To:LeDuc, James W.[jwleduc@UTMB.EDU]From:David Franz[davidrfranz@gmail.com]Sent:Tue 7/30/2019 4:34:01 PM (UTC-05:00)Subject:Re: follow upRIID Consultants Report Final.pdfRIID CoC Jul2019.pdf

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Great! Thanks Jim, Dale might remember me. We served on something together. DTRA TRAC? Early NSABB? I can't remember, but I know I enjoyed working with him. The 2014 report is attached. Last page lists the consultants involved. I've also attached part of the change of command brochure welcoming Col Cox from last week. Thanks to both of you for your support to RIID...or whatever it becomes, dave

David R. Franz Gettysburg, PA (240) 674-0797

On Jul 30, 2019, at 3:14 PM, LeDuc, James W. < iwleduc@UTMB.EDU > wrote:

Just FYI on Fort Detrick. I like your idea about utilization of the new USAMRIID.

From: Klein, Dale <<u>dklein@utsystem.edu</u>> Sent: Tuesday, July 30, 2019 1:45 PM To: LeDuc, James W. <<u>iwleduc@UTMB.EDU</u>> Subject: RE: follow up

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Jim -- I met with the AFC yesterday. There is a new medical commander, Mike Talley. He is at Ft. D "as we speak." When he arrives in Austin soon, I am supposed to meet him. Would be good to leverage UTS capabilities to make USAMRIID great again (to use a famous tag line �) Dale

From: LeDuc, James W. <<u>iwleduc@UTMB.EDU</u>> Sent: Tuesday, July 30, 2019 1:56 PM To: Klein, Dale E <<u>dale.klein@mail.utexas.edu</u>> Subject: follow up

External Mail Hi Dale,

It was nice to see you last week in DC and to catch up a bit. I hope your weekend harvest went well-my back is sore just thinking of all the work that must have been involved!

I wanted to follow up briefly on the Futures Command discussion. I had a chance to chat with a friend and former commander of USAMRIID and it sounds like the situation there is deteriorating rapidly. When I served there from 1981-1992, it was a scientific powerhouse and very well respected around the world. For the past 20 years or so it has steadily declined and is now facing very serious challenges. In addition, construction is about done on the new >\$1B laboratory and how that will be managed/staffed going forward will require new thinking and innovation. I'm wondering if there is an opportunity for UTS to help get the lab back on track? I'd love to help out.

Best wishes,

Jim

James W. Le Duc, Ph.D. Director Galveston National Laboratory University of Texas Medical Branch Galveston, TX 77555-0610 (t) 409-266-6500 (f) 409-266-6810 (m) 409-789-2012

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USAMRIID Consultancy on Strategic Challenges 11-12 June 2014

Executive Summary: After a brief look at USAMRIID, a group of individuals dedicated to the wellbeing of the nation recommend the following:

That the commander:

- 1) **Rework the Mission and Vision of the institute**: USAMRIID is uniquely focused on the warfighter. The *mission statement* should reflect the 21st century threat and the research program must align with the mission. Furthermore, the mission statement must appear relevant at the highest levels of the DoD. The concept that USAMRIID is more an "insurance policy" to deal with the unknown and unexpected than a "factory" to produce medical "things" for the soldier should be understood by all.
- 2) Make USAMRIID a place people want to work: Like an almost-perfect storm, several factors have contributed to cultural changes at the institute over the past 10 to 15 years. "The new facility will be a magnet for researchers but it will be the program that attracts and secures top talent to USAMRIID."
- 3) **Streamline the business model and administrative support to science**: "Science needs to be nimble. Discoveries today can influence the experiments that need to be carried out tomorrow. If procurement takes weeks to months or late-inthe-year funding drives execution the program will always be behind."
- 4) **Develop and execute a 'Campaign Plan' to revitalize the institute:** Craft a message that the highest level leaders can understand; 'market' the program; educate and foster advocacy and collaboration across DoD, the interagency, academe and industry.

That the Department of Defense/Army (EA):

- 1) **Decide what the DoD should expect of USAMRIID**: As the threat has become more diffuse and other departments and agencies have become involved, *USAMRIID must focus* on what it can do best and collaborate across the interagency. A test and evaluation (T&E) focus is easy to understand and articulate, but it requires different types of personnel than those needed to rebuild the subject matter expert (SME) base needed to respond to the unknown.
- 2) **Carefully evaluate the medical products needed for today's threat:** Today's biological threat lends itself poorly to a procurement model and it's complexities make traditional end-user driven requirements unrealistic. Furthermore, the intelligence community is limited in its ability to identify specific threats.
- 3) **Realign chain of command and research program management:** The dual chain of command model instituted in ca. 2003 is not working; neither MRMC/OTSG nor DTRA/ATL are true advocates for the institute. Furthermore, there has been a lack of management continuity above USAMRIID.
- 4) **Reevaluate the OTSG Leadership model:** The current Command Select List model results in 1) a commander with limited technical and historical background to advocate for the laboratory and the program and 2) a second order negative impact on junior officer-scientists, knowing that the likelihood of their being the USAMRIID commander one day is vanishingly small.

Introduction

On 11 and 12 June 2014, individual consultants with broad experience in life sciences or the military (see p. 10) met at USAMRIID to consider the state of the institute. A read-ahead package mailed out two weeks before helped provide a common frame of reference. Key USAMRIID staff presented short briefs and engaged in subsequent discussions; the group also toured the new building under construction. COL (Ret) David Franz and COL Andrea Stahl coordinated the meeting. [Several direct quotes from individuals in the group are italicized; they may or may not represent the views of other members.]

Background

The consultants were not compensated, other than for travel and lodging costs in the case of those from outside the Frederick, Baltimore, DC area. The Chatham House rule was followed and the meeting was not organized under FACA guidelines [not technically a consensus report]. Read-aheads, onsite presentations and group discussion during the meeting were generally aligned around a series of strategic challenges facing the institute today. Key assumptions throughout the meeting included: 1) the nature of the biological threat has changed post-cold war, 2) there is an expanded network of high containment labs and scientists working with select agents post 2002, 3) the new USAMRIID building scheduled for completion in 2017 will have new capabilities and new costs and 4) DoD- and national life-sciences budgets will likely shrink in real dollars in the out-years.

A long and proud heritage: USAMRIID has been there for the nation for almost fifty years. When threat calculations were simpler and organizational structures and leadership followed traditional military principles, it was a sought-after assignment with a vibrant laboratory and---almost family---culture. That legacy lives on through highly qualified and experienced scientists and clinicians in other organizations throughout the national enterprise, many of whom trained and worked at USAMRIID.

The post-cold war threat to our military force and the nation has changed significantly. The old model under which USAMRIID thrived and served the nation so well appears to no longer be appropriate in the face of 21st century threats. The assembled individuals considered today's threat as well as both internal and external variables and stressors in developing a list of recommendations for consideration by the Commander and by the Department of Defense.

Recommendations for the Commander USAMRIID

Recommendation 1: Rework the Mission and Vision.

The stated mission of USARMIID is unique among all of the laboratories working on biological agents: *To protect the warfighter from biological threats. Be prepared to investigate disease outbreaks or threats to public health.* This mission statement

generally parallels that of program-parent organization DTRA. USAMRIID mission subbullet statements are 1) Emphasis on getting products to the warfighter, 2) Surge to a contingency and 3) Train and educate. Of these, the 'emphasis on products to the warfighter' bullet is less relevant than it was in the past.

To a great extent, USARMIID and the management above it have not transitioned mission and focus with the changing threat landscape. While senior leadership at AT&L has recently endorsed the 'capabilities' model, there are inertial forces throughout the system, including within USAMRIID, which make the transition from products to capabilities difficult. The Emphasis on getting 'products to the warfighter' 1) dominates the thinking of both DTRA managers and USAMRIID PIs, 2) flies in the face of preparation for unknown vs. the better known threats of the past and 3) states a responsibility (products to the warfighter) over which the institute has little or no authority or control. If the DoD needs to respond quickly to an unknown threat it needs SMEs; if developing products for the force is a means to that end, it may be helpful. If 'products to the warfighter' is the 'end', and they are developed in the context of the way USAMRIID programs are currently managed by DTRA, the SME base at USAMRIID will continue to erode. The focus on "products to the warfighter" is likely a function of the Joint Requirements Office (JRO) as well as legacy threats, legacy programs and legacy expertise. The commander, USAMRIID must help refocus resources and thinking on the 21st century.

The *mission statement* should reflect the 21st century threat and the research program must align with the mission. Furthermore, "...*the mission statement must be relevant at the highest levels of the DoD.*" For example, one might consider a statement more like, *"Respond to the biological defense needs of the warfighter and help prevent the Nation from being surprised by new biological agents and threats".* The concept that USAMRIID is more an "insurance policy" to deal with the unknown and unexpected than a "factory" to produce medical "things" for the soldier should be understood by all. There should be a clear understanding that USAMRIID is 1) working to clarify and support the needs of the combatant commands and 2) collaborating technically across government, industry and academia. Decision makers MUST understand what USARMIID does, and USAMRIID must do it well.

It is critical to recognize that the current command and control system does not work for a research organization where science is the primary mission. Scientific organizations are based on scientific talent. USAMRIID has a handful of senior researchers who are world-class experts in their fields. Rejuvenation of the scientific talent pipeline is critical to ensure that a scientific organization remains current and is practicing the best science. USAMRIID has not been able to attract and retain quality scientific talent for some time. "With the new laboratories opening in 2017, the investment in these facilities will be wasted if there is not a comparable investment in talent. The new facility will be a magnet for researchers but it will be the program that attracts and secures top talent to USAMRIID." The program should be based on a focused mission. Equally important, particularly internally, is the *vision statement* for the organization. Where does the institute want to be in 10-20 years? A vision statement might read something like: *"The premier organization in the world for research and support to warfighter needs in biological defense. A cost efficient organization staffed by the highest level, globally known experts and dedicated to ensuring that we protect today, tomorrow and in the future against biological agent threats."* Without this kind of focus---'on the wall' and in the hearts and minds of the leadership---it will be difficult to recruit and retain the next generation of scientists and staff.

Under the mission and vision should be a functional, living *strategic plan* [reflecting and linked to higher level DoD strategic plans], reviewed every couple of years, updated and resourced. This document would be internal to the organization, but shared with those commands and entities that influence USARMIID's mission guidance and resources.

Recommendation 2: Make USAMRIID a place people want to work.

The consultants were briefed on workforce challenges, the Workforce Survey of 2009 and Exit Surveys from 2009-present. Like an almost-perfect storm, several factors appear to have contributed to cultural changes at the institute over the past 10 to 15 years: 1) The move from a traditional laboratory model toward a contract research organization (CRO) model has reduced unit cohesiveness and teamwork within the institute. 2) The institute's association with the 'anthrax letters' of 2001 and the suicide death of Dr. Bruce Ivins have probably altered the public's perception of USAMRIID and the way the people of USAMRIID perceive themselves. 3) The heavy regulatory burden (e.g. AR 50-1) and oversight following the 9-11 attacks and the anthrax letters has diverted both funding and human resources from the research mission. (There are inspectors in the building 90-120 days per year; 31 inspectors from the CDC and the DAIG were in the building for two weeks at the time the consultants visited) 4) The dual chain of command and separation of responsibility and authority have degraded leadership and unit cohesiveness. 5) A dramatic increase in personnel and funding for biological defense research across the national enterprise beginning in 2002, followed by more recent reductions in funding, may have lead to a feeling among the staff that they are entering a period of austerity.

The dual chain of command model instituted in ca. 2003 had another important result. Under this structure, the highest-level advocate for the institute is the commander. "It appears that this dilemma is either not understood in the Army personnel system or USAMRIID is not seen as a priority command in the grand scale of leadership positions for the future. USAMRIID must do the things they can control to foster their identity and prove their relevance in the future".

The institute's leadership must have the tools and the desire to influence the health of the culture. It is clear from the surveys that there is work to be done by 'leaders' at all levels within the institute. Leadership can improve 'trust' between individuals and throughout the organization; a community of trust is a more efficient and effective community. A research institute, with its necessary *long-view* is much different than a

hospital or even a clinical lab where trained individuals are much more easily and effectively interchanged within a network of entities.

"Leading" the institute out of its current cultural doldrums is more easily said than done. The current method of selecting USAMRIID commanders almost assures that the commander will have exceptional military leadership characteristics and broad experience. It also almost assures that the commander will have very little experience in running a scientific organization, limited credibility with scientists and not enough time between the time he or she 'understands' the complex organization and the science well enough to be an ambassador for the institute and the time he or she is reassigned. If this system of selecting and utilizing commanders remains in place, the consultants believe many of the cultural difficulties will remain.

Recommendation 3: Streamline the business model and administrative support to science.

Total funding for USARMIID currently comes from 5-6 sources within DoD (83%) or 'work for others'¹ (17%). Core² DoD research funding comes from DTRA for biodefense (33%) and MRMC for the infectious disease research program (1%). Current DTRA biodefense funding is ca. \$52M, of which 46% is dedicated to G&A. There appear to be several major inefficiencies in the business model: 1) funding is often received late in the FY, 2) indirect costs (G&A) appear to be excessive, 3) procurement of equipment and even some reagents for research is so slow that it probably significantly inhibits progress and clearly frustrates and even demoralizes scientists, and 4) program management lacks human and technical continuity. While the group was not able to evaluate the organization in great depth it quickly became clear that there might be an issue with overall organizational balance ('tooth to tail') partially because of the safety/security/ surety/quality personnel overhead required, but also as a result of incremental creep in staffing by legacy management of personnel to budget. Specific recommendations in this broader category include:

- 1) Focus the mission and make hard choices to align the enterprise with mission and vision. Remember; USAMRIID can't do it all.
- 2) The institute is required to use the complex GFEBS accounting system, like the rest of the Army, for funds management and purchasing. That system is not designed for an RDTE organization. Consider communicating with other RDTE organizations which are using the GFEBS operating system to compare notes and possibly even build a case for relief from the most poorly fitting parts.
- Look for novel ways to reduce procurement time delays and the ability to expend funding---which is received late in the FY---as efficiently as possible.
 "Science needs to be nimble. Discoveries today can influence the experiments that"

¹ Contract or grant funds won when PIs write proposals to the National Institutes of Health or other life sciences funding agencies.

² Technically, only part of this funding is 'core' in the sense that the commander controls it.

need to be carried out tomorrow. If procurement takes weeks or months, the program will always be behind." A 'Henry M Jackson Foundation' model or something similar should be considered; ideally one that would allow the command to maintain control over the logistics, the personnel hired and the research.

- 4) Take a serious look at G&A. This is an area where a DoD biological defense laboratory would seem to hold an advantage over others; uniformed personnel salaries, for example, are not included. However, it is likely that the additional burdens of surety and security systems imposed on USARMIID have made costs higher in many cases than other CRO laboratories. Are there efficiencies to be found? Working hard to reduce the G&A costs, particularly with the new agreement with DTRA authorizing the up front payment of 46% of DTRA funding (for G&A), may free up funds for research.
- 5) The new building, scheduled to open in 2017, will be an extraordinary opportunity to advance the nation's biodefense capabilities. The facility will only be able to realize its full potential if there exists a culture of collaboration between all stakeholders interested in protecting the warfighter and the American people from biological threats.

Recommendation 4: Develop and execute a 'Campaign Plan'.

At this critical time for USAMRIID, the command team, led by the commander, must develop a strategy to assure the survival of the institute. The focus of the plan is outreach, both within DoD and to others in the biodefense and life sciences community.

Begin with an "Intelligence Preparation of the Battlefield"

- 1) Who can influence mission or resources? MEDCOM/OTSG, MRMC, the Combatant Commands (particularly SOCOM and PACOM), TRADOC Futures Center, The Joint Requirements Office, Department of Army, OSD (Policy, AT&L and P&R), DARPA, Congress (Maryland Senators and representatives), the IC, particularly DIA and NCMI. Is there an individual in these offices who understands the importance of the institute or is interested in the complexities of biological defense for the force or the nation?
- 2) With whom can USAMRIID set up synergistic collaborations...particularly thinking about the unfunded portion of the new facility? The National Interagency Confederation for Biological Research (NICBR), Maryland Life Sciences, Maryland universities, Maryland biotech companies, pharma, other life sciences industry, HHS, CDC, USDA, USAID, WHO, FAO, OIE are possible collaborators. Positive working relationships with outside organizations will help spread the word, rebuild USARMIID's credibility and offer career development opportunities for its scientists.
- 3) *Who is the messenger?* USAMRIID will need a strong and vocal advocate to lead the campaign. It will also need a system that ensures Institute level advocacy will continue despite frequently changing commanders. The most likely

candidate to lead the campaign may be the yet-to-be hired Science Director...a DB-5 employee who may or may not face a significant learning curve.

4) What is USAMRIID's message? Recommendation 1 above, the mission and vision should be the foundation of the message. The specific S&T needs and capabilities to support the warfighter and the nation must be carefully layered in a way that can be understood and appreciated at ALL levels. Saying we "make products [particularly vaccines] for the soldier" is neither helpful nor strategic in today's environment. Marketing the new building and capabilities will be necessary, but not sufficient. It might be worth reading the history of Southwest Airlines, or of Starbucks, after they initially overextended the company with too many stores and then successfully regrouped. Throughout the campaign, USAMRIID must be responsive to the core funder, JSTO, but it can't afford to be dependent on one source of funding, particularly one that is not an advocate. Institute leadership must communicate and team with IRO, ISTO and IPEO and the regional command surgeons. Finally, consider looking to other DoD labs like the Naval Research Lab (NRL), which has been successful in maintaining quality and attracting both funding and expertise through both rich and lean times within the DoD.

Recommendations for Department of Defense Leadership

Recommendation 1: Decide what the DoD should expect of USAMRIID.

Twenty years ago, the focus of USAMRIID's mission was to conduct basic and preclinical research in support of the development of a relatively small number (10-12) vaccines for the force, to be used prophylactically before a conflict thought likely to occur with the Soviet Union in Europe. The institute's organizational structure was based on research divisions aligned to agent class (bacteria, virus and toxin) plus a medical diagnostics group and a clinical medical group (for education and clinical trials). Today, the threat is more diffuse and less well understood.

The industrial scale weapons agent production facilities of the former Soviet Union and even the more modest capabilities found by UNSCOM in Iraq appear to have been replaced by small footprint, dual-use offensive capabilities that might be found in a few large and medium nation states. Threat agents that might be used by states or their surrogates today, or more crudely developed by subnational actors, might include anything from traditional ones to those that blur the line between chemistry and biology or even those modified through 'gain of function' techniques. Targets may be American citizens or the force, at home or on a distant battlefield. Special operations forces or sub-national groups or individuals may deliver them. Unlike the case of chemical agents, current environmental warning systems will not support "detect to warn" for the use of physical protective measures. Finally, the specific 'threat list' may have increased several fold. Because prophylaxis for 'biological agents' (traditional vaccines) requires great specificity and a period of at least weeks before protection is achieved, the era of vaccines for the force, one of USARMIID's greatest historic strengths, is essentially over. The institute "can no longer do everything well' with regard to medical biological defense. As the threat has become more diffuse and other departments and agencies have become involved, "USAMRIID must focus" on what it can do best and collaborate across the interagency. The DoD has assigned USAMRIID a T&E mission; this mission alone will not support rebuilding the SME base needed to prepare for the unknown. Simply stated, a T&E mission may draw a strong support staff and build expertise in advanced development, commercialization and procurement, while an S&T mission---- and taking every opportunity to participate with public health agencies on outbreak response globally for example--- will build expertise and human networks that are needed to deal with the unknown biological attack on the force or the nation.

Recommendation 2: Carefully evaluate the medical products needed for today's threat.

DoD is a procurement culture. Traditionally, the end-users have the greatest influence on establishing requirements. Service labs, academia and industry conduct the research and development; DoD conducts most of the T&E and the services procure the materiel needed for the force. Today's biological threat lends itself poorly to a procurement model and it's complexities make end-user driven requirements unrealistic. Furthermore, the intelligence task is difficult. What vaccines should we produce [at a cost of \$500M – \$700M and 10 – 15 years in RDT&E]...and whom should we immunize...when? Antiviral and antibacterial drugs might be of significant value in protecting the force, but antivirals are dribbling from even the greater global antimicrobial pipeline slowly, and we are actually losing ground globally in the battle against bacterial drug resistance. The bright spot technically is diagnostics, where the advent of molecular biology and genomics has essentially taken the challenge of 'agent identification and characterization' off the table. In the past, USAMRIID was the first of two go-to places in the nation for agent identification and characterization. Today it can be done in hundreds of places; furthermore USAMRIID is no longer the national leader in supporting microbial forensics³.

USAMRIID's SME pool, arguably the most valuable resource in the face of unknown biological threats, is being dispersed and diluted. The ability of USAMRIID to maintain a cadre of core competencies in a variety of areas is key to ensuring that there are SMEs who will be available for any perceived or real threat to the warfighter as well as threats to the public.

Recommendation 3: Realign chain of command and research program management.

³ The Department of Homeland Security's National Biological Analysis and Countermeasures Center (NBACC) includes an impressive microbial forensics center, National Biological Forensics and Analysis Center (NBFAC) approximately 50 meters from USAMRIID's new building.

The USAMRIID commander reports to Commander, USAMRMC, but the largest portion of the research program is managed by DTRA/JSTO staff, which engages self-assembled scientist teams at the national labs, DoD labs, industry and academia through an annual solicitation process. The DTRA program managers are relatively junior and the management has an acquisition focus. Programs and projects may or may not be sustained across the several years needed for R&D to come to any sort of fruition, depending upon the decisions made by JSTO annually. The dual chain of command greatly reduces the ability of USAMRIID's leadership to shape its scientific program. The outcome for the institute has been what appears to be a CRO model, which has replaced what was an organizational or mission-focused approach to medical biological defense. This model appears to have had a negative impact on efficiencies within the institute. The rigid government Civilian Personnel System gives the USAMRIID leadership little flexibility to mold the most effective workforce, which now competes with much more flexible academic centers.

Two options come to mind: 1) to return to the model that was used pre-2003, in which MRMC would once again be responsible for the entire medical biodefense mission including USAMRIID and the extramural research or 2) USAMRIID would become a "DTRA laboratory" with all fiscal and personnel assets transferred to AT&L. There is little evidence to suggest the second option could be successful. Whatever is decided by DoD, it is in the best interest of the nation to bring together responsibility and authority for medical biological defense under one entity that controls all of the resources.

Recommendation 4: Reevaluate the OTSG Leadership model.

A policy by OTSG to utilize the Command Select List (CSL) for selection of the past two USARMIID commanders has also contributed to cultural change. As currently configured, it appears that scientist-officers who have been within the MRMC laboratories for much of their careers will not be competitive in this new process. Many will, by definition, not have had Tier I commands, for example, a prerequisite for being considered for a Tier II command like USAMRIID. It appears that two negative outcomes of selecting excellent military medical leaders, lacking technical credentials and a research background, to serve as commanders of USMRIID are 1) loss of a commander capable of effectively advocating for the laboratory and the program and 2) a second order negative impact on junior officer-scientists, knowing that the likelihood of their being the USAMRIID commander one day is vanishingly small. A potential positive result of this model is that those selected may be well suited from a standpoint of professional relationships to advocate for the Institute to the line force.

Traditionally, the institute deputy commander was the 'science director' of the institute, and a strong contender for command. It remains to be seen how not being competitive for command will impact the development of military deputies in the future.

Making the "8Z" skill identifier mandatory for this command is a reasonable fix. It would assure that the commander has the S&T experience and skill level necessary to understand the organization and its mission. The selection board's focus could then be

on the officer holding this skill identifier who has the best leadership characteristics and experience. Extending the command tour from two to three years would also help.

An outstanding civilian 'Director", replacing the military commander model, while not ideal in a military laboratory, would provide technical continuity and expertise at a level high enough to represent the institute. It would not solve the scientist-officer career management dilemma. The ultimate value of current hiring action for a "Science Director" will depend on the individual selected and successfully hired, but a DB-5 will need to be very good to make a strategic difference in positioning the Institute.

"The current laboratory model is critically flawed and will not allow the institute, thus the DoD, to adequately protect the warfighter and to meet the challenges of the dangerous, complex and unpredictable world in which we now live." Without serious measures taken at several levels now, futures might well include continual slow decay or even catastrophic failure following an attack on the force or the nation. We have an opportunity, but little time to delay.⁴

Consultants who contributed to this report:

Dr Judy Britz, Executive Director, Maryland Biotechnology Center Dr. Seth Carus, Distinguished Research Fellow, National Defense University Dr. Rita Colwell, University of Maryland, Former Director National Science Foundation Secretary Richard Danzig, Former Secretary of the Navy COL (Ret) David Franz, Former Deputy Commander & Commander USAMRIID LTG (Ret) Robert Hinson, U. Neb, Former Deputy Commander-in-Chief USSRATCOM Dr. Carol Linden, Principal Director, Biomedical Advanced Research Authority, HHS GEN (Ret) Dennis J. Reimer, Former Chief of Staff, US Army Dr. David Walt, Tufts University, Scientific founder of Illumina Dr. Richard Whitley, U. of Alabama at Birmingham, Chair NIAID Antiviral Study Group

⁴ Previous reports which have highlighted some of the same issues include in 2009 *"Core Capabilities for the Chemical-Biological Defense Program"*, chaired by Dr. Anna Johnson-Winegar for the DASD-CBD/AT&L, in which the committee clearly warned of the dysfunctional dual chain of command. More recently in 2012, the National Academy of Sciences study, *Determining Core Capabilities in Chemical and Biological Defense Science and Technology*, chaired by Dr. Mim John warned of the ever changing threat space, the too broadly stated mission and the challenges of the current dual chain of command model.

JOL GARYA, WHEELER



of Science degree in Electrical Engineering at the University Colonel Gary A. Wheeler, MD, was commissioned as an officer in the United States Army after obtaining a Bachelor of California at Berkeley. He then attended the Uniformed Services University of Health Sciences in Bethesda, Mary-Internal Medicine internship and residency at Walter Reed land, earning a Doctor of Medicine degree. He completed Army Medical Center.

Center, Ft. Rucker, Student, U.S. Army War College; Chief Information Officer Division, Madigan Army Medical Center, Chief, Internal Medicine Service and Medicine Continuity Clinic, Walter Reed Army Medical Center, Chief, Department of Medicine, and Chief, Internal Medicine Service, Moncrief Army Com-Western Regional Medical Command; Internal Medicine Consultant, Office of The Surgeon General; Chief, Department of Medicine, Madigan Army Medical Colonel Wheeler's past assignments include Command Surgeon, United States Anny Training and Doctrine Command; Commander, U.S. Army Aeromedical and G6, U.S. Army Medical Department; Chief Medical Information Officer, Center, Deputy Commander for Clinical Services, Weed Army Community Hospital and National Training Center Surgeon; Chief, Clinical Informatics Adult Primary Care Clinic, Madigan Army Medical Center, Chief, Internal munity Hospital.

institute for Federal Health Care Executives, the Joint Medical Executive Skills institute Capstone Course, Command and General Staff College, Army Medical States Army War College. His military education also includes the Interagency Colonel Wheeler holds a master's degree in Strategic Studies from the United Department Strategic Leadership Course, Medical Management of Chemical and Biological Casualties, Officer Advanced Course, Combat Casualty Care Course, Flight Surgeon Course, the Officer Basic Course and Air Assault School

Colonel Wheeler deployed in support of Operation Iraqi Freedom in 2007.

His awards and decorations include Legions of Merit, Bronze Star, Meritorious Physicians and an Assistant Professor of Medicine at the Uniformed Services Ferror Service Ribbon, Army Service Ribbon, Overseas Service Ribbon, and Order of Military Medical Merit. He is a Fellow of the American College of Medals, Army Achievement Medals, National Defense Service Medals, Iraq Service Medals, Joint Service Commendation Medal, Army Commendation the Superior Unit Award. He holds the Expert Field Medical Badge and the Campaign Ribbon, Coast Guard Meritorious Team Ribbon, Global War on University of Health Sciences.

Colonel Wheeler and his wife, Wendy, have four children and two grandchildren.

201 E DARRIN COX

Colonel E. Darrin Cox, MD, most recently served as the Deputy Medical Corps Chief, OTSG.

Administration from Washington University (1987), a Doc-COL Cox was born in Buffalo. NY: he considers Texas his tor of Medicine from Thomas Jefferson University (1996), and a Master's Degree in Strategic Studies (Distinguished home state. He holds a Bachelor of Science in Business Graduate) from the U.S. Army War College (2016).



and thoracic surgery fellowship at Walter Reed Army Medical Center in Wash-Chest Physicians. COL Cox holds academic appointments as Assistant Profesington, DC. He is board certified in both general and thoracic surgery and is a Health Sciences Center (El Paso, TX). He is a recipient of the prestigious Sur-CPT in the Medical Corps. COL Cox completed his general surgery residency Health Professions Scholarship Program and entered active duty in 1996 as a Fellow of the American College of Surgeons and the American College of (Bethesda, MD) and Clinical Assistant Professor at Texas Tech University sor of Surgery at Uniformed Services University of the Health Sciences geon General's "A" proficiency designator for thoracic surgery.

Army Medical Center; Chief, Thoracic Surgery, 10th Combat Support Hospital; and Chief. Performance Improvement and Attending Thoracic Surgeon, Walter Reed Army Medical Center. He also completed a 4-year term as the Consultant liam Beaumont Army Medical Center, Commander, Bavaria Medical Activity, Chair, Department of Surgery, William Beaumont Army Medical Center; Dep-COL Cox's previous assignments include: Deputy Commanding Officer, Wilmander, 745th Forward Surgical Team; Chief, Thoracic Surgery, Walter Reed uty Commander for Clinical Services, 31st Combat Support Hospital; Comto The Surgeon General for Thoracic Surgery.

port of Operation Enduring Freedom-as well as an operational tour supporting months---two tours in support of Operation Iraqi Freedom and one tour in supfoint Task Force-Bravo, Honduras. He has also served overseas in Germany. COL Cox's deployments include 3 combat tours totaling more than 37

mendation (2 OLC). Army Superior Unit Award (2 OLC), and the NATO Medal. He has been awarded the Combat Medical Badge. COL Cox is a member of Medal (1 OLC), Army Achievement Medal (1 OLC), Meritorious Unit Com-COL Cox's awards and decorations include the Legion of Merit, Bronze Star Medal (3 OLC), Meritorious Service Medal (6 OLČ), Army Commendation the Order of Military Medical Merit.

reteran; and Caleb, a sophomore at University of Texas, Austin. They also have and current Director of the Acute Care Nurse Practitioner program at University COL Cox and his wife, Dr. Kathleen Cox, a former Army Nurse Corps Officer of Texas, El Paso, are the proud parents of two sons: Adam, a U.S. Navy three grandchildren.

 SAMRID COMMANDERS CoL William D. Tigertt, MC 56 - 1961 United States Army Medical Unit (USAMU) COL Dan Crozier, MC COL Dan Crozier, MC COL Dan Crozier, MC 	USANR//D COMMANDERS COL Gerald W. Parker, VC 1998 - 2000 2000 - 2002 2000 - 2002
BG Kenneth R. Dirks, MC	COL Erik A. Henchal, MS
April - August 1973	2002 - 2005
COL Joseph F. Metzger, MC	COL George W. Korch, Jr., MS
1973 - 1977	2005 - 2008
COL Richard F. Barquist, MC	COL John P. Skvorak, VC
1977 - 1983	2008 - 2011
COL David L. Huxsoll, VC	COL Bernard L. DeKoning, MC
1983 - 1990	2011 - 2013
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June - September 1990	2013 - 2015
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1990 - 1992	2015 - 2017
COL Ernest T. Takafuji, MC	COL Gary A. Wheeler, MC
1992 - 1995	2017 - 2019
COL David R. Franz, VC	COL E. Darrin Cox
1995 - 1998	2019 -