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Survey of military medical care from pre-deployment to post-separation

Jomana Amara, Ann Hendricks

INTRODUCTION

In the United States, the military medical system, including care for veterans, is large and diverse and involves two institutions, the US Department of Defense (DoD) and the US Department of Veteran's Affairs (VA). The military medical care system has changed in significant ways in the last few decades in response to major policy and operational changes. One of the major changes is a result of the health care system dealing with a large influx of Veterans' from previous wars (Korea and Vietnam Wars) and the acceptance of new diagnosis such as PTSD after the conclusion of the Vietnam War. Some other issues influencing medical care include the policy decision to move to an all-volunteer force in the mid-1970s; expanding the role of female service members; extending deployment of members of the National Guard and Reserves. At a minimum, studying current and past systems of military medical care, permits practitioners to appreciate the changes that might improve care in the future (DeBakey, 1996) and allows practitioners and policy makers an understanding of the larger picture of the military medical system to facilitate thinking about some of the difficulties and opportunities for coordinating treatments and preparing for the future.

Operation Enduring Freedom and Operation Iraq Freedom (OEF/OIF) are the first major large scale military engagements that the US and many of its allies have been involved in since the end of the Vietnam War, necessitating the deployment of large numbers of troops for extended periods of time. These engagements have severely strained and tested military medical resources and the resources of the VA. In addition, these conflicts mark a shift to a new form of warfare.

Consequently, this new form of warfare has resulted in injuries and medical concerns that existed for veterans of past conflicts, but have been labeled “signature” injuries of OEF/OIF. In particular, traumatic brain injury (TBI) and post-traumatic stress disorder (PTSD) have led to more attention to service members’ physical and mental health pre-deployment as well as after. In addition, the US deployed its reserve and National Guard forces at an unprecedented rate, changing the age distribution of deployed and subsequent veteran cohorts. Furthermore, the extent of female service members’ involvement in OEF/OIF in terms of both the number of women deployed and the scope of their involvement is unparalleled. Finally, the period between the Vietnam War and OEF/OIF witnessed tremendous advances in general medical care that translated to progress in care for war wounded.

Today, there are roughly 23 million veterans in the US (United States Census Bureau, 2011). For the majority of these veterans, the period of military service is relatively brief, averaging about 6.5 years among respondents in the 2001 National Survey of Veterans (Department of Veteran's Affairs, 2002). In the same survey, 39 percent of respondents reported having served in a combat or war zone and 36 percent reported exposure to dead, dying, or wounded people (Department of Veteran's Affairs, 2002). Some military service members receive medical care in the combat theater for injuries or other medical conditions sustained while deployed. Other service members have combat-related medical conditions that are identified and treated after they return from war either in the DoD’s health care system for active-duty personnel or in the VA for veterans, including deactivated reservists. VA provides health care services through the Veterans Health Administration (VHA), which treats eligible veterans for these service-connected conditions and other ailments.

There are many overt influences of military service on later-life health such as combat related physical injuries. Less apparent are the psychological wounds that have been a persistent injury of warfare throughout human history, but only recently have we begun to develop more consistent methods of diagnosis and treatment. While exposure to the physical and psychological harms of combat is the clearest channel through which military service may harm physical and mental health, there are many other ways in which military service can affect health. More indirect channels include the development of unhealthy behaviors that may arise either in response to the stresses of combat or the command structure, or more or less independently while the individual is engaged in military service. Military medicine includes treatment for the results of these as well.

HISTORY

Since the Revolutionary War and with every military operation since, the structure of the medical care provided to the armed forces has evolved and became more effective in treating the wounded. As technology advanced, wounded soldiers, who previously were beyond the capabilities of the care available, survived and the military was able to develop and sustain medical care in remote and inhospitable locations under extremely hectic and dangerous conditions. For example, the concept of military triage was developed in the early years of the twentieth century because, for the first time, improved evacuation systems resulted in more severely wounded soldiers reaching medical care than ever before and the military medical systems of that time had to contend with an overwhelming volume of casualties.

The innovative use of combat medics to provide care at the forward location of wounding became a constant presence on the battlefields during the American Civil War. Since then, the combat medic has been expected to render immediate first aid, including stopping bleeding, splinting fractures, dressing wounds, and administering pain medication (DeBakey, 1996). The use of intravenous fluids, plasma, and antibiotic powder by combat medics were introduced during World War II. However, since World War I, in addition to training combat medics, the military provided medical training for soldiers. The training emphasized control of hemorrhage, wound dressing, and fracture splinting. The focus on training combat medics seems to have had an impact on the percentage of soldiers killed in action rates in the current war, with the current rate dropping significantly (Hetz, 2006). Current practice dictates that casualties receive care immediately after wounding. The injured are rapidly returned to duty or carry on along the continuum of care until they reach the level appropriate to their medical need. There are five levels of treatment within the military health care system. Each level has the same capabilities as the level before it, but adds a new treatment capability that distinguishes it from the previous level. Care is usually initiated by the wounded soldier's companions or the combat medic assigned to that particular combat unit. The first three levels of care are in the combat theater field with some Level 4 care available in the battle theater. The first level of full surgical and hospital capability occurs at Level 3. The US Army moved from Mobile Surgical Hospitals to a single, modular hospital (Medical Re-engineering Initiative) during OIF. Level 4 capability can also be found outside of the immediate vicinity of the combat theater such as Landstuhl Army Regional Medical Center in Germany. Level 5 care includes stateside Army Medical Centers like Walter Reed and Brooke where, definitive care and rehabilitation of war wounded have become a significant focus (Hetz, 2006).

US EXPERIENCE

The U.S. is unique in that the federal government has established two institutions to administer medical care to members of the armed forces and veterans. The DoD maintains care of service members until separation at which point, the VA commences care of eligible. Even though these two institutions are separate, they cooperate and try to attempt a seamless transition between active duty and retirees (Government Accountability Office, 2005). This is a unique arrangement in that most nations do not have a separate entity to deal with the medical needs of veterans and veterans usually resort to accessing the existing general health care systems.

Following World War II, VHA was primarily a hospital system for patients with war injuries or psychiatric disorders. By law, outpatient services were available only to veterans with prior VHA inpatient admissions. Nursing home units were often long-term homes for veterans with a variety of disabilities. As World War II veterans aged, the system did not provide adequate or equal access for veterans around the country, many or even most of whom were ambulatory patients with multiple chronic conditions. For decades, the system's focus on inpatient and specialty care lagged behind health care delivery in the private sector, where many medical procedures had moved to an outpatient setting and preventive or coordinated care was emphasized. In fact, rules that prohibited outpatient care in many cases raised concerns that VHA could not provide coordinated primary care (GAO, 1995, 1996).

VHA addressed Congress's demands to increase access to care for veterans when VHA's then-Undersecretary for Health Dr. Kenneth Kizer led an effort to reengineer the Department's health care system in the 1990s. The changes were intended for better management of performance and systemic improvements in quality and innovation (Kizer, Prescription for Change, March 1995; Iglehart, 1996). A substantial revision of eligibility rules and expanded services made care more accessible to veterans and in the most medically appropriate setting.

In addition to the changes in benefits brought by the VHA reengineering, in 1995, VHA medical centers, outpatient clinics, and other facilities were reorganized into regional networks, currently numbering 21 and typically including 7 to 10 medical centers and a large number of outpatient clinics and other facilities. A focus of VHA's reorganization has been the movement of care from inpatient to outpatient settings. For example, as the patient population grew, use of VHA nursing homes for post-acute rehabilitation treatment increased and the number of long stays decreased.

Another area of change was in the provision of substance abuse treatment for Veterans with substance use disorders where the inpatient programs were "virtually eliminated" between 1994 and 2004 (Tracy et al., 2004). Between 2004 and 2009, a number of Acts and initiatives redefined SUD treatment within VHA with emphasis on evidence-based practices and outpatient programs (Tracy, et al., 2011). The measures of success have focused on continuity of follow-up care and patient engagement in treatment.

These are just two of the transformations that have taken place throughout the VHA in the past two decades. The changes have promoted patient-centered, evidence-based care that delivers high quality treatment to all eligible Veterans (Perlin, 2004).

FOCUS OF THE BOOK

The purpose of this book is to provide the reader with an overview of the recent changes and advances in medical care policy for active duty and separated members of the armed forces. This book is also intended to assist personnel studying, providing care, and understanding policy for the medical care options available to active duty and retired service members. Since the United States has the majority of the forces currently deployed and is the nation with the institutions in place to address medical needs at all phases of the deployment cycle and post-separation, the book primarily has a US focus.

In thinking about the book, the editors chose authors recognized for their expertise. The authors were encouraged to focus on and highlight the recent changes that they have observed in their field of expertise. While there are many ways to organize the material in the book, an approach tied to the military career cycle was followed. This approach allows the reader to follow the service member's exposure to health services from enlistment to end of life care. This book is divided into four sections with each section covering a time period in the cycle of health care provided to veterans. The sections are: overview, pre-deployment, deployment, and post-deployment. The book begins with the overview section that defines the background against which the discussions in the book take place.

OVERVIEW

This section sets the background and surveys the needs of the various cohorts of veterans accessing US health care services. The section also describes the access that active duty, reserve and former military service members typically have to health care programs and health insurance during service and after their discharge from the forces. For US readers, this institutional information may be directly relevant. Non-US readers may find this background helps them draw appropriate parallels to their own national systems.

Chapter Two reviews the demographics of the US OEF/OIF cohort and compares it to previous cohorts from other military engagements. It places the demands for immediate post-deployment health services by the OEF/OIF veterans in relation to the demands of the aging Korean and Vietnam War veterans in terms of the number of patients and the average costs of their care. It examines the impact of injured OEF/OIF veterans especially in the area of TBI, PTSD, and physical disability services.

The third Overview chapter describes the access that active duty, reserve and former military service members typically have to US health care programs and health insurance during service and after their discharge from the forces. The chapter lists the options available for the TRICARE system, the military's health care plan that includes both military medical treatment facilities and civilian providers and describes the medical programs available to veterans through the Veterans Health Affairs (VHA), the medical program of the Department of Veterans Affairs. The chapter also details the eligibility of service personnel (active duty, National Guard,

Reserves), veterans, retirees, and dependents to health care and the challenges to providing health care through Department of Defense and VHA.

PRE-DEPLOYMENT

The military services recognize that appropriate health care begins with an understanding of the pre-deployment physical and mental conditions of their members. Especially important are the factors that may affect resilience after events and injuries in the combat zone. Military service confers unique occupational exposures and intense stressors that may have profound impact on long-term health. An understanding and base-lining of service members' health is crucial in an environment of high military operating tempo where personnel can expect to deploy multiple times in the course of their careers. Section II of the book will discuss policy and data pertinent to this policy concern.

Pre-deployment medical policy establishes, among other requirements, the criteria used to determine an individual's medical suitability for deployment. Such policy is necessary for a number of reasons, the first of which is to ensure the deployment of a fit and ready force that is able to withstand the unique occupational and environmental exposures and stressors associated with deployment. Secondly, it reduces the potential for unnecessary medical evacuation for medical conditions that are not suitable for a particular deployment. Chapter 4 expounds on the myriad considerations made when establishing pre-deployment medical policy. The chapter focuses on the perspective from US Central Command (CENTCOM), the command in the US military that is responsible for a 20 country region including Iraq and Afghanistan – the two

major post-Vietnam theaters of war. While other Geographic Combatant Commands (CCMDs) have similar policies, for the most part they mirror CENTCOM's policy and make minor adjustments. Additionally, no other CCMD requires as robust a policy as CENTCOM. The chapter also addresses potential adverse outcomes and costs associated with the lack of an effective application of pre-deployment medical policy.

While most studies of military related exposures are limited by retrospective and cross-sectional design, convenience sampling, and/or short follow-up, the Millennium Cohort Study is the largest population-based prospective health study in military history, designed to evaluate the long-term health impact of military service and to allow policymakers to relate pre-deployment health conditions to later events and outcomes. The Millennium Cohort Study was launched by 2001. Chapter 5 details how the Millennium Cohort Study is answering long-term health concerns of military service members by complementing and integrating with existing military health system data. The Cohort consists of four separate panels enrolled in 2001, 2004, 2007, and 2010 which total over 200,000 participants from all service branches and includes both active-duty and reserve and National Guard personnel. Participants are surveyed at three-year intervals for 21 years while in service and post service. The Millennium Cohort Study is setting a new standard for prospective evaluation of the long-term health consequences of military occupational exposures, both among active military personnel as well as among the growing number of cohort members who have separated or retired from military service and entered the civilian population. The rigorous design and strength of this study allow the project to address complex issues of military and national public health importance for years to come.

Screening for mental health is a frequent topic of discussion in the military, many supporting its introduction, but some recommending caution. Chapter 6 describes the reasons why screening for mental health is an important health service topic and the criteria which should be fulfilled before implementing a screening program. The chapter describes the opportunities for screening and review the evidence in favor of and against screening. The chapter also discusses the possible reasons why the US has been supportive a screening for mental illness while the UK response has been less enthusiastic so far.

The final chapter in this section focuses on the military's public health approach to suicide prevention. Given the public health significance of military suicide and the impact of a service member's suicide on his or her family, unit, and the military community, the DoD has adopted a comprehensive approach to suicide prevention within the armed forces. A key theme throughout the chapter is the critical role of collaboration among key DoD organizations with experts from other federal agencies and academic institutions to continuously improve upon existing surveillance, programmatic, and research components of various suicide prevention efforts within the large military system. The chapter also provides information about recent organized efforts within the armed forces to minimize the devastating toll of suicide on service members and their families as well as on the military system. A sustained scientific dialogue about military suicide prevention efforts, as presented in this chapter, will equip healthcare and helping services providers, military leaders, researchers, and policy makers with a greater appreciation of the complexity of suicide and its prevention among a young and predominantly male force under the current stressors of high military operational tempo and multiple conflicts.

DEPLOYMENT

The primary mission of the military medical corps is to preserve the fighting force. During war, the components of this mission include treatment and rehabilitation of war injuries and non-battle-related injuries, and prevention of disease and injury. To best accomplish this mission, medical officers need to anticipate and recognize the most common medical disorders to ensure a fit and ready force able to fulfill its mandate.

The military health system provides a continuum of care encompassing the forward stabilization on the battlefield to definitive care and rehabilitation at military medical centers in the continental United States. The focus of Chapter 8 is care that is rendered at the battle aid station by the initial responder and includes aid provided by combat life-savers and/or the combat line medics. The provision of far forward medical care in the combat theater is essential to both mission success and the well-being of individual service members. Medical teams at the front-lines have gone to extraordinary measures for the past decade to provide the best possible medical care in austere locations. Providing front-line medical care in a combat theater can be one of the most challenging and at the same time rewarding experiences available to a medical provider at any level of training. The challenge includes balancing the sometimes competing interests of mission goals versus individual patient needs, limited supplies, professional isolation, and presence of increased threats.

The chapter reviews the medical capabilities available to provide medical treatment to the forward-deployed service member as well as the means by which mild traumatic brain injury and post-traumatic stress disorder are addressed by the forward provider. The dedication of the initial responder medical team, in combination with advances in the medical equipment, protective

equipment, and military systems have resulted in lower killed-in-action rates and the highest survivability rate after injury than during any past conflict. However, the nature of the current conflict, along with increased awareness, is giving rise to an increasing number of service members suffering from mild traumatic brain injury and post-traumatic stress disorder. Research and training are underway to prevent, identify, and initiate early treatment for these casualties at the front lines of conflict.

Chapter 9 focuses on the use of hospital ships to provide medical care to forces in combat. Traditional hospital ship missions provided combat support and training; however, hospital ships now routinely perform humanitarian assistance and disaster relief missions. The authors focus on goals for and desired outcomes of navy hospital ships to include addressing health and welfare conditions of local populations, security and stability in a region, and attitudes towards Americans and the West. As humanitarian assistance and disaster relief missions grow in importance for combatant commanders, deployed forces, senior government leaders and the international community, leaders must better understand lessons learned from other missions and integrate policy and direction for the missions. They must consider the disparate forces influencing these missions and be willing to devote resources to better understand stakeholders and outcomes they effect. Building on earlier surveys of literature and government documents on hospital ship missions, the authors recommend greater focus on planning for, staffing, resourcing, and managing hospital ships in accordance with more current missions. The chapter concludes by also recommending greater coordination with the allies in providing medical care internationally.

POST DEPLOYMENT AND SEPARATION

The final section of the book addresses the medical issues that service members struggle with when returning from deployment, when they leave service, and finally as they and their families contend with end of life issues.

The first three chapters in the section, Chapters 10, 11, and 12, tackle mental health issues from three very different perspectives. Chapter 10 steps back and broadly traces the history and evolution of traumatic brain injury; Chapter 11 details the Department of Defense response to psychological health and traumatic brain injury issues. Chapter 12 gages the Department of Veteran's Affairs response to suicide.

The authors of Chapter 10 draw on vast experience working in the two major US institutions responsible for the health care of service members and veterans, DoD and VA. The authors examine how casualties resulting from major wars in the past, starting from the US Civil War to the present day conflicts in Iraq and Afghanistan, led to the establishment of the current model of evaluation and treatment of TBI. They review how the field has expanded in response to the growing cohort of young, brain-injured veterans. The chapter provides an overview of the polytrauma system of care, established as collaboration between the DoD, the VA, and civilian partners, with the goal to integrate specialized TBI care, research, and education across the military, veteran, and civilian medical care. The chapter concludes by detailing the innovative research conducted and the future of TBI treatment.

Chapter 11 examines the Defense Department response to psychological health (PH) and TBI from an historical and a programmatic perspective: it provides background and context for

current program and policy decisions, highlights the most important elements of the current DOD approach, and demonstrates the importance of continued integration and collaboration across agencies. The authors suggest that the PH/TBI program development within the Department of Defense has yielded significant advances in medical understanding and dramatically raised the quality of care available to service members. The chapter concludes by summarizing the Defense Department's coordinated response to the challenges of PH/TBI: a focus on promoting early detection, thus early treatment; ensuring force readiness and addressing cultural barriers to care; improving collaborations with VHA, other federal agencies and academic and civilian organizations; improving deployment related assessments; deploying effective treatments based on the most up-to-date clinical standards; and conducting military relevant research and enhancing information technology systems to promote data sharing and tracking.

In response to congressional mandates and public interest, VHA has increased its efforts to monitor and prevent veteran suicides. Chapter 12 examines the many suicide prevention efforts designed to inform veterans and their caretakers about possible warning signs that might precede suicide behavior and about the various suicide prevention resources available. The efforts include media campaigns and adding personnel to more closely monitor, track, and provide counseling to veterans at risk for suicide. The authors point out that the legislated mission of providing suicide rates for all veterans has still not been realized. The difficulty with enumerating all veteran suicides is primarily related to the difficulty of identifying all veterans.

However, VHA has had greater success regarding suicide prevention, either meeting or progressing towards meeting its obligations relative to providing resources to prevent veteran suicides.

Chapter 13, “An Overview of Toxicant Exposures in Veteran Cohorts from Vietnam to Iraq,” provides a brief overview of the toxicant exposures experienced by veterans during three eras of military conflict. The authors contend that environmental exposures during deployment have been encountered since the earliest conflicts and will continue to be an important issue in future deployments. However, the crucial yet difficult issue is to determine the appropriate levels of interventional chemicals to reduce the risk of disease from pests and possible chemical warfare agent exposures while decreasing the likelihood of negative effects from the chemical toxicant exposures themselves. Exposures to chemical agents will be an ongoing concern in future deployments. The ideal practice would protect troops from disease and exposure but not cause adverse health outcomes in troops at the same time. This approach could help avoid future episodes of Agent Orange chronic sequelae or Gulf War multisymptom illness or cancer incidence as a result of hexavalent chromium exposures. In addition it may also help answer the questions that remain including, ‘what is the impact of genetic factors interacting with exposures on resultant health symptom concerns?’, ‘what are the effects on an aging population with prior exposures’ and ‘are there potential treatments to diminish the multiple medical, neuropsychological and psychological effects of these exposures?’

Over the past decade, the number of women veterans using Veterans Health Administration (VHA) care has nearly doubled, and numbers will continue to rise. In chapter 14, Kimerling et al. point out that women veterans of Operation Enduring Freedom, Operation Iraqi Freedom, and Operation New Dawn (OEF/OIF/OND) are substantially more likely to seek VHA health care

than women from previous eras. This influx of new women veterans represents a changing face of women in VHA. With more than two-thirds of the OEF/OIF/OND cohort in reproductive age groups, there is a projected need for enhanced services across many domains, including reproductive health care, such as the issues of contraception and childbirth. These age groups also represent the peak years for utilization of mental health services among women. The authors conclude by recommending increased attention to access for mental health services, including treatment of war-zone exposures, and attention to couples and family issues that are especially relevant to women's readjustment after deployment.

The book concludes with two chapters addressing the aging and end-of-life issues that veterans contend with. Chapter 15 summarizes and discusses the literature examining the health of aging veterans, the literature on the effects of military service on veterans' mortality and health, and the relationships between military service and later-life health and well-being. MacLean and Edwards outline the challenges to assessing whether and how military service affects health. In addition, they analyze the trends in the experiences of surviving veterans focusing on shifts in war and peace. They offer a broader view of the effects of military service on health and other outcomes that may not be limited to disabilities or health conditions formally diagnosed by the VHA by recognizing that military service has far-reaching influences on the minds and perspectives of all veterans whether they saw combat or not, and whether or not they were wounded. They posit that a far more difficult question to answer is whether and how military service may have exerted a treatment effect on the health of the average veteran independent of measurable service-related trauma.

Grassman and Shreve, in the last chapter of the book, movingly describe the challenges of the final battle that 1800 veterans face daily: dying peacefully. Military service influences soldiers in ways that can sometimes complicate peaceful dying, even though their death may not occur until many years after they leave military service. The authors point out that survival-mode mentality interferes with letting go and a veteran's "attack and defend" instincts make death the enemy and dying a battle. The very characteristics that are prized in service members, such as stoicism and wisdom, and some members' traumatic experience and paralyzing guilt resulting from combat experience become a complication and may impact how veterans and their families cope with the dying process. In addition, veterans may struggle with a sense of "unfinished business" resulting from behaviors used either to avoid confronting locked-up feelings or to numb traumatic memories. Veterans and their families have unique bereavement needs to consider by those charged with caring for terminally ill veterans and their families. The literature is only beginning to evolve in providing guidance for addressing these needs. Pharmacologic interventions for select conditions can be helpful but when a provider is faced with a veteran refusing to admit he or she is in pain when the grimace says otherwise, care often extends well beyond the medicine cabinet.

Bibliography

DeBakey, M.E., 1996. History, the Torch that Illuminates: Lessons from Military Medicine. *Military Medicine*, 161(12), pp.711-16.

Department of Veteran's Affairs, 2002. *United States Department of Veteran's Affairs*. [Online] Available at:

<http://www.virec.research.va.gov/DataSourcesName/NationalSurveyVeterans/2001NationalSurveyofVeterans.htm> [Accessed 15 April 2012].

Government Accountability Office, 2005. *United States Government Accountability Office*. [Online] Available at: <http://www.gao.gov/new.items/d05722t.pdf> [Accessed 16 April 2012].

Hetz, S.P., 2006. Introduction to Military Medicine: A Brief Overview. *Surgical Clinics of North America*, 86, p.675–688.

Inlehart, J.K., 1996. Reform of the Veterans Affairs Health Care System. *New England Journal of Medicine*, 335, pp.1407-12.

Kizer, K.W., n.d. *Prescription for Change: The Guiding Principles and Strategic Objectives Underlying the Transformation of the Veterans Healthcare System*. [Online] Available at: <http://www.va.gov/HEALTHPOLICYPLANNING/rxweb.pdf> [Accessed 22 April 2012].

Perlin JB, K.R.R.R., 2004. The veterans health administration: quality, value, accountability, and information as transforming strategies for patient-centered care. *American Journal of Management Care*, 10, pp.828-36.

Tracy, S.W..T.J.A..&.H.K., 2004. *The Department of Veterans Affairs Substance Abuse Treatment System: Results of the 2003 Drug and Alcohol Program Survey*. Palo Alto: US Department of Veterans Affairs.

Tracy, S.W..T.S..S.S..&.T.J.A., 2011. Treating Substance Use Disorders within the Veterans Affairs Health Care System. In T. Miller, ed. *Veterans Health Reference*. New York: Praeger.

United States Census Bureau, 2011. *United States Census Bureau*. [Online] Available at: <http://www.census.gov/compendia/statab/> [Accessed 15 April 2012].

United States General Accounting Office, Tuesday May 9 1990. *GAO Testimony Before the Subcommittee on Human Resources and Intergovernmental Relations*. GAO Testimony before the Subcommittee on Human Resources and Intergovernmental Relations. Federal Health Care Delivery Issues, Health, Education, and Human Services Division.

United States General Accounting Office, Thursday June 27 1996. *Veteran's Health Care: Challenges for the Future Statement of David P. Blain, Director Health Care Delivery and Quality Issues*. GAO Testimony Before the Subcommittee on Hospitals and Health Care Committee on Veterans' Affairs, House of Representatives. United States General Accounting Office.