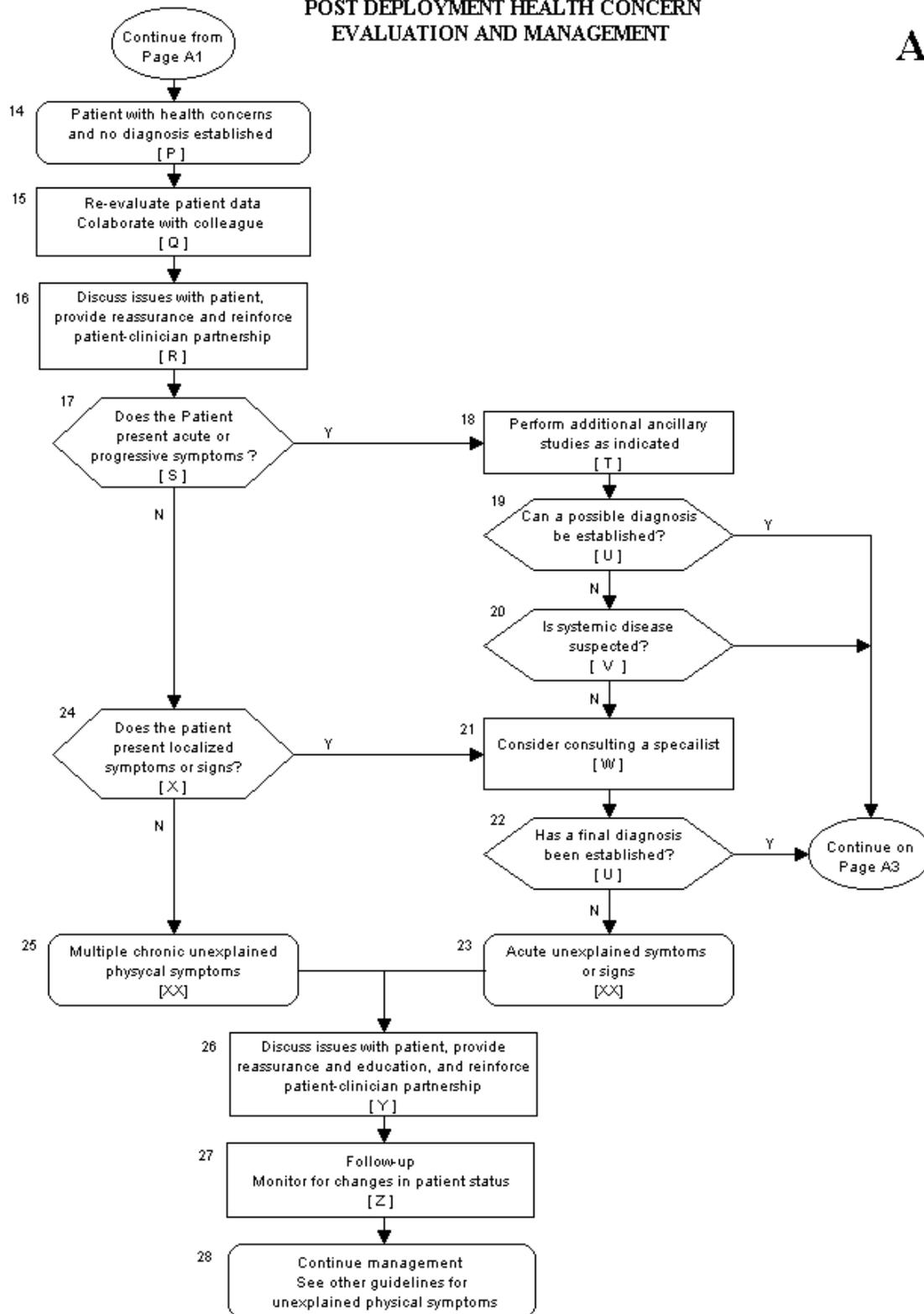
POST DEPLOYMENT HEALTH CONCERN EVALUATION AND MANAGEMENT

A1



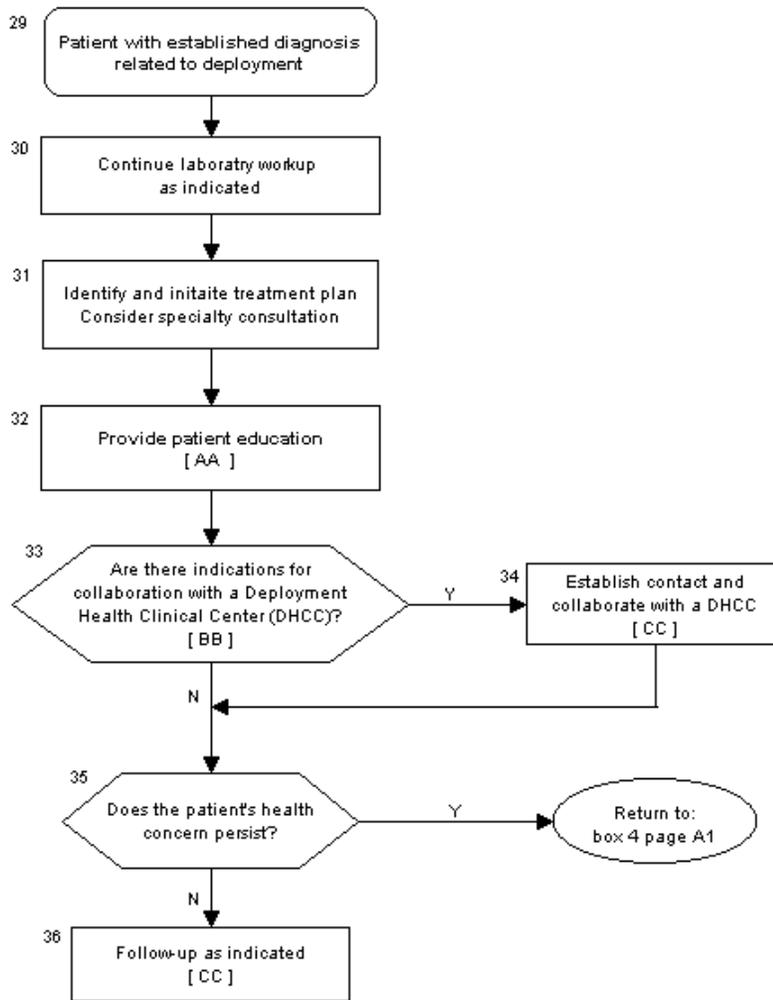
**POST DEPLOYMENT HEALTH CONCERN
EVALUATION AND MANAGEMENT**

A2



POST DEPLOYMENT HEALTH CONCERN EVALUATION AND MANAGEMENT

A3



ANNOTATIONS

A. DoD/VHA Health Care Beneficiary with Deployment Related Health Concern

DEFINITION

A Department of Defense (DoD) or Veterans Health Administration (VHA) health care beneficiary presenting to a primary care clinician for the evaluation and management of a post-deployment health concern.

ANNOTATION

“The nation has a commitment to protect and care for, to the maximum extent possible, the health of military personnel, veterans, and their families. This responsibility is minimizing adverse health effects of military service—both those experienced during the years of military service and those that first appear years after the period of military service” (Presidential Review Directive 5, 1998).

Symptoms and health concerns after a deployment are often indistinguishable from those reported in routine primary health care settings. However, deployment also presents unique and often difficult challenges for military members, veterans, and their families. The military members may experience physical or psychological trauma resulting from a variety of factors, such as combat, environmental extremes, illness or infectious disease, injury, weapons of mass destruction, and toxic environmental threats (IOM, 1999). Female military members may undergo additional health concerns during deployment, including decreased privacy and hygiene, urinary tract and fungal infections, unplanned pregnancy, and sexual assault that may impact their reproductive future post-deployment (Williams, 2000).

Deployment may create or exacerbate existing family problems and strain already fragile family relationships and coping mechanisms. Family members may experience heightened personal and interpersonal stress as a result of sudden changes within the family unit—both the military member’s separation and return. The heightened stress may adversely affect the physical and mental health of each family member and may also lead to domestic violence (IOM, 1999).

All persons should be asked "Is your problem today related to a deployment?" upon visiting any provider for an illness or concern. This is easily accomplished when the person's vital signs are taken. The condition-relatedness to deployment should be noted in the person's record. The clinician can proceed further based on clinical relevance and appropriateness.

It is important for the clinician to determine if the patient has been deployed (see Annotation C) and if the patient's symptoms are deployment related. The determination should be made in light of the patient’s entire medical and deployment history. Even then, in some cases it could be premature to determine that the health concern or problem is deployment related. If a definitive determination cannot be made and *either* the patient or the clinician continues to suspect that the concern or problem is deployment related, the clinician should continue with the next steps in the *Clinical Practice Guideline for Post-Deployment Health Evaluation and Management* (Delbanco, 1992; Engel & Katon, 1999).

DISCUSSION

DoD and VHA health care beneficiary identification and eligibility requirements are specified in the following documents:

- United States Code, Title 10, Part II, Chapter 55, Section 1072, 1074, 1076
- United States Code, Title 38, Part II, Chapter 17, Section 1710–1713
- Public Law 102-405, Title I. *Veterans Health Care Amendment Act of 1992*
- Public Law 102-585, Title VII. *Persian Gulf War Veterans Health Status Act*

REFERENCES

1. Delbanco, T.L. "Enriching the Doctor-Patient Relationship by Inviting the Patient's Perspective." *Annals of Internal Medicine*. 1992. 116 (5): 414-8.
2. Engel, C.C. and Katon, W.J. "Population and Need-Based Prevention of Unexplained Symptoms in the Community." *Institute of Medicine, Strategies to Protect the Health of Deployed U.S. Forces: Medical Surveillance, Record Keeping, and Risk Reduction*. Washington, DC: National Academy Press. 1999. 173-212.
3. Institute of Medicine, Division of Health Promotion and Disease Prevention. *Committee on a National Center on War-Related Illnesses and Post-Deployment Health Issues*. Washington, DC: National Academy Press. 1999.
4. Institute of Medicine, Medical Follow-Up Agency. *Strategies to Protect the Health of Deployed U.S. Forces: Medical Surveillance, Record Keeping, and Risk Reduction*. Washington, DC. National Academy Press. 1999.
5. National Science and Technology Council, Presidential Review Directive 5, Executive Office of the President, Office of Science and Technology Policy. *A National Obligation: Planning for Health Preparedness for and Readjustment of the Military, Veterans, and Their Families After Future Deployments*. August 1998.
6. Title 10 United States Code, Armed Forces. Chapter 55. *Medical and Dental Care*.
7. Title 38 United States Code, Veterans Benefits, Chapter 17. *Hospital, Nursing Home, Domiciliary, and Medical Care*.
8. Williams, R. "Deploying Women's Health Critical to Mission Success in Peace and War. Excerpts from Dr. Sue Bailey's Lecture on Women's Health Issues at the Women in Military Service for America Memorial." *American Forces Press Service*. March 8, 2000.

B. Ascertain Chief Complaint/Concern; Obtain Medical Psychosocial History, Physical Exam, Laboratory Tests

OBJECTIVE

Establish the reason for the patient's visit and obtain comprehensive patient data in order to reach a working diagnosis.

ANNOTATION

The clinician should obtain and review the deployment history with the patient to surface potential links to the chief complaint or concern. The patient's beliefs, expectations, and personal circumstances are significant and may play a strong role in the management of their health care. Some military members are dissatisfied with how clinicians respond to deployment related health concerns. The clinician can validate the patient's deployment related health concerns and communicate care and understanding by completing a thorough and early review of the following:

- All Medical Records
- Medical History and Psychosocial Assessment
- Review of Systems
- Physical and Mental Status Exam
- Routine Test Results

Unstable health problems should be addressed immediately before continuing with data collection.

DISCUSSION

In addition to routine medical history and review of systems the following should be assessed:

- Occupational and deployment history, including possible risks, hazards, and exposures to toxic agents
- Combat exposure, including excessively violent or brutal treatment of civilians or prisoners
- Travel history pre-, during, and post-deployment, including immunizations and other prophylactic measures
- Reproductive history including:
 - Infertility or sexual dysfunction among males and females
 - Menstrual history, miscarriages, stillbirths, and congenital malformations among females
- Prescription history, including over-the-counter medications and herbs
- Tobacco, alcohol, and illicit drug use
- Job stability and stress
- Physical and emotional abuse or sexual harassment and assault
- Current support structure, including marital status, family, and friends
- Family, developmental, and psychosocial history
- Sleep habits

Routine Post-Deployment Laboratory Testing may include the following:

- Complete Blood Count (CBC)
- Basic chemistries, including electrolytes, Blood Urea Nitrogen (BUN), creatinine, glucose, and liver function tests
- Urinalysis
- Tuberculin Skin Test (PPD), if not completed within the past 6 months

Standard Health Assessment could include the following:

- Medical and exposure history assessment
- Patient Health Questionnaire (PHQ), a screening tool for depression, somatization, panic disorder, anxiety, alcohol abuse or dependency, binge eating disorder, and bulimia nervosa (see Appendix C).
- Post Traumatic Stress Disorder (PTSD) Checklist (PCL), a screening tool specifically designed to assess trauma-related distress that can be self-administered in a brief time period (see Appendix C)

REFERENCES

1. Blanchard, E.B., Jones-Alexander, J., Buckley, T.C., and Forneris, C.A. "Psychometric Properties of the PTSD Checklist (PCL)." *Behavior Research Therapy*. 1996. 34(8): 669-73.
2. Peterson, M.C., Holbrook, J.H., Hales, D.V., et al. "Contributions of the History, Physical Examination, and Laboratory Investigation in Making Medical Diagnoses." *Western Journal of Medicine*. 1992. 156 (2): 163-5.
3. PHQ References: Spitzer, R.L., Williams, J.B., Kroenke, K., et al. "Utility of a New Procedure for Diagnosing Mental Disorders in Primary Care. The PRIME-MD 1000 Study." *Journal of the American Medical Association*. 1994. 272: 1749-56.
4. Spitzer, R., Kroenke, K., Williams, J., and the Patient Health Questionnaire Primary Care Study Group. "Validation and Utility of a Self-Report Version of PRIME-MD. The PHQ Primary Care Study." *Journal of the American Medical Association*. 1999. 282: 1737-44.

C. Definition of Deployment

OBJECTIVE

Identify patients who have a history of deployment.

ANNOTATION

Deployment is defined as any current or past event or activity that relates to duty in the armed forces that involves an operation, location, command, or duty that is different from the military member's normal duty assignment (DoD, JP 1-02, 1994). Military members meet deployment criteria anytime they leave the physical locale of the parent command and enter an environment for operational deployment or are stationed in a hostile territory.

The number of military members deployed in any specific operation can vary from one to hundreds of thousands. A deployment may last anywhere from a few days to six months or longer. Military members may deploy to a well-supported U.S. or foreign military base in a developed country, a field setting in an urban or rural part of a developing country, or on a ship visiting foreign ports (DoD Directive 6490.2, 1997; DoD Instruction 6490.3, 1997).

The *Clinical Practice Guideline for Post-Deployment Health Evaluation and Management* also applies to individuals who were not deployed, but have health concerns relating to a deployment; e.g., family members of recently deployed personnel.

DISCUSSION

DoD criteria for deployment includes all activities from origin or home station through destination, specifically including intra-continental U.S., inter-theater and intra-theater movement legs, staging, and holding areas. DoD officially defines deployment as follows:

- The change from a cruising approach or contact disposition to a disposition for battle (Navy)
- The movement of forces within areas of operation
- The positioning of forces into a formation for battle
- The relocation of forces and materiel to desired areas of operations

Deployment missions vary and may include:

- Military liaison and training support
- Joint and coalition force exercises
- Construction projects
- Humanitarian assistance, including health care
- Refugee relief
- Peacekeeping
- Peacemaking
- Low-intensity Conflict (LIC)
- War
- Any combination of the above and other missions

Within the U.S., military members may deploy to conduct the following operations:

- Fight forest fires
- Provide disaster relief
- Assist against terrorist actions
- Maintain civil order
- Support drug interdiction and border patrol operations

The military member may also deploy as part of an official Joint Staff deployment, which is defined as “a troop movement resulting from a [Joint Chiefs of Staff] unified command deployment order for 30 continuous days or greater to a land-based location outside the U.S. that does not have a permanent U.S. military medical treatment facility” (DoD, Joint Staff Memorandum, 1998).

REFERENCES

1. Department of Defense Directive 6490.2. *Joint Medical Surveillance*. August 30, 1997.
2. Department of Defense Instruction 6490.3. *Implementation and Application of Joint Medical Surveillance for Deployments*. August 7, 1997.
3. Department of Defense Joint Publication 1-02. *Dictionary of Military and Associated Terms*. 1994.
4. Department of Defense, Joint Staff Memorandum. *Deployment Health Surveillance and Readiness*, December 4, 1998.

D. Reinforce Partnership with the Patient to Address Deployment Concern(s)

OBJECTIVE

Promote patient trust at the earliest opportunity.

ANNOTATION

Recent experience has shown that individuals concerned about health after deployment may be especially inclined to distrust the Government, making it particularly important for clinicians to establish individual rapport and foster open communication with patients.

Post-deployment health communication typically involves high concern issues. Surveys, case studies, and focus groups indicate that trust and credibility are not quickly or easily established. Rather, they are the result of building and maintaining partnerships.

To establish a partnership with the patient, the clinician should:

- Acknowledge the patient's concerns and symptoms
- Indicate commitment to understand the patient's concern and symptoms
- Encourage open and honest transfer of information that will provide a more comprehensive picture of patient's concerns and medical history
- Indicate commitment to allocate sufficient time and resources to resolving the patient's concerns
- Avoid open skepticism or disapproving comments in discussing the patient's concerns

At each patient visit the clinician should consider the following:

- Ask if there are unaddressed or unresolved concerns
- Summarize and explain all test results
- Schedule follow-up visits in a timely manner
- Explain that outstanding or interim test results and consultations will be reviewed during the follow-up visits
- Offer to include the concerned family member or significant other in the follow-up visit

REFERENCES

1. Emanuel, E.J. and Emanuel, L.L. "Four Models of the Physician-Patient Relationship." *Journal of the American Medical Association*. 1992. 267 (16): 221-6.
2. Lipkin M., Quill T.E., and Napodano, R.J. "The Medical Interview: A Core Curriculum for Residencies in Internal Medicine." *Annals of Internal Medicine*. 1984. 100: 277.
3. Marple, R.L., Kroenke, K., Lucey, C.R., Wilder, J., and Lucas, C.A. "Concerns and Expectations in Patients Presenting with Physical Complaints: Frequency, Physician Perceptions and Actions, and 2-Week Outcome." *Archives of Internal Medicine*. 1997. 157: 1482-8.

4. Peterson, M.C., Holbrook, J.H., Hales, D.V., et al. "Contributions of the History, Physical Examination, and Laboratory Investigation in Making Medical Diagnoses." *Western Journal of Medicine*. 1992. 156 (2): 163-5.
5. Stuart, M.R. and Lieberman, J.A. *The Fifteen-Minute Hour: Applied Psychotherapy for the Primary Care Physician*, Second Edition. Westport, Connecticut: Praeger Paperback. 1993.
6. Wiedemann, P.M. and Schutz, H. *Risk Communication for Environmental Health Hazards*. Zbl. Hyg. Umweltmed. 1998/1999. 202: 345-59.

E. Review History of Deployment; Research Deployment Health Issues

OBJECTIVE

Enhance the clinician's knowledge regarding deployment health issues.

ANNOTATION

The clinician can validate the patient's deployment related health concerns and communicate care and understanding.

Often when evaluating patients with deployment related health concerns, the patient initially knows more about deployment specific exposure than the clinicians. Before proceeding further, the clinician should obtain a clear understanding of the possible risk factors and range of agents the patient may have been exposed to. The clinician should thoroughly research the patient's deployment related health concerns and identify known risks and exposures for a particular deployment. A follow-up appointment provides the clinician with time to research relevant information before discussing it with the patient.

A vast amount of this information is available at various governmental and non-governmental sources. The Deployment Health Resource Web site will provide links to these sources and other information about potential exposures, immunizations, endemic diseases, and other related information. This site will include information from civilian publications and provide links to other data sources that could provide additional information to the clinician and patient. See the Deployment Health Resource Web site at www.pdhealth.mil.

F. Does the Patient Present Signs or Symptoms?

OBJECTIVE

Identify a patient who has an injury or illness.

ANNOTATION

Often after deployment, patients may be reluctant to share signs and symptoms they are experiencing because of occupational and other concerns, including fear of losing their job. Patients may express their concerns as a request or offer additional complaints during the examination that may clarify the true reason for the visit. In other cases, the patient without symptoms may want to discuss deployment related health concerns. It is important to remember that *either* the patient's report of symptoms or the observation of a sign can determine the presence of an illness or injury.

Clinicians should be aware of the fact that our understanding of health outcomes after deployment is limited. Some symptoms may not be obvious or may not have manifested yet.

- Signs are defined as objective physical findings.
- Symptoms are defined as subjective complaints.
- The presence of *either* signs or symptoms warrants further investigation and can suggest the presence of an illness or injury.

- The absence of both signs and symptoms indicates a need to proceed with patient education and reassurance.
- Unusual or emerging illnesses might present as previously unrecognized constellations of symptoms and signs.

DISCUSSION

The clinician needs to understand the type and extent of the patient's health concerns before he or she can adequately address them. However, some patients may be unwilling or unable to verbalize concerns to the clinician because of fear of receiving an unfavorable reaction or unreliable response. In such cases, the clinician may place an increased emphasis on nonverbal sensitivity.

Nonverbal sensitivity requires that the clinician pay special attention to nonverbal cues that denote the patient's true feelings. These cues could include posture, eye contact, facial expressions, and indirect language. Addressing nonverbal cues is valuable to ultimately understanding and communicating with the patient. It is important to note that 50 percent of patients' care time is spent on problems that are primarily psychological (Korsch & Negrete, 1972).

G. Can a Final Diagnosis be Reached?

OBJECTIVE

Determine if the patient has a recognizable medical condition.

ANNOTATION

After determining that the patient is presenting signs or symptoms, the clinician needs to formulate a working diagnosis. Additional studies or the patient's response to treatment will confirm the working diagnosis. In some cases, the clinician will be unable to formulate a diagnosis, in which case it is important to ensure that the following activities were completed and reviewed:

- A complete and thorough medical record review
- A complete history and physical examination (see Annotation B)
- All basic laboratory studies and tests (see Annotation B)
- A thorough deployment history (see Annotation E)
- A review of the health risk associated with the deployment (see Annotation E)
- A standard health assessment (e.g., Patient Health Questionnaire™ (PHQ) and PTSD CheckList (PCL-C))

It is highly recommended that two or more patient visits be completed before concluding the patient does not have a recognizable illness or injury.

H. Review Medical Record

OBJECTIVE

Further evaluate and review all patient data.

ANNOTATION

The clinician should review patient's entire medical history, looking for indicators or symptoms that may have been missed upon first review.

The *Medical Record review* should include the following:

- Complete medical history
- Family and social history
- Occupational and deployment history, including possible risks, hazards, and exposures to toxic agents
- Prescription history, including over-the-counter medications and herbs
- Pre- and post-deployment physical examinations, including immunizations and other prophylactic measures
- Clinical notes
- Emergency room evaluations
- Other routine history and physical examinations
- Radiological, laboratory, and other ancillary test results

I. Obtain Ancillary Studies as Indicated

OBJECTIVE

Further evaluate and confirm the working diagnosis.

ANNOTATION

Selected ancillary studies should be performed based on clues derived from the history and physical examination. The clinician should avoid performing ancillary studies purely for the basis of screening as these tests may have very low specificity, may result in false positive results, and may cause unrealistic expectations on behalf of the patient.

J. Research Deployment Health Issues

OBJECTIVE

Enhance the clinician's knowledge regarding deployment health issues.

ANNOTATION

Often when evaluating patients with deployment related health concerns, the patient initially knows more about deployment specific exposure than the clinicians. Before proceeding further, the clinician should obtain a clear understanding of the possible risk factors and range of agents the patient may have been exposed to. The clinician should thoroughly research the patient's deployment related health concerns and identify known risks and exposures for a particular deployment. A follow-up appointment provides the clinician with time to research relevant information before discussing it with the patient.

A vast amount of this information is available at various governmental and non-governmental sources. The Deployment Health Resource Web site will provide links to these sources and other information about potential exposures, immunizations, endemic diseases, and other related information. This site will include information from civilian publications and provide links to other data sources that could provide additional information to the clinician and patient. See the Deployment Health Resource Web site at www.pdhealth.mil.

K. Asymptomatic Patient with Health Concern

DEFINITION

A patient who expresses a health concern, yet does not exhibit or describe any discernable illness, is categorized as “asymptomatic with health concern.” These concerns may be expressed in the form of questions about illness, exposure, or recent media coverage. The clinician should continue to nurture the patient-clinician partnership, elicit the patient’s trust, and address the patient’s health concerns.

A non-deployed family member may express a health concern that is frequently related to reproduction or the possibility of a contagious illness. In addition, he or she may seek information and reassurance regarding changes or symptoms they have observed in a deployed spouse.

L. Provide Reassurance and Patient Health Education

OBJECTIVE

Validate the patient’s thoughts, feelings, and attitudes, reassure the patient, and reinforce the patient-clinician partnership.

ANNOTATION

Risk Communication:

Risk Communication involves the exchange of information among interested parties about the nature, magnitude, significance, or control of a risk. Clinicians are continually asked to provide information about health, safety, and environmental risks to interested individuals, families, and communities. Risk assessment provides a strong foundation for the understanding of a risk and can be an important perspective for clinicians. Risk Communication is a crucial component of the care, treatment, and support for the patient, patient’s family, or significant others.

In order to maintain the patient-clinician partnership, it is necessary to address and discuss the patient’s concerns throughout the evaluation processes. This communication involves a two-way dialogue between the patient and clinician and is especially critical when a diagnosis has not yet been established. The effectiveness of communications involving a highly personal concern, such as the patient’s personal health, is primarily determined by the patient’s perception of how trusted and credible the clinician is.

There are four factors that influence perceptions of trust and credibility for discussions of high concern issues (Kolluru, 1996):

- Caring and empathy
- Competence and expertise
- Dedication and commitment
- Honesty and openness

Patient Education:

Patient education is one of the most important responsibilities of the clinician. It is facilitated by attention to the patient’s expectations, beliefs, and decisions.

Patients bring a set of beliefs about themselves and the meaning of their symptoms and environmental exposures into encounters with their clinician. Patient expectations of illness and the consequences of exposures may differ significantly from scientific models. The goals of the clinician should include attempting to understand the patient’s beliefs, informing the patient about pertinent scientific information, and establishing

a collaborative and negotiated understanding upon which further communication and work can be based. Some types of patient education may be more effectively provided by other members of the health care team or in a group setting.

DISCUSSION

Several studies emphasize the importance of trust and credibility in the formation of perceptions during health communication. Specific behaviors have been shown to influence the patient's satisfaction with communication. The amount of warmth and friendliness shown by the clinician is positively related to patient satisfaction (Hulka et al., 1975). Furthermore, a study conducted by Street and Wiemann (1987) determined that health care satisfaction was positively associated with the patient's perception of the degree of interpersonal involvement and expressiveness of the clinician, and was negatively associated with the patient's perceived communicative dominance by the clinician.

Health communication is effective when the clinician's actions and communications (both verbal and nonverbal) convey the factors listed below:

- Caring and empathy, including perceived sincerity, ability to listen, and ability to see issues from the perspective of others
- Competence and expertise, including perceived intelligence, training, experience, education level, professional attainment, knowledge, and command of information
- Dedication and commitment, including perceived altruism, diligence, self-identification, involvement, and hard work
- Honesty and openness, including perceived truthfulness, candidness, fairness, objectivity, and sincerity

Of the four factors, patient perceptions of caring and empathy are the most important. Research has shown that it can account for 50 percent or more of an individual's trustworthiness and credibility. In 1984, Beckman and Frankel cited findings indicating that specific communication behaviors, such as listening and not interrupting, may lead to patient satisfaction. Hulka et al. (1975) found that patient satisfaction with health communication is influenced by the clinician's awareness of the patient's concerns.

Patient perceptions of competence and expertise also help determine the clinician's level of trust and credibility. Competence and expertise are the easiest factors to establish because clinicians are automatically perceived by the public to be credible sources of information. A minimal amount of time needs to be spent establishing competence and expertise.

Perceptions of honesty and openness result from both nonverbal cues and words that convey truthfulness, objectivity, and sincerity. Nonverbal cues, such as eye contact and facial expressions, often make more of an impression on the patient than do verbal messages. A patient often perceives the use of medical jargon as a way to mask the truth. Although reliance on medical language may be necessary to communicate some ideas, some patients may not understand or comprehend what the clinician is trying to convey (Samora et al., 1961). Simply put, the clinician must speak the patient's language because some patients are unable to speak or understand the clinician's language.

Perceptions of dedication and commitment are influenced by perceptions of the clinician's hard work in pursuit of health goals. It is vital to the communication process that the clinician reinforces the truth and credibility factors throughout every discussion with the patient. Otherwise, miscommunication and misperception may impede the communication process, which could negatively impact the patient's treatment or prevent the patient from seeking treatment in the future.

REFERENCES

1. Beckman, H. and Frankel, R. "The Effect of Physician Behavior on the Collection of Data." *Annals of Internal Medicine*. 1984. 101(5): 692-6.

2. Kolluru, R., Bartell, S., Pitblado, R., and Stricoff, S. "Communicating Risk in Crisis and Non-Crisis Situations." *Risk Management Handbook for Environmental, Health, and Safety Professionals*, Part VI. 1996. **QE=II-2B, SR=A.**
3. Hulka, B. A., Kupper L. L., and Daly, M. B. "Correlates of Satisfaction and Dissatisfaction with Medical Care: A Community Perspective." *Medical Care*. 1975. 13: 648. **QE=II-2B, SR=A.**
4. McDonald, I.G., Daly, J., Jelinek, V.M., et al. "Opening Pandora's Box: The Unpredictability of Reassurance by a Normal Test Result." *British Medical Journal*. 1996. 313: 329-32.
5. Samora, J., Saunders, L., and Larson, R. F. "Medical Vocabulary Knowledge among Hospital Patients." *Journal of Health and Human Behavior*. 1961. 2: 83-92. **QE=II-3, SR=A.**
6. Street and Wiemann. "Patient Satisfaction with Physicians' Interpersonal Involvement, Expressiveness, and Dominance." *Communication Yearbook 10*. Beverly Hills, California: M. L. McLaughlin. 1987. 519-612.
7. Wiedemann, P.M. and Schutz, H. *Risk Communication for Environmental Health Hazards*. Zbl. Hyg. Umweltmed. 1998/1999. 202: 345-59.

M. Does the Patient's Concern Persist?

OBJECTIVE

Identify an asymptomatic patient who continues to have a health concern.

ANNOTATION

A second direct patient contact should be made within two to four weeks of the initial visit to allow for re-evaluation and to arrange continued contact and access to care, if necessary. Contact should be made by telephone or in person, if possible.

DISCUSSION

After identifying the type and extent of the patient's health concern and providing reassurance and education, the clinician must determine whether the patient's health concern still exists. This is necessary to determine the next step in the patient's treatment.

If the health concern does not persist, the clinician needs to reiterate that time is available for additional discussions regarding current or future concerns. This practice reinforces the trust and credibility factors of empathy and caring, honesty and openness, and dedication and commitment. This practice also allows the patient time to digest the information provided during the appointment. Upon further consideration, the patient might think of additional questions or need clarification of specific issues. The clinician should ensure that the patient knows how to contact them through e-mail, telephone, or by scheduling an appointment.

REFERENCES

1. Adams, J. "The General Approach to the Difficult Patient." *Emergency Medicine Clinic of North America*. 1998. 16 (4): 689-700.
2. Clements, W.M., Haddy, R., and Backstrom, D. "Managing the Difficult Patient." *Journal of Family Practice*. June 1980. 10 (6): 1079-83.
3. Department of Veterans Affairs, Persian Gulf Veterans Coordinating Board. *Comprehensive Risk Communication Plan for Gulf War Veterans*. Clinical Working Group. 1999.
4. Korsch, B.M., and Negrete, V.F. "Doctor-Patient Communication." *Scientific American*. 1972. 227: 66-74.
5. Makadon, H.J., Gerson, S., and Ryback, R. "Managing the Care of the Difficult Patient in the Emergency Unit." *Journal of the American Medical Association*. 1984. 252 (18): 2585-7.
6. Malcolm, R., Foster, H.K., and Smith, C. "The Problem Patient as Perceived by Family Physicians." *Journal of Family Practice*. 1977. 5 (3): 361-4.
7. Patrick, D.L. and Erickson, P. *Health Status and Health Policy: Quality of Life in Health Care Evaluation and Resource Allocation*. New York: Free Press. 1993. 165-87.

N. Reevaluate/Consider Consultation

OBJECTIVE

Resolve the patient's health concern.

ANNOTATION

If the patient's health concern persists despite reassurance and education, the clinician should re-evaluate the patient's medical data to assure that a diagnosis has not been missed and assess the patient's status for the next course of action. The clinician should provide the patient with additional reassurance and educational material, if indicated, keeping in mind that patient dissatisfaction is often related to communication variables. To increase patient satisfaction the clinician should provide detailed explanations to the patient using less medical jargon.

The clinician should consider discussing the patient's medical data with another clinician or consulting with or referring to a specialist. The consulted specialist may be able to interact and communicate more effectively with the patient regarding this type of health concern or may have experience in communicating with patients who exhibit similar health concerns.

Consultation sources, when clinically appropriate, include but are not limited to:

- Social Services
- Family Advocacy Program
- Preventive Medicine/Public Health
- Bioenvironmental Engineering/Environmental Sciences/Industrial Hygiene
- Reproductive Toxicology
- Genetic Counseling
- Health Promotions
- Medical Specialty Consultations
 - Infectious Disease
 - Psychiatry/Psychology
 - Pulmonary
 - Cardiology
 - Internal Medicine
 - Allergy/Immunology
 - Women's Clinic – OB/GYN
 - Gastroenterology
 - Rheumatology
 - Neurology
- Health Information/Education Sources
- Spiritual Counseling

O. Follow-Up as Indicated

OBJECTIVE

Assure that the patient's health concerns have been addressed.

ANNOTATION

It is important that the clinician provide the patient with the opportunity to digest the information provided during the appointment and to discuss concerns with friends and family. The patient may think of additional

questions or need clarification of specific issues. The clinician should provide a means for the patient to contact them directly (e.g., e-mail, voice mail, or pager). To reinforce the trust and credibility factors of empathy and caring, honesty and openness, and dedication and commitment, the clinician should reaffirm with the patient the availability of future appointments to discuss current or future concerns.

REFERENCES

1. Korsch, B.M., and Negrete, V.F. "Doctor–Patient Communication." *Scientific American*. 1972. 227: 66-74.

P. Patient with Health Concern and No Diagnosis Established

DEFINITION

A patient with no established diagnosis will fall into one of four categories:

- Well-recognized diseases not yet manifesting common signs and symptoms
- Emerging diseases—Objective finding with as yet unknown etiology based on current scientific knowledge (e.g. HIV in 1982)
- Medically unexplained physical symptoms—Symptoms without isolated objective findings and clinically identifiable pathophysiology
- Isolated objective findings—Physical signs or laboratory abnormalities without symptoms

Note: Patients may also end up in this category because of clinician or laboratory error (e.g., false positive or negative results or misinterpretation of positive or negative results).

DISCUSSION

One of the main obstacles to understanding medically unexplained symptoms is the confusing terminology sometimes applied to them. For clarity, the Guideline adopts a consistent terminology. "Unexplained symptoms" or "medically unexplained symptoms" are the terms used to describe physical symptoms that provoke care-seeking, but have no clinically determined pathogenesis after an appropriately thorough diagnostic evaluation (Engel & Katon, 1999). Clinicians, scientists, symptomatic individuals, the media, employers, and other groups frequently apply labels to unexplained symptoms for different purposes. These labels may communicate an implied pathogenesis, such as chronic fatigue syndrome (infectious), certain low-level chemical sensitivities (allergic), somatoform disorders (psychiatric), and fibromyalgia (rheumatologic). The Guideline will rely on the more generic "medically unexplained symptoms" or "unexplained symptoms" to describe diagnoses or conditions characterized by symptoms, rather than objective clinical evidence (i.e., signs found on examination or laboratory findings) of an underlying pathophysiological process.

Recently, the Centers for Disease Control (CDC) defined "chronic multisymptom illness" and applied the definition to study the relationship of the Gulf War to subsequent illness. The chronic multisymptom illness definition has the advantage of encompassing several common syndromes that are comprised of unexplained symptoms (Fukuda & Nisenbaum, 1998). The chronic multisymptom illness definition, developed using factor analysis and clinician assessments, is the presence of two or more of the following symptoms: musculoskeletal pain in more than one body region, debilitating fatigue, and cognitive or mood impairment. Frequently associated symptoms such as digestive, respiratory, and nervous system symptoms were not included in the CDC definition.

Unexplained symptoms occurring in the general population include fibromyalgia, chronic fatigue syndrome, hysteria, somatization disorder, conversion disorder, multiple chemical sensitivities, and other names (Buchwald & Garrity, 1994; Clauw, 1995; Clauw & Chrousos, 1997; Kipen & Fiedler, 1999; Barsky & Borus, 1999; and Wessely & Nimnuan, 1999). Patients with chronic fatigue syndrome, fibromyalgia, and temporomandibular disorder may also experience overlapping conditions.

'Disease' and 'illness' are terms sometimes used in the Guideline. When properly used, these terms are not interchangeable (Jennings, 1986). A disease is a pathophysiological process that is identified via objective findings (i.e., signs found on clinical examination or laboratory evidence) (Mayou & Sharpe, 1995; Susser, 1990). In contrast, illness is a subjective lack of wellness that is identified via the complaints and behaviors of the affected person. Illnesses encompass the complete range of physical and mental symptoms and the suffering that is experienced with them (Mayou & Sharpe, 1995; Jennings, 1986; and Susser, 1990). Symptoms and suffering are unusual in some diseases. For example, individuals with essential hypertension seldom perceive their disease until late in its natural history. Similarly, many illnesses involve severe disabling symptoms that are the source of undeniable suffering, even though objective clinical evidence of disease is lacking. Unexplained symptoms may be thought of as illness in the absence of known disease. Unexplained symptoms may also be present if a disease is of insufficient severity to explain the full extent of the associated symptoms.

REFERENCES

1. Barsky, A. and Borus, J. "Functional Somatic Syndromes." *Annals of Internal Medicine*. June 1, 1999. 130: 910-921.
2. Buchwald, Garrity. "Comparison of Patients with Chronic Fatigue Syndrome, Fibromyalgia, and Multiple Chemical Sensitivities." *Archives of Internal Medicine*. September 26, 1994. 154(18): 2049-53.
3. Clauw, D.J. "The Pathogenesis of Chronic Pain and Fatigue Syndromes, with Special Reference to Fibromyalgia." *Medical Hypotheses*. May 1995. 44(5): 369-78.
4. Clauw, D.J. and Chrousos, G.P. "Chronic Pain and Fatigue Syndromes: Overlapping Clinical and Neuroendocrine Features and Potential Pathogenic Mechanisms." *Neuroimmunomodulation*. May-June. 1997. 4(3): 134-53. 1997.
5. Engel, C.C. and Katon, W.J. "Population and Need-Based Prevention of Unexplained Symptoms in the Community." *Institute of Medicine, Strategies to Protect the Health of Deployed U.S. Forces: Medical Surveillance, Record Keeping, and Risk Reduction*. Washington, DC: National Academy Press. 1999. 173-212.
6. Fukuda K., Nisenbaum R., et al. "Chronic Multisymptom Illness Affecting Air Force Veterans of the Gulf War." *Journal of the American Medical Association*. September 16, 1998. 280(11): 981-8.
7. Jennings, D. "The Confusion Between Disease and Illness in Clinical Medicine." *Canadian Medical Association Journal*. October 15, 1986. 135: 865-870.
8. Kipen, H.M., and Fiedler, N. "Multiple Chemical Sensitivity--Context and Implications." *American Journal Epidemiology*. July 1, 1999. 150(1): 13-6.
9. Mayou, R. and Sharpe, M. "Diagnosis, Illness and Disease." *Quarterly Journal of Medicine*. November 1995. 88(11): 827-831.
10. Susser, M. "Disease, Illness, Sickness; Impairment, Disability and Handicap." *Psychological Medicine*. August 1990. 20(3): 471-3.
11. Wessely, S. and Nimnuan, C. "Functional somatic syndromes: one or many?" *Lancet*. September 11, 1999. 354(9182): 936-9.

Q. Reevaluate Patient Data and Collaborate with Colleague

OBJECTIVE

Reassess the progress of the patient's workup and the probability of identifying a diagnosis based on currently available data.

ANNOTATION

Input from colleagues with varying expertise may provide the clinician with a fresh viewpoint regarding the patient's concerns.

Note: Patients may end up in this category because of clinical or laboratory error (e.g., false negative or false positive results or misinterpretation of positive or negative results).

R. Discuss Issues with Patient, Provide Reassurance, and Reinforce Patient-Clinician Partnership

OBJECTIVE

Validate the patient's thoughts, feelings and attitudes, reassure the patient, and reinforce the patient-clinician partnership.

ANNOTATION

At this point in the workup, the patient is likely to be intensely concerned and potentially mistrustful because the clinician has not identified a cause or explanation for their concerns.

Risk Communication:

In order to maintain the collaborative clinician-patient partnership, it is necessary to address and discuss patient and family concerns throughout the evaluation process. This communication involves an open two-way dialogue between patient and clinician. This is especially important when the diagnosis remains in doubt or when the clinician and the patient disagree about the diagnosis. Under these circumstances, patient concerns escalate and increase any preexisting mistrust of the clinician. The effectiveness of communication regarding highly personal concerns, such as a health concern, is primarily determined by the patient's assessment as to how credible and trustworthy the clinician is.

There are four factors that will most influence patient perceptions of clinician trustworthiness and credibility in the presence of a persistent unresolved health concern (Kolluru, 1996). These are the patient's assessment of the clinician's (for further discussion see Annotation L):

- Caring and empathy
- Competence and expertise
- Dedication and commitment
- Honesty and openness

An additional factor to consider under the circumstances of a post-deployment evaluation is external information that the patient and his or her family may be reading or seeing. For example, if after the deployment in question there are popular theories about illnesses that have received media attention, this may reduce the credibility of the Federally-employed clinician, especially when symptoms are undiagnosed after an extended evaluation (Engel & Katon 1999; Engel 1999).

Under these difficult circumstances, the clinician should:

- Maintain open communication with the patient
- Take the time needed to explain the available findings and acknowledge clinical uncertainty where it exists
- Convey a sense of optimism regarding diagnosis, treatment, and prognosis
- Continue to follow the patient's progress, since discontinuing contact or referring without a return visit is likely to leave the patient feeling rejected, angry, and mistrustful
- Always make good on his or her word (e.g., if one promises to talk with an expert, then do it and tell the patient about it later)
- Involve the patient's family or significant others (sometimes the family is more concerned regarding the patient's health than the patient is) unless the patient refuses family involvement

REFERENCES

1. Engel, C.C. and Katon, W.J. "Population and Need-Based Prevention of Unexplained Symptoms in the Community." *Institute of Medicine, Strategies to Protect the Health of Deployed U.S. Forces: Medical Surveillance, Record Keeping, and Risk Reduction*. Washington, DC: National Academy Press. 1999. 173-212.
2. Engel, C.C. "Clinical Risk Communication: Communication of Causation to Gulf War Veterans with Chronic Multisymptom Illnesses." *Proceedings of the 1999 Conference on Federally Sponsored Gulf War Veterans' Illnesses Research*. Pentagon City, Virginia. June 25, 1999.
3. Institute of Medicine, Medical Follow-Up Agency. *Strategies to Protect the Health of Deployed U.S. Forces: Medical Surveillance, Record Keeping, and Risk Reduction*. Washington, DC. National Academy Press. 1999.
4. Kolluru, R., Bartell, S., Pitblado, R., and Stricoff, S. "Communicating Risk in Crisis and Non-Crisis Situations." *Risk Management Handbook for Environmental, Health, and Safety Professionals*, Part VI. 1996. **QE=II-2B, SR=A.**

S. Does the Patient Present Acute or Progressive Symptoms?

OBJECTIVE

Identify the patient who has an acute, subacute, or progressive illness.

DEFINITIONS

Definitions for acute or progressive symptoms in the context of the Guideline are as follows:

- Acute—Manifestations of illness of less than 3 months duration
- Subacute—Manifestations of illness of 3 to 6 months in duration
- Chronic—Manifestations of illness that are longer than 6 months in duration
- Progressive—Clinically appreciable deterioration during a 3 to 6 month period

ANNOTATION

Acute or progressive symptoms are more likely to represent a diagnosable disease than are symptoms of remote onset or chronic, intermittently relapsing nature. When the diagnosis is not apparent after the initial primary care evaluation, the clinician should take an aggressive approach to diagnostic testing in order to diagnose and treat an acute or progressive illness in a timely manner.

REFERENCES

1. Joyce, J., Hotopf, M., and Wessely, S. "The Prognosis of Chronic Fatigue and Chronic Fatigue Syndrome: A Systematic Review." *Monthly Journal of the Association of Physicians*. 1997. 90(3): 223-33.
2. Kroenke, K., and Mangelsdorff, A.D. "Common Symptoms in Ambulatory Care: Incidence, Evaluation, Therapy, and Outcome." *American Journal of Medicine*. 1989. 86: 262-6.
3. Engel, C.C. and Katon, W.J. "Population and Need-Based Prevention of Unexplained Symptoms in the Community." *Institute of Medicine, Strategies to Protect the Health of Deployed U.S. Forces: Medical Surveillance, Record Keeping, and Risk Reduction*. Washington, DC: National Academy Press. 1999. 173-212.
4. Institute of Medicine, Medical Follow-Up Agency. *Strategies to Protect the Health of Deployed U.S. Forces: Medical Surveillance, Record Keeping, and Risk Reduction*. Washington, DC. National Academy Press. 1999.

T. Perform Additional Ancillary Studies as Indicated

OBJECTIVE

Provide objective findings that will result in a diagnosis.

ANNOTATION

When the patient presents with acute or focused signs and symptoms, the clinician should perform additional ancillary studies necessary to obtain a diagnosis. Symptoms of sudden onset or progressive course are more likely to have a diagnosable disease or structural abnormality than are symptoms of remote onset and/or chronic, intermittently relapsing course. The opportunity for timely intervention in the setting of acute or progressive illness dictates an aggressive approach to diagnostic testing, even when the diagnosis is not apparent after the initial primary care evaluation.

DISCUSSION

Additional workups may include, but are not limited to, the following:

- The Erythrocyte Sedimentation Rate (ESR) and C-reactive Protein (CRP) represent acute phase reactants and may be used in distinguishing inflammatory and non-inflammatory disorders. Although they are nonspecific, they may be diagnostically or therapeutically useful.
- Antinuclear Antibodies (ANAs) react with various components of the cell nucleus as well as cytoplasm and cell membrane structures. Positive results are characteristic of systemic lupus erythematosus and related disorders. However, ANAs may be found in normal patients or those with a variety of conditions. The clinical significance of the ANA test often parallels the strength of the titer reported, but these tests are not specific. ANA testing should not be used to screen patients with joint pain or presumed systemic illness.
- Creatine Phosphokinase (CPK) is an intracellular enzyme found in high concentrations in skeletal muscle, myocardium, and brain. Damage to these tissues results in elevated serum levels of CPK. CPK may be elevated and useful in the diagnosis and treatment of inflammatory myositis, muscular dystrophy, myocardial disease, hypothyroidism, cocaine use, muscle trauma, intramuscular injections, and rhabdomyolysis.
- Thyroid Stimulating Hormone (TSH) and other endocrine studies may be indicated.
- Electromyography is a diagnostic test used to evaluate patients with suspected muscle disease. It is often performed in conjunction with nerve conduction testing. It is primarily used to distinguish between weakness caused by disorders of muscle, peripheral nerves, or neuromuscular junction disorders. When combined with nerve conduction testing, it is often useful in distinguishing neuropathic from myopathic causes of muscle weakness.
- Venereal Disease Research Laboratories (VDRL) testing may be used to screen for primary or secondary syphilis in asymptomatic individuals to confirm the diagnosis of secondary syphilis in the presence of syphilitic lesions and gauge the efficacy of therapy. The test detects antibodies that bind cardiolipin and historically was of substantial importance as results were positive in patients with syphilis. A biologic false-positive in a non-pregnant patient should be confirmed with a Treponemal Ab Absorption test. Pregnant patients should be treated on the basis of suspicion of syphilis by history, physical examination, or epidemiology.
- Viral Serologic Testing *should only* be performed if test results will influence diagnosis, therapy, or prognosis or will help determine the infectivity of an individual patient.

- Human Lymphocyte Antigen (HLA) studies *should not* be routinely ordered for evaluation or screening as results are not diagnostic.
- Lyme antibodies *should only* be ordered when individuals are strongly suspected of having Lyme disease. Lyme disease is a clinical diagnosis with laboratory studies helpful for confirmation.
- Rheumatoid factors are not specific for Rheumatoid Arthritis (RA) but can be seen in a variety of other conditions. Therefore, rheumatoid factor measurement should be *reserved for* individuals with possible RA based on history and physical examination.
- HIV testing with appropriate consent and counseling is indicated for patients with known risk factors or suggestive symptoms.
- Drug screening is indicated in patients with known risk factors or presenting symptoms.

Symptom-specific examinations to consider are listed in Table II:

Table II: Symptom-Specific Examinations	
Symptom	Ancillary Studies to Consider
Abdominal Symptoms	Esophagogastroduodenoscopy (EGD) with Biopsy and Aspiration Colonoscopy with Biopsy Abdominal Ultrasound Upper Gastrointestinal (GI) Series Abdominal Computerized Tomography (CT) Scan Gastroenterology Consult Women: Gynecology Consult Acute: Surgical Consult
Chest Pain/Palpitations	Electrocardiogram (ECG) Cardiac Stress Test Holter or Event Monitoring Cardiology Consult Psychiatry Consult (if panic attacks are suspected and consultation is acceptable to the patient)
Cough/Shortness of Breath	Pulmonary Function Test (PFT) with Exercise and Arterial Blood Gas (ABG) Methacholine Challenge if PFTs are normal Bronchoscopy with Lavage and Biopsy Pulmonary Consult
Chronic Fatigue	Polysomnography (PSG) Multiple Sleep Latency Test (MSLT) Sleep specialist consult Psychology or psychiatry consult (<i>only</i> if acceptable to the patient)
Diarrhea	Stool (Guaiac, Ova & Parasites, Leukocytes, Culture, Clostridium Difficile, and Volume) EGD with Biopsy and Aspiration Gastroenterology Consult
Headache	Magnetic Resonance Imaging (MRI) Head Lumbar Puncture (Glucose, Protein, Cell Count, VDRL, Oligoclonal Myelin, Basic Protein, and Pressure Reading) Neurology Consult
Memory Problems	MRI Head Lumbar Puncture

Table II: Symptom-Specific Examinations	
Symptom	Ancillary Studies to Consider
	Neuropsychological Testing Neurology Consult
Muscle Aches, Numbness, or Weakness	Electromyogram (EMG) Nerve Conduction Velocity (NCV) Neurology Consult Rheumatology Consult Physical Medicine Consult
Reproductive Concerns	Urinalysis (UA) and Culture Cervical Pap Smear and Culture Semen Analysis Urology Consult Gynecology Consult
Skin Rash	Biopsy Dermatology Consult
Vertigo/Tinnitus	Audiogram Electronystagmography (ENG) Brainstem Auditory Evoked Response (BAER) Ears, Nose, and Throat (ENT) Consult Neurology Consult Cardiology Consult (if fainting is involved) Psychiatry Consult (if panic attacks are suspected and the consultation is acceptable to the patient)

REFERENCES

1. Department of Veterans Affairs, Persian Gulf Registry. *The Registry Exam and the Uniform Case Assessment Protocol*. 1992. 1994.
2. Office of the Assistant Secretary of Defense, Health Affairs. *Comprehensive Clinical Evaluation Program, Program Guide*. May 1998.
3. Wallace, J. *Interpretation of Diagnostic Tests*. Philadelphia, Pennsylvania: Lippincott 2000. 816-22.

U. Can (Has) a Diagnosis Be (Been) Established?

OBJECTIVE

Identify patients for whom there is a well-defined diagnosis.

ANNOTATION

A diagnosis is a clinically defined injury or disease based on objective and reproducible clinical manifestations of examination, laboratory testing, or medical imaging.

Virtually all patients who see a clinician will receive a label. Biomedicine is firmly predicated on the notion that proper treatment is based upon recognition of the correct disease. However, for syndromes such as multiple chemical sensitivity, chronic fatigue syndrome, fibromyalgia, temporomandibular disorders, fibrositis, interstitial cystitis, irritable bowel syndrome, and chronic pelvic pain, there is ample evidence of diagnostic overlap and limited evidence to support discrete illnesses with distinct pathophysiologies or natural histories. For most of these and other constellations of persistent physical symptoms, comprehensive biomedical evaluation yields few consistent objective findings and does little to guide clinical management or provide insight into associated functional impairment. Typically, these diagnoses are largely descriptive (e.g., retropatellar pain syndrome) or based on hypothesized etiology (e.g., fibromyalgia) rather than a known

pathophysiology. Under the Guideline, conditions that are labeled but are not an objectively evident injury or disease are NOT considered a diagnosis because they do not lead to a specific injury or disease based treatment.

REFERENCES

1. Engel, C.C., Roy, M., Kayanan, D., Ursano, R. "Multidisciplinary Treatment of Persistent Symptoms After Gulf War Service." *Military Medicine*. 1998. 163(4): 202-8.
2. Joyce, J., Hotopf, M., and Wessely, S. "The Prognosis of Chronic Fatigue and Chronic Fatigue Syndrome: A Systematic Review." *Monthly Journal of the Association of Physicians*. 1997. 90(3): 223-33.
3. Kroenke, K., and Mangelsdorff, A.D. "Common Symptoms in Ambulatory Care: Incidence, Evaluation, Therapy, and Outcome." *American Journal of Medicine*. 1989. 86: 262-6.
4. Engel, C.C. and Katon, W.J. "Population and Need-Based Prevention of Unexplained Symptoms in the Community." *Institute of Medicine, Strategies to Protect the Health of Deployed U.S. Forces: Medical Surveillance, Record Keeping, and Risk Reduction*. Washington, DC: National Academy Press. 1999. 173-212.
5. Institute of Medicine, Medical Follow-Up Agency. *Strategies to Protect the Health of Deployed U.S. Forces: Medical Surveillance, Record Keeping, and Risk Reduction*. Washington, DC. National Academy Press. 1999.

V. Is Systemic Disease Suspected?

OBJECTIVE

Identify patients with potential systemic disease.

ANNOTATION

It is possible for patients with diagnosable diseases to initially present with acute and unfocused or non-localized symptoms. Diagnosis for these maladies is difficult and often delayed. These conditions include, but are not limited to, connective tissue diseases (e.g., systemic lupus erythematosus and Sjögren's syndrome), neurological diseases (e.g., multiple sclerosis), infectious diseases, and neoplastic diseases. If the patient's symptoms suggest one of these conditions, the clinician should consider additional diagnostic studies (see Annotation T).

W. Consider Consulting a Specialist

OBJECTIVE

Provide specialized services to individuals who may need and could benefit from them.

ANNOTATION

In the presence of 1) acute or progressive or 2) chronic and localized symptoms that remain undiagnosed to this point in the evaluation, the clinician is urged to consider consulting an appropriate specialist. In most cases, the (primary care) clinician should remain engaged in the care of the patient after the consultation (see Annotation T for a list of problems and corresponding specialty consultants).

X. Does the Patient Present Localized Symptoms or Signs?

OBJECTIVE

Identify patients with regionally-focused symptoms or signs.

DEFINITION

Localized symptoms or signs are those that involve a single organ system (e.g., skin or nervous system) or a single body area (e.g., knee, head, or epigastrium). Symptoms involving different body quadrants, noncontiguous areas, or multiple organ systems are not localized.

ANNOTATION

Patients experiencing chronic problems with localized or regional symptoms often lend themselves to simple explanations or interventions that require specialized expertise. Because of the need for specialized knowledge, these explanations and treatments have remained unconsidered (e.g., arthroscopy for chronic orthopedic illnesses). In this situation, extended evaluations involving multiple body systems or regions are likely to be inappropriate. Instead, an in depth but localized or anatomic approach at the hands of a specialist may be needed.

XX. Acute Unexplained Symptoms or Signs/Multiple Chronic Unexplained Physical Symptoms

DEFINITION

One of the main obstacles to understanding medically unexplained symptoms is the confusing terminology sometimes applied to them. For clarity, the Guideline adopts a consistent terminology. "Unexplained symptoms" or "medically unexplained symptoms" are the terms used to describe physical symptoms that provoke care-seeking, but have no clinically determined pathogenesis after an appropriately thorough diagnostic evaluation (Engel & Katon, 1999). Clinicians, scientists, symptomatic individuals, the media, employers, and other groups frequently apply labels to unexplained symptoms for different purposes. These labels may communicate an implied pathogenesis, such as chronic fatigue syndrome (infectious), certain low-level chemical sensitivities (allergic), somatoform disorders (psychiatric), and fibromyalgia (rheumatologic). The Guideline will rely on the more generic "medically unexplained symptoms" or "unexplained symptoms" to describe diagnoses or conditions characterized by symptoms, rather than objective clinical evidence (i.e., signs found on examination or laboratory findings) of an underlying pathophysiological process.

Recently, the Centers for Disease Control (CDC) defined "chronic multisymptom illness" and applied the definition to study the relationship of the Gulf War to subsequent illness. The chronic multisymptom illness definition has the advantage of encompassing several common syndromes that are comprised of unexplained symptoms (Fukuda and Nisenbaum, 1998). The chronic multisymptom illness definition, developed using factor analysis and clinician assessments, is the presence of two or more of the following symptoms: musculoskeletal pain in more than one body region, debilitating fatigue, and cognitive or mood impairment. Frequently associated symptoms such as digestive, respiratory, and nervous system symptoms were not included in the CDC definition.

Unexplained symptoms occurring in the general population include fibromyalgia, chronic fatigue syndrome, hysteria, somatization disorder, conversion disorder, multiple chemical sensitivities, and other names (Buchwald & Garrity, 1994; Clauw, 1995; Clauw & Chrousos, 1997; Kipen & Fiedler, 1999; Barsky & Borus, 1999; and Wessely & Nimmuan, 1999). Patients with chronic fatigue syndrome, fibromyalgia, and temporomandibular disorder may also experience overlapping conditions.

'Disease' and 'illness' are terms sometimes used in the Guideline. When properly used, these terms are not interchangeable (Jennings, 1986). A disease is a pathophysiological process that is identified via objective findings (i.e., signs found on clinical examination or laboratory evidence) (Mayou & Sharpe, 1995; Susser, 1990). In contrast, illness is a subjective lack of wellness that is identified via the complaints and behaviors of the affected person. Illnesses encompass the complete range of physical and mental symptoms and the suffering that is experienced with them (Mayou & Sharpe, 1995; Jennings, 1986; and Susser, 1990). Symptoms and suffering are unusual in some diseases. For example, individuals with essential hypertension seldom perceive their disease until late in its natural history. Similarly, many illnesses involve severe disabling symptoms that are the source of undeniable suffering, even though objective clinical evidence of disease is

lacking. Unexplained symptoms may be thought of as illness in the absence of known disease. Unexplained symptoms may also be present if a disease is of insufficient severity to explain the full extent of the associated symptoms.

REFERENCES

1. Barsky, A. and Borus, J. "Functional Somatic Syndromes." *Annals of Internal Medicine*. June 1, 1999. 130: 910-921.
2. Buchwald, Garrity. "Comparison of Patients with Chronic Fatigue Syndrome, Fibromyalgia, and Multiple Chemical Sensitivities." *Archives of Internal Medicine*. September 26, 1994. 154(18): 2049-53.
3. Clauw, D.J. "The Pathogenesis of Chronic Pain and Fatigue Syndromes, with Special Reference to Fibromyalgia." *Medical Hypotheses*. May 1995. 44(5): 369-78.
4. Clauw, D.J. and Chrousos, G.P. "Chronic Pain and Fatigue Syndromes: Overlapping Clinical and Neuroendocrine Features and Potential Pathogenic Mechanisms." *Neuroimmunomodulation*. May-June. 1997. 4(3): 134-53.
5. Engel, C.C. and Katon, W.J. "Population and Need-Based Prevention of Unexplained Symptoms in the Community." *Institute of Medicine, Strategies to Protect the Health of Deployed U.S. Forces: Medical Surveillance, Record Keeping, and Risk Reduction*. Washington, DC: National Academy Press. 1999. 173-212.
6. Fukuda K., Nisenbaum R., et al. "Chronic Multisymptom Illness Affecting Air Force Veterans of the Gulf War." *Journal of the American Medical Association*. September 16, 1998. 280(11): 981-8.
7. Jennings, D. "The Confusion Between Disease and Illness in Clinical Medicine." *Canadian Medical Association Journal*. October 15, 1986. 135: 865-870.
8. Kipen, H.M., and Fiedler, N. "Multiple Chemical Sensitivity--Context and Implications." *American Journal Epidemiology*. July 1, 1999. 150(1): 13-6.
9. Mayou, R. and Sharpe, M. "Diagnosis, Illness and Disease." *Quarterly Journal of Medicine*. November 1995. 88(11): 827-831.
10. Susser, M. "Disease, Illness, Sickness; Impairment, Disability and Handicap." *Psychological Medicine*. August 1990. 20(3): 471-3.
11. Wessely, S. and Nimnuan, C. "Functional somatic syndromes: one or many?" *Lancet*. September 11, 1999. 354(9182): 936-9.

Y. Discuss Issues with Patient, Provide Reassurance and Education, and Reinforce Patient-Clinician Partnership

OBJECTIVE

Maintain collaboration and convey optimism and future options for assistance.

ANNOTATION

Most patients at this point will feel hopeless, helpless, and mistrustful. The most important message to convey is the availability of help even though the specific cause for their concerns has not been identified. In approximately one out of three patients presenting with a physical symptom, a physical cause could not be identified upon medical evaluation (Kroenke, 1989; Kroenke, 1994; Marple, 1997).

Helpful techniques for conveying optimism to the patient include the following:

- Introduce the notion to the patient that medically unexplained symptoms are distressing and counseling may help them cope.
- Explain to the patient the common nature of medically unexplained symptoms in routine practice.
- Encourage the use of a symptom diary or journal.
- Provide health promoting educational handouts.
- Encourage behavior modification, exercise, weight loss, diet modification, and sleep hygiene.

- Encourage the reduction or cessation of alcohol, tobacco, and caffeine.
- Counsel the patient on the notion that "more care is not better care" and may cause "more harm than good."
- Advise as to the adverse effects of polypharmacy and specific medications (i.e., opioids, benzodiazepines, and related compounds).
- Emphasize that no catastrophic or progressive diseases have been found despite extensive work-up and consider the possibility of a sleep disorder.

This level of education is often helpful to present in a group format.

The clinician should refocus the attention from symptoms to improving patient functioning. Potentially modifiable psychosocial barriers to patient functioning could include:

- Living environment—Homelessness can perpetuate chronic illness as the result of environmental exposure and virtually non-existent personal hygiene.
- Support systems—Negative support on the part of the spouse, family, or significant other can impair and even worsen functionality.
- Job—Workplace factors have been associated with illness-related behavior.
- Finances—disability compensation can perpetuate illness by requiring continuing symptoms and disability for the worker to be eligible for benefits.

DISCUSSION

Physical symptoms account for more than half of all outpatient visits each year in the United States—an estimated 400 million visits. The data collected from general population surveys help to clarify the types and frequency of physical symptoms experienced in the general population. Table III presents six types of physical symptoms and compares the frequency of these symptoms among the general population and survey respondents.

Physical Symptoms	Prevalence in General Population	Prevalence Among Survey Respondents
Fatigue	22 percent	58 percent
Joint pain	26 percent	59 percent
Headaches	21 percent	37 percent
Sleep Difficulties	15 percent	35 percent
Dyspnea	14 percent	32 percent
Abdominal Pain	11 percent	24 percent

(Kroenke, 1989, Kroenke, 1990, Kroenke, 1993, Kroenke, 1994)

The National Ambulatory Medical Care Survey (NAMCS) data of 1989 similarly found that patient concerns of fatigue, headaches, joint pains, and skin rashes resulted in an estimated 47.6 million outpatient visits. The estimated number of outpatient visits for fatigue was 7 million; for headaches, 9.6 million; for joint pains, 17 million; and for skin rashes, 14 million. It was also found that many patients experience more than one symptom.

REFERENCES:

1. Bluru, R., Bartell, S., Pitblado, R., and Stricoff, S. "Communicating Risk in Crisis and Non-Crisis Situations." *Risk Management Handbook for Environmental, Health, and Safety Professionals*, Part VI. 1996. **QE=2B, SR=A.**

2. Kroenke, K., Arrington, M.E., and Mangelsdorff, A.D. "The Prevalence of Symptoms in Medical Outpatients and the Adequacy of Therapy." *Archives of Internal Medicine*. 1990. 150: 1685-9.
3. Kroenke, K., Jackson, J.L., and Chamberland, J. "Depressive and Anxiety Disorders in Patients Presenting with Physical Complaints: Clinical Predictors and Outcomes." *American Journal of Medicine*. 1997. 103: 339-47.
4. Kroenke, K., and Mangelsdorff, A.D. "Common Symptoms in Ambulatory Care: Incidence, Evaluation, Therapy, and Outcome." *American Journal of Medicine*. 1989. 86: 262-6.
5. Kroenke, K., and Price, R. K. "Symptoms in the Community: Prevalence, Classification, and Psychiatric Comorbidity." *Archives of Internal Medicine*. 1993. 153: 2474-80.
6. Kroenke, K., Spitzer, R. L., Williams, J.B.W., Linzer, M., Hahn, S.R., deGruy, F.V., et al. "Physical Symptoms in Primary Care: Predictors of Psychiatric Disorders and Functional Impairment." *Archives of Family Medicine*. 1994. 3: 744-9.
7. Marple, R.L., Kroenke, K., Lucey, C.R., Wilder, J., and Lucas, C.A. "Concerns and Expectations in Patients Presenting with Physical Complaints: Frequency, Physician Perceptions and Actions, and 2-Week Outcome." *Archives of Internal Medicine*. 1997. 157: 1482-8.

Z. Follow-Up—Monitor Changes in Patient Status

OBJECTIVE

Establish the patient's functional baseline and monitor for changes in general health and functional status that may require specific intervention.

ANNOTATION

A patient reaching this point in the algorithm requires "watchful waiting" as the primary mode of treatment. The components of watchful waiting in the patient with previously evaluated, but thus far medically unexplained, physical symptoms or signs include the following (Engel & Katon 1999):

- Use diagnostic testing conservatively. Order new tests based upon clinical suspicion only, rather than in a "shotgun" fashion. Except under unusual circumstances, testing should be done only when there are acute changes in the patient's clinical status that involve objective signs. Avoid ordering new tests for subjective findings or findings that represent acute exacerbations in an already chronic pattern of symptomatology, so-called "flare-ups" of symptoms.
- Use follow-up visits as an opportunity to review and explain prior testing the patient has received and what it means, accentuating normal findings unless abnormal findings have some specific clinical meaning (i.e., don't confuse the patient with equivocal findings of unknown significance).
- Avoid the use of multiple symptomatic medication treatments as adverse effects of medications increase the risk of harm. Polypharmacy is a common source of morbidity in these patients because they visit physicians often and over extended periods.
- Avoid the use of medications that are harmful if taken for long periods, such as narcotic analgesics or central nervous system depressants (e.g., sedatives, "muscle relaxers", barbiturate formulations such as Fiorinal or Fioricet, benzodiazepines, and related anxiolytics).
- Offer targeted reassurance. Blanket reassurance often leaves the patient feeling as though the clinician does not understand his or her specific concern. Instead, aim reassurance at specific beliefs or misinformation.
- Negotiate behavioral goals collaboratively with the patient. Identify, with patient input, what health behaviors are important to modify. Avoid becoming proscriptive; for example, you may think the patient is obese, but unless the patient sees his or her weight as a problem, clinician directives to lose weight will fall on deaf ears. Worse yet, clinician directives may alienate the patient and reduce adherence to the overall management plan.
- Encourage physical and role reactivation. In the absence of a clear diagnosis, this is usually the major behavioral goal: maximizing and sustaining the patient's ability to function. Inquire at each visit about how the patient is functioning. Look for nonjudgmental ways to incrementally maximize physical

- activity levels, remembering that efforts must “start low and go slow” in the setting of chronic inactivity.
- Maximally involve social supports.
 - Ensure continuity of care. Organize the patient’s care around a single clinician and make visits time contingent (scheduled rather than “PRN” for exacerbations of chronic symptoms). Optimal frequency of visits is generally 4-6 weeks.
 - Use consultant resources judiciously. Specialists will often tend to over-emphasize *new* diagnostic evaluations, often reordering previously ordered tests. This can lead to false positive findings and iatrogenesis.
 - Consider consulting with a mental health specialist for patients who seem inordinately distressed by their symptoms. Be sure, however, to explain the reason for the consultation to both the consultant and the patient. Most patients will feel that their credibility is being questioned or that they are being accused of “imagining” their symptoms when sent to a mental health specialist. In the military, they may also fear that the consultation will have career implications. Mental health consultation should only be made when it is acceptable to the patient, except under circumstances of a psychiatric emergency, which usually means that the patient represents an immediate threat of harm to self or others.

Measurement requirements:

Recently-deployed populations are at risk for health concerns, so careful health monitoring of individuals seeking post-deployment care is essential. Accordingly, there are specific measurement requirements. The Short-Form Health Survey-36 (SF-36) has been widely used in clinical settings to assess functional status and general health across eight dimensions (Ware, 1992) (see Appendix C). A veteran-specific instrument has been developed (SF-36V) that differs only slightly from the original tool in providing a spectrum of responses to two questions regarding work or leisure-time limitations due to physical or emotional problems (Kazis, 1999; Kazis, 1998). The SF-36V assessment tool has been used to assess functional status in over 1.5 million veterans who receive care at VA medical facilities.

DISCUSSION

To increase its importance in clinical care, the VA Under Secretary for Health recently designated “Functional Status” as one of the domains of value for the VA system. The SF-36 assessment tool measures functional health status over eight dimensions:

- Physical functioning (10 questions)
- Social functioning (10 questions)
- Role limitations due to physical problems (4 questions)
- Role limitations due to emotional problems (3 questions)
- Mental health (5 Questions)
- Energy/vitality (4 Questions)
- Pain (2 questions)
- General health perception (5 Questions)

Two summary scales, the Physical Component Score (PCS) and Mental Component Score (MCS), are generated from the scores obtained on these eight dimensions. Scores for each dimension are standardized to a 0-100 point scale and the lower the score, the higher the level of dysfunction. The MCS and PCS scores are standardized to a “50-10” scale with the mean score equal to 50 for the general U.S. population, and the standard deviation equal to a 10-unit difference. Similar scoring schemes have been used for presentation and interpretation of the scores on the eight dimensions as well.

The advantages of the SF-36 include the measurement of health status across several dimensions, brevity, and ease of administration in both interviewer- and self-administered settings, and the ability to measure health status in a range where changes and effects are most likely to be detected. Limitations include the lack of condition specificity. It has been shown that disease specific instruments outperform the SF-36 when the

primary focus is on a particular pathologic process (e.g., inflammatory bowel and coronary artery diseases) (Guyatt, 1989; Spertus, 1995).

STANDARD ASSESSMENT TOOL WEB SITES

- www.rand.org
- www.sf-36.com
- www.outcomes-trust.org/instruments
- www.qlmed.org/SF-36

STANDARD HEALTH ASSESSMENT TOOLS (See Appendix B)

REFERENCES

1. Blanchard, E.B., Jones-Alexander, J., Buckley, T.C., and Forneris, C.A. "Psychometric Properties of the PTSD Checklist (PCL)." *Behavior Research Therapy*. 1996. 34(8): 669-73.
2. Campbell, K.A., Rohlman, D.S., Storzbach, D., et al. "Test-Retest Reliability of Psychological and Neurobehavioral Tests Self-administered by Computer." *Assessment* (ISSN: 1073-1911). 1999. 6(1): 21-32.
3. Engel, C.C. and Katon, W.J. "Population and Need-Based Prevention of Unexplained Symptoms in the Community." *Institute of Medicine, Strategies to Protect the Health of Deployed U.S. Forces: Medical Surveillance, Record Keeping, and Risk Reduction*. Washington, DC: National Academy Press. 1999. 173-212.
4. Engel, C.C. "Clinical Risk Communication: Communication of Causation to Gulf War Veterans with Chronic Multisymptom Illnesses." *Proceedings of the 1999 Conference on Federally Sponsored Gulf War Veterans' Illnesses Research*. Pentagon City, Virginia. June 25, 1999.
5. Guyatt, G., Mitchell, A., Irvine, E.J., et al. "A New Measure of Health Status for Clinical Trials in Inflammatory Bowel Disease." *Gastroenterology*. 1989. 96: 804-10.
6. Hays, R.D., Sherbourne, C.D., and Mazel, R.M. "The RAND 36-Item Health Survey 1.0." *Health Economics*. 1993. 2: 217-27.
7. Institute of Medicine, Medical Follow-Up Agency. *Strategies to Protect the Health of Deployed U.S. Forces: Medical Surveillance, Record Keeping, and Risk Reduction*. Washington, DC. National Academy Press. 1999.
8. Kazis, L.E., Miller, D., Clark, J., et al. "Health-Related Quality of Life in Patients Served by the Department of Veterans Affairs." *Archives of Internal Medicine*. 1998. 158: 626-632.
9. Kazis, L.E., Ren, X.S., Lee, A., et al. "Health Status in VA Patients: Results from the Veterans Health Study." *American Journal of Medical Quality*. 1999. 14: 28-38.
10. Kazis, L.E., Wilson, N.J., et al. *Health Outcomes of Veterans Using SF-36V: 1998 National Survey of Ambulatory Care Patients*. Washington DC. Department of Veterans Affairs.
11. Scientific Advisory Committee, Medical Outcomes Trust. *Evaluating Health Outcome Measures: The Medical Outcomes Trust Approach*. Boston: 1999.
12. Spertus, J.A., Winder, J.A., Dewhurst, T.A., et al. "Development and Evaluation of the Seattle Angina Questionnaire: A New Functional Status Measure for Coronary Artery Disease." *Journal of the American College of Cardiology*. 1995. 25 (2): 333-41.
13. Ware, J.E., Kosinski, M., Bayliss, M.S., McHorney, C.A., Rogers, W.H., and Raczek, A. "Comparison of Methods for the Scoring and Statistical Analysis of SF-36 Health Profile and Summary Measures: Summary of Results from the Medical Outcomes Study." *Medical Care*. 1992. 33 (4). AS264-AS279, Supplement.
14. Ware, J.E., and Sherbourne, C.D. "The MOS 36-Item Short-Form Health Survey (SF-36). Conceptual Framework and Item Selection." *Medical Care*. 1992. 30 (6): 473-83.

AA. Provide Patient Education

OBJECTIVE

Provide health education to patient and family.

ANNOTATION

Patient Education is one of the most important responsibilities of the clinician. It is facilitated by attention to the patient's expectations, beliefs, and decisions.

Patients bring a set of beliefs about themselves and the meaning of their symptoms and environmental exposures into encounters with their clinician. Patient's expectations of illness and the consequences of exposures may differ significantly from scientific models. The goals of the clinician should include attempting to understand the patient's beliefs, informing the patient about pertinent scientific information, and establishing a collaborative and negotiated understanding upon which further communication and work can be based. Some forms of patient education may be more effective if provided by other members of the health care team or in a group setting.

BB. Are There Indications for Collaboration with a Deployment Health Clinical Center (DHCC)?

OBJECTIVE

Determine whether collaboration with a DHCC will aid in the treatment of the patient's diagnosed illness.

ANNOTATION

Referral centers have been designated in both DoD and VHA facilities. Consultation with these centers offers the clinician and patient access to clinicians with special expertise and experience, entry into approved clinical trials, and diagnostic testing and evaluation that may not be available locally or at other referral centers.

If the clinical evaluation reveals a well-defined diagnosis with a widely accepted treatment protocol, and the patient is willing to accept this diagnosis as the cause of signs or symptoms, the clinician should begin therapy at the local facility. The clinician should attempt to reach an agreement with the patient on an appropriate interval of time to reassess signs, symptoms, and concerns and jointly determine whether further evaluation is necessary. The clinician should consider collaboration with, and the possible referral to, a DHCC to ensure that deployment-related health concerns receive full consideration.

If the clinical evaluation reveals a diagnosis or disease entity that is newly defined or the effective treatment protocol has not been established for the diagnosis, the clinician and patient may benefit from collaboration with a DHCC. Collaboration may occur through in-person, telephonic, or other written communication depending on the level of clinical urgency. Consultation with these centers offers the clinician and patient access to practitioners with special expertise and experience, entry into approved clinical trials, and diagnostic testing and evaluation that may not be available locally or at other referral centers.

REFERENCES

1. Engel, C.C., Liu, X., Clymer, R., Miller R., Sjoberg, T., and Shapiro, J. "Rehabilitative Care of War-Related Health Concerns." *Journal of Occupational and Environmental Medicine*. 2000. 42(4): 385-390.
2. Engel, C.C., Roy, M., Kayanan, D., Ursano, R. "Multidisciplinary Treatment of Persistent Symptoms After Gulf War Service." *Military Medicine*. 1998. 163(4): 202-8.

CC. Establish Contact and Collaborate with a Deployment Health Clinical Center (DHCC)

OBJECTIVE

Contact and collaborate with the assistance of a DHCC to manage complicated deployment-related health care concerns.

ANNOTATION

Referral centers have been designated in both DoD and VHA facilities. Consultation with these centers offers the health care provider and patient access to clinicians with special expertise and experience, entry into approved clinical trials, and diagnostic testing and evaluation that may not be available locally or at other referral centers.

Walter Reed Army Medical Center
Deployment Health Clinical Center
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DD. Follow-Up as Indicated

OBJECTIVE

Assure the patient's current deployment related health concern is resolved.

ANNOTATION

As part of the overall treatment plan, the clinician should continue to provide patient instruction and monitor the course of the patient's illness for the effectiveness of treatment and potential identification of new concerns in each follow-up appointment. The clinician and patient should determine the frequency of visits based on clinical indications and patient need.

The clinician should match the patient's diagnosis with the specific deployment event when possible and report deployment related health concerns, as appropriate.

APPENDIX A

**CLINICAL PRACTICE GUIDELINE FOR
POST-DEPLOYMENT HEALTH
EVALUATION AND MANAGEMENT**

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APPENDIX B

**CLINICAL PRACTICE GUIDELINE FOR
POST-DEPLOYMENT HEALTH
EVALUATION AND MANAGEMENT**

**THE DEPARTMENT OF DEFENSE
COMPREHENSIVE CLINICAL EVALUATION PROGRAM AND
THE DEPARTMENT OF VETERANS AFFAIRS GULF WAR HEALTH
EXAMINATION REGISTRY**

The Department of Veterans Affairs (VA) *Gulf War Health Examination Registry* (PGR) was authorized on November 4, 1992, by Public Law 102-585 (Title VII), the Persian Gulf War Veterans Health Status Act. The PGR offers every Gulf War veteran a complete physical examination with basic laboratory studies. Additionally, a complete medical history is obtained and documented in the veteran's medical record. The Department of Defense (DoD), Office of Health Affairs (HA), instituted the *Comprehensive Clinical Evaluation Program* (CCEP) on June 7, 1994. The CCEP expanded upon routine medical care of Gulf War veterans and provided a more systematic evaluation strategy modeled after the VA PGR.

The standard VA registry clinical examination protocol consists of the laboratory tests and consultations that clinicians use to evaluate the symptoms reported by Gulf War veterans during their initial physical examination. This baseline examination protocol elicits information about symptoms and exposures and directs initial laboratory studies, including blood count, urinalysis, and a set of blood chemistry tests. VA expanded this standard protocol as more experience was gained about the health problems of Gulf War veterans. In addition to core laboratory screening, clinicians order additional tests and specialty consultations, as clinically indicated, in an attempt to reach a diagnosis for every participating veteran.

If a Gulf War veteran's symptoms remain unexplained after the initial examination, the VA provides an expanded assessment protocol, which is a set of clinical guidelines for evaluating ill-defined or unexplained illnesses. For this purpose, an "unexplained illness" is characterized as one or more symptoms which do not conform to a characteristic clinical presentation, allowing for a diagnosis, but which appear to be causing a decline in the veteran's functional status or quality of life. This set of extended clinical guidelines—the Uniform Case Assessment Protocol (UCAP)—suggests 22 additional tests and auxiliary specialty consultations, and outlines supplementary diagnostic procedures based on the specific symptoms of the veteran and the clinical judgment of the registry clinician. The UCAP was originally developed in 1993 by the VA and is now used in both the VA and the DoD Gulf War clinical registries.

The CCEP was developed to provide a systematic and uniform medical evaluation at 184 military health care facilities located in 39 States, eight foreign countries, and two territories. To institute the CCEP, organizational meetings were held with senior medical officials from all military services; health care officials of the VA were consulted to ensure that the CCEP and the PGR collected comparable data and four instructional meetings were held with military health care personnel to review CCEP procedures and provide clinical and research information related to Gulf War health questions. A special committee of the Institute of Medicine (IOM) reviewed and monitored the CCEP process, including the design and implementation of the program and interpretation of the initial findings.

By January 1999, systematic clinical examinations were completed on approximately 100,000 U.S. Gulf War veterans. Both DoD and VA registry participants report a broad range of symptoms that span a variety of organ systems. The most common primary symptoms reported are fatigue, joint pain, headache, memory loss, sleep disturbance, rash, and difficulty concentrating. The most common diagnoses in the VA's registry are the same as in the DoD Registry: psychological conditions, musculoskeletal system diseases, and the category of symptoms, signs, and ill-defined conditions.

Every U.S. war since the Civil War has produced chronic, enigmatic, and disabling post-war physical symptoms among veterans. Unexplained physical symptoms became an especially contentious issue for veterans, policy makers, scientists, and clinicians after the Gulf War. Over 43% of the first 18,000 veterans seeking DoD care for Gulf War health concerns were diagnosed with an ill-defined condition, and nearly 18% had an ill-defined condition as a primary diagnosis. A recent Center for Disease Control and Prevention (CDC) study found that 45% of Gulf War veterans and 15% of non-deployed Gulf War era veterans met the criteria for chronic multi-symptom illnesses.

The DoD and VA asked the IOM to evaluate the adequacy of the PGR and the CCEP, since both evaluation programs have evolved over time. The IOM endorsed the systematic, comprehensive set of clinical practice guidelines set forth in the CCEP and PGR. These guidelines have assisted clinicians in the determination of specific diagnoses for thousands of patients. However, the IOM emphasized the need to focus care at the primary care level, both to enhance the continuity of care and foster the establishment of ongoing therapeutic

relationships. In addition, research has shown that a high prevalence of psychosocial problems occur among deployed forces, leading the IOM to recommend the development of standardized guidelines for screening, assessing, evaluating, and treating these patients. The IOM also recommended the development of explicit guidelines for identifying patients in the primary care setting who would benefit from a psychiatric evaluation. The IOM recommendations are based on research findings, lessons learned from PGR, CCEP, and UCAP implementation, and advances made in the field of clinical practice evaluation.

The IOM emphasized that the experiences after the Vietnam and Gulf Wars demonstrated that the post-deployment period is crucial for carrying out medical screening and evaluation and providing appropriate care for returning service members. In addition, DoD and VA clinicians identified the need for standardized guidelines for screening, assessing, evaluating, and treating patients returning from deployment who may have deployment related health concerns. The IOM also felt that standardized guidelines for screening, assessing, evaluating, and treating patients were especially important to VA in that the Veterans Benefits Improvement Act of 1998 (Public Law 105-368) provides that service members will be eligible for medical care for a period of 2 years after their return from service in a theater of combat operations during a period of war or hostilities. The provision of this care without the need for establishing service-connection provides a valuable opportunity to ascertain the health needs of this population, including those related to medically unexplained symptoms. Rather than naming a special deployment-specific registry, the IOM concluded that veterans should receive care as needed, with evaluation, follow-up, and patient management focused in the primary care setting.

Congress also expressed concern and provided legislation mandating establishment of DoD Deployment Health Centers and VA Center(s) for the Study of War-Related Illnesses and Post-Deployment Health Concerns. These DoD and VA Centers will serve as loci of activity for post-deployment health concerns and support continued development of applicable evidence-based solutions for post-deployment medical concerns. The DoD Deployment Health Clinical Center, located at Walter Reed Army Medical Center, has the mission and responsibility to:

1. Maintain and improve primary and tertiary health care for individuals with deployment-related health concerns.
2. Maintain, improve, and explore the use of health information systems to improve the continuum of deployment related health care the military offers and military medicine's capacity for early identification of emerging deployment related illnesses.
3. Develop a program of militarily relevant clinical research to include multi-center clinical trials, risk communication strategies, and clinical health services research.
4. Assist in developing, implementing, and sustaining an evidence-based military medical deployment health education program to increase the volume, quality, rate, and ease of use of clinically relevant research knowledge disseminated to military health care providers regarding deployment related health care and communication strategies.

The DoD and Veterans Health Affairs (VHA) convened a group of experts, including the VHA Field Advisory Group and DoD Service Champions nominated by each of the Surgeons General, to review the IOM recommendations and develop a plan for implementation. The challenge for the work group was to develop an evidence-based post-deployment health clinical evaluation program focused in the primary care setting. The group consensus was to pursue the development of an evidence-based clinical practice guideline (CPG) to assist clinicians in the primary care setting in screening, evaluating, and managing the post-deployment health concerns of service members and develop specific treatment CPGs for those conditions recognized as most important.

APPENDIX C

**CLINICAL PRACTICE GUIDELINE FOR
POST-DEPLOYMENT HEALTH
EVALUATION AND MANAGEMENT**

STANDARD HEALTH ASSESSMENT TOOLS

Brief Patient Health Questionnaire™ (PHQ-Brief)

This questionnaire is an important part of providing you with the best health care possible. Your answers will help in understanding problems that you may have. Please answer every question to the best of your ability unless you are requested to skip a question.

Name _____ Age _____ Sex: Female Male Today's Date _____

- | | Not at all | Several days | More than half the days | Nearly every day |
|---|--------------------------|--------------------------|--------------------------|--------------------------|
| 1. Over the <u>last 2 weeks</u>, how often have you been bothered by any of the following problems? | | | | |
| a. Little interest or pleasure in doing things | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| b. Feeling down, depressed, or hopeless | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| c. Trouble falling or staying asleep, or sleeping too much | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| d. Feeling tired or having little energy | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| e. Poor appetite or overeating | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| f. Feeling bad about yourself, or that you are a failure, or have let yourself or your family down | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| g. Trouble concentrating on things, such as reading the newspaper or watching television | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| h. Moving or speaking so slowly that other people could have noticed. Or the opposite — being so fidgety or restless that you have been moving around a lot more than usual | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| i. Thoughts that you would be better off dead, or of hurting yourself in some way | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

2. Questions about anxiety.

- | | | |
|--|---------------------------------------|--|
| a. In the <u>last 4 weeks</u> , have you had an anxiety attack — suddenly feeling fear or panic? | NO
<input type="checkbox"/> | YES
<input type="checkbox"/> |
|--|---------------------------------------|--|

If you checked "NO", go to question #3.

- | | | |
|--|--------------------------|--------------------------|
| b. Has this ever happened before? | <input type="checkbox"/> | <input type="checkbox"/> |
| c. Do some of these attacks come <u>suddenly out of the blue</u> — that is, in situations where you don't expect to be nervous or uncomfortable? | <input type="checkbox"/> | <input type="checkbox"/> |
| d. Do these attacks bother you a lot or are you worried about having another attack? | <input type="checkbox"/> | <input type="checkbox"/> |
| e. During your last bad anxiety attack, did you have symptoms like shortness of breath, sweating, your heart racing or pounding, dizziness or faintness, tingling or numbness, or nausea or upset stomach? | <input type="checkbox"/> | <input type="checkbox"/> |

3. If you checked off any problems on this questionnaire so far, how difficult have these problems made it for you to do your work, take care of things at home, or get along with other people?

- | | | | |
|---|---|---|--|
| Not difficult
at all
<input type="checkbox"/> | Somewhat
difficult
<input type="checkbox"/> | Very
difficult
<input type="checkbox"/> | Extremely
difficult
<input type="checkbox"/> |
|---|---|---|--|

FOR OFFICE CODING: Maj Dep Syn if answers to #1a or b and five or more of #1a-i are at least "More than half the days" (count #1i if present at all). Other Dep Syn if #1a or b and two, three, or four of #1a-i are at least "More than half the days" (count #1i if present at all).Pan Syn if all of #2a-e are "YES."

- | 4. In the <u>last 4 weeks</u> , how much have you been bothered by any of the following problems? | Not bothered | Bothered a little | Bothered a lot |
|---|--------------------------|--------------------------|--------------------------|
| a. Worrying about your health | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| b. Your weight or how you look | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| c. Little or no sexual desire or pleasure during sex | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| d. Difficulties with husband/wife, partner/lover, or boyfriend/girlfriend | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| e. The stress of taking care of children, parents, or other family members | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| f. Stress at work outside of the home or at school | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| g. Financial problems or worries | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| h. Having no one to turn to when you have a problem | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| i. Something bad that happened <u>recently</u> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| j. Thinking or dreaming about something terrible that happened to you <u>in the past</u> - like your house being destroyed, a severe accident, being hit or assaulted, or being forced to commit a sexual act | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
5. In the last year, have you been hit, slapped, kicked or otherwise physically hurt by someone, or has anyone forced you to have an unwanted sexual act?
- | | |
|--------------------------|--------------------------|
| NO | YES |
| <input type="checkbox"/> | <input type="checkbox"/> |

6. What is the most stressful thing in your life right now? _____

7. Are you taking any medicine for anxiety, depression or stress?
- | | |
|--------------------------|--------------------------|
| NO | YES |
| <input type="checkbox"/> | <input type="checkbox"/> |

8. FOR WOMEN ONLY: Questions about menstruation, pregnancy and childbirth.

- a. Which best describes your menstrual periods?
- | | | | | |
|--|---|--|---|---|
| <input type="checkbox"/> Periods are unchanged | <input type="checkbox"/> No periods because pregnant or recently gave birth | <input type="checkbox"/> Periods have become irregular or changed in frequency, duration or amount | <input type="checkbox"/> No periods for at least a year | <input type="checkbox"/> Having periods because taking hormone replacement (estrogen) therapy or oral contraceptive |
|--|---|--|---|---|
- b. During the week before your period starts, do you have a serious problem with your mood - like depression, anxiety, irritability, anger or mood swings
- | | |
|---------------------------|--------------------------|
| NO
(or does not apply) | YES |
| <input type="checkbox"/> | <input type="checkbox"/> |
- c. If YES: Do these problems go away by the end of your period?
- | | |
|--------------------------|--------------------------|
| <input type="checkbox"/> | <input type="checkbox"/> |
|--------------------------|--------------------------|
- d. Have you given birth within the last 6 months?
- | | |
|--------------------------|--------------------------|
| <input type="checkbox"/> | <input type="checkbox"/> |
|--------------------------|--------------------------|
- e. Have you had a miscarriage within the last 6 months?
- | | |
|--------------------------|--------------------------|
| <input type="checkbox"/> | <input type="checkbox"/> |
|--------------------------|--------------------------|
- f. Are you having difficulty getting pregnant?
- | | |
|--------------------------|--------------------------|
| <input type="checkbox"/> | <input type="checkbox"/> |
|--------------------------|--------------------------|

Patient Health Questionnaire™ (PHQ)

This questionnaire is an important part of providing you with the best health care possible. Your answers will help in understanding problems that you may have. Please answer every question to the best of your ability unless you are requested to skip over a question.

Name _____ Age _____ Sex: Female Male Today's Date _____

- | | Not bothered | Bothered
a little | Bothered
a lot |
|---|--------------------------|--------------------------|--------------------------|
| 1. During the <u>last 4 weeks</u>, how much have you been bothered by any of the following problems? | | | |
| a. Stomach pain | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| b. Back pain | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| c. Pain in your arms, legs, or joints (knees, hips, etc) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| d. Menstrual cramps or other problems with your periods | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| e. Pain or problems during sexual intercourse | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| f. Headaches | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| g. Chest pain | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| h. Dizziness | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| i. Fainting spells | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| j. Feeling your heart pound or race | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| k. Shortness of breath | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| l. Constipation, loose bowels, or diarrhea | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| m. Nausea, gas, or indigestion | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

- | | Not at all | Several
days | More than
half the
days | Nearly
every
day |
|--|--------------------------|--------------------------|-------------------------------|--------------------------|
| 2. Over the <u>last 2 weeks</u>, how often have you been bothered by any of the following problems? | | | | |
| a. Little interest or pleasure in doing things | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| b. Feeling down, depressed, or hopeless | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| c. Trouble falling or staying asleep, or sleeping too much | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| d. Feeling tired or having little energy | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| e. Poor appetite or overeating | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| f. Feeling bad about yourself, or that you are a failure, or have let yourself or your family down | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| g. Trouble concentrating on things, such as reading the newspaper or watching television | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| h. Moving or speaking so slowly that other people could have noticed?
Or the opposite — being so fidgety or restless that you have been moving around a lot more than usual | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| i. Thoughts that you would be better off dead or of hurting yourself in some way | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

FOR OFFICE CODING: Som Dis if at least three of #1a-m are "a lot" and lack an adequate biol explanation. Maj Dep Syn if answers to #2a or b and five or more of #2a-i are at least "More than half the days" (count #2i if present at all). Other Dep Syn if #2a or b and two, three, or four of #2a-i are at least "More than half the days" (count #2i if present at all).

3. Questions about anxiety.

- | | | |
|--|--------------------------|--------------------------|
| a. In the <u>last 4 weeks</u> , have you had an anxiety attack — suddenly feeling fear or panic? | NO | YES |
| | <input type="checkbox"/> | <input type="checkbox"/> |

If you checked “NO”, go to question #5.

- | | | |
|--|--------------------------|--------------------------|
| b. Has this ever happened before? | <input type="checkbox"/> | <input type="checkbox"/> |
| c. Do some of these attacks come <u>suddenly out of the blue</u> — that is, in situations where you don’t expect to be nervous or uncomfortable? | <input type="checkbox"/> | <input type="checkbox"/> |
| d. Do these attacks bother you a lot or are you worried about having another attack? | <input type="checkbox"/> | <input type="checkbox"/> |

4. Think about your last bad anxiety attack.

NO **YES**

- | | | |
|--|--------------------------|--------------------------|
| a. Were you short of breath? | <input type="checkbox"/> | <input type="checkbox"/> |
| b. Did your heart race, pound, or skip? | <input type="checkbox"/> | <input type="checkbox"/> |
| c. Did you have chest pain or pressure? | <input type="checkbox"/> | <input type="checkbox"/> |
| d. Did you sweat? | <input type="checkbox"/> | <input type="checkbox"/> |
| e. Did you feel as if you were choking? | <input type="checkbox"/> | <input type="checkbox"/> |
| f. Did you have hot flashes or chills? | <input type="checkbox"/> | <input type="checkbox"/> |
| g. Did you have nausea or an upset stomach, or the feeling that you were going to have diarrhea? | <input type="checkbox"/> | <input type="checkbox"/> |
| h. Did you feel dizzy, unsteady, or faint? | <input type="checkbox"/> | <input type="checkbox"/> |
| i. Did you have tingling or numbness in parts of your body? | <input type="checkbox"/> | <input type="checkbox"/> |
| j. Did you tremble or shake? | <input type="checkbox"/> | <input type="checkbox"/> |
| k. Were you afraid you were dying? | <input type="checkbox"/> | <input type="checkbox"/> |

5. Over the last 4 weeks, how often have you been bothered by any of the following problems?

Not at all Several days More than half the days

- | | | | |
|--|--------------------------|--------------------------|--------------------------|
| a. Feeling nervous, anxious, on edge, or worrying a lot about different things | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
|--|--------------------------|--------------------------|--------------------------|

If you checked “Not at all”, go to question #6.

- | | | | |
|---|--------------------------|--------------------------|--------------------------|
| b. Feeling restless so that it is hard to sit still | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| c. Getting tired very easily | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| d. Muscle tension, aches, or soreness | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| e. Trouble falling asleep or staying asleep | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| f. Trouble concentrating on things, such as reading a book or watching TV | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| g. Becoming easily annoyed or irritable | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

FOR OFFICE CODING: Pan Syn if all of #3a-d are ‘YES’ and four or more of #4a-k are ‘YES’. Other Anx Syn if #5a and answers to three or more of #5b-g are “More than half the days”.

6. Questions about eating.

- | | | |
|---|---------------------------------------|--|
| a. Do you often feel that you can't control <u>what</u> or <u>how much</u> you eat? | NO
<input type="checkbox"/> | YES
<input type="checkbox"/> |
| b. Do you often eat, <u>within any 2-hour period</u> , what most people would regard as an unusually <u>large</u> amount of food? | <input type="checkbox"/> | <input type="checkbox"/> |

If you checked 'NO' to either #a or #b, go to question #9.

- | | | |
|---|---------------------------------------|--|
| c. Has this been as often, on average, as twice a week for the last 3 months? | <input type="checkbox"/> | <input type="checkbox"/> |
| 7. In the last 3 months have you <u>often</u> done any of the following in order to avoid gaining weight ? | NO | YES |
| a. Made yourself vomit? | <input type="checkbox"/> | <input type="checkbox"/> |
| b. Took more than twice the recommended dose of laxatives? | <input type="checkbox"/> | <input type="checkbox"/> |
| c. Fasted — not eaten anything at all for at least 24 hours? | <input type="checkbox"/> | <input type="checkbox"/> |
| d. Exercised for more than an hour specifically to avoid gaining weight after binge eating? | <input type="checkbox"/> | <input type="checkbox"/> |
| 8. If you checked "YES" to any of these ways of avoiding gaining weight, were any as often, on average, as twice a week? | NO
<input type="checkbox"/> | YES
<input type="checkbox"/> |
| 9. Do you ever drink alcohol (including beer or wine)? | NO
<input type="checkbox"/> | YES
<input type="checkbox"/> |

If you checked "NO" go to question #11.

- | | | | |
|---|---|---|--|
| 10. Have any of the following happened to you <u>more than once in the last 6 months?</u> | NO | YES | |
| a. You drank alcohol even though a doctor suggested that you stop drinking because of a problem with your health | <input type="checkbox"/> | <input type="checkbox"/> | |
| b. You drank alcohol, were high from alcohol, or hung over while you were working, going to school, or taking care of children or other responsibilities | <input type="checkbox"/> | <input type="checkbox"/> | |
| c. You missed or were late for work, school, or other activities because you were drinking or hung over | <input type="checkbox"/> | <input type="checkbox"/> | |
| d. You had a problem getting along with other people while you were drinking | <input type="checkbox"/> | <input type="checkbox"/> | |
| e. You drove a car after having several drinks or after drinking too much | <input type="checkbox"/> | <input type="checkbox"/> | |
| 11. If you checked off <u>any</u> problems on this questionnaire, how <u>difficult</u> have these problems made it for you to do your work, take care of things at home, or get along with other people? | | | |
| Not difficult
at all
<input type="checkbox"/> | Somewhat
difficult
<input type="checkbox"/> | Very
difficult
<input type="checkbox"/> | Extremely
difficult
<input type="checkbox"/> |

FOR OFFICE CODING: Bul Ner if #6a,b, and-c and #8 are all 'YES'; Bin Eat Dis the same but #8 either 'NO' or left blank. Alc Abu if any of #10a-e is 'YES'.

12. In the <u>last 4 weeks</u> , how much have you been bothered by any of the following problems?	Not bothered	Bothered a little	Bothered a lot
a. Worrying about your health	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Your weight or how you look	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Little or no sexual desire or pleasure during sex	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Difficulties with husband/wife, partner/lover or boyfriend/girlfriend	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. The stress of taking care of children, parents, or other family members	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f. Stress at work outside of the home or at school	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g. Financial problems or worries	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
h. Having no one to turn to when you have a problem	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
i. Something bad that happened <u>recently</u>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
j. Thinking or dreaming about something terrible that happened to you in <u>the past</u> - like your house being destroyed, a severe accident, being hit or assaulted, or being forced to commit a sexual act	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

13. In the last year, have you been hit, slapped, kicked or otherwise physically hurt by someone, or has anyone forced you to have an unwanted sexual act?

NO	YES
<input type="checkbox"/>	<input type="checkbox"/>

14. What is the most stressful thing in your life right now? _____

15. Are you taking any medicine for anxiety, depression or stress?

NO	YES
<input type="checkbox"/>	<input type="checkbox"/>

16. FOR WOMEN ONLY: Questions about menstruation, pregnancy and childbirth.

a. Which best describes your menstrual periods?

Periods are unchanged <input type="checkbox"/>	No periods because pregnant or recently gave birth <input type="checkbox"/>	Periods have become irregular or changed in frequency, duration or amount <input type="checkbox"/>	No periods for at least a year <input type="checkbox"/>	Having periods because taking hormone replacement (estrogen) therapy or oral contraceptive <input type="checkbox"/>
---	--	---	--	--

	NO	YES
	(or does not apply)	
b. During the week before your period starts, do you have a <u>serious</u> problem with your mood - like depression, anxiety, irritability, anger or mood swings?	<input type="checkbox"/>	<input type="checkbox"/>
c. If YES: Do these problems go away by the end of your period?	<input type="checkbox"/>	<input type="checkbox"/>
d. Have you given birth within the last 6 months?	<input type="checkbox"/>	<input type="checkbox"/>
e. Have you had a miscarriage within the last 6 months?	<input type="checkbox"/>	<input type="checkbox"/>
f. Are you having difficulty getting pregnant?	<input type="checkbox"/>	<input type="checkbox"/>

Developed by Drs. Robert L. Spitzer, Janet B.W. Williams, Kurt Kroenke and colleagues, with an educational grant from Pfizer Inc. For research information, contact Dr. Spitzer at rls8@columbia.edu. The names PRIME-MD® and PRIME-MD TODAY® are trademarks of Pfizer Inc.

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PTSD CheckList – Civilian Version (PCL-C)

Patient's Name: _____

Instruction to patient: Below is a list of problems and complaints that veterans sometimes have in response to stressful life experiences. Please read each one carefully, put an "X" in the box to indicate how much you have been bothered by that problem *in the last month*.

No.	Response:	Not at all (1)	A little bit (2)	Moderately (3)	Quite a bit (4)	Extremely (5)
1.	Repeated, disturbing <i>memories, thoughts, or images</i> of a stressful experience from the past?					
2.	Repeated, disturbing <i>dreams</i> of a stressful experience from the past?					
3.	Suddenly <i>acting or feeling</i> as if a stressful experience <i>were happening again</i> (as if you were reliving it)?					
4.	Feeling <i>very upset</i> when <i>something reminded</i> you of a stressful experience from the past?					
5.	Having <i>physical reactions</i> (e.g., heart pounding, trouble breathing, or sweating) when <i>something reminded</i> you of a stressful experience from the past?					
6.	Avoid <i>thinking about</i> or <i>talking about</i> a stressful experience from the past or avoid <i>having feelings</i> related to it?					
7.	Avoid <i>activities</i> or <i>situations</i> because <i>they remind you</i> of a stressful experience from the past?					
8.	Trouble <i>remembering important parts</i> of a stressful experience from the past?					
9.	Loss of <i>interest in things that you used to enjoy</i> ?					
10.	Feeling <i>distant</i> or <i>cut off</i> from other people?					
11.	Feeling <i>emotionally numb</i> or being unable to have loving feelings for those close to you?					
12.	Feeling as if your <i>future</i> will somehow be <i>cut short</i> ?					
13.	Trouble <i>falling</i> or <i>staying asleep</i> ?					
14.	Feeling <i>irritable</i> or having <i>angry outbursts</i> ?					
15.	Having <i>difficulty concentrating</i> ?					
16.	Being " <i>super alert</i> " or watchful on guard?					
17.	Feeling <i>jumpy</i> or easily startled?					

Weathers, F.W., Huska, J.A., Keane, T.M. *PCL-C for DSM-IV*. Boston: National Center for PTSD – Behavioral Science Division, 1991.

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PTSD CheckList – Military Version (PCL-M)

Patient's Name: _____

Instruction to patient: Below is a list of problems and complaints that veterans sometimes have in response to stressful military experiences. Please read each one carefully, put an "X" in the box to indicate how much you have been bothered by that problem in *the last month*.

No.	Response:	Not at all (1)	A little bit (2)	Moderately (3)	Quite a bit (4)	Extremely (5)
1.	Repeated, disturbing <i>memories, thoughts, or images</i> of a stressful military experience?					
2.	Repeated, disturbing <i>dreams</i> of a stressful military experience?					
3.	Suddenly <i>acting or feeling</i> as if a stressful military experience <i>were happening again</i> (as if you were reliving it)?					
4.	Feeling <i>very upset</i> when <i>something reminded</i> you of a stressful military experience?					
5.	Having <i>physical reactions</i> (e.g., heart pounding, trouble breathing, or sweating) when <i>something reminded</i> you of a stressful military experience?					
6.	Avoid <i>thinking about</i> or <i>talking about</i> a stressful military experience or avoid <i>having feelings</i> related to it?					
7.	Avoid <i>activities</i> or <i>situations</i> because <i>they remind you</i> of a stressful military experience?					
8.	Trouble <i>remembering important parts</i> of a stressful military experience?					
9.	Loss of <i>interest in things that you used to enjoy</i> ?					
10.	Feeling <i>distant</i> or <i>cut off</i> from other people?					
11.	Feeling <i>emotionally numb</i> or being unable to have loving feelings for those close to you?					
12.	Feeling as if your <i>future</i> will somehow be <i>cut short</i> ?					
13.	Trouble <i>falling</i> or <i>staying asleep</i> ?					
14.	Feeling <i>irritable</i> or having <i>angry outbursts</i> ?					
15.	Having <i>difficulty concentrating</i> ?					
16.	Being " <i>super alert</i> " or watchful on guard?					
17.	Feeling <i>jumpy</i> or easily startled?					

Weathers, F.W., Huska, J.A., Keane, T.M. *PCL-M for DSM-IV*. Boston: National Center for PTSD – Behavioral Science Division, 1991.

This is a Government document in the public domain.

PTSD Checklist – Stressor Specific Version (PCL-S)

The event you experienced was: _____ on: _____

Instruction to patient: Below is a list of problems and complaints that veterans sometimes have in response to stressful military experiences. Please read each one carefully, put an “X” in the box to indicate how much you have been bothered by that problem in *the last month*.

No.	Response:	Not at all (1)	A little bit (2)	Moderately (3)	Quite a bit (4)	Extremely (5)
1.	Repeated, disturbing <i>memories, thoughts, or images</i> of the stressful experience?					
2.	Repeated, disturbing <i>dreams</i> of the stressful experience?					
3.	Suddenly <i>acting or feeling</i> as if the stressful experience <i>were happening again</i> (as if you were reliving it)?					
4.	Feeling <i>very upset</i> when <i>something reminded</i> you of the stressful experience?					
5.	Having <i>physical reactions</i> (e.g., heart pounding, trouble breathing, or sweating) when <i>something reminded</i> you of the stressful experience?					
6.	Avoid <i>thinking about or talking about</i> the stressful experience or avoid <i>having feelings</i> related to it?					
7.	Avoid <i>activities or situations</i> because <i>they remind</i> you of the stressful experience?					
8.	Trouble <i>remembering important parts</i> of the stressful experience?					
9.	Loss of <i>interest in things that you used to enjoy</i> ?					
10.	Feeling <i>distant or cut off</i> from other people?					
11.	Feeling <i>emotionally numb</i> or being unable to have loving feelings for those close to you?					
12.	Feeling as if your <i>future</i> will somehow be <i>cut short</i> ?					
13.	Trouble <i>falling or staying asleep</i> ?					
14.	Feeling <i>irritable</i> or having <i>angry outbursts</i> ?					
15.	Having <i>difficulty concentrating</i> ?					
16.	Being “ <i>super alert</i> ” or watchful on guard?					
17.	Feeling <i>jumpy</i> or easily startled?					

Weathers, F.W., Huska, J.A., Keane, T.M. *PCL-S for DSM-IV*. Boston: National Center for PTSD – Behavioral Science Division, 1991.

This is a Government document in the public domain.

The Short Form Health Survey 12 Item™ (SF-12)

Instructions for Completing the Questionnaire

Please answer every question. Some questions may look like others, but each one is different. Please take the time to read and answer each question carefully by filling in the bubble that best represents your response.

EXAMPLE

This is for your review. Do not answer this question. The questionnaire begins with the section **Your Health in General** below.

For each question you will be asked to fill in a bubble in each line:

How strongly do you agree or disagree with each of the following statements?

- | | Strongly Agree | Agree | Uncertain | Disagree | Strongly Disagree |
|--------------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| a) I enjoy listening to music. | <input type="radio"/> |
| b) I enjoy reading magazines. | <input type="radio"/> |

Please begin answering the questions now.

Your Health in General

1. In general, would you say your health is:

- | Excellent | Very good | Good | Fair | Poor |
|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| <input type="radio"/> |

2. The following items are about activities you might do during a typical day. Does your health now limit you in these activities? If so, how much?

- | | Yes, Limited A Lot | Yes, Limited A Little | No, Not Limited At All |
|--|-----------------------|-----------------------|------------------------|
| a. Moderate activities , such as moving a table, pushing a vacuum cleaner, bowling, or playing golf | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| b. Climbing several flights of stairs | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

Please turn the page to continue.

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3. During the **past 4 weeks**, have you had any of the following problems with your work or other regular daily activities as a result of your physical health?

YES	NO
-----	----

- a. **Accomplished less** than you would like YES NO
- b. Were limited in the **kind** of work or other activities YES NO

4. During the **past 4 weeks**, have you had any of the following problems with your work or other regular daily activities as a result of any emotional problems (such as feeling depressed or anxious)?

YES	NO
-----	----

- a. **Accomplished less** than you would like YES NO
- b. Didn't do work or other activities as **carefully** as usual YES NO

5. During the **past 4 weeks**, how much did pain interfere with your normal work (including both work outside the home and housework)?

Not at all **A little bit** **Moderately** **Quite a bit** **Extremely**

6. These questions are about how you feel and how things have been with you during the **past 4 weeks**. For each question, please give the one answer that comes closest to the way you have been feeling. How much of the time during the **past 4 weeks**...

	All of the Time	Most of the Time	A Good Bit of the Time	Some of the Time	A Little of the Time	None of the Time
--	-----------------	------------------	------------------------	------------------	----------------------	------------------

- a. Have you felt calm and peaceful? All of the Time Most of the Time A Good Bit of the Time Some of the Time A Little of the Time None of the Time
- b. Did you have a lot of energy? All of the Time Most of the Time A Good Bit of the Time Some of the Time A Little of the Time None of the Time
- c. Have you felt downhearted and blue? All of the Time Most of the Time A Good Bit of the Time Some of the Time A Little of the Time None of the Time

7. During the **past 4 weeks**, how much of the time has your physical health or emotional problems interfered with your social activities (like visiting with friends, relatives, etc.)?

All of the Time	Most of the Time	Some of the Time	A Little of the Time	None of the Time
<input type="radio"/>				

THANK YOU FOR COMPLETING THIS QUESTIONNAIRE!

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The Short Form Health Survey 36 Item™ (SF-36)

Instructions for Completing the Questionnaire

Please answer every question. Some questions may look like others, but each one is different. Please take the time to read and answer each question carefully by filling in the bubble that best represents your response.

EXAMPLE

This is for your review. Do not answer this question. The questionnaire begins with the section **Your Health in General** below.

For each question you will be asked to fill in a bubble in each line:
How strongly do you agree or disagree with each of the following statements?

	Strongly Agree	Agree	Uncertain	Disagree	Strongly Disagree
a. I enjoy listening to music.	<input type="radio"/>				
b. I enjoy reading magazines.	<input type="radio"/>				

Please begin answering the questions now.

Your Health in General

1. In general, would you say your health is:

Excellent Very good Good Fair Poor

1. Compared to one year ago, how would you rate your health in general now?

Much better now than one year ago Somewhat better now than one year ago About the same as one year ago Somewhat worse now than one year ago Much worse now than one year ago

Please turn the page to continue.

2. The following items are about activities you might do during a typical day. **Does your health now limit you** in these activities? If so, how much?

	Yes, Limited A Lot	Yes, Limited A Little	No, Not Limited At All
a. Vigorous activities such as running, lifting heavy objects, participating in strenuous sports	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b. Moderate activities , such as moving a table, pushing a vacuum cleaner, bowling, or playing golf	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c. Lifting or carrying groceries	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d. Climbing several flights of stairs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
e. Climbing one flight of stairs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
f. Bending, kneeling, or stooping	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
g. Walking more than one mile	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
h. Walking several blocks	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
i. Walking one block	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
j. Bathing or dressing yourself	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

3. During the **past 4 weeks**, have you had any of the following problems with your work or other regular daily activities as a result of your physical health?

	YES	NO
a. Cut down on the amount of time you spend on Work or other activities	<input type="radio"/>	<input type="radio"/>
b. Accomplished less than you would like	<input type="radio"/>	<input type="radio"/>
c. Were limited in the kind of work or other activities	<input type="radio"/>	<input type="radio"/>
d. Had difficulty performing the work or other	<input type="radio"/>	<input type="radio"/>
e. Activities (for example, it took extra time)	<input type="radio"/>	<input type="radio"/>

4. During the **past 4 weeks**, have you had any of the following problems with your work or other regular daily activities as a result of any emotional problems (such as feeling depressed or anxious)?

	YES	NO
a. Cut down on the amount of time you spend on Work or other activities	<input type="radio"/>	<input type="radio"/>
b. Accomplished less than you would like	<input type="radio"/>	<input type="radio"/>
c. Didn't do work or other activities as carefully as usual	<input type="radio"/>	<input type="radio"/>

Please turn the page to continue.

5. During the **past 4 weeks**, how much did your physical health or emotional problems interfere with your normal work social activities with family, friends, neighbors, or groups?

- Not at all A little bit Moderately Quite a bit Extremely
-

6. How much bodily pain have you had during the **past 4 weeks**?

- None Very Mild Mild Moderate Severe Very Severe
-

7. During the **past 4 weeks**, how much did pain interfere with your normal work (including both work outside the home and housework)?

- Not at all A little bit Moderately Quite a bit Extremely
-

8. These questions are about how you feel and how things have been with you during the **past 4 weeks**. For each question, please give the one answer that comes closest to the way you have been feeling. How much of the time during the **past 4 weeks**...

	All of the Time	Most of the Time	A Good Bit of the Time	Some of the Time	A Little of the Time	None of the Time
a. Did you feel full of pep?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b. Have you been a very nervous person?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c. Have you felt so down in the dumps nothing could cheer you up?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d. Have you felt calm and peaceful?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
e. Did you have a lot of energy?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
f. Have you felt downhearted and blue?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
J. DID YOU FEEL WORN OUT?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
k. Have you been a happy person?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
l. Did you feel tired?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

9. During the **past 4 weeks**, how much of the time has your physical health or emotional problems interfered with your social activities (like visiting with friends, relatives, etc.)?

All of the Time	Most of the Time	Some of the Time	A Little of the Time	None of the Time
<input type="radio"/>				

11. HOW TRUE OR FALSE IS EACH OF THE FOLLOWING STATEMENTS FOR YOU?

	Definitely True	Mostly True	Don't know	Mostly False	Definitely False
a. I seem to get sick a little easier than other people	<input type="radio"/>				
b. I am as healthy as anybody I know	<input type="radio"/>				
c. I expect my health to get worse	<input type="radio"/>				
d. My health is excellent	<input type="radio"/>				

THANK YOU FOR COMPLETING THIS QUESTIONNAIRE!

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APPENDIX D

**CLINICAL PRACTICE GUIDELINE FOR
POST-DEPLOYMENT HEALTH
EVALUATION AND MANAGEMENT**

BIBLIOGRAPHY

- Adams, J. "The General Approach to the Difficult Patient." *Emergency Medicine Clinic of North America*. 1998. 16 (4): 689-700.
- Barsky, A. and Borus, J. "Functional Somatic Syndromes." *Annals of Internal Medicine*. June 1, 1999. 130: 910-921.
- Beckman, H. and Frankel, R. "The Effect of Physician Behavior on the Collection of Data." *Annals of Internal Medicine*. 1984. 101(5): 692-6.
- Blanchard, E.B., Jones-Alexander, J., Buckley, T.C., and Forneris, C.A. "Psychometric Properties of the PTSD Checklist (PCL)." *Behavior Research Therapy*. 1996. 34(8): 669-73.
- Bluru, R., Bartell, S., Pitblado, R., and Stricoff, S. "Communicating Risk in Crisis and Non-Crisis Situations." *Risk Management Handbook for Environmental, Health, and Safety Professionals*, Part VI. 1996.
- Buchwald, Garrity. "Comparison of Patients with Chronic Fatigue Syndrome, Fibromyalgia, and Multiple Chemical Sensitivities." *Archives of Internal Medicine*. September 26, 1994. 154(18): 2049-53.
- Campbell, K.A., Rohlman, D.S., Storzbach, D., et al. "Test-Retest Reliability of Psychological and Neurobehavioral Tests Self-administered by Computer." *Assessment* (ISSN: 1073-1911). 1999. 6(1): 21-32.
- Clauw, D.J. and Chrousos, G.P. "Chronic Pain and Fatigue Syndromes: Overlapping Clinical and Neuroendocrine Features and Potential Pathogenic Mechanisms." *Neuroimmunomodulation*. May-June. 1997. 4(3): 134-53. 1997.
- Clauw, D.J. "The Pathogenesis of Chronic Pain and Fatigue Syndromes, with Special Reference to Fibromyalgia." *Medical Hypotheses*. May 1995. 44(5): 369-78.
- Clements, W.M., Haddy, R., and Backstrom, D. "Managing the Difficult Patient." *Journal of Family Practice*. June 1980. 10 (6): 1079-83.
- Delbanco, T.L. "Enriching the Doctor-Patient Relationship by Inviting the Patient's Perspective." *Annals of Internal Medicine*. 1992. 116 (5): 414-8.
- Department of Defense Directive 6490.2. *Joint Medical Surveillance*. August 30, 1997.
- Department of Defense Instruction 6490.3. *Implementation and Application of Joint Medical Surveillance for Deployments*. August 7, 1997.
- Department of Defense Joint Publication 1-02. *Dictionary of Military and Associated Terms*. 1994.
- Department of Defense, Joint Staff Memorandum. *Deployment Health Surveillance and Readiness*. December 4, 1998.
- Department of Veterans Affairs, Persian Gulf Registry. *The Registry Exam and the Uniform Case Assessment Protocol*. 1992. 1994.
- Department of Veterans Affairs, Persian Gulf Veterans Coordinating Board. *Comprehensive Risk Communication Plan for Gulf War Veterans. Clinical Working Group*. 1999.
- Emanuel, E.J. and Emanuel, L.L. "Four Models of the Physician-Patient Relationship." *Journal of the American Medical Association*. 1992. 267 (16): 221-6.

- Engel, C.C. "Clinical Risk Communication: Communication of Causation to Gulf War Veterans with Chronic Multisymptom Illnesses." *Proceedings of the 1999 Conference on Federally Sponsored Gulf War Veterans' Illnesses Research*. Pentagon City, Virginia. June 25, 1999.
- Engel, C.C. and Katon, W.J. "Population and Need-Based Prevention of Unexplained Symptoms in the Community." *Institute of Medicine, Strategies to Protect the Health of Deployed U.S. Forces: Medical Surveillance, Record Keeping, and Risk Reduction*. Washington, DC: National Academy Press. 1999. 173-212.
- Engel, C.C., Liu, X., Clymer, R., Miller R., Sjoberg, T., and Shapiro, J. "Rehabilitative Care of War-Related Health Concerns." *Journal of Occupational and Environmental Medicine*. 2000. 42(4): 385-390.
- Engel, C.C., Roy, M., Kayanan, D., Ursano, R. "Multidisciplinary Treatment of Persistent Symptoms After Gulf War Service." *Military Medicine*. 1998. 163(4): 202-8.
- Fukuda K., Nisenbaum R., et al. "Chronic Multisymptom Illness Affecting Air Force Veterans of the Gulf War." *Journal of the American Medical Association*. September 16, 1998. 280(11): 981-8.
- Guyatt, G., Mitchell, A., Irvine, E.J., et al. "A New Measure of Health Status for Clinical Trials in Inflammatory Bowel Disease." *Gastroenterology*. 1989. 96: 804-10.
- Hays, R.D., Sherbourne, C.D., and Mazel, R.M. "The RAND 36-Item Health Survey 1.0." *Health Economics*. 1993. 2: 217-27.
- Hulka, B. A., Kupper L. L., and Daly, M. B. "Correlates of Satisfaction and Dissatisfaction with Medical Care: A Community Perspective." *Medical Care*. 1975. 13: 648.
- Institute of Medicine, Committee on the Evaluation of the Department of Defense Comprehensive Clinical Evaluation Program, Division of Health Promotion and Disease Prevention. *Adequacy of the Comprehensive Clinical Evaluation Program: A Focused Assessment*. Washington, DC: National Academy Press. 1997.
- Institute of Medicine, Committee on the Evaluation of the Department of Veteran Affairs Uniform Case Assessment Protocol. *Adequacy of the VA Persian Gulf Registry and Uniform Case Assessment Protocol*: Washington, DC. National Academy Press. 1998.
- Institute of Medicine, Division of Health Promotion and Disease Prevention. *Committee on a National Center on War-Related Illnesses and Post-Deployment Health Issues*. Washington, DC: National Academy Press. 1999.
- Institute of Medicine, Medical Follow-Up Agency. *Strategies to Protect the Health of Deployed U.S. Forces: Medical Surveillance, Record Keeping, and Risk Reduction*. Washington, DC. National Academy Press. 1999.
- Institute of Medicine. *Protecting Those Who Serve: Strategies To Protect the Health of Deployed U.S. Forces*. National Academy Press: Washington, DC. 2000.
- Jennings, D. "The Confusion Between Disease and Illness in Clinical Medicine." *Canadian Medical Association Journal*. October 15, 1986. 135: 865-870.
- Joyce, J., Hotopf, M., and Wessely, S. "The Prognosis of Chronic Fatigue and Chronic Fatigue Syndrome: A Systematic Review." *Monthly Journal of the Association of Physicians*. 1997. 90(3): 223-33.

- Kazis, L.E., Wilson, N.J., et al. *Health Outcomes of Veterans Using SF-36V: 1998 National Survey of Ambulatory Care Patients*. Washington DC. Department of Veterans Affairs.
- Kazis, L.E., Miller, D., Clark, J., et al. "Health-Related Quality of Life in Patients Served by the Department of Veterans Affairs." *Archives of Internal Medicine*. 1998. 158: 626-632.
- Kazis, L.E., Ren, X.S., Lee, A., et al. "Health Status in VA Patients: Results from the Veterans Health Study." *American Journal of Medical Quality*. 1999. 14: 28-38.
- Kippen, H.M., and Fiedler, N. "Multiple Chemical Sensitivity--Context and Implications." *American Journal Epidemiology*. July 1, 1999. 150(1): 13-6.
- Kolluru, R., Bartell, S., Pitblado, R., and Stricoff, S. "Communicating Risk in Crisis and Non-Crisis Situations." *Risk Management Handbook for Environmental, Health, and Safety Professionals*, Part VI. 1996.
- Korsch, B.M., and Negrete, V.F. "Doctor-Patient Communication." *Scientific American*. 1972. 227: 66-74.
- Kroenke, K., Arrington, M.E., and Mangelsdorff, A.D. "The Prevalence of Symptoms in Medical Outpatients and the Adequacy of Therapy." *Archives of Internal Medicine*. 1990. 150: 1685-9.
- Kroenke, K., Jackson, J.L., and Chamberland, J. "Depressive and Anxiety Disorders in Patients Presenting with Physical Complaints: Clinical Predictors and Outcomes." *American Journal of Medicine*. 1997. 103: 339-47.
- Kroenke, K., and Mangelsdorff, A.D. "Common Symptoms in Ambulatory Care: Incidence, Evaluation, Therapy, and Outcome." *American Journal of Medicine*. 1989. 86: 262-6.
- Kroenke, K., and Price, R. K. "Symptoms in the Community: Prevalence, Classification, and Psychiatric Comorbidity." *Archives of Internal Medicine*. 1993. 153: 2474-80.
- Kroenke, K., Spitzer, R. L., Williams, J.B.W., Linzer, M., Hahn, S.R., deGruy, F.V., et al. "Physical Symptoms in Primary Care: Predictors of Psychiatric Disorders and Functional Impairment." *Archives of Family Medicine*. 1994. 3: 744-9.
- Lipkin M., Quill T.E., and Napodano, R.J. "The Medical Interview: A Core Curriculum for Residencies in Internal Medicine." *Annals of Internal Medicine*. 1984. 100: 277.
- Makadon, H.J., Gerson, S., and Ryback, R. "Managing the Care of the Difficult Patient in the Emergency Unit." *Journal of the American Medical Association*. 1984. 252 (18): 2585-7.
- Malcolm, R., Foster, H.K., and Smith, C. "The Problem Patient as Perceived by Family Physicians." *Journal of Family Practice*. 1977. 5 (3): 361-4.
- Marple, R.L., Kroenke, K., Lucey, C.R., Wilder, J., and Lucas, C.A. "Concerns and Expectations in Patients Presenting with Physical Complaints: Frequency, Physician Perceptions and Actions, and 2-Week Outcome." *Archives of Internal Medicine*. 1997. 157: 1482-8.
- Mayou, R. and Sharpe, M. "Diagnosis, Illness and Disease." *Quarterly Journal of Medicine*. November 1995. 88(11): 827-831.
- McDonald, I.G., Daly, J., Jelinek, V.M., et al. "Opening Pandora's Box: The Unpredictability of Reassurance by a Normal Test Result." *British Medical Journal*. 1996. 313: 329-32.

- National Science and Technology Council, Presidential Review Directive 5, Executive Office of the President, Office of Science and Technology Policy. *A National Obligation: Planning for Health Preparedness for and Readjustment of the Military, Veterans, and Their Families After Future Deployments*. August 1998.
- Office of the Assistant Secretary of Defense, Health Affairs. *Comprehensive Clinical Evaluation Program, Program Guide*. May 1998.
- Patrick, D.L. and Erickson, P. *Health Status and Health Policy: Quality of Life in Health Care Evaluation and Resource Allocation*. New York: Free Press. 1993. 165-87.
- Peterson, M.C., Holbrook, J.H., Hales, D.V., et al. "Contributions of the History, Physical Examination, and Laboratory Investigation in Making Medical Diagnoses." *Western Journal of Medicine*. 1992. 156 (2): 163-5.
- Public Law 102-405, Title I. *Veterans Health Care Amendment Act of 1992*.
- Public Law 102-585, Title VII. *Persian Gulf War Veterans Health Status Act*.
- Samora, J., Saunders, L., and Larson, R. F. "Medical Vocabulary Knowledge among Hospital Patients." *Journal of Health and Human Behavior*. 1961. 2: 83-92.
- Scientific Advisory Committee, Medical Outcomes Trust. *Evaluating Health Outcome Measures: The Medical Outcomes Trust Approach*. Boston: 1999.
- Society for Medical Decision Making Committee on Standardization of Clinical Algorithms. "Proposal for Clinical Algorithm Standards." *Medical Decision Making*. 1992. 12(2): 149-154.
- Spertus, J.A., Winder, J.A., Dewhurst, T.A., et al. "Development and Evaluation of the Seattle Angina Questionnaire: A New Functional Status Measure for Coronary Artery Disease." *Journal of the American College of Cardiology*. 1995. 25 (2): 333-41.
- Spitzer, R., Kroenke, K., Williams, J., and the Patient Health Questionnaire Primary Care Study Group. "Validation and Utility of a Self-Report Version of PRIME-MD. The PHQ Primary Care Study." *Journal of the American Medical Association*. 1999. 282: 1737-44.
- Spitzer, R.L., Williams, J.B., Kroenke, K., et al. "Utility of a New Procedure for Diagnosing Mental Disorders in Primary Care. The PRIME-MD 1000 Study." *Journal of the American Medical Association*. 1994. 272: 1749-56.
- Street and Wiemann. "Patient Satisfaction with Physicians' Interpersonal Involvement, Expressiveness, and Dominance." *Communication Yearbook 10*. Beverly Hills, California: M. L. McLaughlin. 1987. 519-612.
- Stuart, M.R. and Lieberman, J.A. *The Fifteen-Minute Hour: Applied Psychotherapy for the Primary Care Physician*, Second Edition. Westport, Connecticut: Praeger Paperback. 1993.
- Susser, M. "Disease, Illness, Sickness; Impairment, Disability and Handicap." *Psychological Medicine*. August 1990. 20(3): 471-3.
- Title 10 United States Code, Armed Forces. Chapter 55. *Medical and Dental Care*.
- Title 38 United States Code, Veterans Benefits, Chapter 17. *Hospital, Nursing Home, Domiciliary, and Medical Care*.
- The U.S. Preventive Services Task Force Guide to Clinical Preventive Services*, Second Edition. 1996. 15-38.

VA 1996 External Peer Review Program, Contract No. V101 (93) P-1369.

VHA Directive 96-053. *Roles and Definitions for Clinical Practice Guidelines and Clinical Pathways*. August 29, 1996.

Wallace, J. *Interpretation of Diagnostic Tests*. Philadelphia, Pennsylvania: Lippincott 2000. 816-22.

Ware, J.E., Kosinski, M., Bayliss, M.S., McHorney, C.A., Rogers, W.H., and Raczek, A. "Comparison of Methods for the Scoring and Statistical Analysis of SF-36 Health Profile and Summary Measures: Summary of Results from the Medical Outcomes Study." *Medical Care*. 1992. 33 (4). AS264-AS279, Supplement.

Ware, J.E., and Sherbourne, C.D. "The MOS 36-Item Short-Form Health Survey (SF-36). Conceptual Framework and Item Selection." *Medical Care*. 1992. 30 (6): 473-83.

Wessely, S. and Nimnuan, C. "Functional somatic syndromes: one or many?" *Lancet*. September 11, 1999. 354(9182): 936-9.

Wiedemann, P.M. and Schutz, H. *Risk Communication for Environmental Health Hazards*. Zbl. Hyg. Umweltmed. 1998/1999. 202: 345-59.

Williams, R. "Deploying Women's Health Critical to Mission Success in Peace and War. Excerpts from Dr. Sue Bailey's Lecture on Women's Health Issues at the Women in Military Service for America Memorial." *American Forces Press Service*. March 8, 2000.

Woolf, S. H. "Practice Guidelines, A New Reality in Medicine II. Methods of Developing Guidelines." *Archives of Internal Medicine*. May 1992. 152: 947-948.

Woolf, S. H. "Practice Guidelines, A New Reality in Medicine III. Impact on Patient Care. " *Archives of Internal Medicine*. Dec 1993. 153: 2647-55.

APPENDIX E

**CLINICAL PRACTICE GUIDELINE FOR
POST-DEPLOYMENT HEALTH
EVALUATION AND MANAGEMENT**

ACRONYMS

ABG	Arterial Blood Gas
ANA	Antinuclear Antibody
BAER	Brainstem Auditory Evoked Response
BLS	Biosafety Level
BPS	Bio-Psycho-Social
BRFSS	Behavioral Risk Factor Surveillance System
BSI	Brief Symptom Inventory
BUN	Blood Urea Nitrogen
CBC	Complete Blood Count
CCEP	Comprehensive Clinical Evaluation Program
CDC	Center for Disease Control and Prevention
CPG	Clinical Practice Guideline
CPK	Creatine Phosphokinase
CRP	C-Reactive Protein
CT	Computerized Tomography
DHCC	Deployment Health Clinical Center
DoD	Department of Defense
DX	Diagnosis
ECG	Electrocardiogram
EGD	Esophagogastroduodenoscopy
EMG	Electromyelogram

ENG	Electroencephalography
ENT	Ears, Nose, and Throat
ESR	Erythrocyte Sedimentation Rate
GI	Gastrointestinal
GYN	Gynecology
HA	Health Affairs
HIV	Human Immunodeficiency Virus
HLA	Human Lymphocyte Antigen
IOM	Institute of Medicine
LIC	Low Intensity Conflict
MCS	Mental Component Score
MeSH	Medical Subject Headings
MHS	Military Health System
MRI	Magnetic Resonance Imaging
MSLT	Multiple Sleep Latency Test
NAMCS	National Ambulatory Medical Care Survey
NCV	Nerve Conduction Velocity
NLM	National Library of Medicine
OB	Obstetrics
PA	Physician Assistant

PCL	PTSD Checklist
PCM	Primary Care Manager
PCS	Physical Component Score
PFT	Pulmonary Function Test
PGR	Persian Gulf Registry
PHQ	Patient Health Questionnaire
PHS	Public Health Service
PPD	Purified Protein Derivative
PRIME-MD	Primary Care Evaluation of Mental Disorders
PRN	Pro re nata (as needed)
PSG	Polysomnography
PSTF	Preventive Services Task Force
PTSD	Posttraumatic Stress Disorder
QE	Quality of Evidence
RA	Rheumatoid Arthritis
SF	Short-Form
SME	Subject Matter Expert
SR	Strength of Recommendation
SSRI	Selective Serotonin Reuptake Inhibitors
TMA	TRICARE Management Activity
TSH	Thyroid Stimulating Hormone
UA	Urinalysis

UCAP	Universal Case Assessment Protocol
USUHS	United States Unified Health Services
VA	Department of Veterans Affairs
VAMC	Veterans Affairs Medical Center
VDRL	Venereal Disease Research Laboratories
VHA	Veterans Health Affairs