ACHIEVING WORLD CLASS

An Independent Review of the Design Plans for the Walter Reed National Military Medical Center and the Fort Belvoir Community Hospital

National Capital Region Base Realignment and Closure Health Systems Advisory Subcommittee of the Defense Health Board

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Considering the time constraints, budget limitations and ambiguities of vision and command structure associated with the design of the new Walter Reed National Military Medical Center and Fort Belvoir Community Hospital, commendable progress has been made towards designing facilities that are likely to better serve the National Capital Region.

This report highlights some of the ways that these facilities will be able to achieve the goal of becoming *world-class medical facilities*.

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EXECUTIVE SUMMARY

REPORT PURPOSE

The National Capital Region (NCR) Base Realignment and Closure (BRAC) Health Systems Advisory Subcommittee (HSAS) of the Defense Health Board (DHB) was convened in May 2008 to advise the Department of Defense (DoD) on the planned integration of military medical facilities in the NCR service area. In response to the National Defense Authorization Act for Fiscal Year 2009 (NDAA 2009, Public Law 110-417; Appendix A), in September 2008, the NCR BRAC HSAS was further charged to review the design and construction plans for the new Walter Reed National Military Medical Center (WRNMMC) and the new Fort Belvoir Community Hospital (FBCH) to determine if they were being designed and constructed to be *world-class medical facilities* and, if not, what should be done to remedy any perceived deficiencies. This report responds to this latter charge.

FINDINGS

Based upon its review, the NCR BRAC HSAS finds that:

A. The integration of the Walter Reed Army Medical Center (WRAMC), the National Naval Medical Center (NNMC) and other military medical commands in the NCR is likely to better serve the area's active duty and retired military personnel and their dependents.

B. Congress specified that the new WRNMMC and FBCH should be designed and constructed to be *world-class medical facilities,* and indicated that this should be taken to mean that they incorporate "…the best practices of the premier private health facilities in the country as well as the collaborative input of military healthcare professionals into a design that supports the unique needs of military personnel and their families". This verbiage conveys Congressional intent, but it does not provide operational or functional details about the meaning of the term *world-class medical facilities* that would support completion of the review required by the NDAA 2009.

C. To date, no recognized body has established an operational definition of *world-class medical facility*. Based on a review of relevant reports and other literature, the HSAS's collective experience and judgment, and extensive review by prominent healthcare leaders, a definition of *world-class medical facility* was developed and used as a yardstick for this review (Appendix B).

D. The creation of a *world-class medical facility* must begin with a clear vision. This vision is realized through integrated facility design and operational plans, skilled and appropriately empowered leadership, and the provision of necessary funding and other resources, among other things. If funding and other resources come from more than one source, they must be integrated to match the integrated facility design and operational plan.

E. The BRAC funding process entails a number of constraints and limitations that do not support the creation of a comprehensive plan and construction strategy, particularly for renovation of existing facilities. These limitations have been, and continue to be, a major impediment to designing the new WRNMMC to be a *world-class medical facility*.

F. The Service-specific and facility-centric cultures of the Army, Navy and Air Force medical commands conflict with the needs of an IDS, and there is no evidence of a concerted, organized effort to engineer

the new integrated military healthcare culture needed to achieve and sustain a joint Armed Services IDS that provides *world-class* medical care.

G. Many dedicated individuals have worked diligently to achieve what they have perceived to be the goals of the regional integration effort; however, there are multiple circumstances beyond their control that have impeded, and continue to impede, their efforts. Among these are Service-specific and facility-centric military healthcare cultu*res, a conf*using and redundant chain of command, and ambiguity about the vision, goals and expectations for the future NCR IDS and the WRNMMC. There is an urgent need to clarify the vision, goals and expectations for the future NCR IDS, especially for the WRNMMC, and to consolidate organizational and budgetary authority in a single entity.

H. A comprehensive, forward-looking demand analysis that includes the capability to accommodate surge needs has not been completed for the WRNMMC.

I. There does not appear to be a comprehensive "master plan" for the WRNMMC that includes the combined and augmented assets of the WRAMC and NNMC and that integrates the Uniformed Services University for the Health Sciences (USUHS), the Joint Pathology Center (JPC) and other specialized centers or institutions on the grounds of or proximal to the WRNNMC.

J. Significant input from frontline clinicians and other stakeholders does not appear to have been incorporated into the current plans for the WRNMMC.

K. The current plans for the WRNMMC are not those of a *world-class medical facility*. Significant deficiencies exist, especially with regard to the existing NNMC. The final facility design will more likely be able to achieve world-class status if the deficiencies detailed below are addressed and if the definition of *world-class medical facility* detailed in Appendix B is used to guide further work.

   The following specific issues need to be addressed in the design and construction plans for the WRNMMC:

   1. Several areas are not in conformance with the Joint Commission's hospital design standards.
   2. The current bed plan does not provide for broad conversion to single-patient rooms.
   3. The design of the surgical suite has several problems.
      a. It appears that after construction and renovation there will be too few operating rooms (ORs) and that the ORs will be too small to accommodate current and expected future surgical technologies.
      b. The frozen section/surgical pathology space is to be located in an area remote from the surgical suite. Such an arrangement is problematic because it "designs in" inefficiencies and could lead to patient safety problems.
      c. It is unclear whether the post-anesthesia care unit (PACU) will be used for services unrelated to post-anesthesia care. Any decision in this regard should be informed by analyses of the demand for PACU services and of the experience and skills of PACU staff relative to the skills needed to properly care for other potential PACU patients.
   4. Plans for observation care are unclear. The capability to provide observation care is important, especially for emergency patients, and should be specifically designed and planned for in accordance with the projected need for this level of care.

5. On-site simulation labs for surgery, cardiac catheterization, gastrointestinal endoscopy and pulmonary endoscopy are not included. Provision of these labs in an off-site location will likely create barriers to the utilization of these important resources.
6. Information management and information technology (IM/IT) support and services are absolutely essential to the operation of a *world-class medical facility*; however, the plans for these essential services appear to be incomplete:
   a. It is unclear whether the IM/IT infrastructure needs (e.g., fiber optic cabling, wireless technology) are being addressed.
   b. Plans for the electronic health record do not appear to have addressed significant issues such as inter-system interoperability, ease of physician use, transportability and use of open source software.
   c. Plans to support the transfer of medical records from WRAMC into the new facility are inadequate.
7. The new facility design does not seem to account for expansion of support services (e.g., food service, day care, community services, medical records, materiel management) to accommodate the anticipated growth in staff, patients and families.
8. Parking limitations imposed by the National Capital Planning Commission (NCPC) appear likely to have a detrimental impact on the operations of the WRNNMC.
9. The new WRNMMC facility design locates the dialysis unit above several environmentally-sensitive areas of the hospital. The rationale for this is not obvious.
10. There does not appear to be a strategic technology master plan for use of advanced diagnostic and treatment technologies.

L. The plan for the new FBCH is well conceived and incorporates many important evidence-based design (EBD) features; however, the current plan would benefit from addressing the following specific issues:
   1. There does not appear to be a plan to evaluate the impact of incorporating EBD features into the facility's design. Such an assessment would be valuable for informing plans for future federal hospital construction.
   2. FBCH representatives have talked about a "facility-based master plan", but the existence of this master plan could not be documented.
   3. More complete plans should be created for IM/IT and for diagnostic and treatment technology along the lines as those outlined for the WRNMMC.

M. The BRAC timeline required an accelerated process for designing and building these two new facilities. Since different processes were used, it would be instructive to evaluate the two different processes to determine their relative value in an effort to inform planning for the design and construction of future federal medical facilities.

N. There is no need to halt construction of the new facilities if a properly devised master plan can be developed to ensure that backfill renovations can be accomplished in a timely manner. Halting construction would be very costly and highly demoralizing and should be avoided if at all possible.

RECOMMENDATIONS

A. Further planning for the new WRNMMC and FBCH, as well as development of the NCR IDS, should be guided by the definition of *world-class medical facility* detailed in Appendix B of this report.

B. One official should be empowered with singular organizational and budgetary authority and staffed appropriately to manage and lead the healthcare integration efforts and operations in the NCR. This should be accomplished as quickly as possible, and this official's authority should extend over all DoD healthcare facilities and resources that impact healthcare operations within the NCR.

   This official should *not* have day-to-day operational responsibility for any individual facility in the NCR, so that his/her primary concern is always the operation of the integrated system.

   The selected official should give high priority to:

   1. developing a shared vision and a clear mission statement for the NCR IDS and the WRNMMC;
   2. creating a comprehensive master plan for both the NCR IDS and the WRNMMC;
   3. engineering a culture that will support the NCR IDS and *world-class medical facilities*;
   4. developing a strategic technology master plan for the WRNMMC, FBCH and NCR IDS;
   5. ensuring that all further planning is informed by user groups and reflects input from patients and their families and frontline clinicians (e.g., physicians, nurses, pharmacists); and
   6. implementing a mechanism for the ongoing independent review of the design and construction of the new WRNMMC.

C. Deficiencies in the current plans for the WRNMMC should be corrected and the funding needed to correct these deficiencies should be identified as soon as possible. Specifically:

   1. All design and construction plans should be in conformance with the Joint Commission's standards, at a minimum.
   2. The bed plan should be reconsidered so that single-patient rooms are the norm throughout the facility.
   3. Plans for the surgical suite should be reconsidered, addressing especially the specific concerns identified in this regard. A model of the perioperative process and a demand analysis should be developed and used to guide further planning for the surgical suite.
   4. Plans for patients requiring observation should be further considered and clarified.
   5. Plans for on-site simulation laboratories should be developed and funded.
   6. The IM/IT infrastructure plan should be further considered. Funding and other resources to ensure that the facility will have a forward-looking IT infrastructure should be ensured and electronic health record-related issues of inter-operability, ease-of-use, open-source applications and portability should be addressed.
   7. Current plans should be reviewed for their adequacy to address expected increased needs in support services such as food service, day care, parking, medical records processing and storage, and materiel management, among others. Modifications to current plans should be made based on this review.

8. Placement of the dialysis unit in the new WRNMMC should be further considered.

D. A plan to assess the outcomes, benefits and return on investment, among other things, of the design processes used for the new WRNMMC and FBCH, as well as the benefits of incorporating EBD principles in these facilities, should be developed, funded and implemented.

E. New construction should proceed as currently planned, assuming that the needed master plans are developed in a timely manner. Going forward, modifications should be made as needed.

   Backfill renovation should be deferred until it can be coordinated with and, if necessary, redesigned in conjunction with the master plan and the recommendations detailed in this report.

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I. INTRODUCTION

A. The Duncan Hunter National Defense Authorization Act for Fiscal Year 2009 (NDAA 2009) was enacted on October 14, 2008. Section 2721 of the NDAA 2009 (Appendix A) requires the Secretary of Defense to establish a panel of medical facility design experts, military healthcare professionals, representatives of premier healthcare facilities in the United States, and patient representatives to:

1. "review the design plans for the National Military Medical Center and the new military hospital at Fort Belvoir; and
2. advise the Secretary regarding whether the design, in the view of the panel, will achieve the goal of providing world-class medical facilities."

The Defense Health Board was charged with submitting a report to the Assistant Secretary of Defense for Health Affairs (ASD(HA)) with findings and recommendations to address any deficiencies in the conceptual design plans.

B. On May 30, 2008, the ASD(HA) established the National Capital Region (NCR) Base Realignment and Closure (BRAC) Health Systems Advisory Subcommittee (HSAS) of the DHB to provide recommendations on the establishment of an integrated delivery service (IDS) network in the NCR that would be anchored by the new Walter Reed National Military Medical Center (WRNMMC).

C. On October 20, 2008, the ASD(HA) requested that the NCR BRAC HSAS conduct the independent design review required by the NDAA 2009 (Appendix C). To meet the legislative requirements, the Subcommittee was augmented with individuals having subject-matter expertise necessary to address the design and construction issues posed by Congress.

The NCR BRAC HSAS is comprised of physicians of varied backgrounds, current and former hospital and health system executives, healthcare architects, healthcare planners, healthcare facility regulators and accreditation experts, former military medical officers, former Department of Defense (DoD) senior civilian leadership and military healthcare patients. Most members belong to more than one of these categories. (See Appendix D for the ASD(HA) memorandum nominating the subcommittee members and Appendix E for biographies of Subcommittee participants.)

II. BACKGROUND

In May 1988, Secretary of Defense Frank Carlucci chartered the Defense Secretary's Commission on Base Realignment and Closure to make recommendations about closing or realigning military installations. Public Law 100-526 provided the statutory basis for this approach. The Commission later recommended the closure of 86 military facilities and realignment of another 59.

In January 1990, Secretary of Defense Richard Cheney proposed closing 35 military bases and realigning 20 others. Congress rejected Secretary Cheney's proposal and later enacted the Defense Base Closure and Realignment Act of 1990 (Title XXIX of Public Law 101-510), which created the independent Commission on Base Realignment and Closure (BRAC) to recommend the realignment and closure of military installations. This "BRAC process" has continued to be used to date.

The most recent BRAC recommendations were presented on September 8, 2005, and called for closing 33 military bases and realigning another 804, including relocating the Walter Reed Army Medical Center (WRAMC) to the grounds of the National Naval Medical Center (NNMC) and establishing the new WRNMMC. The Commission also recommended that a new military hospital be constructed on the grounds of Fort Belvoir, Virginia. These facility changes were envisioned to better serve the NCR's active duty and retired military personnel and their families.

Under the provisions of the BRAC process, all construction and relocation activities must be completed by September 15, 2011.

III. METHODS

The NCR BRAC HSAS, augmented with several subject-matter experts, convened by teleconference and in-person on several occasions between October 2008 and January 2009, reviewed numerous documents (refer to the Bibliography and References section of this report), and listened to multiple presentations by responsible project officials. Minutes of the meetings were recorded and are available for review at http://www.health.mil/dhb/.

The Subcommittee's draft definition of *world-class medical facility* was reviewed by more than 30 prominent medical and healthcare system leaders who were not associated with the Subcommittee or the DHB. The definition was also presented at the 2009 Annual Meeting of the American College of Physician Executives, where more than 200 healthcare leaders attending the session had the opportunity to review and provide feedback. Revisions to the statement were made based on input received from these outside reviews and the Subcommittee's further deliberations.

The Subcommittee's preliminary findings were presented to and discussed at meetings of the full DHB on December 15, 2008, and again on March 9, 2009. Its final assessment is detailed in this report.

IV. FINDINGS

A. The integration of the WRAMC, NNMC and other military medical commands in the NCR into the WRNNMC and FBCH is likely to better serve the area's active duty and retired military personnel and their dependents.

B. Congress specified that the new WRNMMC and FBCH should be designed and constructed to be *world-class medical facilities,* and indicated that this should be taken to mean that they incorporate "…the best practices of the premier private health facilities in the country as well as the collaborative input of military healthcare professionals into a design that supports the unique needs of military personnel and their families". This verbiage conveys Congressional intent, but it does not provide operational or functional details about the meaning of the term *world-class medical facilities* that would support completion of the review required by the NDAA 2009.

C. To date, no recognized body has established an operational definition of a *world-class medical facility*. Based on a review of relevant reports and other literature, the Subcommittee's collective experience and judgment, and thorough review by prominent healthcare leaders, a definition of *world-class medical facility* was developed and used as a yardstick for this review (Appendix B).

D. The creation of a *world-class medical facility* must begin with a clear vision. This vision is realized through integrated facility design and operational plans, skilled and appropriately empowered leadership, and the provision of necessary funding and other resources, among other things. If funding and other resources come from more than one source, they must be integrated to match the integrated facility design and operational plan.

E. The BRAC funding process entails a number of constraints and limitations that do not support the creation of a comprehensive plan and construction strategy, particularly for renovation of existing facilities. These limitations have been, and continue to be, a major impediment to designing the new WRNMMC to be a *world-class medical facility.*

The BRAC 2005 appropriation limits use of these funds. While there are exceptions for combining BRAC funds with other appropriations, the combination of appropriations cannot be used to expand or circumvent the usual capital construction appropriation process. (Department of the Army, 2009) It was explained in several presentations to the Subcommittee that BRAC funds could not be used to upgrade or improve operational capabilities of an existing facility. (Oliveria, 2008) Therefore, the two projects (i.e., the renovation of the existing NNMC and the new construction) could not be combined into one project because the upgrade of the NNMC would be outside the scope of BRAC funding, even though renovating the NNMC is integral to the final design and construction of the new integrated facility. This is highly illogical from a healthcare facility design and construction perspective. Currently, there are insufficient other funds to complete the needed renovation of the existing NNMC. Without renovating the NNMC, the WRNMMC cannot be designed and constructed to be a *world-class medical facility*.

The new WRNMMC is being developed on a campus that constrains planning and design in major ways. The campus is already largely built out with multiple buildings and multiple "tenants", including the NNMC and Uniformed Services University of Health Sciences (USUHS). Further, the original tower is considered a national landmark whose surroundings are required by the National Capital Planning Commission (NCPC) to be architecturally "compatible", especially when viewed from Wisconsin Avenue.

The NCPC also imposed constraints on parking to limit traffic congestion in the neighborhood and to encourage use of mass transit such as Metrorail. Such constraints may not be appropriate for a hospital that provides 24/7/365 operations.

The majority of identified design deficiencies in the WRNMMC plans relate to renovation construction, as opposed to the new BRAC-related construction, but the BRAC funding constraints do not allow for these deficiencies to be addressed, as previously discussed. This is a major impediment for the WRNMMC to become a *world-class medical facility*.

The final facility design will more likely be that of a *world-class medical facility* if these deficiencies are addressed by the recommendations specified in this report and if the definition of *world-class medical facility* detailed in Appendix B is used to guide further work.

F. The Service-specific and facility-centric cultures of the Army, Navy and Air Force medical commands conflict with the needs of an IDS, and there is no evidence of a concerted, organized effort to engineer the new integrated military healthcare culture needed to achieve and sustain a joint Armed Services IDS that provides *world-class* medical care.

The culture change needed to support an integrated healthcare delivery system in the NCR appears to be occurring more by happenstance than design. The military medical flag officers in the National Capital Area (NCA) in August 2005 envisioned one unified military healthcare system, jointly staffed, that would provide high-quality, efficient and convenient care. However, the initial planning to close WRAMC, to create the WRNMMC at Bethesda, and to establish a new medical facility at Fort Belvoir was viewed as Service-specific. The Army would close WRAMC, the Navy would build the WRNMMC and the Army would build the new hospital at Belvoir. (Oliveria)

There was an attempt to provide oversight, foster inclusion and develop an integrated healthcare delivery system within the current Service cultures. In May 2007, NCA military medical leaders noted that integration is a highly complex process and that they must “evolve to meet both NCA and MEDCEN [Medical Center] integration challenges.” (Schoomaker & Robinson, 2007a) They also noted that their Organizational Development Practitioners would continue to assist them in understanding cultural differences and guide this important transformation. (Schoomaker & Robinson, 2007b) While the need for developing a joint-Service culture was recognized, clear evidence that it is actually occurring has not been seen.

Each Service medical system has its own traditions, policies and practices – i.e., its culture. During the presentations to the NCR BRAC HSAS, there were multiple occasions when the position presented seemed to be Service-specific, rather than an integrated, joint-Service position. There were occasions when planning assumptions appeared to conflict based on Service-specific policies and practices. Moreover, some data elements reflected only one Service’s needs rather than the combined requirement for the integrated WRNMMC or NCR IDS.

While cultural change and the associated process redesign is difficult, it is essential to achieving a well-functioning IDS rooted in *world-class medical facilities*. An intentional change in attitudes and relationships is needed. While such a cultural change takes time to develop under the best of circumstances, it is unlikely to occur at all unless it is planned and engineered.

The needed new joint-Service culture requires a shared vision, guiding principles, and a clearly-stated mission, all of which are based on broadly understood core values, among other things. The vision provides the destination for change, while the values are the glue that holds the pieces together and sustains the change during the difficulties that will inevitably occur. However, it appears that there is

considerable uncertainty regarding these elements. As such, the vision, values, goals and expectations for both the WRNMMC and the NCR IDS must be clarified for the needed culture change to occur.

G. Many dedicated individuals have worked diligently to achieve what they have perceived to be the goals of the regional integration effort; however, there are multiple circumstances beyond their control that have impeded, and continue to impede, their efforts. Among these are the Service-specific and facility-centric military healthcare cultures, a confusing and redundant chain of command, and ambiguity about the vision, goals and expectations for the future NCR IDS and the WRNMMC. There is an urgent need to clarify the vision, goals and expectations for the future NCR IDS, especially for the WRNMMC, and to consolidate organizational and budgetary authority in a single entity.

The Subcommittee believes that the consolidation of organizational and budgetary authority is foundational to achieving the Congressional intent that the WRNMMC be a *world-class medical facility*.

Under the memorandum attached as Appendix F, the mission and authorities of the JTF CapMed were to "oversee, manage and direct all healthcare delivery by military medical units within the JOA… JTF CapMed will be resourced by the Commands, Services and MHS… The Commander JTF CapMed will have Tactical Control of the military medical units assigned or attached to the JTF…."

Appendix G subsequently realigned "resources, including transfer of civilian personnel authorizations, and a delegation of civilian personnel authorizes to the Commander of the JTF-CapMed." In this action memo, Joint Commands were established at WRNMMC and FBCH, but there was no mention of the other facilities within the region. This action memo also deferred the ultimate governance decision of the JTF-CapMed. Possibilities for the governance included consideration of "potential models for organization as a defense agency or field activity or as a subordinate command under a Combatant Commander…" These documents underscore the lack of clarity about command and budgetary authority that was repeatedly commented upon and alluded to during presentations to the Subcommittee.

The various healthcare facilities within the region are subject to the provision of funding and other support at the discretion of the individual Services; there is no permanent governance established for the JTF CapMed; and there are inherent limitations imposed by a joint command structure that only encompasses two facilities within a supposedly joint-Service integrated region. This fragmented approach to establishing an integrated Joint Command significantly adversely impacts the successful implementation of a fully-integrated healthcare system and the development of component *world-class medical facilities*.

H. A comprehensive, forward-looking demand analysis that includes the capability to accommodate surge needs has not been completed for the WRNMMC.

The NCR BRAC HSAS heard a presentation from the WRAMC Office of Integration. (Fitzpatrick) In order to adequately plan for services in the NCR, the Multi-Service Market Office (MSMO) and Noblis (formerly Mitretek) worked with clinical leaders to project the most appropriate regional distribution of medical resources. Unlike the model used by the Medical Joint Cross Service Group (MJCSG) under BRAC, the MSMO used a market-based approach to determine the most appropriate distribution of resources. "MJCSG planners used the assumption that 30% of WRAMC's workload would migrate to Bethesda, while 70% would go to Belvoir." The MSMO model employed, "drive/distance factors, acuity, GME and health professions education, and clinical staffing requirements" to determine the optimal level of inpatient beds for both facilities. Neither the MJCSG nor the MSMO model included the

recapture of inpatient workload from the purchased care setting. The data used by the MSMO for determining demand was historic workload data for Fiscal Year (FY) 2004.

While the Subcommittee applauds the proactive approach of validating the model used under BRAC, there is no indication that the model has been updated with more recent data or that its underlying assumptions have been validated. Planning has been based on the number of beds, admissions, surgeries and other procedures that occurred in FY 2004, rather than being based on a future-focused demand analysis that incorporates likely changes in how healthcare will be provided and future service needs of the area. In addition, there was no indication that the new facility could extend beyond the planned capacity to accommodate a surge in the demand for inpatient services.

I. There does not appear to be a comprehensive "master plan" for the WRNMMC that includes the combined and augmented assets of the WRAMC and NNMC and that integrates the Uniformed Services University for the Health Sciences (USUHS), the Joint Pathology Center (JPC) and other specialized centers or institutions on the grounds of or proximal to the WRNNMC.

Master plans are typically created according to the level of service delivery being considered (i.e.., at the facility, installation or campus, and regional levels). Depending on the level of service delivery, the master plan is likely to focus on different issues. For example, a facility-level master plan typically addresses matters relating to staffing and the availability of clinical and support services within the facility, its diagnostic and treatment technology and compliance with building and operational standards, and the ability of the facility to adapt to changing needs, among other things. An installation- or campus-level master plan may focus more on traffic and materials management, potential additional facilities or facility expansion, and accessibility to and connectivity between and among the facilities. A regional-level master plan may focus on the flow of patients between and among individual installations, the availability of specialized services within the region, transportation, and other similar matters.

While there is a NNMC installation master plan that addresses community issues associated with the installation, this plan does not address many facility and regional issues. This installation plan needs to be viewed in light of a regional and facility master plan to ensure that all three are coordinated with one another. The absence of a facility master plan appears to have constrained planning for the needed renovation of the NNMC that will be part of the new WRNMMC.

The master plan should specifically address how USUHS, the JPC, and other specialized centers on the grounds of or proximal to the current NNMC will be integrated into the WRNMMC.

J. Significant input from frontline clinicians and other stakeholders does not appear to have been incorporated into the current plans for the WRNMMC.

WRAMC and NNMC held "Town Hall" meetings that discussed issues such as employee retention, fencing, construction plans, parking, gate access, and a timeline of events. However, there is little evidence that stakeholders were involved in the actual design process. The Deputy Director of Government Relations for the National Military Family Association (NMFA) provided a briefing to the NCR BRAC HSAS and indicated that the NMFA had provided feedback on the WRNMMC design and other NCR military treatment facilities (MTFs) in which they expressed concerns over some of the design elements of the facility (e.g., narrow passageways between buildings, location of departments to provide centralized care, the disease-centered, rather than patient-centered, focus of the cancer center). It does not appear that these concerns were addressed or that the NMFA was significantly involved in the design process. (Cohoon, 2008)

Various informal comments were also heard from a number of clinicians who seemed to feel that their concerns or issues were not paid attention to or addressed.

K. The current plans for the WRNMMC are not those of a *world-class medical facility*. Significant deficiencies exist, especially with regard to the existing NNMC. The final facility design will more likely be able to achieve world-class status if the deficiencies detailed below are addressed and if the definition of a *world-class medical facility* detailed in Appendix B is used to guide further work.

The following specific issues need to be addressed in the design and construction plans for the WRNMMC:

1. Several areas are not in conformance with the Joint Commission's hospital design standards.

   According to the Facility Guidelines Institute, the *Guidelines for Design and Construction of Health Care Facilities* are periodically updated. By policy, the Unified Facilities Criteria (UFC) provides construction criteria for the DoD. Prior to the most recent UFC update in February 2009, the last update to the *Guidelines* was published in October 2003. With the rapid changes in healthcare facility design and construction, this places organizations in the difficult position of having to use "draft" documents in setting construction standards in the contracting process. These draft documents may or may not contain the most recent trends in facility design and construction. It was noted that the General Performance Technical Specification document provided to the Subcommittee referenced the use of "'Draft' Navy-only UFC documents that are applicable as final documents." This could explain the discovery of several instances where construction plans do not meet Joint Commission standards.

   While the majority of the nonconformance issues involve "remodeling" of the NNMC, some have to do with new construction. These issues fell into 3 categories.

   First were instances where "revisions were required to meet applicable codes and standards for healthcare." Examples included: janitor closet access through the men's bathroom; public toilet not compliant with the Americans with Disabilities Act (ADA); door to the inpatient holding room in radiation oncology too small to accommodate a stretcher; no public toilets in physical therapy and occupational therapy; certain departments do not have all Joint Commission required spaces; and certain rooms do not meet their minimum dimensions or area requirements.

   Second were instances where "revision is required to fully meet operational requirements." Examples include: no pediatric preparation/holding area in radiation oncology; no medical director's office in the amputee center; only 75% of required caregiver offices provided for in physical therapy; no equipment storage area in occupational therapy; no staff toilet in hematology/oncology; and only 75% of required nurse offices provided in gynecology.

   Third were instances where "revisions are required to provide improved function, flow or environment." Examples include: nurse station located away from patient clinical areas in allergy and immunology; consult rooms in critical care area buried within the family day room; no access doors to critical care off the elevator outlet; anesthesia offices located a long distance from the operating room and pain clinic; and unclear access to the emergency department through a second set of doors.

   A facility must conform to basic design standards if it to be a *world-class medical facility*.

2. The current bed plan does not provide for broad conversion to single-patient rooms.

Single-patient rooms ("private rooms") are the state-of-the-art (SOTA) in healthcare today for infection control and other clinical reasons. "The research literature shows that the design of the physical environment strongly impacts hospital-acquired infection rates by affecting both airborne and contact transmission routes. The literature suggests a clear pattern wherein infection rates are lower when there is very good air quality and patients are in single-bed rather than multi-bed rooms." (Ulrich, Quan, Zimring, Joseph, Choudhary, 2004, p.6) This deficiency needs to be addressed, recognizing that a few rooms may maintain two beds to serve military-specific culture needs (i.e., to maintain the "buddy system" when medically appropriate).

Many of the current rooms are too small for two patients, do not permit direct visual monitoring by caregivers, do not have enough room for family members to comfortably visit, and do not meet military requirements for wheelchair and other access. The rooms also do not appear to be adequately outfitted with lifts for moving patients with amputations or other serious mobility problems.

Likewise, the strategy for patient ward assignment needs to be addressed to ensure that patients are appropriately grouped to maximize the effectiveness and efficiency of medical resources.

3. The design of the surgical suite has several problems.

   a. It appears that after construction and renovation there will be too few operating rooms (ORs) and the ORs will be too small to accommodate current and expected future surgical technologies.

      Surgical methods have changed dramatically within the last decade and are projected to continue to change at a rapid pace with advancements in video-imaging, computer technology and robotics. (Mack, 2001) These new surgical technologies require larger ORs. Renovating ORs that were built to accommodate yesterday's technology, using the same footprint as in the original design, will not adequately accommodate current or future advancements in surgical technology.

      In addition, the surgical technologies planned for use appear, in some cases, to be inadequate, as does the supporting infrastructure (e.g., HVAC, wireless communication capability). Further, the pre- and post-operative care areas appear to be inadequate, and the flow of perioperative patients, especially on the outpatient side, appears to be inefficient.

   b. The frozen section/surgical pathology space is to be located in an area remote from the surgical suite. Such an arrangement is problematic because it "designs in" inefficiencies and could lead to patient safety problems.

      In order to optimize patient flow and process efficiency, the surgical suite should be located near services such as radiology, pathology, and the intensive care unit. The strategic location of support services improves OR efficiency and thereby patient safety. (Wikipedia, April 7, 2009) According to *Building Type Basics for Healthcare Facilities* the "laboratory requires a satellite location in the department for processing and interpreting frozen sections of pathological tissue removed during surgery. This satellite lab space requires a direct communication system with the surgeon operating in the OR, allowing the surgeon to be notified to remove more tissue if necessary in cancer or other surgical procedures." (Kobus, Skaggs, Bobrow, Thomas, Payette, Chin & Kliment, 2008) "Greater efficiency in the OR adds up to better use of OR time. Staff members are able to respond to physicians' requests in a

timely manner, resulting in increased safety and cost benefits for patients." (Worley & Hohler, 2008 p.923)

c. It is unclear whether the post-anesthesia care unit (PACU) will be used for services unrelated to post-anesthesia care. Any decision in this regard should be informed by analyses of the demand for PACU services and of the experience and skills of PACU staff relative to the skills needed to properly care for the other potential PACU patients.

   Operating rooms are very resource intensive so they need to function as efficiently as possible. In an effort to maximize efficiency, OR management practices attempt to reduce the time required for the surgery itself and the time between surgeries. (Krupka & Sandberg, 2006) The unexpected utilization of PACU beds to support other services may adversely affect the flow of patients in and out of the OR, causing some surgeries to be delayed or cancelled if PACU beds are not available at the completion of surgery.

   In addition to affecting the efficient management of the OR, the PACU is essentially a short-stay intensive care unit staffed by nurses who are "trained in airway management, basic life support, and the special needs of postoperative patients emerging from anesthesia. They should also be adept at caring for acute surgical wounds and a variety of drainage catheters." (Katz, M.J., April 7, 2009) These competencies may differ from those required for other patient care services.

   The use of the PACU should be based upon a demand analysis for PACU services and an assessment of the most appropriate use of PACU staff and/or plans for cross-training PACU personnel to meet any additional patient care requirements.

4. Plans for observation care are unclear. The capability to provide observation care is important, especially for emergency patients, and should be specifically designed and planned for in accordance with the projected need for this level of care.

   WRAMC currently has an observation unit as well as limited capacity in the emergency room. At the NNMC, emergency patients needing observation care are admitted to an inpatient ward. The number of inpatient beds planned for the WRNMMC was based upon inpatient workload and did not account for inpatient beds being utilized for observation care. This may lead to the unplanned unavailability of inpatient beds. In addition, some of the requirements for observation care set forth by the American College of Emergency Physicians (ACEP) may conflict with the current concept of operation at the WRNMMC. The ACEP adopted several guiding principles to promote quality care and patient safety which included a dedicated ED observation area, directed by an emergency physician and emergency nurse having clearly-defined responsibilities, written policies and procedures approved by appropriate ED and hospital medical staff and adequate space, staff, equipment and supplies appropriate for the conditions being managed. (Ross, August 2008)

5. On-site simulation labs for surgery, cardiac catheterization, gastrointestinal endoscopy and pulmonary endoscopy are not included. Provision of access to these labs in an off-site location will likely create barriers to the utilization of these important resources. This is a major omission.

   Although simulation has been used in the aviation industry for over 80 years, it was only "in the late 1980s these technologies began to be adapted to the surgical world, along with the new technology of virtual reality." (Satava, 2008, p.141)

In September 2006, the Accreditation Council for Graduate Medical Education (ACGME) announced that "simulation will be part of the redesign of graduate medical education." (Philibert, 2005) Simulation is used to enhance the skills of a wide range of clinicians, including physicians, nurses and allied health professionals. "Even the most experienced surgeon, anesthesiologist and nurse can benefit from practice on those rare but potentially high risk surgeries that we don't practice continually." (Feaster, April 7, 2009) "As technologies and procedures evolve, newer techniques may require additional specialized skills. How do hospitals, practices, other physicians, and patients ensure that surgeons possess the requisite skills to perform these procedures safely and deal with intra-operative complications?" (Roberts, Bell, Duffy, 2006, p.3223)

Simulation is not limited to enhancing the skills of individual practitioners. It is now used to enhance the skills of surgical teams. "At the University of Washington we have a virtual OR that's one flight down from our main OR. It has an exact replica of the full OR We can bring down an anesthesiologist, a CRNA (certified registered nurse anesthetist), surgeon, scrub nurse, circulating nurse—basically a whole operating room team." (Joch, 2008, p.13) A simulation laboratory should be readily available within the hospital. Positioning a simulation laboratory within the hospital minimizes the impact on staff as they work simulation into their already hectic schedules and provides a more realistic setting, thereby enhancing the simulation experience.

While coming late to medicine, simulation capability is now recognized as essential for training, competency testing of trainees and refresher training for senior clinicians. Access to these labs in an off-site location is not adequate.

The Subcommittee finds this omission especially ironic in view of the military's critically important leadership role in the development of simulation technology in the United States.

6. Information management and information technology (IM/IT) support and services are absolutely essential to the operation of a *world-class medical facility*; however, plans for these essential services appear to be incomplete:

   a. It is unclear whether the IM/IT infrastructure needs (e.g., fiber optic cabling, wireless technology) are being addressed.

      During the review process, the Subcommittee heard presentations by the J6 Joint Planning Group (JPG) that covered the mission and vision statement for IM/IT in the NCR. The "J6 JPG provides oversight of IM/IT initiatives for the Joint Operating Area (JOA)." (Rowland, 2009) Membership for the JPG includes the Chief Information Officers from WRAMC, NNMC, USUHS, Malcolm Grow and Dewitt; the Chief Technology Officer of the Military Health System (MHS) and the Director and Deputy Director of the Communication Support Systems of the JTF CapMed. There was no evidence of frontline clinician and other stakeholder inclusion in the planning process.

      The Subcommittee was advised that the following would be incorporated into the new WRNMMC: "smart room" technology; wired/wireless internet access; extended patient services via electronic kiosks and public area media displays; patient entertainment and education system; hands-free, wireless, communication devices; medication dispensing units and use of bar code technology; security/building automation network; radio-frequency identification technology; smart beds; redundant and logical data pathways; and a near "saturation" distribution plan." (Rowland) However, the Subcommittee was not advised on how or when these technologies would be deployed, whether funding was available, how the plan was

derived, what stakeholders were involved with the planning, and what other technologies were to be incorporated into the new facility. It is also unclear if wireless communication will be provided throughout the hospital or if it will be confined to certain locations.

The planning documents indicated that "funding will be available to support required infrastructure improvements to absorb the additional users into the campus", but the Subcommittee could find no evidence that funding had actually been provided. Planning documents also envisioned "the maximum use of technology" but their space allocation document for the computer room appeared to use "DoD criteria". (Noblis, 2007) This may be in conflict with the envisioned state, given the following statement in the comments section of that planning document, "requires further analysis; perhaps should consider 2 computer rooms". This would imply that the planning assumptions for the maximum use of technology may be in conflict with the realities of funding and space limitations.

b. Plans for the electronic health record do not appear to have addressed significant issues such as inter-system interoperability, ease of physician use, transportability and use of open-source software. These issues should be addressed.

During the IM/IT presentation, a plan was outlined to integrate the hospitals within the region to provide a single-user sign-on capability, but the Subcommittee was subsequently advised that the plan was not currently funded. When asked to clarify if the single user sign-on plan applied strictly to the AHLTA, the MHS outpatient documentation system, or if it included the inpatient documentation system, and if there were any interoperability issues between the facilities with the use of the Common Access Card (CAC), the following response was given, "The questions... are all valid. We are addressing these questions in our first J6 milestone task, which is the WRAMC and Dewitt migration plan. We are planning to brief the JPTB on several COA's in our migration plan on May 20th." The Subcommittee inferred from this response that a definitive answer was not available.

An electronic health record system is an essential tool for providing safe, effective, efficient and otherwise high-value modern healthcare. While there appears to be a well-intentioned plan, the Subcommittee believes it needs to be further considered because significant issues do not appear to have been addressed, including interoperability among systems, ease of physician use, transportability and use of open-source software.

c. Plans to support the transfer of medical records from WRAMC into the new facility are inadequate.

The Subcommittee was advised that the current concept for existing medical records housed at WRAMC is to digitally scan them into electronic format. In their initial planning document, Mitretek assumed, "Minimal space was provided for records storage with the assumption that electronic records will be used and existing records would be digitized."(Noblis) The Subcommittee is concerned that this assumption may conflict with current policy, has not been appropriately staffed, has no plan and is not funded. The Subcommittee therefore has concerns that no additional medical record storage space is planned at the new facility to accommodate the medical records from WRAMC.

7. The new facility design does not seem to account for expansion of support services (e.g., food service, day care, community services, medical records, materiel management) to accommodate the anticipated growth in staff, patients and families.

8. Parking limitations imposed by the NCPC appear likely to have a detrimental impact on the operations of the WRNNMC.

   The parking standards set forth in the *Guidelines for Design and Construction of Health Care Facilities* state, "Each new facility, major addition, or major change in function shall have parking space to satisfy the needs of patients, personnel, and the public… A formal parking study is desirable. In the absence of such a study provide one space for each bed plus one space for each employee normally present on any single weekday shift. This ratio may be reduced in an area convenient to public transportation or public parking facilities or where carpool or other arrangements to reduce traffic have been developed." (American Institute of Architects, 2006 p.37)

   The JTF CapMed parking estimates are outlined in the table below.

National Naval Medical Center Bethesda							
	Projected Staff Numbers		Associated Future Parking Numbers				
	Total Staff estimate	Adjusted Staff (less staff lodgers – dental – shift workers + shift overlap – volunteers)	Staff	Visitor	Other	Patient	Total
UFC only parking allowance[4]	10,613	10,339	7,807	2,045	803	2,777	13,432
NCPC[1] and UFC[2] parking allowance	10,613	9,679	3,279	2,045	803	2,777	8,903
Actual future conditions	10,613	9,679	2,462	2,045	803	2,777	8,087
Montgomery County[3]	10,500	NA	3,022	2,524	836	5,287	11,669

1 NCPC ratio of 1:3 for Staff

2 UFC for non-staff allowance

3 Note the Montgomery County value for patients shown includes staff and patients. The staff numbers shown are for facilities other than the hospital

4 Adjusted staff for UFCs is total staff less dental staff. Staff parking includes the volunteers at 0.75 spaces per volunteer. The dental parking is included in patients parking since we could not separate the number.

Through the comprehensive Master Plan, NNMC will meet the NCPC staff parking ratio of 1:3. The number of future parking spaces is less than allowed by DoD design criteria. Likewise, the parking is less than the Montgomery County zoning requirements.

Source: NNMC as provided by JTF CapMed 12/10/2008

The table presents parking estimates using various methods. While the federal installation is not bound by Montgomery County standards, estimates were derived for comparison purposes. The UFC has a formula which incorporates the number of staff, patients, etc. and is the criteria which typically governs military construction and renovation. The NCPC criterion used a standard ratio of 1:3 for staff members due to the availability of Metrorail. "Reasonable walking distance has been defined herein as 2,000 feet, or somewhere between a quarter mile and a half mile—about a 10-minute walk." (NCPC, April 7, 2009) This standard does not take into account that the hours of operation for the Metrorail may not accommodate the needs of a hospital which provides 24/7/365 coverage.

While there is nearby public transportation, there are a number of concerns regarding the reliability and availability of public transportation. The nearest Metro station is on the Red Line at the Medical Center. The Medical Center is located at the southwest corner of Rockville Pike and South Wood Road. This Metro station primarily serves NIH and NNMC with an average of 10,420 weekday

passengers: 68% walk to the metro station, while the remainder uses the Metro bus or some other form of transportation. The distance to the hospital from the Metro station and pedestrian safety have been cited as issues by Montgomery County and the Washington Metropolitan Area Transit Authority (WMATA). Pedestrian wait time to cross Rockville Pike is long and pedestrian traffic conflicts with turning vehicles. (BRAC Implementation Committee, October 21, 2008) The Montgomery County BRAC implementation Committee has been studying various courses of action, but the issue remains unresolved.

While the current study is funded, implementation of its recommendations is not funded. The committee reported that it would take at least three years to complete a project once funding is received. (BRAC Implementation Committee, February 19, 2008)

In 2004, the Department of the Interior conducted a study on excessive water intrusion along the Red Line and noted, "Excessive water leakage through the walls and the presence of water inside the underground facilities has damaged mechanical and electrical components in the tunnel, and has escalated the deterioration rate of the rail system. This leakage will eventually reduce the life span of the structure and rail system." (Greene, Shapiro & LaMotte, 2004 p.31) On March 27, 2009, the Red Line experienced a double derailment; this "marked the fourth set of derailments in less than two months." (Weir, Mar 31, 2009) Ridership of the Metrorail has increased over the past 12 consecutive years with a 3.6% or 7 million rider increase from Fiscal Year 2007 to 2008. (WMATA, July 8, 2008) While WMATA will be adding 20 additional rail cars, (Sherfinski, 2009) it has proposed "cuts that affect about 40 bus lines around the region." (Weir, Mar 27, 2009) All of these issues impact the viability of using public transportation as an alternative to providing additional parking spaces in support of the WRNMMC and may adversely impact the future operation of the WRNMMC.

9. The new WRNNMC facility design locates the dialysis unit above several environmentally-sensitive areas of the hospital (e.g., Central Sterile Processing's sterile storage area, part of the kitchen preparation area). The rationale for this is not obvious.

   The dialysis unit requires frequent inspection and maintenance of its plumbing system because of the corrosive nature of some of the materials used in the dialysis process. While this design may be workable, it is difficult to understand its logic and should be further considered.

10. There does not appear to be a strategic technology master plan for use of advanced diagnostic and treatment technologies.

    In their initial planning documents, Mitretek assumed the maximum use of technology in the OR but then went on to state that, "Equipment selection for these rooms will not be made until construction is well under way. In the future, as technology and medical practice advance these rooms need to adapt. The sizes of the procedure rooms and the amount of support space were developed with consideration to future flexibility." (Noblis) This is counter-intuitive, since construction plans are usually based upon well-defined needs and objectives approved by stakeholders involved in the process. A typical process outline for new construction is to coordinate with key stakeholders, review the various options, make a decision, and then plan the space requirements to support that decision. (Miller & Larmore, 2007, p.25) In this case, it appears that assumptions were made without a well-defined master plan and without validating the actual technology that was envisioned or the inter-connectivity and space requirements necessary to support that technology.

In the 2006 *Health Facilities Management, Hospitals & Health Networks* and American Society for Healthcare Engineering (HFM/ASHE) hospital construction survey, hospitals are being built with flexibility in mind and technology is the driving force. ORs are larger, "going from just 450 square feet a decade ago to much bigger today to accommodate the imaging equipment that help guide surgeons." (Carpenter, 2006, p.8) Rooms are designed to be "acuity-adaptable" and can be changed into an ICU room without having to transfer a patient to a different location in the hospital. (Carpenter, p.9) Wireless communications, real-time tracking systems, point-of-care testing, and remote patient management are all current information technology trends in the delivery of healthcare. (Larsen, 2008, p.13) "Healthcare's investment in all types of IT is growing faster as a percentage (nearly 5 percent) than any other field in 2006 and is expected to remain in a strong growth mode through 2010." (Buell, 2007, p.16)

The Naval Medical Center San Diego recently renovated their minimally-invasive surgical suites. In their renovation process, prior to developing a statement of work, the project included "close collaboration among all of the stakeholders." (Acevedo, 2009, p.154) The-newly constructed ORs at the Naval Medical Center San Diego included the installation of ceiling-mounted booms where everything is controlled by the surgeon or the OR staff. This eliminated the use of carts, and improved maneuverability within the surgical suite. "Each suite includes:

- ceiling-mounted lights;
- a central control station, touch panel interface controlling images, audio, and data;
- three high-resolution flat-panel monitors displaying pictures from a digital video scope camera;
- a built-in, high-definition digital camera on one of the surgical lights;
- voice activation, allowing nurses and physicians to control the system remotely;
- digital documentation, which can convert still images, video, and dictation to a CD or DVD, or transfer data to a network, allowing information to be stored in multiple places; and
- connectivity of the OR to any connected location inside or outside of the hospital." (Acevedo, p.156)

Modern healthcare is inextricably linked with advanced diagnostic and treatment technologies. Such technologies (e.g., CT, MRI and PET imaging; robotic and minimally-invasive surgery; cardiac pacemakers and stents) have been the basis for many important improvements in medical care and will be even more important in the future. The Subcommittee did not have an opportunity to review the medical technology needs or plans for the new facilities. No such plan was presented and the Subcommittee does not know if one exists. A detailed technology strategic plan is needed. The Subcommittee has been advised that there is a plan, but was unable to conclude whether the plan was adequate based on the information provided. There was no indication that any information was withheld but insufficient information was provided to the Subcommittee to make a full assessment.

L. The plan for FBCH is well conceived and incorporates many important evidence-based design (EBD) features; however, the current plan would benefit from addressing the following specific issues:

1. There does not appear to be a plan to evaluate the impact of incorporating EBD features into the facility's design. Such an assessment would be valuable for informing plans for future federal hospital construction.

FBCH included beneficiaries and staff in the creation of the hospital and branding image in an all day planning seminar in June 2007. The participants in that planning session adopted the history of military medicine and the peaceful energy of nature as the theme for the new hospital. These concepts were symbolized by the American eagle and captured through the slogans: "Caring for Our Own" and "Patriotic and Proud". This theme drove the interior color schemes and textures for the new facility. In addition, the facility design included patient-centered and EBD principles to create a SOTA therapeutic environment.

Military medicine has a unique opportunity both to contribute to the scientific underpinnings of EBD by evaluating the impact of the features incorporated into the FBCH and to influence the design and construction of future MHS healthcare facilities. Unfortunately, funds to support such an assessment are not included in BRAC allocation.

In 1984, Roger Ulrich studied the effects of hospital window views on recovery from abdominal surgery. The study found that patients that could see trees, rather than a concrete wall, required less narcotic pain medications, experienced a shorter hospital stay, and had fewer negative evaluative comments in the nurses' notes. (As cited in Bilchik, 2002, p.19) This marked the beginning of EBD. The Center for Health Design defines EBD as "the process of basing decisions about the built environment on credible research to achieve the best possible outcomes." (Center for Health Design, April 7, 2009)

On January 22, 2007, the Assistant Secretary of Defense for Health Affairs (ASD(HA)) requested the Commanders, United States Army Corps of Engineers and Naval Facilities Engineering Command, to instruct the respective design teams of the new medical facilities in San Antonio and the NCR to apply patient-centered and EBD principles across all medical Military Construction (MILCON) projects. The ASD(HA) noted that a growing body of research has demonstrated that the built environment can positively influence health outcomes, patient safety, and long-term operating efficiencies to include reduction in staff injuries, reduction in nosocomial infection rates, patient falls, and reductions in length of hospital stay. (Winkenwerder, 2007) The Army medical planners embraced EBD principles and worked with leaders in the field to design the new medical facility at Fort Belvoir.

The FBHC embraces the most recent EBD research and incorporates the principles of the Institute of Medicine's (IOM) 2000 report, *To Err is Human: Building a Safer Health System*, (Kohn, Corrigan & Donaldson, 2000) to decrease adverse events related to facility design. The planners used the IOM's healthcare quality aims included in their 2001 report, *Crossing the Quality Chasm: A New Health System for the 21st Century*, that calls for a system-wide reform of healthcare. (Institute of Medicine, 2001)

Many of the EBD features incorporated in the FBHC facility design are well-supported by science and business case analysis. Other included features represent good design choices and facility management practices that do not require significant additional front-end investments. In addition, there are some features in the FBHC design that are intuitively "smart." The MHS produced a report, *Evidence Based Design: Application in the MHS,* in 2007 "to guide the application of EBD across a facility's life cycle. The report notes that while there is considerable evidence for many design features, more research is needed to validate and guide the complex process of healthcare design." (Ossmann, Boenecke & Dellinger, 2008)

2. FBCH representatives talked about a “facility-based master plan”, but the existence of this master plan could not be documented. The Subcommittee believes this EBD strategy should be documented in a master plan and become part of the regional master plan.
3. More complete plans should be created for IM/IT and for diagnostic and treatment technology along the lines as those outlined for the new WRNMMC.

M. The BRAC timeline required an accelerated process for designing and building these two new facilities. Since different processes were used, it would be instructive to evaluate the two different processes (i.e., Integrated Design-Bid-Build at the FBCH and Design-Bid-Build at WRNMMC) to determine their relative value in an effort to inform planning for the design and construction of future federal medical facilities. Any process that shortens the construction timeline and provides DoD more flexibility—while maintaining quality and efficiency—should be carefully considered.

N. There is no need to halt construction of the new facilities if a properly devised master plan can be developed to ensure that backfill renovations can be accomplished in a timely manner. Halting construction would be very costly and highly demoralizing and should be avoided if at all possible.

V. RECOMMENDATIONS

A. Further planning for the new WRNMMC and FBCH, as well as development of the NCR IDS, should be guided by the definition of *world-class medical facility* detailed in Appendix B of this report.

B. One official should be empowered with singular organizational and budgetary authority and staffed appropriately to manage and lead the healthcare integration efforts and operations in the NCR. This should be accomplished as quickly as possible, and this official's authority should extend over all DoD healthcare facilities and resources that impact healthcare operations within the NCR.

   This official should *not* have day-to-day operational responsibility for any individual facility in the NCR, so that his/her primary concern is always the operation of the integrated system.

   The selected official should give high priority to:

   1. developing a shared vision and a clear mission statement for the NCR IDS and the WRNMMC;
   2. creating a comprehensive master plan for both the NCR IDS and the WRNMMC;
   3. engineering a culture that will support the NCR IDS and *world-class medical facilities*;
   4. developing a strategic technology master plan for the WRNMMC, FBCH and NCR IDS;
   5. ensuring that all further planning is informed by user groups and reflects input from patients and their families and frontline clinicians (e.g., physicians, nurses, pharmacists); and
   6. implementing a mechanism for the ongoing independent review of the design and construction of the new WRNMMC.

C. Deficiencies in the current plans for the WRNMMC should be corrected, and the funding needed to correct these should be identified as soon as possible. Specifically:

   1. All design and construction plans should be in conformance with the Joint Commission's standards, at a minimum.
   2. The bed plan should be reconsidered so that single-patient rooms are the norm throughout the facility.
   3. Plans for the surgical suite should be reconsidered, addressing especially the specific concerns identified in this regard. A model of the perioperative process and a demand analysis should be developed and used to guide further planning for the surgical suite.
   4. Plans for patients requiring observation should be further considered and clarified.
   5. Plans for on-site simulation laboratories should be developed and funded.
   6. The IM/IT infrastructure plan should be further considered. Funding and other resources to ensure that the facility will have a forward-looking IT infrastructure should be ensured and electronic health record-related issues of inter-operability, ease-of-use, open-source applications and portability should be addressed.
   7. Current plans should be reviewed for their adequacy to address expected increased needs in support services such as food service, day care, parking, medical records processing and storage, and materiel management, among others. Modifications to the current plans should be made based on this review.

8. Placement of the dialysis unit in the new WRNMMC should be further considered.

D. A plan to assess the outcomes, benefits and return on investment, among other things, of the design processes used for the new WRNMMC and FBCH, as well as the benefits of incorporating EBD principles in these facilities, should be developed, funded and implemented.

E. New construction should proceed as currently planned, assuming that the needed master plans are developed in a timely manner. Going forward, modifications should be made as needed.

   Backfill renovation should be deferred until it can be coordinated with and, if necessary, redesigned in conjunction with the master plan and the recommendations detailed in this report.

APPENDICES

APPENDIX A

S.3001
Duncan Hunter National Defense Authorization Act for Fiscal Year 2009
(Engrossed Amendment as Agreed to by House)

SEC. 2721. INDEPENDENT DESIGN REVIEW OF NATIONAL NAVAL MEDICAL CENTER AND MILITARY HOSPITAL AT FORT BELVOIR.

(a) Findings- Congress makes the following findings:

(1) Military personnel and their families, as well as veterans and retired military personnel living in the National Capital region, deserve to be treated in world-class medical facilities.

(2) World-class medical facilities are defined as incorporating the best practices of the premier private health facilities in the country as well as the collaborative input of military healthcare professionals into a design that supports the unique needs of military personnel and their families.

(3) The closure of the Walter Reed Army Medical Center in Washington, D.C., and the resulting construction of the National Military Medical Center at the National Naval Medical Center, Bethesda, Maryland, and a new military hospital at Fort Belvoir, Virginia, offer the Department of Defense the opportunity to provide state-of-the-art and world-class medical facilities offering the highest quality of joint service care for members of the Armed Forces and their families.

(4) Congress has supported a Department of Defense request to expedite the construction of the new facilities at Bethesda and Fort Belvoir in order to provide care in better facilities as quickly as possible.

(5) The Department of Defense has a responsibility to ensure that the expedited design and construction of such facilities do not result in degradation of the quality standards required for world class facilities.

(b) Independent Design Review-

(1) ESTABLISHMENT OF DESIGN REVIEW PANEL- The Secretary of Defense shall establish a panel consisting of medical facility design experts, military healthcare professionals, representatives of premier healthcare facilities in the United States, and patient representatives--

(A) to review design plans for the National Military Medical Center and the new military hospital at Fort Belvoir; and

(B) to advise the Secretary regarding whether the design, in the view of the panel, will achieve the goal of providing world-class medical facilities; and

(2) RECOMMENDATIONS FOR CHANGES TO DESIGN PLAN- If the panel determines that the design plans will not meet such goal, the panel shall make recommendations for changes to those plans to ensure the construction of world-class medical facilities.

(3) REPORT- Not later than 90 days after the date of the enactment of this Act, the panel shall submit to the Secretary of Defense a report on the findings and recommendations of the panel to address any deficiencies in the conceptual design plans.

(4) ASSESSMENT OF RECOMMENDATIONS- Not later than 30 days after submission of the report under paragraph (3), the Secretary of Defense shall submit to the congressional defense committees a report including--

(A) an assessment by the Secretary of the findings and recommendations of the panel; and

(B) the plans of the Secretary for addressing such findings and recommendations.

(c) Cost Estimate-

(1) PREPARATION- The Department of Defense shall prepare a cost estimate of the total cost to be incurred by the United States to close Walter Reed Army Medical Center, design and construct replacement facilities at the National Naval Medical Center and Fort Belvoir, and relocate operations to the replacement facilities.

(2) SUBMISSION- The Secretary of Defense shall submit the resulting cost estimate to the congressional defense committees as soon as possible, but in no case later than 120 days after the date of the enactment of this Act.

(d) Milestone Schedule-

(1) PREPARATION- The Secretary of Defense shall prepare a complete milestone schedule for the closure of Walter Reed Army Medical Center, the design and construction of replacement facilities at the National Naval Medical Center and Fort Belvoir, and the relocation of operations to the replacement facilities. The schedule shall include a detailed plan regarding how the Department of Defense will carry out the transition of operations between Walter Reed Army Medical Center and the replacement facilities.

(2) SUBMISSION- The Secretary of Defense shall submit the resulting milestone schedule and transition plan to the congressional defense committees as soon as possible, but in no case later than 45 days after the date of the enactment of this Act.

APPENDIX B

What Is a *World-class Medical Facility*?

As we men of medicine grow in learning we more justly appreciate our dependence on each other. The sum total of medical knowledge is now so great and wide spreading that it would be futile for any one man... to assume that he has even a working knowledge of any part of the whole... The best interest of the patient is the only interest to be considered, and in order that the sick may have the benefit of advancing knowledge, union of forces is necessary... It has become necessary to develop medicine as a cooperative science; the clinician, the specialist, and the laboratory workers uniting for the good of the patient, each assisting in elucidation of the problem at hand, and each dependent upon the other for support.

William J. Mayo, M.D.
Commencement Address
Rush Medical College, 1910

General Description

A *world-class medical facility*[1] is one where the best of the art and science of medicine come together in a focused effort to meet the needs of the patient by providing the best in physical, mental, social and spiritual care. A *world-class medical facility* routinely performs at the theoretical limit of what is possible and consistently and predictably delivers superior healthcare value – i.e., high quality-care and optimal treatment outcomes at a reasonable cost to the patient and society.

A medical facility achieves the distinction of being considered *world class* by doing many things in an exceptional manner, including applying evidence-based healthcare principles and practices, along with the latest advances in the biomedical, informatics and engineering sciences; using the most appropriate state-of-the-art technologies in an easily accessible and safe healing environment; providing services with adequate numbers of well trained, competent and compassionate caregivers who are attuned to the patient's, and his or her family's culture, life experience and needs; providing care in the most condition-appropriate setting with the aim of restoring patients to optimal health and functionality; and being led by skilled and pragmatic visionaries. The practices and processes of a *world-class medical facility* are models to emulate.

Many of the elements of a *world-class medical facility* can be objectively assessed and measured with existing methods, as reflected in the characteristics enumerated in the following section entitled Defining Characteristics; however, a *world-class medical facility* is more than the sum of its parts. Much of what distinguishes an institution, or facility, as being *world class* results from synergies between and among its parts and cannot be measured with currently available methods.

A *world-class medical facility* regularly goes above and beyond compliance with professional, accreditation and certification standards. It has a palpable commitment to excellence. A *world-class medical facility* has

[1]Importantly, in most settings the term *healthcare facility* would be used instead of *medical facility*, but because the legislation requiring this report used the term *medical facility*, that term is used here with the intent that it be viewed as being interchangeable with *healthcare facility*.

highly-skilled professionals working together with precision and passion as practiced teams within an environment of inquiry and discovery that creates an ambience that inspires trust and communicates confidence. A *world-class medical facility* constantly envisions what could be and goes beyond the best known medical practice to advance the frontiers of knowledge and pioneer improved processes of care so that the extraordinary becomes ordinary and the exceptional routine.

Defining Characteristics of a *World-class Medical Facility*

What is a Medical Facility?

In trying to define what it means to be a *world-class medical facility* it is understood that the physical structure, or facility per se, only provides the setting in which persons with health conditions are housed while doctors, nurses and myriad supporting personnel diagnose, administer treatment and provide other services needed to address health-related conditions and improve a person's health and functioning. While the facility does not diagnose, treat or provide any specific service, it is now well established that the design and construction of facilities can substantially affect the efficiency and effectiveness of making correct and timely diagnoses; the ease and accuracy of administering appropriate therapy; the attitude and morale of patients, visitors and healthcare workers; the culture of the organization and an environment that promotes the healing process.

In the following discussion, reference to *medical facility* is taken to mean the composite of the physical structure, the healthcare professionals who work there, the technology that they employ, and the processes and procedures used to accomplish their work, among other things.

Operational Characteristics of a World-class Medical Facility

To be considered world class, a medical facility must meet at least the 18 conditions in the 6 domains specified below.

I. Basic Infrastructure

The facility:

1. Has attained and maintains all accreditations and certifications that satisfy licensure and other statutory and regulatory requirements relating to the provision of the services offered at the facility.[2]
2. Provides comprehensive and definitive acute healthcare services in an integrated and coordinated manner that meets patient needs from birth (including the pre-term neonate) through the end of life, as demonstrated by, but not limited to:
    a. providing services in all the specialty areas recognized by the American Board of Medical Specialties (ABMS), in so far as these specialties are reasonable and appropriate for the needs of the patient population and community served;
    b. offering services in a preponderance of the subspecialty areas recognized by the ABMS; and
    c. having clearly specified policies and procedures for referral and transfer of patients for highly specialized services that are generally centralized to a few locations (e.g., definitive burn care,

[2] For example, the Joint Commission, American Osteopathic Association (AOA) or Det Norske Veritas (DNV)accreditation; Accreditation Council for Graduate Medical Education (ACGME) postgraduate physician residency program accreditation; certifications by the American Association of Blood Banks, American College of Radiology, American College of Surgeons, College of American Pathologists, Nuclear Regulatory Commission, and the Food and Drug Administration's Division of Mammography Quality and Radiation Programs

organ transplants, spinal cord injury care and rehabilitation), if such services are not provided at the facility.

3. Has a high degree of facility readiness to provide high quality care as demonstrated by at least the following characteristics:
   a. application of contemporary evidence-based knowledge and principles of design and construction and the utilization of state-of-the-art technology to, among other things:
      1) create a healing environment and continuous healing relationships;
      2) optimize the patient room environment and functionality for:
         a) providing patient/family-centered care;
         b) supporting the patient's and family's direct involvement in care delivery;
         c) minimizing the need for patient movement; and
         d) allowing direct visual monitoring by caregivers.
      3) facilitate effective communication between and among caregivers, patients and families;
      4) support information management, as reflected by attaining at least stage 6 of the Healthcare Information and Management Systems Society (HIMSS) Electronic Medical Record Adoption Model;
      5) minimize the occurrence of healthcare-related infections;
      6) facilitate real time location tracking of patients and staff;
      7) reduce patient and staff stress;
      8) encourage retention of staff;
      9) utilize unified communications;
      10) support facility navigation and way-finding; and
      11) achieve functional integration of component parts and processes into a coordinated system;
   b. assurance of equal access for all patients, families and staff to all clinical and routine non-clinical areas and activities throughout the interior and exterior areas of the facility by providing a physical barrier-free environment that exceeds minimum American with Disabilities Act (ADA) requirements;
   c. development and regular testing of plans for continuity of operations during times of emergency or catastrophe due to epidemic, weather or other acts of nature, technological failure or terrorism, inter alia;
   d. incorporation of significant flexibility and adaptability in the facility design and construction to accommodate changing practices and processes of care resulting from new knowledge, as well as optimization of surge capacity to accommodate the need to treat and manage unexpected large numbers of additional patients as might occur with an epidemic or disaster.
4. Assures that caregivers and other staff are prepared to perform competently and otherwise appropriately by, among other things:

a. promulgating policies for and standards of performance, conduct, and ethical behavior for all personnel, including job-specific and specialty-specific standards, as appropriate;

b. monitoring the performance of all employee's on a regular basis (at least annually) by direct observation of performance, formal testing, supervisor and peer review, patient feedback and/or other methods, as appropriate to the position;

c. providing feedback of monitoring results to the employee and, if relevant, concerned parties, together with counseling, mentoring and personal improvement or remediation programs, as needed;

d. promptly investigating all complaints or concerns voiced about the competence or safety of a caregiver's performance; and

e. carrying out whatever other actions are necessary to ensure that all caregivers and other staff are properly trained, equipped, fit and otherwise fully prepared to perform their assigned jobs.

II. Leadership and Culture

1. Provides executive leadership that is:

   a. visionary and mission-focused;

   b. experienced with demonstrated competence in the critical competencies identified by the National Center for Healthcare Leadership and the American College of Healthcare Executives (1);

   c. stable over time; and

   d. empowered with organizational and fiscal authority.

2. Organizes its governance structure and processes to, among other considerations:

   a. ensure that the governing body is composed of appropriately knowledgeable and dedicated individuals who reflect and represent the interests of the organization and its stakeholders and who recognize the competencies required for excellent leaders;

   b. facilitate effective communication with its medical staff and employee representatives;

   c. assure that patient and patient family's views and perspectives about facility operations are known to facility management and the governing board; and

   d. ensure that the governing board is actively involved in overseeing the operation of the institution, and especially in overseeing the quality and safety of care provided.

3. Manifests an organizational culture that:

   a. continually strives for excellence, as demonstrated by, among other things:

      1) the organization's mission, vision, core values, bylaws and strategic objectives;

      2) the attainment of, or being in the process of attaining, the highest level of certification or designation for specialty services having generally recognized tiered levels of service;[3]

      3) having been awarded "magnet status" by the American Nurses Credentialing Center (ANCC);

[3] For example, level 1 trauma center or comprehensive cancer center.

4) receipt of awards for excellence in organizational performance;[4]
5) establishment of multidisciplinary Centers of Excellence; and
6) the reputation and professional accomplishments of its staff;

b. seeks to be a high reliability organization by demonstrating, among other characteristics, proactive and relentless vigilance in
   1) avoiding preventable patient harm, and
   2) improving process effectiveness and efficiency;

c. actively encourages and rewards innovation;

d. promotes and supports teamwork, collaboration and partnerships, as demonstrated by, among other manifestations:
   1) formally established collaborative relationships with other institutions and professional organizations;
   2) routine utilization of one or more formal teamwork training methodologies for staff; and
   3) recognition and awards for exceptional team performance and success;

e. creates a work environment that promotes employee satisfaction and well being by, among other things;
   1) fostering an environment of civility and respect for patients and employees;
   2) reporting and addressing lateral violence;
   3) supporting professional development; and
   4) offering services such as child and elder care programs, telecommuting, flexible work schedules, and employee wellness and fitness programs;

f. is pro-active and non-punitive in identifying medical errors and recognizes medical errors and preventable adverse events as opportunities for process improvement, as demonstrated by, among other things:
   1) utilization of a formal adverse event and near-miss reporting system;
   2) routine application of clearly defined policies and procedures for root cause analysis and failure mode and effects analysis; and
   3) establishment of formal processes of learning from the occurrence of adverse events;

g. recognizes the importance of culture, education, spiritual beliefs, life experience and health literacy on a person's response to injury or illness, their understanding and acceptance of diagnostic interventions and treatment, and in the healing process;

h. nurtures efforts to advance the frontiers of knowledge and to pioneer improved processes of care; and

i. understands that its responsibility does not stop at the hospital walls and recognizes the need to support, among other activities:

[4] For example, Malcolm Baldrige National Quality Award or state or regional quality awards.

1) patient-focused care coordination, and
2) systematic examination of antecedents of hospitalization to reduce the need for such care.

III. Processes of Care

1. Organizes its services so that they are integrated and seamless between and among services in the facility and with home and community-based services.
2. Consistently applies contemporary evidence-based knowledge and principles and utilizes state-of-the-art technology in executing the following processes, among others:
   a. diagnosis;
   b. treatment;
   c. documentation and records keeping;
   d. medication management;
   e. communication and care coordination;
   f. knowledge management;
   g. materiel management; and
   h. business processes.
3. Routinely operationalizes evidence-based practices and processes in the delivery of care, including, but not limited to, those that:
   a. implement the most recent set of “Safe Practices” endorsed by the National Quality Forum (2);
   b. minimize the likelihood of the occurrence of the “never events” identified by the National Quality Forum (3);
   c. implement the 6 aims and 10 “design rules” for healthcare in the 21st century espoused by the Institute of Medicine (4);
   d. comply with the most recent National Patient Safety Goals and related specific expectations set by The Joint Commission (5);
   e. are connected with known life-saving interventions such as evidence-based care for myocardial infarction, medication reconciliation and the ventilator bundle;
   f. evaluate the quality of care provided to its sickest patients (i.e., those who die) by routinely utilizing the autopsy for quality assurance and education; and
   g. utilize formal quality and process improvement methodologies as an integral element of all care processes.
4. Demonstrates transparency of processes by, among other manifestations:
   a. routinely involving patients, patient families and employees in reviewing and determining the processes of care;
   b. ensuring that patients are provided with complete information about their care that is appropriate to their level of healthcare literacy so that they can make informed decisions and fully participate in all decisions about their care;

c. responding openly, promptly and honestly when patients are injured by unanticipated adverse events or anticipated complications by:

1) informing the patient and/or the patient's designated representative, as appropriate, of what has happened and what will be done to remediate any injury and mitigate further injury;

2) investigating the cause(s) of the event and reporting the findings to the patient and/or the patient's designated representative, as appropriate;

3) providing emotional support for the patient as well as the caregivers involved in the adverse event; and

4) apologizing to the patient and his/her family and/or the patient's designated representative, as appropriate, when the institution or caregivers are responsible for the event; and

5) compensating the patient for costs associated with injury.

d. making publicly available performance data and de-identified results of root cause analyses.

IV. Performance

1. Complies with all relevant federal government performance reporting requirements

2. Demonstrates superior performance (e.g., greater than the 90th percentile) against standardized industry metrics, including but not limited to those for:

a. clinical care;[5]

b. patient satisfaction;[6]

c. employee satisfaction;

d. employee sick leave, absenteeism and retention;

e. work-related injuries and illnesses; and

f. stewardship of resources as reflected by expense control, operating efficiency and adequacy of revenue or appropriation to support sustained high level performance, among other considerations.

V. Knowledge Management

1. Is regularly engaged in a full spectrum of scholarly activities, including, but not limited to:

a. providing graduate medical education and other health professional training;

b. conducting research, having its faculty and staff speak at scientific meetings and publish in peer-reviewed professional journals; and

c. utilizing a dedicated process to monitor, translate and apply research findings into clinical care, including a process for evaluating the results of new processes or pilot programs.

2. Has simulation laboratories for surgery, cardiac catheterization, endoscopy and emergency care, at a minimum.

[5] NQF endorsed performance measures for hospital and ambulatory care
[6] NQF endorsed performance measures for patient satisfaction(H-CAPHS), American Consumer Satisfaction Index) and loyalty

VI. Community and Social Responsibility

1. Demonstrates a population health focus by routinely being involved in activities aimed at improving the community and constituency that it serves, as demonstrated by, but not limited to:
   a. hosting or supporting health maintenance and disease early detection programs; and
   b. participating in local and regional disaster readiness programs; and
   c. working with other organizations on community improvement projects.
2. Demonstrates environmental responsibility and sustainability in the facility design, construction and operation by, but not limited to:
   a. having achieved Leadership in Energy and Environmental Design (LEED) certification;
   b. embracing the recommendations contained in the latest edition of the *Green Guide for Healthcare*; and
   c. disposing of potentially reusable medical devices with a Food and Drug Administration (FDA) cleared medical device reprocessor.
3. Demonstrates prudent use of resources by continually striving to reduce waste and inefficiencies.

The Spectrum of *World-class* Healthcare Facilities

A spectrum of healthcare facilities may seek to achieve world-class status, and the above defining characteristics may require modification when appropriate to a specific organization's mission. For example, a world-class community hospital may provide services in fewer specialties and subspecialties than a world-class academic medical center and may be engaged in relatively few scholarly activities, but would otherwise be expected to demonstrate the same characteristics.

Likewise, a world-class military medical center must meet the requirements for being a world-class healthcare facility but also needs to ensure that it addresses the unique needs of active duty and retired military personnel, as well as the needs of the branch or branches of the Armed Forces served.

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5. The Joint Commission. (2009). *2009 National Patient Safety Goals.* Chicago, IL. http://www.jointcommission.org/PatientSafety/National PatientSafetyGoals/

APPENDIX C

THE ASSISTANT SECRETARY OF DEFENSE
WASHINGTON, DC 20301-1200

HEALTH AFFAIRS

OCT 20 2008

MEMORANDUM FOR PRESIDENT, DEFENSE HEALTH BOARD

SUBJECT: Request to Defense Health Board (DHB) Pertaining to National Capital Region Base Realignment and Closure

The 2005 Base Realignment and Closure (BRAC) recommendations and subsequent legislation established the new Walter Reed National Military Medical Center (WRNMMC), integrating the Walter Reed Army Medical Center and at Bethesda and National Naval Medical Center into a consolidated premier world-class military health care system with medical campuses in Bethesda, Fort Belvoir, and other locations in the national capital region. To accomplish this effort, the construction of new and improved facilities Bethesda and Fort Belvoir are required to accommodate a known shortfall of facility space and associated infrastructure.

In keeping with the objective of building a world-class integrated healthcare facility, the Section 2721 of 2009 National Defense Authorization Act calls for an independent design review from the Department of Defense for the National Military Medical Center and the new military hospital at Fort Belvoir.

To ensure that the new design and construction efforts meet the Department's goal of providing world class health care in state of the art facilities, and in response to Section 2721, I request the Defense Health Board Subcommittee on National Capital Region Base Realignment and Closure provide a comprehensive review to advise the Secretary regarding whether the design will achieve the goal of providing world-class medical facilities. If the panel determines that the design plans will not meet such goal, recommendations for changes to those plans are requested to ensure the construction of world-class medical facilities.

Additional consultants and past patients at Walter Reed Army Medical Center will augment the existing Subcommittee to provide the subject matter expertise and background needed to address the design and construction issues.

It is important that the DHB expedite the review to avoid construction delays at the Bethesda and Fort Belvoir locations. My point of contact for the issue is Col Roger Gibson, Defense Health Board Executive Secretary, 703-681-8448 ext 1228, roger.gibson@ha.osd.mil.

S. Ward Casscells, MD

APPENDIX D

THE ASSISTANT SECRETARY OF DEFENSE

1200 DEFENSE PENTAGON
WASHINGTON, DC 20301-1200

MAY 30 2008

HEALTH AFFAIRS

MEMORANDUM FOR ASSISTANT DIRECTOR, EXECUTIVE AND POLITICAL PERSONNEL, WASHINGTON HEADQUARTERS SERVICE

SUBJECT: Nomination for Appointment to the Defense Health Board

I nominate the candidates on the enclosed list for appointment to the Defense Health Board (DHB) National Capital Region Base Realignment and Closure (NCR BRAC) Health Systems Advisory Subcommittee. The nominees are widely recognized military and civilian leaders with a wide base of knowledge and keen intellect that will greatly benefit the Defense Health Board in providing recommendations on how to best align physical and manpower resources as the Department transitions to the Walter Reed National Medical Center construct.

The nominees have varied and extensive backgrounds and will help to ensure that the Defense Health Board will continue to provide the Department of Defense with sound advice on matter relating to the health of military service members, families, and retired veterans.

Biographies and currícula vitae/resumes highlighting the achievements of each nominee are enclosed along with other documentation required for appointment consideration. Once appointed, Subcommittee Members may serve on additional Defense Health Board Subcommittees or Task Forces as needed during their term.

My point of contact for this action is Col Roger L. Gibson, DHB Executive Secretary, (703) 681-1712.

S. Ward Casscells, MD

Attachments: As stated

cc: USD(P&R)
CMO

Nominees

(MG, Ret.) Nancy Adams	Consultant, Martin, Blanck & Associates, Inc
Col (Ret.) Richard J. Andrassy, MD	Professor of Surgery at Uniformed Services University of the Health Sciences (USUHS)
Lt Gen (Ret.) Paul K. Carlton, MD	Director, Office of Homeland Security, Texas A&M University System Health Science Center
(VADM, Ret.) Michael Cowan, MD	Chief Medical Officer, Bearing Point, Inc.
Raymond F. DuBois	Senior Advisor, Center for Strategic and International Studies
MG (Ret.) Arnold Fields	Deputy Director, Africa Center for Strategic Studies
BG (Ret.) James J. James. MD	Director, Center for Public Health Preparedness and Disaster, American Medical Association
Kenneth W. Kizer, MD	Chairman; Medsphere Systems Corporation
Philip E. Tobey, FAIA, FACHA	Senior Vice President of SmithGroup

APPENDIX E

Short Biographies of NCR BRAC HSAS Members & Subject-Matter Experts

Col (Ret) Richard John Andrassy, M.D., F.A.C.S., F.A.A.P., F.A.C.N., F.I.C.S.

Dr. Andrassy joined the University of Texas Houston Health Science Center as the Denton A. Cooley, MD Chair in Surgery in the Department of Surgery after a distinguished career as a military officer, retiring from the USAF Medical Corps as a Colonel. He also serves as the Jack H. Mayfield Distinguished University Chair in Surgery, Surgeon-in-Chief at Memorial-Hermann Hospital, Chairman of the Board for University of Texas Physicians, professor of Surgery and Pediatrics in the UT MD Anderson Cancer Center, professor of Surgery at Uniformed Services at The University of the Health Sciences in Maryland and Interim Chairman of the Department of Otorhinolaryngology. Dr. Andrassy received his BS from the Virginia Military Institute (1968) and his MD from the Medical College of Virginia (1972). He completed his internship and residency in Surgery and served as Chief Resident in Surgery at Wilford Hall USAF Medical Center in Texas. Dr. Andrassy completed fellowships in Pediatric Surgery at the University of Southern California Children's Hospital and Pediatric Surgical Oncology at Children's Hospital.

Dr. Andrassy's academic achievements have included appointments in surgery at University of Texas Houston Medical School; University of Texas Health Science Center at San Antonio; Tulane University in New Orleans and University of Southern California in Los Angeles. He is the Surgeon-in-Chief at Hermann Hospital and on the Board of Directors for Andrassy Family Charitable Foundation. Dr. Andrassy has also been on the Board of Trustees for the Norman Family Charitable Foundation; Board of Directors for the Memorial Hermann Plaza Ambulatory Surgery Center; and the Chairman for the Council of Surgical Chairman at the University of Texas-Houston Medical School. Dr. Andrassy is a member of the American College of Surgeons and the American Academy of Pediatrics. His numerous awards and achievements include Houston Distinguished Surgeon of the Year (2006), Dean's Teaching Excellence Award (1990, 1998, 1999) and a Meritorious Service Medal (USAF, 1983). Dr. Andrassy has published hundreds of articles, over 250 abstracts, 42 chapters, 2 books, and has been invited to speak at over 400 national and international lectures.

Lt Gen (Ret) Paul K. Carlton Jr., M.D., F.A.C.S.

Dr. Carlton serves as the Director of the Office of Homeland Security for the Texas A&M University System Health Science Center, and is a former Chief Medical Officer of the United States Air Force. Dr. Carlton received his BS in Life Sciences from the US Air Force Academy (1969) and his MD from the University of Colorado, School of Medicine (1973). He completed his residency in General Surgery at Wilford Hall Medical Center (1973-1978). Dr. Carlton also holds an Honorary ScD from the University of Colorado (2003). He has completed courses in Combat Casualty Care (C4, 1981); Advanced Trauma Life Support Instructor in Germany (1982-1999); Hospital Commander's Management (1985); at the Western Network Institute for Health Care Executives (1988); Advanced Cardiac Life Support Instructor (1993-current); and holds a FAA Commercial Pilot License with Instrument, Multi, and Instructor Ratings. Dr. Carlton is a member of the US Air Force Academy Graduates Association; the Air Force Society of Clinical Surgeons; and a Fellow of the American College of Surgeons. His academic appointments include Clinical Professor of Surgery at the University of Texas Health Science Center, and Clinical Professor of Surgery at the Uniformed Services Division of the University of Health Sciences Board of Governors. He has been awarded the Surgeon General's Award from the Air Force Society of Clinical Surgeons (1976, 1978); Air Force Commendation Medal; Meritorious Service Medal; Air Medal, Operation Desert Shield/Storm;

Distinguished Service Medal; Airman's Medal (for lifesaving initiatives following the Pentagon attack on 9/11); Distinguished Community Service Award (for actions taken during Hurricane Rita); and is a Founding Member of the American Board of Physicians Specialties in Disaster Medicine. In addition to these achievements, Dr. Carlton has published 10 articles and delivered numerous professional presentations.

Raymond F. DuBois

Mr. DuBois is currently a Senior Adviser for CSIS. His focus in this position is on international security policy, defense management reform and initiatives emanating from the 2006 Quadrennial Defense Review. These initiatives include the "execution roadmaps" focusing on Building Partnership Capacity, Institutional Reform, and Governance and Strategic Communications. Mr. DuBois earned his Bachelor of Arts degree from Princeton University.

Mr. DuBois has held numerous DoD positions. He was Acting Under Secretary of the Army (2005-2006), Director of Administration and Management of the Office of the Secretary of Defense (2002-2005), Director of Washington Headquarters Services (2002-2004), Deputy Under Secretary of Defense for Installations and Environment (2001-2004) and Special Assistant to the Secretary and Deputy Secretary of Defense (2001). In addition, Dr. DuBois was also the President and CEO of Potomac Strategies International LLC (1995-2001) and a Marketing Executive at Digital Equipment Corporation (1990-1995).

Mr. DuBois also served in the Army from 1967-1969, including 13 months in Vietnam as a combat intelligence operations sergeant where he received the Army Commendation Medal. He is also the recipient of the Department of Defense Medal for Distinguished Public Service, the Army Civilian Distinguished Public Service Award (twice), the Navy Distinguished Public Service Award, the Air Force Decoration for Exceptional Civilian Service and the Army Commander's Award for Public Service.

Cheryl L. Herbert, B.S.N., M.B.A.

Ms. Herbert is the President of the Dublin Methodist Hospital, a part of the OhioHealth Corporation based in Columbus, Ohio. Her responsibilities include overseeing the overall operation of Dublin Methodist Hospital's, managing 400 full time equivalent employees and a budget of $191 million. As President, Ms. Herbert has led planning, design, construction, medical staff development, recruitment and hiring of associates, as well as the opening of a unique 94-bed community hospital.

Ms. Herbert's previous positions include the President and Chief Executive Officer (CEO) of the Morrow County Hospital, which is a managed hospital in the OhioHealth System; Vice President of the Marion General Hospital, which is a member hospital of the OhioHealth System; President of the MedCenter Hospital, Marion, Ohio; as well as the Vice President of Patient Care Services at the MedCenter Hospital, Marion, Ohio.

Ms. Herbert received her BSN from the Capital University, Columbus, Ohio and her MBA in Executive Management from Ashland University. Ms. Herbert's professional and civic affiliations include the American College of Healthcare Executives, the VHA Foundation CEO Health Care Safety Network, the Dublin Convention and Visitors Bureau Board, and the Dublin City Schools Business Advisory Council.

BG (Ret) James Januarius James, M.D., Dr.P.H., M.H.A.

Dr. James currently serves as the Director of the Center for Public Health Preparedness and Disaster of the American Medical Association as well as Editor-in-Chief, AMA Journal of Disaster Medicine and Public Health Preparedness. He completed his undergraduate training at Long Island University in 1963 and

received his MD in 1967 from the Cincinnati College of Medicine. Dr. James performed his internship at Los Angeles County, performed two years of General Surgery training at Dartmouth Affiliated Hospital, and completed a residency in General Preventive Medicine. Dr. James received an MHA from U.S. Army-Baylor University Program in 1974, and DrPH from the UCLA School of Public Health.

Dr. James awards include the Governor's Sterling Award for Performance Excellence Awarded to the Miami-Dade County Health Department (2002), and UCLA Alumni Award for Academic Distinction (1967). Dr. James is a Fellow of the American College of Preventive Medicine, the American College of Physician Executives, and the American College of Physicians. He has also published over 60 abstracts and articles on a variety of subjects.

Dr. James is a retired Brigadier General in the US Army. His military honors include the Award of Army Surgeon General's "A" Professional Designator (1987), Distinguished Service Medal (1995), the Legion of Merit, U.S. Army (3), and the Meritorious Service Medal (4).

Kenneth W. Kizer, M.D., M.P.H., F.A.C.E.P., F.A.C.P.M., F.A.C.O.E.M., F.A.M.T., F.A.A.C.T., F.A.A.M.A., F.A.C.P.E., F.R.P.H., F.R.S.M. (Chairman)

Dr. Kizer is an internationally renowned healthcare thought leader and sought after speaker and consultant. A former practicing emergency physician and medical toxicologist, he has been selected as one of the "100 Most Powerful People in Healthcare" by *Modern Healthcare* magazine several times, and his work has been featured in *Time*, *BusinessWeek*, *Fortune*, *The Wall Street Journal* and *New York Times*, among many other magazines, newspapers and television shows.

Dr. Kizer's professional experience includes positions in both the public and private sectors, including serving as President, CEO and Chairman of Medsphere Systems Corporation; founding president and CEO of the National Quality Forum; Under Secretary for Health in the U.S. Department of Veterans Affairs; Director of the California Department of Health Services; and Director of the Emergency Medical Services Authority for the State of California. He has served on the U.S. Preventive Services Task Force and Chairman of the Board of The California Wellness Foundation, as well as on the governing boards of two managed care companies, several foundations and numerous professional associations and non-profit organizations. He has held senior academic positions at the University of California Davis and the University of Southern California.

Dr. Kizer is board certified in six medical specialties and/or subspecialties, and has authored over 400 original articles, book chapters and other reports. He is a fellow or distinguished fellow of 10 professional societies and a member of the Alpha Omega Alpha National Honor Medical Society, the Delta Omega National Honorary Public Health Society, and the Institute of Medicine of the National Academy of Sciences. He is an honors graduate of Stanford University and UCLA.

Among his many awards are the Award of Excellence, American Public Health Association; Distinguished Service Medal, American Legion; Earnest A. Codman Award, The Joint Commission; Gustav O. Lienhard Medal and Award, Institute of Medicine; Justin Ford Kimball Innovator Award, American Hospital Association; Nathan Davis Award for Outstanding Public Service, American Medical Association; John D. Chase Award for Physician Executive Excellence, Association of Military Surgeons of the United States; Exceptional Service Award, U.S. Department of Veterans Affairs; Rodney T. West Literary Achievement Award, American College of Physician Executives; Special Recognition Award, March of Dimes; and Rear Admiral William S. Parsens Award for Scientific and Technical Progress, Navy League of the United States.

Andrew Mazurek, M.S., M.A., M.B.A.

Mr. Mazurek is currently the Managing Director of Navigant Consulting in Chicago, Illinois. Previously, he has worked at the Metis Advisory Group, Ltd. and Perkins & Will, Inc. He has served as a chief planner and a capital program manager for a hospital system, a principal health planner for a national healthcare facilities design firm, and a principal with a national healthcare facilities planning consultancy. Academically, he holds a Bachelor of Architecture (magna cum laude) from the Illinois Institute of Technology, a Master of Architecture and Urban Planning from Princeton University, a M.S. in Health Services Planning and Design from Columbia University in New York, and a M.B.A. in Healthcare Administration from the University of Chicago.

He is a member of the American Hospital Association, the American College of Healthcare Executives, and the National Council of Architectural Registration Boards (NCARB). Among his numerous achievements include serving as a consultant for projects at academic medical institutions, such as the University of Pittsburgh Medical Center, Cedars Sinai Medical Center, Duke University Medical Center, University of Illinois Medical Center, and the University of Chicago Hospitals and Health System. Additionally, he has consulted for the Intermountain Health Care of Utah, Carilion Health Care of Virginia, Mercy Health Partners of Cincinnati, Iowa Health System of Iowa, and the Oakwood Health System of Michigan. Mr. Mazurek has also played a pivotal role in replacement hospital projects in Israel, Bahrain, and Kuwait.

Dennis S. O'Leary, M.D., F.A.C.P.E., M.A.C.P., F.A.C.H.E.

Dr. O'Leary is President Emeritus of the Joint Commission. Under his leadership, the Joint Commission successfully transformed its accreditation process to focus on actual organization performance in the provision of patient care. This transformation set the stage for the progressive introduction of care-related outcomes and process measures, as well as national patient safety goals, into the accreditation process. Dr. O'Leary also oversaw the introduction of cutting-edge standards related to patient safety, pain management, use of patient restraints, and emergency preparedness. Most recently, he spearheaded the launching of a series of Joint Commission public policy initiatives which have addressed various issues including the nurse staffing crisis, health professions educational reform, health literacy, and the nexus between patient safety and the tort system. O'Leary earned his MD from Cornell University Medical College in New York and his BA from Harvard University in Cambridge, Massachusetts. After two years of internal medicine training at the University of Minnesota Hospital in Minneapolis, he completed his residency and hematology fellowship at Strong Memorial Hospital in Rochester, New York. He is board certified in Internal Medicine and Hematology.

Dr. O'Leary has been active in a variety of professional activities. He served as President and Chairman of the Board of the District of Columbia Medical Society, and was a founding member of the NCA Health Care Coalition. After joining The Joint Commission, he became a Master of the American College of Physicians, as well as an initial Fellow of the American College of Physician Executives, an Honorary Fellow of the American College of Healthcare Executives, an honorary member of the American Dental Association, and a member of the Institute of Medicine of the National Academy of Sciences. In 2000, he was identified by Modern Healthcare as "one of the 25 most influential leaders in health care" during the past quarter century. Dr. O'Leary is also a past winner of the Distinguished Service Awards of the American Medical Association and of the American Health Information Management Association, as well as a recipient of the Joint Commission's Ernest Amory Codman Award.

Charles M. Olson, B.S., B.A.

Mr. Olson is currently Division Chair of the Hospital Project Services Department of Facilities & System Support Services at the Mayo Clinic in Rochester, Minnesota. He is also a member of the Facilities Leadership Team for the Department of Facilities & Systems Support Services as well as Project Manager for Facility Project Services at the Mayo Clinic in Rochester. Mr. Olson has previously held appointments as Vice President for Planning and Development at H&H Associates Inc.; the Director of Design and Construction at Lutheran Health Systems; and Project Architect at Mutchler Twitchell & Lynch in Fargo, North Dakota. As an instructor in the Department of Architecture at North Dakota State University, he instructed a class entitled "Design for the Elderly Market" (1985). Academically, Mr. Olson holds a B.S. in Architecture with a Minor in Construction Management (1975) and a B.A. in Architecture (1977) from North Dakota State University in Fargo, North Dakota.

Mr. Olson is board certified with the American College of Healthcare Architects and the National Council of Architectural Registration Boards. He is also registered with the American Institute of Architects and holds architectural licensure in Minnesota and North Dakota. At the Mayo Clinic, he is a member of the Hospital Administrative Leadership Team; the Infection Control Committee; the Rochester Facilities Committee; the Environmental Health, Safety and Security Subcommittee; the Rochester Administrative Group; the Surgical Facility Committee; the Clinical Practice Committee Space & Remodeling Subcommittee; the Hospital Master Planning Group; and the Hospital Space Coordination Group. Internationally, he has consulted for healthcare systems and private hospitals in Cyprus, Malaysia, Turkey, United Arab Emirates, and Turkey. He has delivered presentations at national and international conferences on topics as diverse as ICU design for the future or Practice of Medicine and the Built Environment at Mayo Clinic.

John Pangrazio, M.A., F.A.I.A., F.A.C.H.A.

Mr. Pangrazio is currently a partner with NBBJ Architecture, Design, and Planning, where he has led the planning and design efforts for numerous university medical centers, private hospitals, children's hospitals, and cancer treatment centers in California, Arizona, and Washington. Previously, he has served as a United States Air Force Commissioned Officer in the Office of the Surgeon General, Medical Construction Liaison Office in San Francisco, California, and Bangkok, Thailand from 1968-1970. Academically, he has a Bachelor of Architecture from California Polytechnic State University (1967) and a Master of Architecture from the University of Washington, Seattle (1971).

Mr. Pangrazio is a member of the American Institute of Architects and has served as President-Elect (2003-2004) and President (2004-2005). As an American Society for Healthcare Engineering (ASHE) member, he has won the Sustainable Design Awards (2002) and was a Vista Awards Jury member (2002). He is also on the Editorial Review Board of the Health Environmental Research & Design Journal. He is NCARRBR certified and is a registered architect in the following states: Washington, Ohio, Missouri, South Dakota, Kentucky, New Jersey, Arizona, Indiana, Hawaii, Idaho, Georgia, Nevada, North Dakota, Michigan, Maryland, California, Texas, Vermont, Colorado, Rhode Island, and West Virginia. For his work with the Clinic Replacement at the McChord Air Force Base, he won the following awards: the United States Air Force, Honor Award for Design Excellence (2002); the Air Mobility Command Design Awards (2000); and the Society for American Military Engineer Design Honorable Mention, Excellence Award (2000). For his work with the Banner Estrella Medical Center in Phoenix, Arizona, he won the Interiors Award, Contracts Magazine (2006); Modern Healthcare, Award of Excellence (2005); Westmarc, Best of the West Award, Service to Communities, Health and Wellness (2005); AIA, Phoenix Chapter, Honor Award, Distinguishable Building Category (2005); IIDA Pacific Northwest Chapter, InAward, Honors Healthcare Category (2004); and Southwest Contractor, Best of 2004 Award (2004). For his involvement with the United States Naval

Hospital in Bremerton, Washington, he won the NAVFAC Design Awards Program from the Department of the Navy, Commander's Award for Design Excellence (2005); the Modern Healthcare Design Award (2003); and the AIA, Seattle Chapter, Merit Award (2002). He has delivered 37 professional presentations and authored over 50 publications.

A. Ray Pentecost III, Dr.P.H., A.I.A., A.C.H.A.

Dr. Pentecost is currently the Vice President and Director of Healthcare Architecture at Clark Nexsen in Norfolk, Virginia, a position he has held since 2003. Previously, he was Chief Executive Officer of The Health Enterprise Group; the Chief Executive Officer of Mid-Atlantic Women's Care PLC.; the Vice President for Practice Management, United Medical Care, P.L.L.C.; the President of Health Environments, Inc.; the President of Gerontological Health Consultants, Inc.; the Vice President of Technology Serving People, Inc.; the Director of Business Development of Gelsomino-Johnson Architects; and the Vice President of Information Design, Inc. Dr. Pentecost has held faculty appointments as a Research Assistant Professor and an Adjunct Assistant Professor in Environmental Sciences at the University of Texas, School of Public Health; a Faculty Associate at the Center for Health Promotion Research and Development; an Adjunct Research Assistant Professor in Community Health Practice at the University of Texas, School of Public Health; a Clinical Assistant Professor, General Instructor at the University of Texas, School of Nursing; a faculty advisor for Student Enrichment at the Huffington Center of Aging in the Baylor College of Medicine; an Adjunct Associate Professor at the University of Houston, College of Architecture; and an Adjunct Professor/Advisor in the Department of Architecture at the School of Engineering and Technology at Hampton University. Academically, Dr. Pentecost has a Bachelor of Architecture Degree from Rice University, College of Architecture (1977); a M.P.H from the University of Texas, School of Public Health (1979); and a Dr.P.H. from the University of Texas, School of Public Health (1982).

Dr. Pentecost is a member of American College of Healthcare Architects; the Texas Society of Architects; the Houston Chapter of the American Institute of Architects; the VISTA Awards Jury, American Society of Healthcare Engineers; and the Virginia Society of Architects. He is on the Dean's Advisory Board at Old Dominion University College of Health Sciences and is a member of the Board of Directors for the Virginia Commonwealth University Health System Authority. Among his numerous recognitions include Best Design and Construction (2007) by the City of Hampton Renaissance Award program; First Place for Healthcare Interior Design Excellence (2008) by State Chapters, American Society of Interior Designers (ASID) and the International Interior Design Association (IIDA); and the Innovation Award (2008) from the National Council for Public-Private Partnerships (NCPPP). Dr. Pentecost has received research support from the following organizations: the American Hospital Association-American Institute of Architects; Texas Department of Labor and Standards; The University of Houston; American Institute of Architects; Harris County Hospital District; and the Harris County Medical Society. Dr. Pentecost has authored over 42 publications. He has delivered 19 presentations at international colloquiums and conferences, 28 presentations to state audiences, and 20 presentations to academic audiences.

Orlando Portale, M.A.

Mr. Portale is currently the Chief Technology and Innovation Officer for Palomar Pomerado Health in San Diego, California, a position he has held since 2005. Previously, he was President of Portale & Company Inc., the General Manager for the Global Health Industry Business Development for Sun Microystems, the Executive Director of Mergers and Acquisitions & Technology Integration Office, the Senior Advisor for Commercial and Government Health at Science Applications International Corporation (SAIC), and the Department Head for Applied Clinical Informatics at the University of Michigan Health System.

Academically, Mr. Portale holds a Master of Advanced Studies in Healthcare Leadership from the University of California San Diego, School of Medicine.

Mr. Portale is a member of the following professional organizations: the American Health Information Community Successor, Brookings Institution, Business Sustainability Committee; the American Hospital Association Technical Advisory Board; the California Hospital Association, Conference Faculty; the Cisco Healthcare Executive Advisory Board; the IBM Healthcare and Life Sciences Executive Advisory Board; the Society of Laparoendoscopic Surgeons, Conference Faculty; and the U.S. Department of Veterans Affairs, Blue Ribbon Committee on the Future of Healthcare Technology, NIBS. Dr. Portale has delivered presentations for numerous conferences including: the California Hospital Association, the Society of Laparoendoscopic Surgeons, the U.S. Department of Veterans Affairs, the Blue Ribbon Committee Meeting, Wireless Healthcare and Life Sciences Conference, Cisco, StorageTek Healthcare, CalRHIO, HIMSS, the 13th Annual Symposium on Computer Applications in Medical Care, the Omnis Group, and the IBM Health Industry Executive.

Stephen C. Schimpff, M.D.

Dr. Schimpff is currently the Director of Mid-Atlantic Bio-Agro Defense Consortium at the University of Maryland, Baltimore and University of Maryland, College Park. He is also the Research Professor of Public Policy at the University of Maryland, College Park and Professor of Oncology and Pharmacology at the University of Maryland, School of Medicine in Baltimore, Maryland. Previously, he has held appointments as the Chief Executive Officer for the University of Maryland Medical Center; the Executive Vice President of the University of Maryland Medical System; the Director of the University of Maryland Cancer Center at the University of Maryland School of Medicine and Medical System; the Head for the Division of Infectious Diseases in the Department of Medicine at the University of Maryland School of Medicine; the Head for the Section of Infection Research, Baltimore Cancer Research Program at the National Cancer Institute; the Senior Investigator for the Baltimore Cancer Research Program at the National Cancer Institute; and the Acting Head of the Medical Service with the Baltimore Cancer Research Program at the National Cancer Institute. Academically, Dr. Schimpff holds a B.A. from Rutgers University (1963) where he received the Van Der Poole Award for Excellence in Medicinal Chemistry and a MD from Yale Medical School (1967) where he was inducted into the Alpha Omega Alpha honor society.

Dr. Schimpff is a member of several professional societies including: the EORTC's International Antimicrobial Therapy Project Group of which he is a co-founder; the Multinational Association of Supportive Care in Cancer of which he is a founder; the American College of Physicians; the American Society of Clinical Oncology; the Infectious Diseases Society of America; the American Association of Cancer Research; the University Health System Consortium; the Association of American Medical Colleges; the American Society of Clinical Oncology; and the National Board of Medical Examiners. Dr. Schimpff was also the chair of the Board of Governors of the National Institutes of Health's Warren G. Magnuson Clinical Center, a member of the Board's Executive Committee, and chair of the Finance Working Group. Dr. Schimpff has published over 200 scientific articles, reviews, and book chapters and has edited three textbooks, including Comprehensive Textbook of Oncology. He has also written a book for general audiences entitled The Future of Medicine: Megatrends in Healthcare That Will Affect Your Quality of Life, and he is working on a sequel, which will focus on the impact of healthcare reform on the delivery of healthcare.

Philip E. Tobey, F.A.I.A., F.A.C.H.A.

Mr. Tobey is currently Senior Vice President and National Healthcare Leader of SmithGroup. Prior to entering private practice, he served as an officer with the U.S. Air Force's Office of the Surgeon General and held review responsibility for medical projects worldwide. A registered architect and interior designer, Mr. Tobey received his Bachelor of Architecture degree from the Rhode Island School of Design and his Master of Architecture degree from Harvard University.

Mr. Tobey is a Fellow of the American Institute of Architects (AIA) and Fellow and Founding Member of the American College of Healthcare Architects. He is a board member of the AIA Academy on Architecture for Health, an advisor to the National Institutes of Health, and to Health Systems 2020, a consortium studying the future of health care. A prolific lecturer, Mr. Tobey has addressed many national and regional organizations concerning issues and trends that affect health care. Notable clients include the National Institutes of Health, numerous academic medical centers, all branches of services of the Department of Defense (including the National Intrepid Center of Excellence for Traumatic Brain Injury), major health systems (including Kaiser Permanente, Sutter, and Universal), and many regional and community healthcare providers. His work has been published in many regional and national periodicals.

Patient Representative

Tammy Duckworth, M.A.

Ms. Duckworth is the Assistant Secretary for Public and Intergovernmental Affairs in the Department of Veterans Affairs, a Major in the Illinois Army National Guard and a decorated veteran who lost both legs and partial use of one arm during combat in Operation Iraqi Freedom. She has received a number of decorations for her military service, including the Purple Heart and Air Medal.

Since her recovery at Walter Reed Army Medical Center, Duckworth has been a prominent veterans' advocate. In 2007, she received the Hubert H. Humphrey Civil Rights Award and was named the 2008 Disabled Veteran of the Year by the Disabled American Veterans. She was the AMVETS' Silver Helmet Recipient for 2009.

Duckworth previously served as a manager for Rotary International, supervising employees in Tokyo, New Delhi, Sydney, Seoul and Chicago. She speaks fluent Thai and Indonesian and has published on the health risks of environmental radon and lung cancer. Her doctoral studies on the International Political Economy of Southeast Asia were interrupted by her deployment to Iraq and subsequent injury. In 2008, she completed the Chicago Marathon, fulfilling a promise made at Walter Reed. She has also resumed flying and recently received a Statement of Demonstrated Ability from the FAA certifying her to fly aircraft without the use of assistive devices.

APPENDIX F

DEPUTY SECRETARY OF DEFENSE
1010 DEFENSE PENTAGON
WASHINGTON, DC 20301-1010

SEP 12 2007

MEMORANDUM FOR SECRETARIES OF THE MILITARY DEPARTMENTS
CHAIRMAN OF THE JOINT CHIEFS OF STAFF
UNDER SECRETARIES OF DEFENSE
CHIEFS OF SERVICES
COMMANDERS OF THE COMBATANT COMMANDS
ASSISTANT SECRETARIES OF DEFENSE
GENERAL COUNSEL OF THE DEPARTMENT OF DEFENSE
DIRECTOR, ADMINISTRATION AND MANAGEMENT
DIRECTOR, PROGRAM ANALYSIS AND EVALUATION
DIRECTORS OF THE DEFENSE AGENCIES

SUBJECT: Establishing Authority for Joint Task Force - National Capital Region/Medical (JTF CapMed) and JTF CapMed Transition Team (Unclassified)

The 2006 Quadrennial Defense Review provided strategies to improve the management, performance, and efficiency of the Military Health System (MHS). These strategies included elimination of redundant command structures, alignment of resource streams, and provision of clear lines of authority and responsibility for local decision making.

Effective 14 Sep 07, I am establishing JTF CapMed under the command of RADM John Mateczun, MC, USN, as delineated in Annex A and B. JTF CapMed will (1) ensure the effective and efficient delivery of world-class military healthcare within the NCR Tricare Sub-region (JOA) using all available military healthcare resources within this JOA, and (2) oversee the consolidation and realignment of military healthcare within the JOA in accordance with the Base Realignment and Closure Act (BRAC) Business Plan 169 and 173E. JTF CapMed will also conduct such other missions as may be assigned to improve the management, performance, and efficiency of the MHS.

Upon receipt of this memorandum, the current NCR Multiple Service Market Office (MSMO) and the NCR Medical BRAC Integration Office will merge to form the Transitional Element (TE) of JTF CapMed. RADM Mateczun will establish the Joint Table of Distribution (JTD) for the JTF Headquarters. Services will provide additional or alternate staffing as requested by the transition team or JTF.

I have tasked the Under Secretary of Defense for Personnel and Readiness and Vice Chairman, Joint Staff to oversee this effort within the Department. Tab A provides authorities, guidance, and immediate tasks to establish JTF CapMed. Tab B identifies the military units assigned to JTF CapMed.

Attachments:
As stated

TAB A

Final as of Signature Date

AUTHORITIES AND GUIDANCE FOR ESTABLISHING
JOINT TASK FORCE NATIONAL CAPITOL REGION MEDICAL (JTF CapMed)

1. **ESTABLISHMENT**. JTF CapMed will achieve Initial Operational Capable (IOC) not later than 1 October 2007 and Fully Operational Capable (FOC) not later than 30 September 2008.

a. JTF CapMed will be a fully functional Standing Joint Task Force reporting directly to the Secretary of Defense (SECDEF) through the Deputy Secretary of Defense (DEPSECDEF).

b. The commander of JTF CapMed will be an O-9 Medical Department Officer vested with appropriate authorities and reporting relationships as specified below. This position will be a position of importance and responsibility under section 601 of Title 10, United States Code.

c. The Commander of JTF CapMed will act as the senior medical officer in the JOA with responsibility for the effective and efficient delivery of world-class military healthcare in the NCR. The Commander will organize staff and reporting organizations to execute his/her mission. The Commander shall have the authority to compile budgets for the units assigned to JTF CapMed and distribute and direct resources as needed within the JOA to accomplish mission objectives. The Commander shall directly supervise the JTF Component Commanders within the JOA. The Commander shall forward risks and issues to the Co-Chairs of the Overarching Integrated Product Team for the Transition of Medical Activities in the National Capital Region (NCR OIPT) as necessary to ensure the effective execution of the JTF CapMed mission.

2. **MISSIONS AND RELATED AUTHORITIES**. The mission and authorities of JTF CapMed are as follows:

a. Oversee, manage, and direct all health care delivery by military medical units within the JOA and ensure the military medical readiness of personnel in the JOA.

b. Oversee, manage, and distribute resources to military health care assets within the JOA.

c. Develop a Joint NCR transition plan and oversee BRAC Business Plan 169 and 173E implementation and related military construction (MILCON) projects.

d. Coordinate the scheduling and funding of clinical and non-clinical work with Services, MHS BRAC Program Integration Office, US Army Corps of Engineers and NAVFAC.

e. Develop and maintain interagency and private partnerships.

f. Other tasks as assigned.

3. **JTF CAPMED LOCATION.** The Commander, National Naval Medical Center, Bethesda, Maryland shall provide or arrange for the administrative and logistic support of the headquarters of JTF CapMed.

4. **RESOURCES AND PERSONNEL.** JTF CapMed will be resourced by the Commands, Services, and MHS to ensure the successful implementation of its assigned missions, as indicated below.

a. The Commander, JTF CapMed will establish the JTD for the JTF Headquarters (HQ). Initial joint staffing will be provided by MSMO and BRAC Medical Integration Office staff. Services will take immediate steps to identify and assign military personnel to fill the JTF CapMed Headquarters Joint Table of Distribution (JTD) to meet mission requirements; Services will fill these positions prior to funding the billets.

b. The Commander, JTF CapMed will have Tactical Control (TACON) of the military medical units assigned or attached to the JTF (TAB B). The Services will retain operational and administrative control of the personnel assigned to JTF CapMed. The Services may assign and reassign personnel within the JTF CapMed JOA in support of their military medical units.

c. Operational and Maintenance funding. ASD (HA) shall identify and provide funds to support the HQ Staff of JTF CapMed and provide resources for the delivery of military health care within the JOA.

TAB B

JTF CapMed Military Medical Units

Army:

Walter Reed Army Medical Center, Washington, DC

Dunham HC, Carlisle, PA

Barquist AHC, FT Detrick, MD

Kirk AHC, Aberdeen Proving Ground, MD

Kimbrough AHC, FT Mead, MD

Fairfax FHC, Fairfax, VA

Woodbridge FHC, Woodbridge, VA

Andrew/Rader FHC, FT Meyer, VA

DeWitt ACH, FT Belvoir, VA

Pentagon HC, Arlington, VA

Air Force:

Malcolm Grow MC, Andrews AFB, MD

Bolling AFB 579 HC, Washington, DC

11th MDG Flight Medicine Clinic, Pentagon

Navy:

National Naval Medical Center, Bethesda, MD

NHC Quantico, Quantico, VA

Pax River HC, Patuxent River, MD

NMC Naval Academy, Annapolis, MD

NHC USUHS, Bethesda, MD

NHC Carderock, Anacostia, MD

NHC/DC Lakehurst, Lakehurst, NJ

NHC/DC NAF Washington, DC

NHC/DC Willow Grove, PA

NHC Mechanicsburg, PA

NHC/DC Dahlgren, VA

NHC/DC Indian Head, MD

NHC NRL, Washington, DC

Tri-Serv Dental Clinic, Pentagon

NHC Philadelphia Naval Bus Ctr, PA

NHC/DC Washington Navy Yard, DC

NHC/DC Earle, NJ

NHC/DC Sugar Grove, WV

APPENDIX G

UNDER SECRETARY OF DEFENSE
4000 DEFENSE PENTAGON
WASHINGTON, DC 20301-4000

PERSONNEL AND READINESS

750

ACTION MEMO

FOR: DEPUTY SECRETARY OF DEFENSE

FROM: David S. C. Chu, Under Secretary of Defense (Personnel and Readiness)

SUBJECT: Civilian and Military Personnel Management Structures for the Joint Task Force National Capital Region – Medical (JTF-CapMed)

- This Action Memo addresses three issues concerning JTF-CapMed: (1) approval of a civilian personnel staffing model; (2) approval of a military personnel staffing model; and (3) deferral of an ultimate governance decision.

- Approval of Civilian Personnel Staffing Model: On 20 October, Dr. Chu, Mr. Arny, and Dr. Casscells met with you to seek your approval of our NCR OIPT Co-chairs' recommendation to adopt a DoD Civilian Model for NCR medical facilities. You approved the NCR OIPT Co-chairs' recommendation. This recommendation:

  - Is a realignment of resources, including transfer of civilian personnel authorizations, and a delegation of civilian personnel authorities to the Commander of the JTF-CapMed. This departure from current practice applicable to Joint Commands, where civilian personnel management is through Military Department support arrangements, will strengthen joint management of the CapMed organization.

  - Incorporates the policy of "guaranteed" placement of current civilian employees in the future CapMed organization. In this context, guaranteed placement means best efforts within applicable regulations to achieve placement in new positions, which efforts are expected to be fully effective.

- Approval of a Military Personnel Staffing Model: On 24 October, the Joint Staff Surgeon briefed the NCR OIPT on potential courses of action for military personnel manning of Walter Reed National Military Medical Center (WRNMMC) and Fort Belvoir Community Hospital (FBCH) post-BRAC. The recommendation by the NCR OIPT Co-Chairs and Joint Chiefs is the establishment of Joint Commands at WRNMMC and FBCH. This recommendation:

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SD CA		DSD SA	
SD SMA		DSD SMA	
SD MA		DSD MA	
ESA		DSD CA	
ES			
ESR		ESD	

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- Continues the JTF-CapMed as a joint military command, establishing subordinate joint commands for WRNMMC and FBCH.
- Establishes all billets at WRNMMC and FBCH as JOINT and documented on a Joint Table of Distribution.

- **Deferral of an Ultimate Governance Decision:** The issue of the ultimate organizational governance of the JTF-CapMed – including consideration of potential models for organization as a defense agency or field activity or as a subordinate command under a Combatant Commander – was considered but not discussed by the NCR OIPT during the Joint Staff briefing of 24 October. However, this very important issue should be deferred to allow the new Administration to consider it. In the interim, the Commander, JTF-CapMed will continue to directly report to the Deputy Secretary of Defense.

- Attached at TAB A is the memo from the OIPT Co-chairs and the briefing slides from the 20 October meeting with you on civilian personnel (which you previously approved). Briefing slides from the 24 October OIPT are at TAB B.

RECOMMENDATION: That the Deputy Secretary of Defense: 1) confirm approval of a DoD civilian personnel model; 2) approve the establishment of Joint Commands at WRNMMC and FBCH; and 3) defer a decision on ultimate organizational governance of the JTF-CapMed.

Approve: _____ Disapprove: _____

1-15-09

COORDINATION: TAB C

Attachments:
As stated

Regarding deferral of an Ultimate Governance Decision: These deliberations need to continue and recommendations brought forth expeditiously

DEC 2 3 2008

Prepared by: S. Ward Casscells, MD, ASD (HA), 703-697-2111, Livelink# 159424

1-15-09

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