Master of Public Health Field Experience Report

EVALUATION OF THE CRITICAL COMMUNICATION PROCESS IN THE U.S. ARMY FOOD DEFENSE PROGRAM

by

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Summary

According to its website, the United States Army Public Health Command (USAPHC) serves "to promote health and prevent disease, injury and disability in Soldiers and retirees, their family members, and Army civilians, and to assure effective execution of full-spectrum veterinary services for the Army and Department of Defense." Within this organization, the Veterinary Services Portfolio manages the Animal Medicine and Food Protection Programs. The Health Risk Management Portfolio contains the Health Risk Communication Program, which provides training and consultation services throughout the Department of Defense on how to effectively communicate scientific and technical information to lay persons on an interpersonal level. This report describes the capstone project completed at the interface of the Food Protection Program and the Health Risk Communication Program in order to evaluate the critical communication process that should occur within the U.S. Army Food Defense program. My field experience with the USAPHC, coursework, and supplemental experiences have collectively educated me on and provided me unique experiences with infectious disease control, international trade, border security, weapons of mass destruction, food defense, global health, social behavior, and risk communication.

Subject Keywords: risk communication, food defense, food protection, antiterrorism, Army, DoD

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List of Abbreviations

AAFES	Army and Air Forces Exchange Service (AAFES)
AIPH	Army Institute of Public Health
AMC	Army Material Command
APG	Aberdeen Proving Ground
AT	Antiterrorism
ATO	Antiterrorism Officer
ATWG	Antiterrorism Working Group
CBP	Customs and Border Protection
CBRN	Chemical, Biological, Radiological, Nuclear
CHPPM	U.S. Army Center for Health Promotion and Preventive Medicine
DeCA	Defense Commissary Agency
DFAC	Dining Facility
DoD	Department of Defense
DTRA	Defense Threat Reduction Agency
DVM	Doctor of Veterinary Medicine
FDAT	Food Defense Assessment Team
FDM	Food Defense Manager
FDS	Food Defense Specialist
FMD	Foot and Mouth Disease
FPCON	Force Protection Condition
FWRA	Food and Water Risk Assessment
FYGVE	First Year Graduate Veterinary Education
HBM	Health Behavior Model
HHA	Higher Headquarters Assessment
HIO	Health Information Office
IFVA	Installation Food Vulnerability Assessment
IFVAW	Installation Food Vulnerability Assessment Workbook
IMCOM	Installation Management Command
IRB	Institutional Review Board
ISP	Installation Support Plan

JSIVA	Joint Staff Integrated Vulnerability Assessment
MPH	Master of Public Health
NBAF	National Bio- and Agrodefense Facility
NCO	Non-Commissioned Officer
NCOIC	Non-Commissioned Officer in Charge
OCONUS	Outside the Continental United States
PAO	Public Affairs Officer
PCS	Permanent Change of Station
PHRB	Public Health Review Board
PV	Prime Vendor
QA	Quality Assurance
TG	Technical Guide
UMKC	University of Missouri-Kansas City
USAPHC	U.S. Army Public Health Command
USDA	United States Department of Agriculture
VCO	Veterinary Corps Officer
VETCOM	U.S. Army Veterinary Command
WMD	Weapon of Mass Destruction

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Chapter 1 - Background

When exploring placement options for my field experience, I considered the U.S. Army because of the unique role the veterinarian plays in food safety and public health throughout the Department of Defense (DoD). Moreover, the military provides manpower and other resources in a number of emergency scenarios, including animal health events, which I may be involved with during my career; thus, I wanted to enhance my understanding of military organization, jargon, and mission. Dr. Michael Cates, K-State Master of Public Health (MPH) program director, is a retired Brigadier General who previously served as Chief of the Army Veterinary Corps and Commanding General of the U.S. Army Center for Health Promotion and Preventive Medicine (CHPPM). Given his previous experience and networking, he suggested I contact the U.S. Army Public Health Command (USAPHC) at Aberdeen Proving Ground (APG), Maryland as a possible site placement.

1.1 U.S. Army Public Health Command

In 2011, the former U.S. Army Veterinary Command (VETCOM) combined with the former CHPPM to create the USAPHC.[1] The USAPHC serves "to promote health and prevent disease, injury and disability in Soldiers and retirees, their family members, and Army civilians, and to assure effective execution of full-spectrum veterinary services for the Army and Department of Defense."[2]

Headquartered at Aberdeen Proving Ground, Maryland, USAPHC consists of the AIPH and five Public Health Command Regions (Europe, Pacific, North, South, and West) (see Appendix 1). Also located at APG, the AIPH "standardizes and promulgates practices and procedures used throughout the USAPHC, administers and funds public health mission execution, provides one-of-a-kind and reach-back technical capabilities, and oversees quality assurance."[3] It provides these services via nine portfolios (Environmental Health Engineering, Epidemiology and Disease Surveillance, Health Promotion and Wellness, Health Risk Management, Laboratory Sciences, Occupational and Environmental Medicine, Occupational Health Sciences, Toxicology, and Veterinary Services). I worked at the interface of the Health Risk Communication Program within the Health Risk Management Portfolio and the Food Protection Program within the Veterinary Services Portfolio.

1.2 Health Risk Communication

As one of the newest portfolios in USAPHC, Health Risk Management was formally developed in 2001 in response to the September 11, 2001 terrorist attacks on New York City, the Pentagon, and Pennsylvania and the fall 2001 anthrax attacks in the United States. Health risk management is "the

[1] USAPHC. 2013. *Veterinary Command*. USAPHC [cited 14 June 2013]. Available from http://phc.amedd.army.mil/organization/vetcom/Pages/default.aspx.
[2] USAPHC. 2013a. Command Information Sheet. USAPHC.
[3] USAPHC. 2013. *Army Institute of Public Health*. USAPHC [cited 14 June 2013]. Available from http://phc.amedd.army.mil/organization/institute/Pages/default.aspx.

science and art of identifying, evaluating, selecting, documenting and implementing measures to reduce or prevent risk to human health."[4]

Risk analysis is a process formally practiced by a wide array of industries and specialties. While a variety of descriptions exist, generally risk analysis consists of a continuum of risk assessment, risk management, and risk communication.

Figure 1.1 Risk Analysis Framework. http://www.who.int/foodsafety/micro/riskanalysis/en/. Accessed 18 June 2013.

Upon identification of a risk, the analysis cycle begins with risk assessment, which focuses on researching and defining a particular risk.[5] Based upon this scientific assessment, policies are enacted on how to control or mitigate the risk, which is the risk management aspect. At this stage, perceptions due to politics, credibility, and culture begin to surface and quickly become apparent as the communication process begins to explain the newly established policies. Consideration of how these policies will be understood and accepted by lay persons must take into account their perceptions, cultural values, and trust in the subject matter experts and policy writers. Only when these considerations, along with a large amount of empathy, are incorporated into the communication message may policies be understood by and be effective for the target audience.

[4] Public Affairs Office. 2012. Health Risk Management Portfolio Command Information Sheet. edited by USAPHC: USAPHC.

[5] In the context of health, a hazard may be defined as "a factor or exposure that may adversely affect health; anything that has the potential to cause harm." As defined in the context of risk management, a risk is "the probability than an adverse event will occur (such as exposure from a chemical incident) times the consequences of the adverse event." http://www.healthknowledge.org.uk/public-health-textbook/disease-causation-diagnostic/2f-environment/risk-hazard

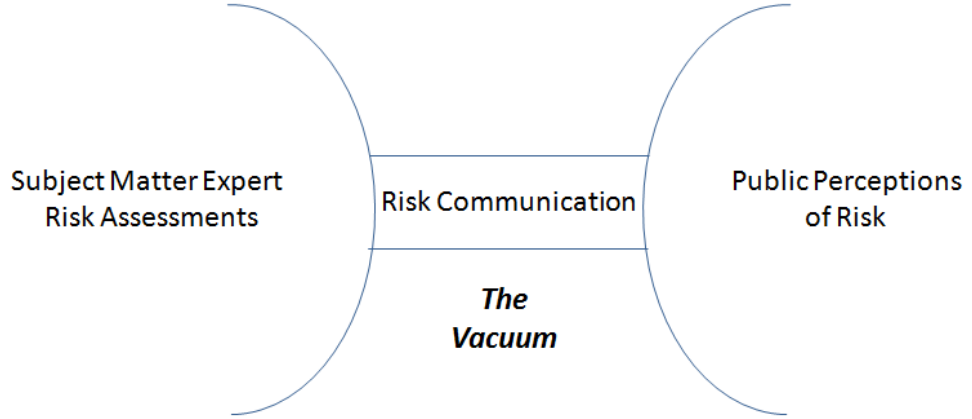

Figure 1.2 Source: Adapted from *The Great Divide*. Davidson, Bethney, and Steve Witt. 2013. *Risk Communication: A Critical Process*. In Walter Reed Army Institute of Research Risk Communication Training. Silver Spring, Maryland: USAPHC AIPH.

Risk communication may be defined as "a science-based approach for communicating effectively in high-stakes, emotionally charged, controversial situations."[6] Alternatively, the Joint Food and Agriculture Organization/World Health Organization Expert Consultation define it as "the exchange of information and opinions concerning risk and risk-related factors among risk assessors, risk managers, consumers and other interested parties."[7] The latter definition appropriately expresses the role of risk communication as a continual process practiced by individuals throughout the risk analysis cycle, whereas the former definition conveys it in those emotional situations where people become more aware of the need for effective risk communication.

Experts in the Health Risk Communication Program provide a skill set unique to the entire DoD; they train personnel in each of the service branches on how to effectively communicate scientific and technical information to lay persons on an interpersonal level. They provide a variety of training and consultation services and may even rapidly deploy in the event of a crisis to assist the DoD with health risk communication.

It is necessary to distinguish risk communication from other internal offices with communication expertise. A Public Affairs Officer (PAO) works predominantly with the media and emphasizes presentation skills versus risk communication's focus on the content of an interactive exchange. The Health Information Office (HIO) develops products such as posters, fact sheets, pocket cards, etc. that are additional "layers" of communication. While these resources offer a tremendous potential to educate, at times they can be misleading, vague, too technical, and generally not developed with the

[6] Schickedanz, Timothy and Mary Katherine Riley. 2013. Risk Communication Course: Communication Skills for Any Issue that Impacts your Mission. USAPHC AIPH.

[7] World Health Organization and Food and Agriculture Organization of the United Nations.1999. The application of risk communication to food standards and safety matters. Rome. P.3

particular target audience in mind. In this way, risk communication can provide an interpersonal dialogue that connects the HIO materials with the audience. Together, PAO, HIO, and risk communication personnel complement each other's skill sets quite beautifully, yet remain unique in their areas of expertise.

1.3 Veterinary Services

The USAPHC website states that the "Veterinary Services Portfolio is responsible for policy development and oversight of command missions regarding Animal Medicine and Food Protection matters."[8] With over 200 Veterinary Corps Officers (VCOs), the

> Army Veterinary Corps is supported by an exceptional team of 2,100 enlisted Soldiers and non-commissioned officers, and nearly 600 Army Veterinary Service civilian personnel. They are instrumental in the provision of outstanding veterinary support to almost 500 installations, a multitude of deployable units, and research laboratories across the DoD. Veterinary Service officers, warrant officers, noncommissioned officers, Soldiers, and civilians are guardians of the DoD food supply, leaders in animal health, and provide critical support to research.[9]

1.3.1 Food Protection Program

Individuals in the Food Protection Program look after food quality and wholesomeness to protect the health of all DoD personnel. The term "food protection" encompasses food quality, food safety, and food defense. USAPHC personnel perform sanitation inspections of all facilities serving and storing food, including Army and Air Force Exchange Service (AAFES), Defense Commissary Agency (DeCA), Dining Facilities (DFACs), and child development centers.[10]

1.3.1.1 Food Safety

Although Congress did not formally establish the U.S. Army Veterinary Corps until 1916, veterinarians were sought after in the 1890s to inspect animal products being served on posts because of their unique training in microbiology, epidemiology, pathology, and public health. With the advent of the Air Force Veterinary Corps in 1949, the Army shared military veterinary responsibilities. However, in 1980 Congress disestablished the Air Force Veterinary Corps, so the Army once again became the

[8] USAPHC. 2013. *Veterinary Services Portfolio*. USAPHC 2013b [cited 28 June 2013]. Available from http://phc.amedd.army.mil/organization/institute/dvet/Pages/default.aspx.

[9] Poppe, BG John L. 2013. "The US Army Veterinary Service 2020: Knowledge and Integrity." *The Army Medical Department Journal* January-March 2013:9.

[10] USAPHC. 2013. *Food Safety*. USAPHC [cited 17 June 2013]. Available from http://phc.amedd.army.mil/topics/foodwater/ifs/Pages/default.aspx.

veterinary service provider throughout the DoD.[11] Nonetheless, the Air Force has retained a few veterinarians as Public Health Officers who also monitor food safety; therefore, USAPHC personnel conduct inspections on Army, Navy, and Marine Corps installations while Air Force officers conduct the inspections for Air Force bases.

Veterinarians supervise operational ration assembly plants, supply and distribution points, ports of debarkation, and other types of subsistence operations (i.e. commissaries). Because the veterinarian on post is typically kept busy in the veterinary clinic, often they simply do not have the time to conduct all the food inspections, so a Veterinary Food Inspection Specialist, designated a 68R or "Romeo", is an enlisted soldier (E1-E6) who actively inspects all of the previously identified food sites on and off an installation. Most of the time a Non-Commissioned Officer in Charge (NCOIC) (E5-E6) supervises the Romeos and 68T Animal Care Specialists or "Tangos". The NCOICs spend considerable time managing the young soldiers who, because of their age and maturity level, may require frequent discipline. While it is officially under the veterinarian's jurisdiction to complete the food inspections, often he or she only steps in if there is a problem that the NCOIC and soldiers cannot resolve. At the point when food transitions from production and storage into preparation and service, inspection and quality assurance then falls under the jurisdiction of a Preventive Medicine Specialist, designated a 68S or "Sierra". Romeos and Sierras thus have similar, yet distinct, inspection responsibilities, and are increasingly working together so as to reduce duplication of efforts.

U.S. Army Warrant Officers are previous enlisted soldiers who are selected through a competitive process to become "highly specialized experts and trainers in their career fields. By gaining progressive levels of expertise and leadership, these leaders provide valuable guidance to commanders and organizations in their specialty."[12] Most of the Warrant Officers in the Army are helicopter pilots, but they may also specialize in areas such as geospatial engineering; intelligence; human resources; chemical, biological, radiological, nuclear (CBRN); or supply and airdrop systems. To qualify as a 640A Veterinary Services Food Safety Officer, a Romeo or Sierra must be at least an E5 and have served as a specialist in their field for a minimum of five years. Once selected and trained, 640As serve as subject matter experts for all matters involving food safety and defense.

Each military installation runs off an Installation Support Plan (ISP), which outlines major support functions for food safety/quality assurance (QA), food defense, and animal programs. Essentially it is an agreement between the military installation and the units responsible for food protection and public health that outlines the frequency at which inspections of food establishments on base will be conducted, the depth of inspections, the training they will receive, the committees they will serve on, and the advisory functions they will fulfill.

[11] U.S. Army Veterinary Corps. 2013. U.S. Army Veterinary Corps History. U.S. Army Veterinary Corps, 23 April 2013 2013 [cited 14 June 2013]. Available from http://veterinarycorps.amedd.army.mil/history.htm.

[12] U.S. Army Recruiting Command. 2013. *United States Army Warrant Officer Recruiting* (2.01). U.S. Army, 17 June 2013 [cited 17 June 2013]. Available from http://www.usarec.army.mil/hq/warrant/.

In the mid-1990s, DoD established the Prime Vendor (PV) Destination Audit Program in order to save money by contracting out subsistence delivery agreements to companies such as Sysco.[13] The audit program ensures food safety and quality assurance for subsistence delivered to installations.

Traditionally, commercial food, bottled water, and ice production facilities that wish to sell products to the DoD must undergo a food protection audit by USAPHC veterinarians or Warrant Officers;[14] if the facility passes the audit it is placed on the Worldwide Directory of Sanitarily Approved Food Establishments for Armed Forces Procurement for the specific products that the DoD wishes to purchase. [15] Romeos, warrant officers, veterinarians, and contracting officials frequently reference this directory to ensure that the food products available on an installation have been approved. If, for instance, a Romeo discovers that a product on a shelf in a commissary is from an unapproved source,[16] the veterinarian or warrant officer has seven days to conduct a risk assessment on that product, evaluating it for product characteristics (pH and water activity), recall and foodborne illness history, listing status (products listed by other agencies or produced in facilities approved for other items), shelf life, delivery history, and audit frequency of that company. Depending on what the inspector deems the risk of the product, it may be pulled immediately or it may be allowed to remain on the shelf for up to 45 days, which provides ample time for that production facility to undergo an audit and potentially be placed in the approved source directory.

For short-term events and exercises outside the continental United States (OCONUS), access to approved sources may be quite limited or unavailable. Consequently, the Army conducts Food and Water Risk Assessments (FWRAs),[17] in which inspectors assess actual or potential health threats; intentional and unintentional adulteration of the product with CBRN or physical agents; potential exposure pathways; and courses of action and countermeasures to control or reduce the health threats to DoD personnel. FWRAs provide a scaled level of risk versus a pass/fail status as with audits, which the senior commander then uses to make a final decision on whether or not to use an FWRA source. Facilities remain in the FWRA database[18] for only six months or for the duration of a military exercise or event. The ability to eat local foods boosts morale amongst the soldiers, yet obviously increases the risk of gastrointestinal and other illnesses. Thus, this is another area in which health risk communication is vital between the inspector and the commander.

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[13] Conversation between Amy Sents and CW5 Finch about Army food inspection, 13 June 2013.

[14] USAPHC. 2013. *Commercial Audits*. USAPHC [cited 17 June 2013]. Available from http://phc.amedd.army.mil/topics/foodwater/ca/Pages/default.aspx.

[15] USAPHC. 2013. *Worldwide Directory of Sanitarily Approved Food Establishments for Armed Forces Procurement*. USAPHC [cited 10 July 2013]. Available from http://phc.amedd.army.mil/topics/foodwater/ca/Pages/DoDApprovedFoodSources.aspx.

[16] AIPH. 2011. AIPH(VET) MEMO B11-02-DOD Unapproved Sources Procedures.

[17] USAPHC. 2013. *Food & Water Risk Assessments*. USAPHC [cited 17 June 2013]. Available from http://phc.amedd.army.mil/topics/foodwater/fwra/Pages/default.aspx.

[18] USAPHC. 2013. *DoD Food and Water Risk Assessment (FWRA) Sources*. USAPHC [cited 10 July 2013]. Available from http://phc.amedd.army.mil/topics/foodwater/fwra/Pages/DoDFWRASources.aspx.

1.3.1.2 Food Defense

As opposed to food safety, which focuses on accidental or unintentional contamination of food, water, and ice, food defense strives to prevent the intentional contamination of those products from CBRN or physical agents.[19] This proactive, preventive effort requires expertise and coordination from a number of groups, including intelligence, antiterrorism/force protection, law enforcement, public health, and food specialists.

Established in 2009, the Installation Food Defense Program consists of Installation Food Vulnerability Assessments (IFVAs)[20] and Special Events Assessments (SEAs). SEAs are conducted on an as-needed basis and evaluate both food safety and food defense of a service or venue providing food for a special event or other gathering of 300 or more DoD personnel. IFVAs, however, are performed annually and focus solely on food defense, evaluating the food supply for vulnerabilities, or system weaknesses and potential areas for contamination or adulteration. Upon completion of an IFVA by the VCO, the Branch and District Food Defense Managers both review the IFVA before the installation-level VCO or Food Defense Non-Commissioned Officer (NCO) relays it to the Antiterrorism Officer (ATO), who then conveys it to the installation commander. It is critical that the vulnerability or potential concern (i.e. risk) is communicated by applying the Risk Assessment Matrix (Table 1.1), as this is a format the commander and his or her staff are familiar with from other risks and decision processes. In this way, the food vulnerabilities are presented in the same context as other risks and are more clearly understood by a commander.

Table 1.1 Risk Assessment Matrix

	HAZARD PROBABILITY				
HAZARD SEVERITY	**Frequent (A)**	**Likely (B)**	**Occasional (C)**	**Seldom (D)**	**Unlikely (E)**
Catastrophic (I)	Extremely High	Extremely High	High	High	Moderate
Critical (II)	Extremely High	High	High	Moderate	Low
Marginal (III)	High	Moderate	Moderate	Low	Low
Negligible (IV)	Moderate	Low	Low	Low	Low
	RISK ESTIMATE				

Source: USAPHC. 2012. Technical Guide No. 355 Installation Food Vulnerability Assessment (IFVA) Program Handbook. p.14-15.

[19] USAPHC. 2013. *Food Defense Frequently Asked Questions*. USAPHC [cited 26 June 2013]. Available from http://phc.amedd.army.mil/topics/foodwater/ifd/Pages/FAQ.aspx.

[20] USAPHC. 2012. Technical Guide No. 355 Installation Food Vulnerability Assessment (IFVA) Program Handbook. USAPHC.

The installation commander then utilizes the Force Protection Condition (FPCON) program, a DoD-approved system that standardizes preventive actions and responses to terrorist threats, to make an operational decision on how to protect his or her organization against terrorism. These actions are formalized into five steps that comprise an IFVA: [21]

1. Review the Terrorism Threat Assessment, Criticality Assessment, Installation Curtailment Plan, and Continuity of Operations Plan to determine if Food Defense issues have been considered and/or addressed in those documents.
2. Perform the vulnerability assessments on all facilities listed on the Food and Water Asset List.
3. Coordinate with the ATO to schedule a Food Defense Assessment Team (FDAT) meeting in order to review the IFVAs.
4. Complete the IFVAW and submit it to the District Food Defense Manager (FDM) or Regional Food Defense Specialist (FDS) for review and approval.
5. Brief the installation VCO prior to the Garrison/Installation Commander's final out-briefing.

Figure 1.3 USAPHC IFVA Program Technical Review Channel. USAPHC. 2012. Technical Guide No. 355 Installation Food Vulnerability Assessment (IFVA) Program Handbook.

Figure 1.3 illustrates the chain of personnel through whom an IFVA Program Technical Review passes, from the headquarters level all the way down to the installation level. As one can imagine, these multiple steps each serve as a possible point of miscommunication or a shift in severity of the message or situation, so risk communication is essential.

Every three years, each military installation undergoes a Higher Headquarters Assessment (HHA) in which a team of about six people evaluates the installation for how it is managing its AT program. Depending on the type of installation, either Installation Management Command (IMCOM) or Army Material Command (AMC) is the local organization that organizes and executes the HHA. The Army food

[21] USAPHC. 2012. Technical Guide No. 355 Installation Food Vulnerability Assessment (IFVA) Program Handbook. p.14-15.

defense specialists assist with HHAs for Army, Navy, and Marine Corps installations whereas Air Force personnel are responsible for HHAs on Air Force bases.

Each ATO should form an FDAT that the Food Defense NCO and VCO participate in. This team conducts a thorough and systematic review and assessment of installation food systems using risk management principles. These activities are incorporated into the Installation Antiterrorism Working Group (ATWG), which oversees the implementation of the AT program on an installation, develops and refines AT plans, and addresses emergent or emergency AT program issues.[22] The VCO is required to attend ATWG meetings. Therefore, the Food Defense NCOs and VCOs should at minimum be interacting with the ATO at the FDAT and/or ATWG meetings. The extent to which NCOs, VCOs, and ATOs communicate at these meetings or in other scenarios served as the focus of my capstone project.

[22] USAPHC. 2012. Technical Guide No. 355 Installation Food Vulnerability Assessment (IFVA) Program Handbook.

Chapter 2 - Capstone Project / Culminating Experience

When I originally contacted USAPHC about completing my field experience, I was interested in conducting a project within the Food Defense Program, but because many of the activities in that program are classified, I was told that would not be feasible. Due to my limited institutional knowledge, I struggled to identify a specific project that I would like to work on. The short duration (two months) of my experience also made it quite challenging to identify a research or policy need within the Veterinary Services Portfolio that could dually function as a capstone project for me. As a result, I turned to "coaching up" my interests to my mentors in order to discern a need they had that was also interesting for me.[23]

The learning objectives for my field experience ranged from gaining broad military knowledge to learning more specific components of the Food Protection Program:

- Learn general organization and terminology of the U.S. Army
- Become acquainted with the organizational structure of the U.S. Army Public Health Command and its mission areas, both domestically and around the world
- Learn how the Army currently conducts food safety risk assessments both within the U.S. and abroad
- Become familiar with the training food inspectors currently undergo in both scientific assessment and risk communication
- Learn the skills and qualities that the Army seeks among employees in the public health command
- Learn about career opportunities within the Army

This summer I had the privilege of working with a number of terrific mentors with a rich variety of experiences and a wealth of knowledge. Dr. Rebecca Benisch served as my field experience preceptor. Upon graduating with her DVM from Texas A&M University in 2002, she served for 7.5 years on active duty as a VCO in the Army, with an assignment in Egypt and a deployment to Iraq. She then worked 1.5 years as a civilian Veterinary Medicine Officer for the Army. Since April 2012, she has worked as a Food Safety Specialist at AIPH. Dr. Benisch completed her MPH from the University of Iowa in May 2013.

I also worked extensively with Ms. Bethney Davidson who has worked for eight years as a Health Risk Communication Specialist at AIPH. After graduating from Appalachian State University with a degree in Health Promotion and Preventive Medicine in 1991, she worked for one year as the Employee Wellness Coordinator for a county health department. She then enlisted in the U.S. Army in July 1992 and served in a variety of assignments, including Outpatient Mental Health, Alcohol and Drug Outpatient Counseling, and Family Social Work Services. From 1997-2002, Ms. Davidson stayed at home full-time to support her active duty husband and her daughter. Finally, from 2002-2005, she became the Parent Family Liaison for Edgewood Elementary School in Edgewood, Maryland.

[23] "Coaching up" is a trait emphasized in the KSU *Frontier* program in which students communicate their interests to their mentors, bosses, etc.

I arrived at APG on 6 June 2013. As with previous government internships, my first few days involved filling out paperwork, completing training modules, and gaining the necessary identification and access cards. Right away, I learned the difficulty in coordinating schedules internally, as I had to wait one week to meet with Dr. Benisch, Ms. Davidson, and Ms. Esther Pfau from the Health Information Office. Based on their experience and expertise, we decided I would evaluate the risk communication gap between lower-level enlisted food inspectors (Romeos) and managers of food establishments (i.e. commissaries, DFACs, etc.) on post. They and the warrant officers in the Food Protection Program consider this to be a critical gap as Romeos have no training in risk communication, and their communication skills in general vary tremendously based on age, education, and experience. Dr. Benisch began to coordinate a site visit for me to shadow and interview Romeos at Fort Meade nearby, but it immediately became a waiting game as the request inched through the proper channel of authority. In the meantime, I asked the warrant officers in my office about the food safety and inspection processes to gain background information for my report.

June 19-23 I attended the KSU *Frontier* Field Trip to southern California to witness food defense and supply-chain complexity and international trade and port security. While I was away, Dr. Benisch spoke with COL Robert Webb, the Veterinary Services Portfolio Director, who was apparently unaware of the direction we had decided to take my project. He indicated that he would rather I evaluate the risk communication gaps between VCOs and ATOs and perhaps try to quantify the Risk Assessment Matrix so that a commander can better understand the implications of a food defense vulnerability and make decisions accordingly. Given the stall on my initial project idea, it was a convenient time to switch directions. From this situation, I learned I needed to communicate more clearly with my head supervisor (in this case COL Webb) and directly inquire of the needs and goals he had identified for my summer project.

Upon returning from the field trip (note this is already late June, nearly halfway through my time at APG), I met with COL Webb, Dr. Benisch, and Ms. Davidson to determine the goals and outcome for my revised project. In order to achieve COL Webb's ultimate goal of developing some form of risk communication training for VCOs and NCOs, I first needed to pursue formative research[24] to quantify and qualify the extent to which VCOs currently communicate with the ATO on each installation. Thus, I began to draft a survey to send out to all VCOs. Fortunately, Dr. Benisch had recently conducted a survey as part of her MPH practicum through the University of Iowa, so I was able to turn to her for guidance throughout the process.

[24]"Formative research is the basis for developing effective strategies, including communication channels, for influencing changes in behavior." It is conducted prior to or during design and implementation of a program to help understand users' needs and inform or improve program design.
California Department of Public Health. 2013. *Formative Research*. State of California 2013 [cited 10 July 2013]. Available from http://www.cdph.ca.gov/programs/cpns/Pages/FormativeResearch.aspx.
2013. *Health Literacy Glossary*. Communicate Health, Inc. 2013 [cited 10 July 2013]. Available from http://communicatehealth.com/about-health-literacy/glossary/.

I completed numerous revisions to my survey questions based on advice from Dr. Benisch, Ms. Davidson, Ms. Riley (another Health Risk Communication Specialist), Ms. Deaver (Command Statistician), and CW3 Belcher (the Food Defense Program Manager). Initially I wrote one survey with 12 questions and ultimately developed two surveys with 23 questions each. Throughout this process I learned to think critically about what I wanted each question and choice to tell me, and how I was going to use that information; if I did not have a clear purpose for each question, then I needed to revise or eliminate it. I also learned to thoroughly evaluate the syntax and vocabulary I used as words can carry with them strong connotations or perceptions. Moreover, I evaluated the ranges I used for chronological and numerical responses and the style of question (yes/no, multiple choice, multiple mark, write-in blocks, etc.) in order to achieve my goal for the question while minimizing confusion for the respondent. I also had to consider if, and how much of, a character limit I wanted to impose on the write-in blocks. What I naïvely considered to be a fairly simple process, I soon learned required more advanced critical thinking than I had previously considered.

Another surprising requirement I was informed I needed to comply with was receiving approval by the Public Health Command's Public Health Review Board (PHRB) and/or Institutional Review Board (IRB), along with K-State's IRB. I learned of this when going over a second draft of my survey with Ms. Riley, who has completed a number of surveys herself. After looking through the required paperwork, we discovered I had only one day to complete and submit it to the PHRB; otherwise I would have to wait one more month to submit my proposal for review. Consequently, I quickly incorporated Ms. Riley's editing suggestions into my survey and completed the necessary documents. I was unable to collect COL Webb's and CW3 Belcher's signatures Friday afternoon, so I e-mailed the PHRB director the unsigned documents on Friday and passed along the signed copies on Monday, 1 July. One week later, on 8 July, I received an informal approval e-mail pending completion of the official detailed paperwork, which was delayed due to the government furlough. The PHRB deemed my project as only "public health practice" and not research, so I was not required to advance through the Army's IRB.

On Tuesday, 9 July, I received the official approval paperwork, which I needed to submit with my KSU IRB paperwork, officially filed under Dr. Kastner's name as the principal investigator. In order for my proposal to be approved by KSU, however, Dr. Kastner and I were both required to complete several training modules on the KSU IRB website regarding research with human subjects. Upon completion of all these steps, Dr. Kastner received official approval from the KSU IRB on Friday, 12 July.

The only electronic survey platform approved by the USAPHC is Vovici, which I had never heard of prior to my field experience. Unfortunately, access to this online software program is limited to those who have been internally approved by USAPHC for an account, and since I was here for such a short period of time, I could not acquire my own account. Consequently, I had to rely on the few others at APG who did have accounts to help me input, edit, and analyze my survey. The "official" way to do so is to submit a work order to G-6, the Information Management office within PHC headquarters. Unfortunately, this can take anywhere from several weeks to a couple of months to be completed. Thus, I submitted a work order as a back-up option but sought to gain assistance from one of the few people I

knew with an account. Ms. Deaver, Command Statistician, was willing to help me edit and analyze the results, but could not take the time to input my surveys. She did not think there was anyone in the Veterinary Services Portfolio any longer with an account, so my only other option was Ms. Riley within the risk communication office. Due to her schedule, the earliest date she could help me was 15 July, which would mean by the time we inputted and tested everything, we would not be able to deploy the survey until the week of 22 July, and it would close my final day on site, leaving me no time to review the results and meet with Ms. Deaver.

COL Vogelsang who oversees the animal care portion of the VET Portfolio happened to stop through my office the morning of 9 July and ask how things were going. After explaining the situation previously described, he mentioned he had access to Vovici and said he was willing to take some time in between his other tasks to input one of my surveys. This way I would not have to wait until after I left APG to begin analyzing the results. This truly was going to save a lot of downtime and frustration on my part if he was able to initiate the survey writing for me.

Fortunately, COL Vogelsang e-mailed a test link for the first survey early the next afternoon, and it was a great start on inputting the survey. Dr. Benisch then mentioned that she had a Vovici account that I could use to access my survey, though she had very little experience with the program and would not be able to provide any technical help. The only inconvenience was that she had to be logged into her computer for me to use it, which meant we had to find places in her schedule where she could be away from her computer. That afternoon and the next day I took over editing and testing the survey, which involved a few calls to the Vovici help desk and advice from COL Vogelsang and Ms. Riley in order to familiarize myself with the program. Dr. Benisch also shared with me the scenarios she had developed to pilot test the links in her survey and urged me to do the same. By the end of the day on 11 July, I had made large strides in editing the survey and writing the scenarios for my pilot testing.

When I returned on Monday, 15 July, I began attempting each of the scenarios (64 total), which included all combinations of answers, skips, etc. a respondent could potentially complete while navigating through the survey. I ran through the list of scenarios three times, which took about an hour each time. In between, I fixed glitches via Dr. Benisch's computer. By the end of the day, I felt like the survey was nearly complete. I learned how to duplicate it in order to make the necessary changes for the VCO survey.

On Tuesday, 16 July, I polished both surveys and executed some last-minute scenario testing. Following the afternoon staff meeting, I e-mailed the links and drafted messages to COL Webb who then forwarded them on to Dr. Lively in G-6, who forwarded them out to the targeted audience.

While my survey was open, I unfortunately did not have much else to work on. I spent one day in the risk communication office and the rest of the time working on my written report. By the time I was ready to send out reminder e-mails the following Tuesday afternoon, I only had 13 responses (3% response rate) from VCOs and 0 responses (0% response rate) from NCOs. Considering that no NCOs had responded, the initial means of distribution through the e-mail list was obviously ineffective, so COL Webb said he would push both of them out through the command channels instead. I decided to retain

the original VCO deadline, but I changed the NCO deadline to 2 August (my final day on-site) at 1500 so they would have more time to respond. The e-mails went out late afternoon, and by Wednesday morning results were already up to 23 VCOs and 8 NCOs.

The only "bump in the road" that surfaced was an e-mail forwarded up through the command channel on Thursday, 25 July asking about feedback from those VCOs, either trainers or trainees, involved in the First Year Graduate Veterinary Education (FYGVE) program, which is essentially an internship program for first year Army veterinarians. It teaches them how to be an officer in the Army and trains them on the clinical veterinary and food protection tasks they will be expected to complete on their own upon completion of the FYGVE program. In writing my survey, no one had anticipated that this group would also like to provide feedback since they have the opportunity to meet with ATOs and thus may have insight into ways to improve that communication process, even though none of them are officially responsible for food defense on any installations. After discussing my options with Ms. Deaver, we decided to duplicate the VCO survey but adjust it for the FYGVEs so they would not branch out right away, but could continue through the survey and answer the questions as if they were identified as responsible for food defense on an installation. LTC Schiavetta, Dr. Benisch, and I decided LTC Schiavetta could send out this new, exclusive survey link to the FYGVE program manager so that only the FYGVEs received it. Unfortunately, LTC Schiavetta took it upon herself to also send it out to the district commanders, which we had not discussed and was not necessary. Consequently, the separate FYGVE link went out through the same channel that the VCO reminder had two days previously, creating confusion for everyone out in the field who now wondered what this extra survey was and if they were supposed to also take it. LTC Schiavetta subsequently sent a few additional e-mails to clarify the situation. I hope this additional e-mail did not annoy the VCOs and thereby harden them to participating in future surveys.

The VCO survey closed on Friday, 26 July, and the NCO and FYGVE surveys closed on my last day at APG, Friday, 2 August. Throughout my final week at APG, I began analyzing the VCO survey via Vovici and Microsoft Excel. On Wednesday I had the opportunity to meet with Ms. Deaver, who helped me improve upon my initial analysis by developing more sophisticated tables, commands, and statistical analyses. I could have handed off the survey results to Ms. Deaver or another command statistician to analyze and present back to COL Webb, but I wanted the opportunity to learn and practice. With Ms. Deaver's guidance, I completed the analysis of all three surveys and wrote a report for COL Webb, Dr. Benisch, and Ms. Davidson to utilize as they begin to develop risk communication training for VCOs and NCOs. I submitted the report to Dr. Benisch on 5 September. This marked the completion of my capstone project.

Chapter 3 - Competencies, Relevant Coursework, and Supplemental Experiences

Throughout the past two years, I completed 36 hours of academic coursework and a six-hour field experience. While these classes have undeniably educated me and helped me grow as a scholar, I also firmly believe in the advice Mark Twain gave when he said, "Never let school interfere with your education."[25] Thus, I have sought out additional experiences to supplement my formal education.

3.1 MPH Core Competencies

3.1.1 Biostatistics[26]

I enrolled in the MPH program prior to the biostatistics class being offered; instead, I took a more generic introductory statistics course. While I am happy with the elective coursework I completed, I would have liked to have had additional training in statistics as I think it would help me in understanding and evaluating the statistical results in journal articles and published literature, not to mention my own surveys.

My capstone project consisted primarily of developing and analyzing three surveys. Because I had not previously had any training on survey design and analysis, I faced a fairly steep learning curve. Fortunately, I had several mentors experienced in survey writing, particularly the command statistician, Ms. Deaver, who previously worked for the U.S. Census Bureau. While it may have helped to have had formal training previously, I am very grateful I was able to acquire survey writing skills during my field experience.

3.1.2 Environmental Health[27]

The environmental toxicology course was my first course in both toxicology and environmental issues. I learned and applied the principles of risk assessment by completing my own as an assignment within the course. The other main concepts I learned were characteristics of a toxin vs. poison and the dose-response relationship. These key concepts provided basic background knowledge for the subsequent veterinary toxicology course I completed.

3.1.3 Epidemiology[28]

This course reinforced many of the main points I learned in the veterinary epidemiology course I took during my first year of vet school. It was neat to review them from primarily a human medicine angle, however, and to engage in group discussions with MPH students outside of

[25] Leonard, Harrison. 2010. 'Never let school interfere with your education'. *Daily Sundial*, http://sundial.csun.edu/2010/12/%E2%80%98never-let-school-interfere-with-your-education%E2%80%99/.

[26] STAT 703: Statistical Methods for Natural Scientists; MPH 840: Public Health Field Experience

[27] DMP 806: Environmental Toxicology

[28] DMP 754: Veterinary Epidemiology

veterinary medicine. One of these discussions in particular highlighted the controversial nature of applying epidemiological measures to health policies; in many cases writing policies becomes a case of choosing between imperfect solutions that are guided by science and statistics, but for which we do not have a perfect test or epidemiological assessment. I especially enjoyed this exercise and its likeness to a real-life policy decision process.

3.1.4 Health Services Administration[29]

This course provided a basic understanding of various kinds of health care in the United States and around the world, all of which was new information to me. It was also a particularly timely course to take during the summer of 2012 when the U.S. Supreme Court ruled in favor of the *Affordable Care Act*. The course required each student to interview a health care administrator, so I met with my hometown hospital administrator and personal physician; it was neat to return to my home in rural Kansas and explore the local healthcare challenges through a different perspective.

3.1.5 Social and Behavioral Sciences[30]

While I unfortunately felt most of my time in this core class involved completing busywork, looking back, I wish I had been able to take this as a small in-person course in order to engage in conversations on the course topics that encouraged critical thinking. The exposure to health risk communication during my field experience has reinforced and further educated me on how perceptions rule one's behavior. In order to effectively communicate to anyone—a subject matter expert or lay person, a coworker or family member—it is vital to first understand that person's perceptions, particularly if we are interested in changing his or her behavior.

Through the lecture and reading assignments, I learned about the history and evolution of public health, particularly the various health behavior models and theories, three of which I am going to summarize and apply to my field experience. I first learned about the five levels of the social ecological model, which is foundational to understanding how people's perceptions and decisions are influenced by countless entities at varying distances from an individual. These interactions are illustrated in figure 3.1.

[29] HMD 720: Administration of Health Care Organizations

[30] KIN 818: Social and Behavioral Bases of Public Health; MPH 840: Public Health Field Experience

Figure 3.1 Social Ecological Model. Wilson, Bob. Social Ecological Model. www.balancedweightmanagement.com. Accessed 30 July 2013.

Also critical to the process of changing people's behavior, which as a future veterinarian could be persuading a client to adopt a particular vaccination or biosecurity protocol, are understanding the stages of that process as outlined in the transtheoretical model in figure 3.2.

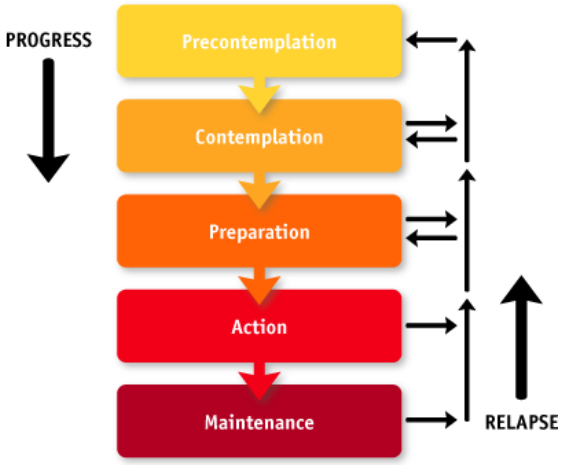


Figure 3.2 The Stages of Change Continuum. American Society on Aging and American Society of Consultant Pharmacists Foundation. Facilitating Behavior Change. http://www.adultmeducation.com/FacilitatingBehaviorChange.html. Accessed 30 July 2013.

The model can be applied to the ultimate goal of my capstone project, which is to urge VCOs and Food Defense NCOs to adopt more regular communication and interaction with ATOs. In this scenario, the precontemplation phase would have been the time prior to anyone in PHC realizing that this was a problem—thus prior to creating the Food Defense Program in 2009. Subsequently the contemplation phase was the phase from the development of the program and policies by USAPHC that dictate the roles of VCOs and Food Defense NCOs in the Food Defense Program. Now

that these policies are in place (i.e., the Technical Guide (TG) 355, Installation Food Vulnerability Assessment (IFVA) Program Handbook, which my survey asked about), the VCOs and Food Defense NCOs need to be trained and informed as to why communicating with the ATO is important to their job and the success of the Food Defense Program mission. This is where the risk communication messaging that they will be provided following my survey analysis comes into play. At that point, each VCO and Food Defense NCO will, as an individual, hopefully be moved into action if they are not already. They will then have to actively work to maintain that communication dialogue with their ATO(s). As the figure indicates, however, at any phase in this model there is the potential for relapse, which has surely been the case for some VCOs and Food Defense NCOs who may have taken the initiative immediately following policy guidance and/or instructions from their commander, but after encountering barriers to establishing that communication dialogue with the ATO, have relapsed into contemplation. This is exactly why risk communication is not and cannot be a one-time discussion, nor why a policy (i.e. the TG355) as a product of risk management can be expected to be acted upon forever after its adoption. Rather, that policy and initial training as to why communicating with ATOs is critical for mission success, must be continually refreshed and refined in order to prevent personnel from relapsing into a stage of inactivity.

In order to move the VCOs and Food Defense NCOs into the action phase, however, it is critical to understand their perceptions, which brings the discussion to the Health Belief Model. The U.S. Public Health Service developed the Health Belief Model (HBM) in the 1950s in order to explain why the tuberculosis and other medical screening programs were not very successful. The figure below illustrates how the four constructs of the HBM (perceived seriousness, perceived susceptibility, perceived benefits, and perceived barriers) are influenced by demographic and sociopsychological variables to ultimately determine the likelihood of a person taking the recommended preventive health action, or in the case of my capstone project, the likelihood of VCOs and Food Defense NCOs of fostering a communication dialogue with the ATO on their installation.

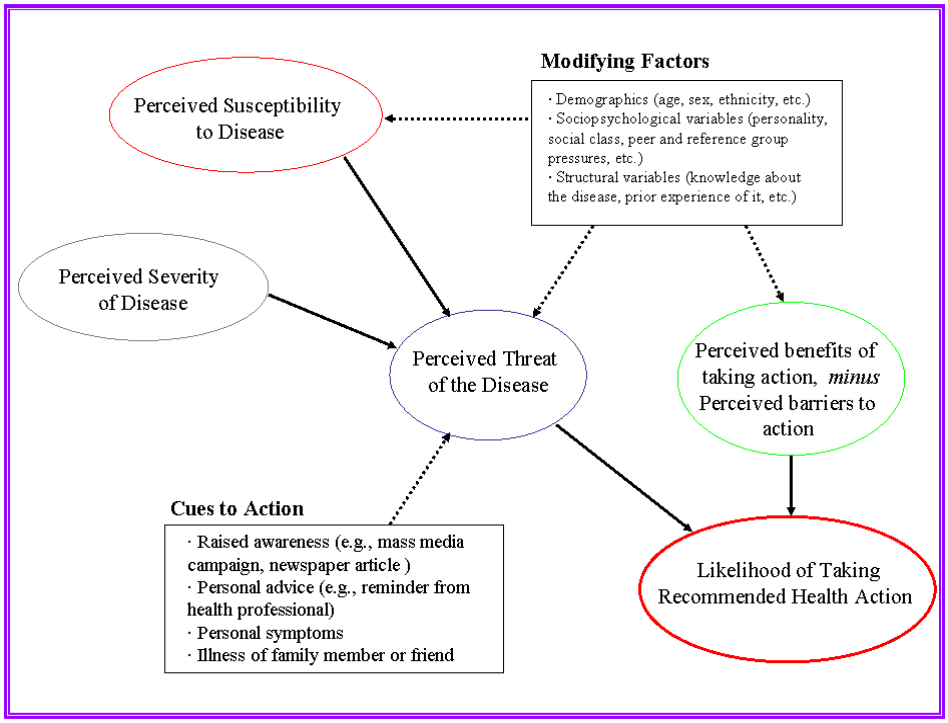


Figure 3.3 The Health Belief Model. University of Ottawa. Behaviour Change. http://www.medicine.uottawa.ca/sim/data/BehaviorChange_e.htm. Accessed 30 July 2013.

Creating change in a military scenario such as my project is not quite as difficult as an individual in society because of the ability of a commander to dictate orders, but this still requires both senior leadership and the VCO or Food Defense NCO to prioritize communication with an ATO. Through altering their perceived susceptibility to a food defense incident and the ramifications of that incident if not communicated to the ATO, hopefully VCOs and Food Defense NCOs will be more likely to engage in that critical communication process.

Both this course from an academic standpoint and my field experience from a practical standpoint emphasized the importance of cultural competence and sensitivity. Cultural competence is a set of attitudes, skills, behaviors, and policies that enable organizations and staff to work effectively in cross-cultural situations. It reflects the ability to acquire and use knowledge of the health-related beliefs, attitudes, practices, and communication patterns of clients and their families to improve services, strengthen programs, increase community participation, and close the gaps in health status among diverse population groups. Cultural sensitivity in the healthcare environment implies showing empathy and sensitivity to patients and treating them as individuals in a respectful and caring manner. Health risk communication training emphasizes cultural competency and cultural sensitivity, in order to establish trust and credibility with one's target audience, another prerequisite to affecting behavior change.

While I may not have benefited as much as possible from this class due to the online format, the health risk communication training I received during my field experience reinforced and applied

each of these academic models or theories to real-world situations, even if they weren't overtly recognized as such. This is perhaps the competency area in which I have gained the most as I was able to learn from several instructors/mentors with a variety of experiences and apply these concepts to my capstone project.

3.2 Infectious Diseases and Zoonoses Core Competencies

3.2.1 Pathogens and Pathogenic Mechanisms[31]

My DVM coursework provided the bulk of my education and training in this area. I particularly enjoyed my independent study in advanced parasitology, which the instructor allowed me to tailor to my specific interest in policy. I evaluated three historical parasite eradication programs for lessons current policymakers could learn from. One of my favorite graduate classes, this class provided a venue to synthesize my veterinary, public health, and policy knowledge and experiences into three presentations, perhaps mimicking a task in a future job.

3.2.2 Host Response to Pathogens and Immunology[32]

Because I have had only one course in immunology, I recognize my knowledge in this area is only introductory, but value the incredible role of immunology and its role in the future of medicine.

3.2.3 Environmental and Ecological Influences[33]

Most of the courses I took in this area focused on the history and policies of public health and food safety. The food protection and defense course largely reinforced concepts and policies I had learned through experience, research, and FBI learning sessions (see section 4.3). On the other hand, the remaining courses introduced me to a number of new policies and ideas.

The global public health class was probably one of the most eye-opening courses I took as part of my MPH program. It was incredibly interesting to discuss health disparities, international policies, and the stakeholders and money involved. I also tremendously enjoyed learning from Dr. Briggs, a rabies specialist and experienced international policymaker.

Trade and Agricultural Health and Globalization and the Food Trade provided instruction on trade policies, regulating bodies, and historical examples that have set precedence for today's trade laws and principles. I learned that many times these policies are the result of a trade and security

[31] Understand and be able to describe the ecology and modes of disease causation of infectious agents such as bacteria, viruses, parasites, and fungi; DMP 712: Veterinary Bacteriology and Mycology (dual credit); DMP 718: Veterinary Parasitology (DVM course); DMP 722: Veterinary Virology (dual credit); DMP 856: Advanced Veterinary Parasitology

[32] Describe the current understanding of host immune response to infection and understand the role of vaccination in infectious disease control; DMP 705: Principles of Veterinary Immunology (dual credit)

[33] Understand the influence of space/geography, insect vectors, toxic plants and other toxin sources, as well as infectious agents on infectious disease and food safety; DMP 801: Toxicology (DVM course); DMP 816: Trade and Agricultural Health (dual credit); DMP 844: Global Public Health; DMP 888: Globalization, Cooperation, and the Food Trade (DVM course); FDSCI 731: Food Protection and Defense; MPH 840: Public Health Field Experience

dilemma—consumers desire products from other countries so they can enjoy items such as fresh fruit year-round, but importing such products poses a number of biological, chemical, and physical hazards to our domestic agriculture and food supply chain, which could have disastrous economic consequences on U.S. industries.

3.2.4 Disease Surveillance and Quantitative Methods[34]

Again, because I enrolled in the MPH program prior to restructuring the electives, I did not have any formal education in this area. While my capstone project did not evaluate a disease event per se, I did learn how to quantitatively and qualitatively evaluate a communication process that, if effective, should theoretically mitigate food vulnerabilities. As with a disease, our nation's complex food system possesses various points at which it is vulnerable or susceptible to contamination, whether intentional or unintentional. Thus, like a direct health event, it merits quantitative evaluation of risk factors.

3.2.5 Effective Communication[35]

One of the largest weaknesses in my academic training has been communication skills development. Because I enrolled in the MPH program prior to redesigning the electives, I was not required to take a communications class. While I would have liked to have taken the multidisciplinary thought and writing course, I unfortunately could not fit it in with my DVM class schedule. As a veterinarian and public health specialist, my ability to effectively communicate on an interpersonal level with clients and coworkers and at a larger level through the media will be vital to establishing quality and longevity within those relationships. Indeed research in human medicine has confirmed that "the current malpractice environment is fueled by communication and relationship failures."[36]

3.3 Supplemental Experiences

3.3.1 *Frontier* Program Fieldtrips

Since the spring of 2011, I have had the opportunity to be involved in the *Frontier* program.[37] While my schedule the past few years has prevented me from attending the biweekly meetings, I have been fortunate to participate in field trips and other networking activities throughout the summer holidays. While working in Washington D.C. during the summer of 2011, I met with several other *Frontier* scholars and Dr. Ackleson several times for coffee. This was a neat

[34] Understand how disease events and risk factors for disease are quantified and compared; MPH 840: Public Health Field Experience

[35] Develop and demonstrate effective strategies to communicate public health/infectious disease issues to a variety of audiences; CS 826: Contemporary Issues in Veterinary Medicine (DVM course); MPH 840: Public Health Field Experience

[36] Roter, Debra. 2006. "The Patient-Physician Relationship and its Implications for Malpractice Litigation." Journal of Health Care Law and Policy no. 9 (2):304-314. P. 304.

[37] Frontier is an "interdisciplinary program for the historical studies of border security, food security, and trade policy." http://frontier.k-state.edu/index.php?option=com_frontpage&Itemid=1

chance to meet students from other schools and learn about their policy interests and current job placements.

The following summer I attended a trip to the Santa Teresa border crossing near Las Cruces, New Mexico. Again, this served as a wonderful opportunity to get to know other *Frontier* students at K-State and several universities throughout the country. The first day we attended an immigration law seminar and had a policy workshop by Dr. Ackleson. The second and more notable day for me was the actual visit to the border crossing. I was unsure of what this large cattle crossing would look like, so I was a little surprised to see it was placed in what seemed to be the middle of nowhere. It was neat to speak with some of the Customs and Border Protection (CBP) officers to learn what they routinely look for in both personal vehicles and cargo, as well as to see items they have confiscated for various reasons, including a jar of rattlesnake tea—ick! Even more exciting was the tour through the cattle yards to learn how and what they inspect cattle for, how long they are quarantined for, etc. Having this experience was particularly helpful when I subsequently enrolled in the advanced parasitology course and researched Texas Cattle Fever. It would be nice to visit the crossing again and ask more detailed questions regarding the control of the disease since I now know more about it.

This past summer I had the chance to attend another field trip, this time to the ports of Los Angeles and Long Beach, California. These ports are enormous, with a combined capacity that ranks in the top ten of all ports world-wide. The sheer volume and value of goods that flow through them in a year is stunning. With so much movement and potential for adulteration, maintaining the physical security and integrity of the goods becomes challenging. The guided tour through the ports was eye-opening.

3.3.2 Federal Bureau of Investigation (FBI) Training Events

During my first semester as an MPH student, Dr. Kastner informed me of a conference on agroterrorism he thought I might enjoy. Held by the FBI, the International Symposium on Agroterrorism brought together agroterrorism experts from law enforcement, academia, the government, and industry to discuss WMD, past agroterrorism incidents, and policies aimed at preventing such an event from occurring in the future. This conference and the networking I did with persons in each of the interest groups truly opened my eyes to the potential threats in the food and agriculture industries. It also enlightened me to potential career opportunities.

In December 2011 I attended a biosecurity workshop at the University of Missouri—Kansas City (UMKC), which targeted scientists in the academic community. The introductory half was a good refresher of some of the biosecurity principles, policies, and previous incidents/breaches nationally and internationally. It was particularly interesting to learn how academics and researchers have been targeted throughout the years, particularly students who have access to laboratories, etc. During the second half of the workshop, we broke up into small groups and participated in a table top exercise of how we would respond to a situation of someone doing “extra” research in a university laboratory and even removing research specimens.

During June 2012, I traveled to Kansas City to interview Special Agent David Cudmore, WMD Coordinator for the Kansas City field office. I asked him about his background, job activities, and career opportunities with a veterinary degree in the FBI or a similar law enforcement agency. I also

asked him about his personal opinion on the legitimacy of the threat of agroterrorism and on current issues at the time, such as research on the bird flu. Overall, it was a terrific opportunity to learn about the regular and WMD-specific activities of the FBI and how someone in law enforcement approaches the issues of bio- and agrosecurity.

3.3.3 USDA Smith-Kilborne Course on Transboundary Animal Diseases

One of the highlights of my veterinary and public health career thus far has been the chance to attend this course at Cornell University and the Plum Island Animal Disease Center in May-June, 2013. One student from each veterinary school in North America was selected to attend the course. Experience, knowledge, and interest in transboundary diseases varied considerably among the students, with me being one of the more knowledgeable attendees. Some students attended because they have a strong interest in policy on the international or federal level, while others attended simply so they have a better idea of how to diagnose a transboundary disease, should an infected animal ever be presented in their clinic.

We were truly blessed with the opportunity to hear from a variety of specialists, including epidemiologists, researchers, and international consulting veterinarians. Dr. Alfonso Torres, previously the Chief Veterinarian for United States Department of Agriculture (USDA) and now on faculty at Cornell University, headed the program and presented several case studies of foot and mouth disease (FMD) outbreaks, which I found particularly fascinating. It was an amazing opportunity to discuss the 2001 outbreak in the United Kingdom with the veterinarian who actually served as the spokesman for the USDA Veterinary Services during the time of the outbreak!

Following the classroom portion of the course, we spent two days at the Plum Island Animal Disease Center, which is soon to be replaced by the National Bio- and Agrodefense Facility (NBAF) in Manhattan, Kansas. As the K-State representative, it was especially neat to visit the facility and witness the research being done in order to develop a more informed opinion about moving the facility to Kansas. Overall this was an incredible opportunity to meet other veterinary students from throughout North America, learn from experts in transboundary animal diseases, and actually witness some of the diseases firsthand!

3.3.4 Research Activities

During the summer of 2011, I worked as a Volunteer Scholar in the Food, Agriculture, and Veterinary Defense branch within the Department of Homeland Security's Office of Health Affairs. For my project, I gathered and analyzed state animal disease response plans and ultimately made recommendations for how to write or improve upon current plans. I was astounded at the variation that exists between states, if a state even has a plan for how to deal with an animal disease event. Interpretations of animal disease, disaster, and emergency all varied quite a bit, along with jargon, authorities, and inclusivity. The project allowed me to read and compare a number of policies to learn what makes an effective and realistic policy. Outside of my project, I also had the chance to visit other offices within Department of Homeland Security (DHS), USDA, and Congress.

While I was never one for learning history in my youth, through personal travel, involvement in the *Frontier* program, and taking courses from Dr. Kastner, my interest in history has blossomed the past few years. This developing interest, coupled with the financial incentive in a veterinary

student history essay competition, inspired me to research the history of biological agents used as weapons of mass destruction. After many hours of research and several dozen articles, I completed my essay. It was fascinating to learn about the many incidents, even hundreds of years ago, of people using biological agents (animals or microscopic organisms) in warfare.

3.3.5 Scholarship Opportunities

Throughout 2012, I worked extensively with Mr. James Hohenbary, K-State's Assistant Dean for Scholarship Administration, and Dr. Kastner to complete and polish applications for the prestigious Marshall, Mitchell, and Fulbright scholarships. I planned to take a year off of veterinary and graduate school at K-State in order to complete a one-year graduate program at King's College London, the University of Nottingham, or one of four Irish or Northern Ireland universities. My proposed field of study varied by institution, but generally involved international security and food safety.

Throughout this year-long process, I had the opportunity to research dozens of European universities and graduate programs, as well as notable historical events in Ireland and the UK, such as the 2001 FMD outbreak. I also read and visited with many people about the culture, government, and history of the two countries. Additionally, I had the chance to develop my writing skills via the applications and my interviewing skills via practice and finalist interviews. While I unfortunately was not selected to receive any of these scholarships, this time-intensive process served as a tremendous opportunity to learn about myself and grow as a scholar.

Chapter 4: Synthesis and Conclusion

I encountered several frustrations throughout my field experience. The largest was easily not having enough work to do most of the time. In my two previous government internships, I was kept quite busy both with projects and with other meetings or events I was encouraged to attend. Those supervisors took extra steps to expose me to areas outside the office I was working in, which greatly enhanced my experience. At USAPHC, personnel within the VET portfolio were willing to meet with me if I asked, but did not invite me to sit in on meetings or policy-writing discussions. "Coaching up," therefore became key in order to learn about and participate in additional activities. I had very little interaction with anyone outside of the VET portfolio and the Health Risk Communication Program, which was disappointing. I think the still recent and disjointed merge of CHPPM and VETCOM, the geographic disconnect of portfolios, summer vacations and furlough schedules, and the military chain of command all compounded this situation.

The week following July 4th, furloughs for civilian personnel commenced. With few exceptions, all civilians were off work without pay for two days every other week for eleven weeks. Obviously, this made it difficult for everyone within the Army who relied on civilian support to complete their work in a timely manner, resulting in extra planning and an inability to accomplish tasks. For me, it complicated meeting with my project mentors (all civilians), especially given my limited time on-post and need to continually move forward with my project. In one specific example, I had hoped to watch part of a previous risk communication class, but the video specialist who was needed to convert the files was unable to do so immediately and was then on furlough. By the time she was back in the office, the risk communication specialist I planned to watch the video with was gone for two weeks of vacation, extending past my final date. Additionally, Dr. Benisch's furlough days overlapped with my last two days of work, which made my out-processing slightly more complicated. I also planned to meet with Ms. Deaver the Monday after the VCO survey closed, but she was furloughed that Monday and Tuesday, so I had to wait until Wednesday to do so, delaying the survey analysis yet again.

The timeline for my project also presented challenges and frustrations I had not expected. In each of my two previous internships, my supervisors had identified a project need that I could manage more or less within my internship period. I thought by coordinating my field experience a year ahead of time that the VET portfolio would anticipate my arrival and task me with a project that would be mutually beneficial. While this was somewhat the case, it took nearly half of the summer to identify the specific project COL Webb wanted me to research. By that point, the paperwork, deadlines, limited access to Vovici, and inadequate survey distribution all complicated and delayed my project. It also turned out to be a very difficult time of year to attempt a survey because summer is a popular time for vacations and military PCSing (permanent change of station) to occur. I therefore had many false hopes and naïve expectations regarding my field experience and capstone project.

For all of these reasons, it did not take long to realize that a career in the Department of Defense, whether as a soldier, contractor, or civilian, is not something I wish to pursue. I realize that

even in other government agencies I will always have to deal with some level of bureaucracy and financial circumstances (i.e. furloughs) that are out my agency's control, but the extra layer of military hierarchy proved to be more than I care to work with on a daily basis. This experience has caused me to question what kind of environment I aspire to eventually work in—government, academia, other public practice, or any other position where I could work on preventive medicine and one health issues at a grassroots level. I am deeply grateful for this experience for reasons soon to follow, but I am also appreciative of the frustrations I faced because they gave me a more realistic view of the challenges in working in a government environment.

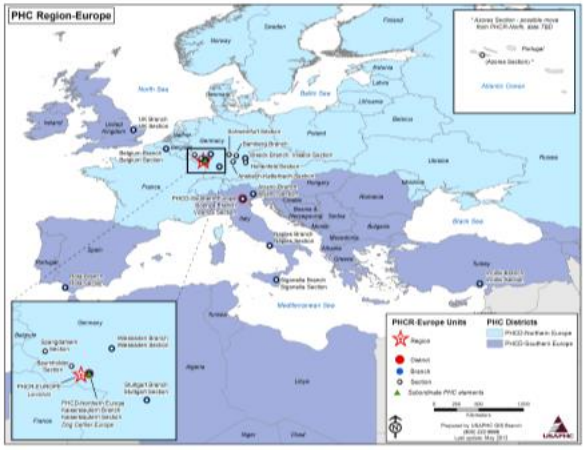
While I did encounter many frustrations with this experience, I still overwhelmingly view it as a wonderful opportunity. I accomplished each of my learning objectives without any problem. Although I was informed that working in a headquarters environment such as AIPH does not accurately portray what Army life is "really" like, I still gained exposure and understanding of DoD and Army organization, terminology, and rank that I would otherwise not have had. It was also interesting to learn about the Army's approach to food safety and food defense and the kinds of training their officers and enlisted personnel complete.

I also gained risk communication training, which I may never be formally exposed to again. Obviously, communication is something that everyone on this earth practices, regardless of age, education, experience, race, or culture. Thus, the general communication training I received can be used on a personal and professional level daily, and the more specialized health risk communication training I received will be beneficial in my professional career when speaking to both other professionals and lay persons. I was also fortunate to have learned from Ms. Davidson, who has provided consultative services to several high profile military situations over the past few years.

The survey-writing and statistical skills I acquired through my project filled gaps in my educational programs that I would otherwise still be deficient in. Additionally, I enjoyed the opportunity to learn to use the Vovici software system and complete most of the survey editing and analysis myself.

Regardless of what career or personal aspirations I pursue in life, my experience in the Master of Public Health program at K-State and supplemental experiences have undoubtedly broadened my education and provided a rewarding complement to my DVM education. They have prepared me for whatever life may bring through developing my critical thinking, writing, and communication skills; educating me on a wide breadth of topics; and exposing me to a variety of people and cultures. I am forever grateful for these opportunities.

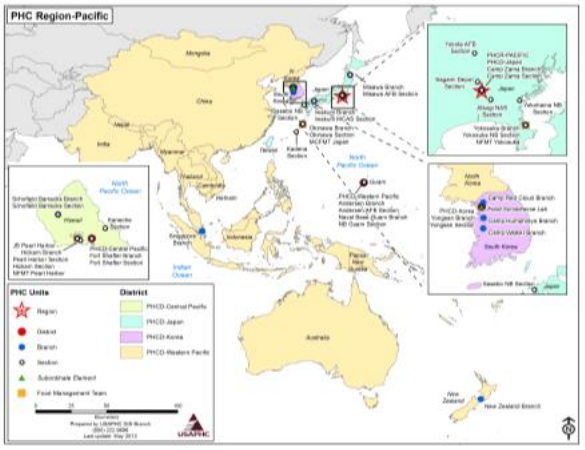
Appendix 1. USAPHC Regions

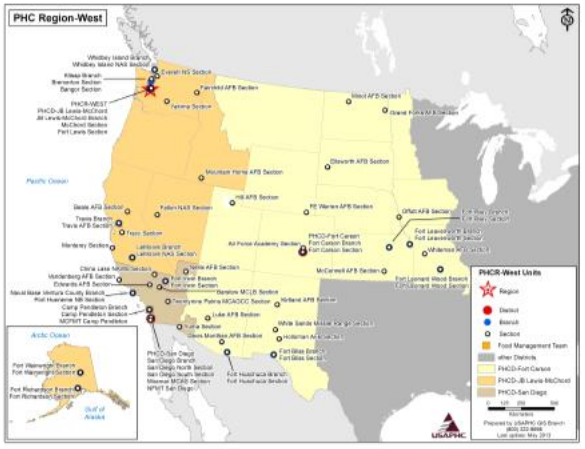


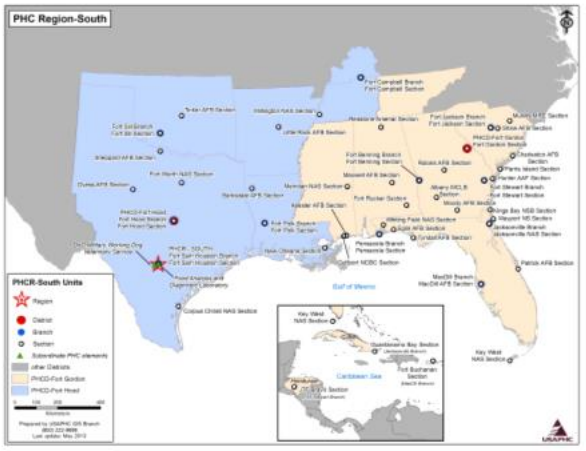
USAPHC Locations Worldwide

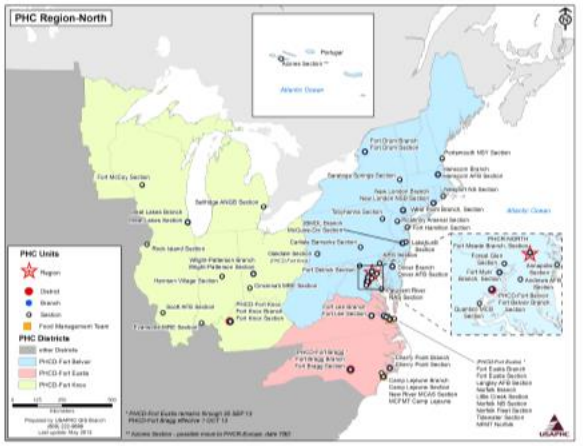
USAPHC
U.S. ARMY PUBLIC HEALTH COMMAND
Geographic Information Systems

Prepared by USAPHC GIS Branch
(800) 222-9698
May 2013









Appendix 2. DoD Vulnerability Assessment, Food Vulnerability Assessment Benchmarks[38]

Benchmark #	Benchmark Category	Benchmark	References	Supplemental
RM-13	Food Vulnerability Assessment (FVA)	**FVAs are performed to ensure all food supplies and distribution points use programs and procedures to prevent and eliminate the intentional contamination of food. The ultimate goal of the FVA is to delay, deter, detect and respond to attacks through the food supply chain. FVAs are required to be conducted IAW COCOM and Service guidance.**	DoD FPCON Measures	Combatant Command Guidance US Army Technical Guide 188
		Best Practices: • Has a multi-disciplinary Food Defense Assessment Team (or equivalent) been established for conducting systematic reviews and assessments of the installation's food systems? • Has a FVA been conducted IAW applicable COCOM and/or Service guidance? • Does the FVA identify potential vulnerabilities for each facility that stores, prepares, serves, and/or sells food, ice, or bottled water, including schools, child care centers, exchange operations, contract operations, recreation facilities, etc.? • Have food defense AT measures been incorporated into the logistical and contracting processes for establishments on or off the installation that supply, transport, store, prepare, serve, and/or sell food, ice, or bottled water to the installation? • Are procedures established for increasing surveillance during higher FPCONs or increased threat? **Note:** Currently, FVAs are not required by DoD guidance, only COCOM and Service guidance.		AFI 10-245 AFI 10-246

[38] Department of Defense. 2013. Vulnerability Assessment Benchmarks.

Appendix 3. Questionnaire to Evaluate the Critical Communication Process between NCOs (VCOs) (FYGVEs) and ATOs

The Food Protection Program at the U.S. Army Public Health Command (USAPHC) is conducting this survey to help evaluate the critical communication process between the Food Defense Noncommissioned Officer (NCO) (Veterinary Corps Officer) and the Antiterrorism Officer (ATO) located at the installation level. The results of the survey will identify opportunities for enhanced communication training. The survey should only take about 10 minutes to complete, and your responses to this survey will remain anonymous. If you need to return to a previous page, please use the "back" button provided within the survey; do not use the back button in your browser while taking the survey. Thank you for your participation and valuable input!

Instructions for survey input are highlighted in yellow throughout. Please place all questions on different pages. Character limits for block spaces are noted accordingly.

Changes for the VCO survey are highlighted in blue throughout. Note that Q15A and Q15B have entirely different tables for the NCO survey and the VCO survey.

The FYGVE survey mirrors the VCO survey, however questions 3, 4, 4.1, and all "B" questions were eliminated; thus, they will complete the survey as though they are responsible for food defense at one installation.

1. Which of the following choices best describes your review of the TG355, Installation Food Vulnerability Assessment (IFVA) Program Handbook, released in November 2012?

   - o_1 I know this TG so well I could teach it
   - o_2 I have read it cover to cover
   - o_3 I have skimmed it cover to cover
   - o_4 I have only skimmed or read some of the contents
   - o_5 I have not looked at it, but I am aware it exists
   - o_6 I have not even heard of this document
   - o_7 Other, please specify: _____

   For responses o_5 or o_6, please skip to question 3; otherwise continue.

2. Please rate the level to which you agree or disagree with the following statements:

   Report values will be ranked from 1 to 5 with 5 for "Strongly Agree" and 1 for "Strongly Disagree."

		Strongly Agree	**Agree**	**Neither Agree nor Disagree**	**Disagree**	**Strongly Disagree**
1.	The contents of the TG355 help me achieve mission success in my role as an NCO. (Replace "an NCO." with "a VCO.")	o	o	o	o	o
2.	The training I received on the TG355 provided adequate understanding to achieve mission success in my role as an NCO. (Replace "an NCO." with "a VCO.")	o	o	o	o	o
3.	Receiving face-to-face training on new policies, such as the TG355, as they are released would enrich my understanding of the material and improve my ability to achieve mission success.	o	o	o	o	o

2.1 Please provide feedback on the effectiveness of the content and training you received on the TG355 as it pertains to achieving mission success. In addition, please note any suggestions you have to improve training and understanding of future policies as they are released. *(750 character limit)*

3. At how many installations are you responsible for food defense?

Include via drop-down menu with the following report values:

o0	0	o3	3	o6	6	o9	9
o1	1	o4	4	o7	7	o10	10+
o2	2	o5	5	o8	8		

If someone answers with "0," continue to question 4. If someone answers with "1," continue to question 5A. For all other answers, continue to question 5B.Questions will continue to follow A/B format based on the number of installations they responded with in Q3 until they merge again at Q19. Please reference branching pattern for clarity.

4. Please explain why you are not responsible for food defense at any installations. *(750 character limit)*

4.1. Which PHC region are you assigned to?

- o1 Europe
- o2 North
- o3 Pacific
- o4 South
- o5 West

Ending Page Q4

Thank you for your time. We have received your response, but are seeking feedback from those considered responsible for food defense. You may now close your browser.

5A. Do you know who the Antiterrorism Officer (ATO) is at your installation?

- o_1 Yes
- o_2 No

For responses of "No," skip to question 20A; otherwise continue.

5B. In general, do you know who the Antiterrorism Officer (ATO) is at the installations for which you are responsible?

- o_1 Yes
- o_2 No

For responses of "No," skip to question 20B; otherwise continue.

6A. Have you met the ATO at your installation face-to-face?

- o_1 Yes
- o_2 No

For responses of "No," skip to question 17A; otherwise continue.

6B. Have you met the ATO at your installations face-to-face?

- o_1 Yes (all)
- o_2 Yes (some)
- o_3 No

For responses of "No," skip to question 17B; otherwise continue.

7A. How frequently do you collaborate with the ATO at your installation?

- o_1 Greater than 1 time per month
- o_2 Once per month
- o_3 1-2 times per quarter
- o_4 1-3 times per year
- o_5 Less than 1 time per year

7B. In general, how frequently do you collaborate with the ATO at each of your installations?

- o_1 Greater than 1 time per month
- o_2 Once per month
- o_3 1-2 times per quarter
- o_4 1-3 times per year
- o_5 Less than 1 time per year

8A. In what setting(s) do you collaborate with the ATO at your installation? *(Please mark all that apply)*

- $\square_1$ Food Defense Assistance Team (FDAT) meetings
- $\square_2$ Antiterrorism Working Group (ATWG)/Force Protection Group meetings
- $\square_3$ Installation Food Vulnerability Assessment (IFVA) in-briefing
- $\square_4$ IFVA out-briefing
- $\square_5$ Immediately upon identifying a potential concern or vulnerability
- $\square_6$ Higher Headquarters Assessment (HHA)
- $\square_7$ Other, please specify: [ ]

8B. In what setting(s) do you generally collaborate with the ATO at your installations? *(Please mark all that apply)*

- $\square_1$ Food Defense Assistance Team (FDAT) meetings
- $\square_2$ Antiterrorism Working Group (ATWG)/Force Protection Group meetings
- $\square_3$ Installation Food Vulnerability Assessment (IFVA) in-briefing
- $\square_4$ IFVA out-briefing
- $\square_5$ Immediately upon identifying a potential concern or vulnerability
- $\square_6$ Higher Headquarters Assessment (HHA)
- $\square_7$ Other, please specify: [ ]

9A. How often does your installation host Food Defense Assistance Team (FDAT) meetings?

- o_1 Quarterly
- o_2 Semi-annually
- o_3 Annually
- o_4 Never
- o_5 I do not know
- o_6 Other, please specify: [ ]

For responses of "Never," skip to Q12A; otherwise continue.

9B. In general, how often do your installations host Food Defense Assistance Team (FDAT) meetings?

- o1 Quarterly
- o2 Semi-annually
- o3 Annually
- o4 Never
- o5 I do not know
- o6 Other, please specify: [ ]

For responses of "Never," skip to Q12B; otherwise continue.

10A. Do you participate in these FDAT meetings regularly?

- o1 Yes
- o2 No

For responses of "Yes," skip to Q12A; otherwise continue.

10B. Do you participate in these FDAT meetings regularly?

- o1 Yes (all installations)
- o2 Yes (some installations)
- o3 No

For responses of "Yes (all installations)," skip to Q12B; otherwise continue.

11A. Please provide reasons why you do not attend these meetings regularly. *(Mark all that apply)*

- ☐1 I do not have time to attend these meetings.
- ☐2 The meetings are unproductive.
- ☐3 I do not think attending these meetings falls within my mission.
- ☐4 I was not aware I am supposed to attend these meetings.
- ☐5 I was told I do not have to attend these meetings.
- ☐6 The VCO on my installation attends instead. (replace "VCO" with "Food Defense NCO")
- ☐7 I am not invited to these meetings.
- ☐8 Other, please specify: [ ]

11B. Please provide reasons why you do not attend these meetings regularly. *(Mark all that apply)*

☐1 I do not have time to attend these meetings.

☐2 I am responsible for multiple installations and cannot regularly travel to each of them to attend these meetings.

☐3 The meetings are unproductive.

☐4 I do not think attending these meetings falls within my mission.

☐5 I was not aware I am supposed to attend these meetings.

☐6 I was told I do not have to attend these meetings.

☐7 The VCO on my installation attends instead. (replace "VCO" with "Food Defense NCO")

☐8 I am not invited to these meetings.

☐9 Other, please specify: _____

12A. How often does your installation host Antiterrorism Working Group (ATWG)/Force Protection Group meetings?

o1 Quarterly

o2 Semi-annually

o3 Annually

o4 Never

o5 I do not know

o6 Other, please specify: _____

For responses of "Never," skip to Q15A; otherwise continue.

12B. In general, how often do your installations host Antiterrorism Working Group (ATWG)/Force Protection Group meetings?

o1 Quarterly

o2 Semi-annually

o3 Annually

o4 Never

o5 I do not know

o6 Other, please specify: _____

For responses of "Never," skip to Q15B; otherwise continue.

13A. Do you participate in these ATWG meetings regularly?

o1 Yes

○2 No

For responses of "Yes," skip to Q15A; otherwise continue.

13B. Do you participate in these ATWG meetings regularly?

○1 Yes (all installations)

○2 Yes (some installations)

○3 No

For responses of "Yes (all installations)," skip to Q15B; otherwise continue.

14A. Please provide reasons why you do not attend these meetings regularly. *(Mark all that apply)*

☐1 I do not have time to attend these meetings.

☐2 The meetings are unproductive.

☐3 I do not think attending these meetings falls within my mission.

☐4 I was not aware I am supposed to attend these meetings.

☐5 I was told I do not have to attend these meetings.

☐6 The VCO on my installation attends instead. (replace "VCO" with "Food Defense NCO")

☐7 I am not invited to these meetings.

☐8 Other, please specify: _____

14B. Please provide reasons why, in general, you do not attend these meetings regularly. *(Mark all that apply)*

☐1 I do not have time to attend these meetings.

☐2 I am responsible for multiple installations and cannot regularly travel to each of them to attend these meetings.

☐3 The meetings are unproductive.

☐4 I do not think attending these meetings falls within my mission.

☐5 I was not aware I am supposed to attend these meetings.

☐6 I was told I do not have to attend these meetings.

☐7 The VCO on my installation attends instead. (replace "VCO" with "Food Defense NCO")

☐8 I am not invited to these meetings.

☐9 Other, please specify: _____

15A. Please rate the level to which you agree or disagree with the following statements.

Report values will be ranked from 1 to 5 with 5 for "Strongly Agree" and 1 for "Strongly Disagree."

	Value Statement	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree
1.	I feel my role as the Food Defense NCO is valuable to the Food Defense Program mission.	o	o	o	o	o
2.	The food defense training provided to me was critical to the success of the Food Defense Program mission.	o	o	o	o	o
3.	Attending FDAT meetings is/would be helpful to my mission as a Food Defense NCO. *Please provide a response even if you do not attend regularly.*	o	o	o	o	o
4.	Attending ATWG/Force Protection Group meetings is/would be helpful to my mission as a Food Defense NCO. *Please provide a response even if you do not attend regularly.*	o	o	o	o	o
5.	The communication opportunities with the VCO at my installation support mission success.	o	o	o	o	o
6.	The communication opportunities with the ATO at my installation support mission success.	o	o	o	o	o
7.	There are effective communication channels available to me as a member of the Installation Food Vulnerability Assessment Program.	o	o	o	o	o

15A. Please rate the level to which you agree or disagree with the following statements. (VCO survey)

Report values will be ranked from 1 to 5 with 5 for "Strongly Agree" and 1 for "Strongly Disagree."

	Value Statement	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree
1.	I feel my role as the VCO is valuable to the Food Defense Program mission.	o	o	o	o	o
2.	On-the-job food defense training is adequate for the success of the Food Defense Program mission.	o	o	o	o	o
3.	Formal food defense training would substantially improve my ability to achieve mission success within the Food Defense Program.	o	o	o	o	o
4.	Attending FDAT meetings is/would be helpful to my mission as a VCO. *Please provide a response even if you do not attend regularly.*	o	o	o	o	o
5.	Attending ATWG/Force Protection Group meetings is/would be helpful to my mission as a VCO. *Please provide a response even if you do not attend regularly.*	o	o	o	o	o
6.	The communication opportunities with the Food Defense NCO at my installation support mission success.	o	o	o	o	o
7.	The communication opportunities with the ATO at my installation support mission success.	o	o	o	o	o
8.	There are effective communication channels available to me as a member of the Installation Food Vulnerability Assessment Program.	o	o	o	o	o

15B. Please rate the level to which you agree or disagree with the following statements.

Report values will be ranked from 1 to 5 with 5 for "Strongly Agree" and 1 for "Strongly Disagree."

	Value Statement	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree
1.	I feel my role as the Food Defense NCO is valuable to the Food Defense Program mission.	O	O	O	O	O
2.	The food defense training provided to me was critical to the success of the Food Defense Program mission.	O	O	O	O	O
3.	Attending FDAT meetings is/would be helpful to my mission as a Food Defense NCO. *Please provide a response even if you do not attend regularly.*	O	O	O	O	O
4.	Attending ATWG/Force Protection Group meetings is/would be helpful to my mission as a Food Defense NCO. *Please provide a response even if you do not attend regularly.*	O	O	O	O	O
5.	In general, the communication opportunities with the VCOs at my installations support mission success.	O	O	O	O	O
6.	In general, the communication opportunities with the ATOs at my installations support mission success.	O	O	O	O	O
7.	There are effective communication channels available to me as a member of the Installation Food Vulnerability Assessment Program.	O	O	O	O	O

15B. Please rate the level to which you agree or disagree with the following statements. (VCO survey)

Report values will be ranked from 1 to 5 with 5 for "Strongly Agree" and 1 for "Strongly Disagree."

	Value Statement	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree
1.	I feel my role as the VCO is valuable to the Food Defense Program mission.	o	o	o	o	o
2.	On the job food defense training provided to me is adequate for the success of the Food Defense Program mission.	o	o	o	o	o
3.	Formal food defense training would substantially improve my ability to achieve mission success within the Food Defense Program.	o	o	o	o	o
4.	Attending FDAT meetings is/would be helpful to my mission as a VCO. *Please provide a response even if you do not attend regularly.*	o	o	o	o	o
5.	Attending ATWG/Force Protection Group meetings is/would be helpful to my mission as a VCO. *Please provide a response even if you do not attend regularly.*	o	o	o	o	o
6.	In general, the communication opportunities with the Food Defense NCOs at my installations support mission success.	o	o	o	o	o
7.	In general, the communication opportunities with the ATOs at my installations support mission success.	o	o	o	o	o
8.	There are effective communication channels available to me as a member of the Installation Food Vulnerability Assessment Program.	o	o	o	o	o

16A. Please include any further comments on the effectiveness of the communication process you participate in between the Food Defense Program and the Antiterrorism Program at your installation. *(1000 character limit)*

Please skip to question 18A.

16B. Please include any further comments on the effectiveness of the communication process you participate in between the Food Defense Program and the Antiterrorism Program at your installations. *(1000 character limit)*

Please skip to question 18B.

17A. Why have you not met with the ATO face-to-face? *(Please mark all that apply)*

- ☐1 I recently arrived at the installation (less than 3 months ago).
- ☐2 I do not have time to meet with the ATO.
- ☐3 I was not aware I am supposed to meet with the ATO.
- ☐4 Personality differences make it difficult to work with the ATO.
- ☐5 The VCO communicates with the ATO. (Replace "VCO" with "Food Defense NCO")
- ☐6 Another NCO on my installation is responsible for food defense. (Eliminate as option)
- ☐7 Other, please specify: ____

17B. In general, why have you not met with the ATO face-to-face? *(Please mark all that apply)*

- ☐1 I recently arrived at the installation (less than 3 months ago).

☐2 I do not have time to meet with the ATO.

☐3 I was not aware I am supposed to meet with the ATO.

☐4 Personality differences make it difficult to work with the ATO.

☐5 I am responsible for multiple installations and cannot regularly travel to each of them for face-to-face meetings with every ATO.

☐6 The VCO communicates with the ATO. (Replace "VCO" with "Food Defense NCO")

☐7 Another NCO on my installation is responsible for food defense. (Eliminate as option)

☐8 Other, please specify: ☐

18A. Please provide any additional comments or feedback you would like to share concerning communication and the Food Defense Program at your installation. *(1000 character limit)*

18B. Please provide any additional comments or feedback you would like to share concerning communication and the Food Defense Program at your installations. *(1000 character limit)*

19. Which PHC region are you assigned to?

o1 Europe

o2 North

o3 Pacific

o4 South

o5 West

Ending Page Q19

Thank you for your time. We have received your response. You may now close your browser.

20A. Why do you not know who the ATO is at your installation? *(Please mark all that apply)*

- ☐1 I recently arrived at the installation (less than 3 months ago).
- ☐2 I do not have time to meet with the ATO.
- ☐3 I was not aware I am supposed to meet with the ATO.
- ☐4 Another NCO on my installation is responsible for food defense. (Replace "Another" with "The")
- ☐5 The VCO communicates with the ATO. (eliminate option)
- ☐6 Other, please specify: ☐

20B. Why do you not know who the ATOs are at your installations? *(Please mark all that apply)*

- ☐1 I recently arrived at the installation (less than 3 months ago).
- ☐2 I do not have time to meet with the ATO.
- ☐3 I was not aware I am supposed to meet with the ATO.
- ☐4 I am responsible for multiple installations and cannot travel to each of them to meet with every ATO.
- ☐5 Another NCO on my installation is responsible for food defense. (Replace "Another" with "The")
- ☐6 The VCO communicates with the ATO. (eliminate option)
- ☐7 Other, please specify: ☐

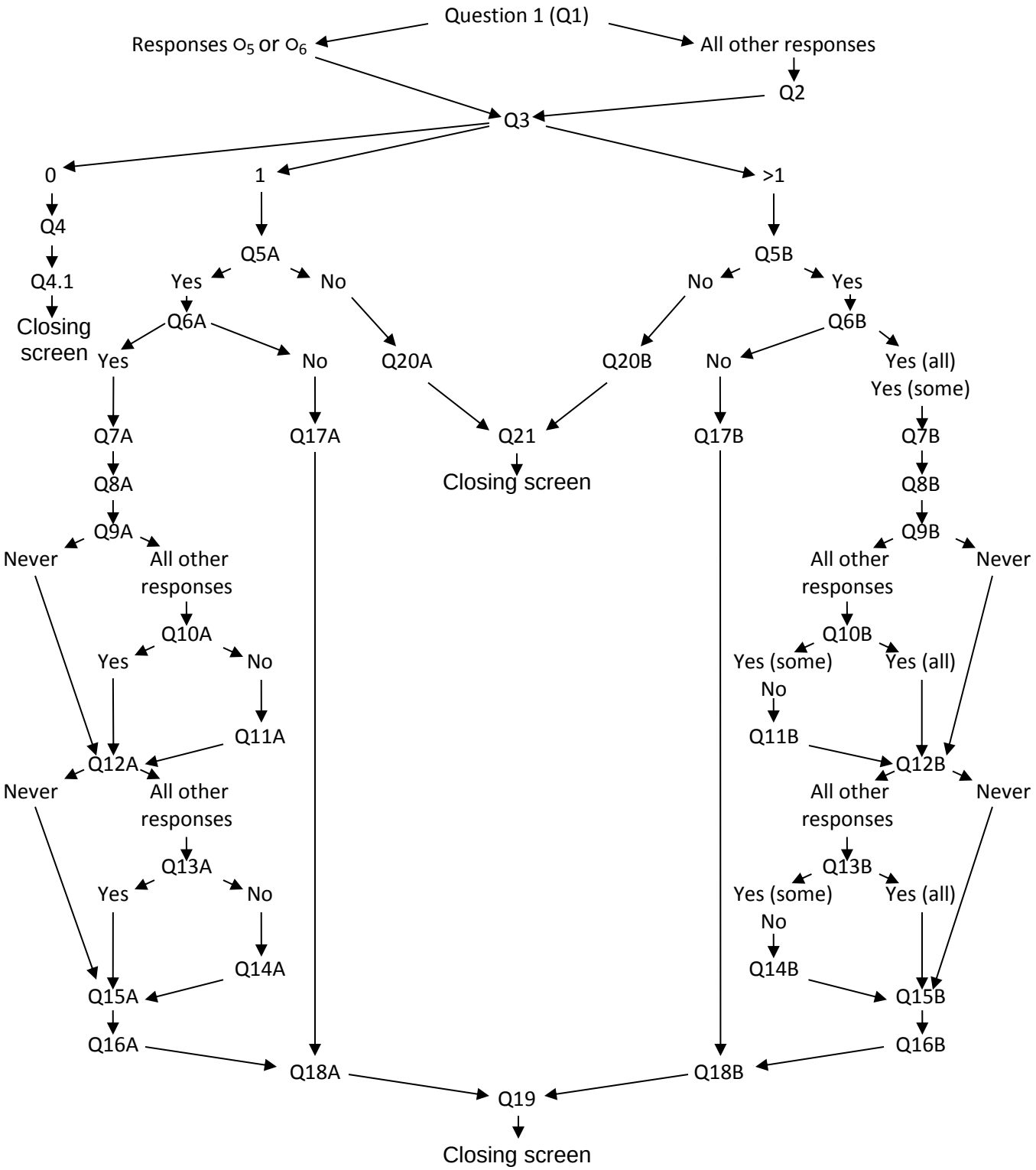
21. Which PHC region are you assigned to?

- O1 Europe
- O2 North
- O3 Pacific
- O4 South
- O5 West

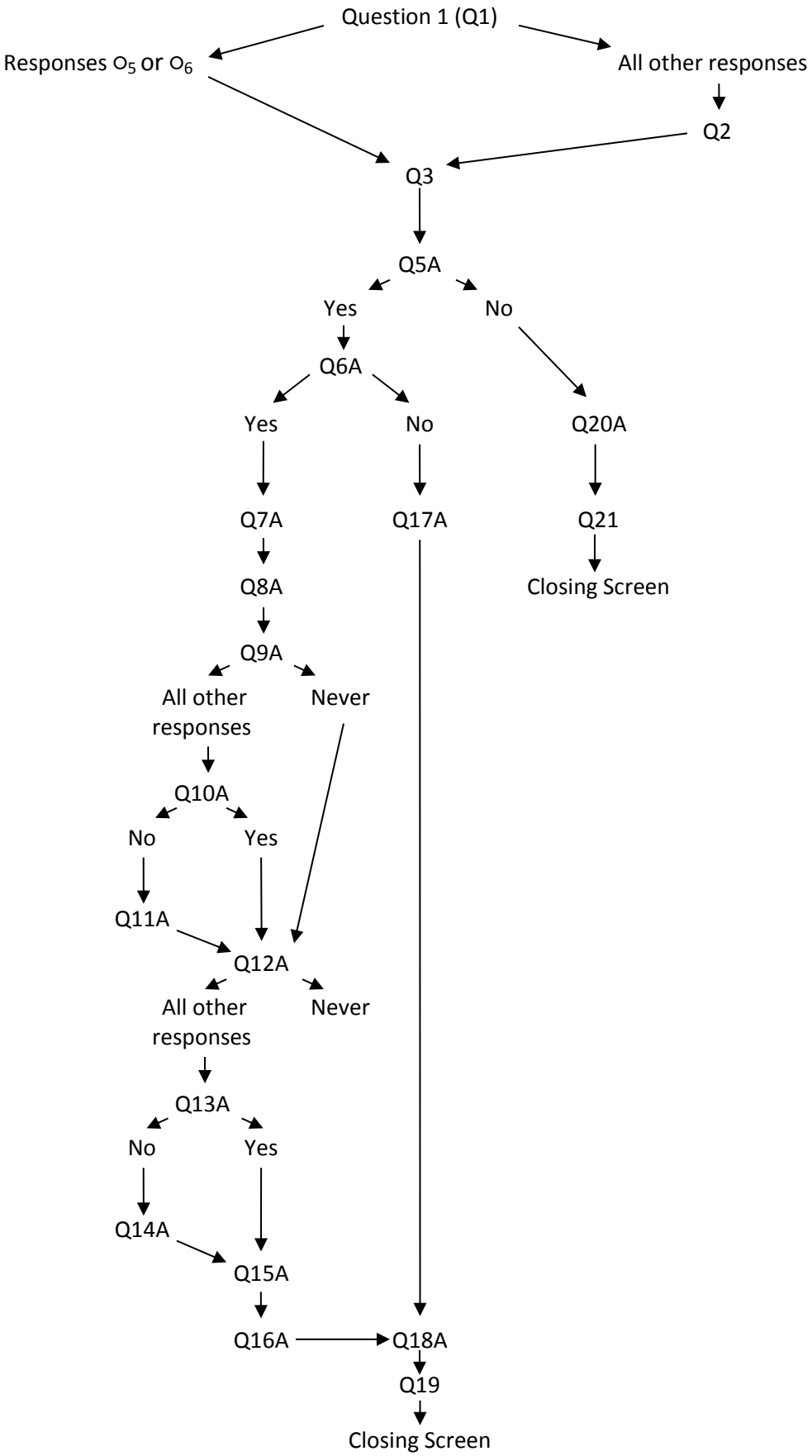
Ending Page Q21

Thank you for your time. We have received your response, but are looking for feedback from those who have collaborated with the ATO on their installation(s). You may now close your browser.

Appendix 4. Branching Pattern for VCO and NCO Surveys



Appendix 5. Branching Pattern for FYGVE Survey



Appendix 6. Analysis of the Questionnaire to Evaluate the Critical Communication Process between VCOs/NCOs/FYGVEs and ATOs September, 2013

I. Background

Established in 2009, the U.S. Army Food Defense Program remains a relatively new program that requires training and educating personnel on the responsibilities and actions required of them. One aspect of this program that leadership in the Veterinary Services (VET) Portfolio at the Army Institute of Public Health (AIPH) would like to see better implemented is the critical communication process between Veterinary Corps Officers (VCOs)/Food Defense Noncommissioned Officers (NCOs) and Antiterrorism Officers (ATOs) at the installation level.

One of the newest portfolios in the U.S. Army Public Health Command (USAPHC), Health Risk Management was formally developed in 2001 in response to the September 11, 2001 and 2001 anthrax attacks in the United States. Health risk management is "the science and art of identifying, evaluating, selecting, documenting and implementing measures to reduce or prevent risk to human health."[39] Within this portfolio exists the Health Risk Communication Program. Experts in the Health Risk Communication Program provide a skill set unique to the entire DoD; they train personnel in each of the service branches on how to effectively communicate scientific and technical information to lay persons on an interpersonal level. The VET Portfolio aspires to enlist this risk communication expertise available to them while developing training to VCOs and NCOs on how to communicate with ATOs. In order for those in the Health Risk Communication Program to understand the current barriers to, perceptions of, and participation in this communication process, however, an informational needs assessment was conducted.

II. Authority

Written in response to Department of Defense Instruction (DoDI) 2000.16, USAPHC Technical Guide No. 355 "Installation Food Vulnerability Assessments (IFVA) Program Handbook", November 2012, Section 2-11 "Section/Installation Veterinary Corps Officers" states that VCOs will participate in IFVAs and attend Antiterrorism Working Group (ATWG) and Food Defense Assistance Team (FDAT) meetings. Section 2-12 "Section/Installation Food Defense Noncommissioned Officers" states that NCOs will complete and present IFVAs for review, as well as attend FDAT meetings. Additionally, Section 3-2 "Procedures" requires that Veterinary Services personnel coordinate with the ATO to schedule FDAT meeting to review IFVAs.

III. Methodology and Respondent Profile

In order to provide risk communication training to VCOs and Food Defense NCOs that will enable them to routinely communicate effectively to the local ATO vulnerabilities and areas of concern within the food supply, an evaluation of the current communication process was conducted. The overall objective of the survey was to evaluate the effectiveness of this communication process in order to identify communication gaps and areas to provide risk communication training. It also looked at the training,

[39]Public Affairs Office. 2012. Health Risk Management Portfolio Command Information Sheet. edited by USAPHC: USAPHC.

understanding, and perceived value of the recently published IFVA Program Handbook, which describes the responsibilities and actions required of VCOs and NCOs, including their communication and interaction with installation ATOs.

Dr. Cliff Lively initially distributed the VCO and NCO surveys on Tuesday, July 16, 2013 via two separate e-mail lists. He sent the VCO survey to 389 veterinarians and the NCO survey to 509 NCOs, though only approximately 350 NCOs work in the Food Defense Program; unfortunately a current list of them does not exist so the e-mail was sent to all NCOs. After one week I had only received 13 responses to the VCO survey and none to the NCO survey, so COL Webb pushed each of them out through the command channel instead. Because of the lack of any NCO responses, the survey deadline was extended one week beyond the original eight working days.

Due to confusion by personnel involved in the FYGVE program, the VCO survey was revised to tailor it to FYGVEs and, via LTC Schiavetta, sent it to all FYGVE cadre and participants on July 25, 2013.

Upon closure of all surveys by August 2, 2013, the response rates were VCOs: 13% (52/389), NCOs: 11% (57/509), and FYGVEs: 59% (19/32). After moving one response from the NCO survey to the FYGVE survey and eliminating responses with input on zero or one questions, the final response rates were VCOs: 13% (49/389), NCOs: 10% (51/509), and FYGVEs: 41% (13/32). Because of the limited number of FYGVE responses, analyses were limited and are included here only when significant.

The only demographic collected was the region in which the respondent was stationed.

Table 1. Responses by Region

USAPHC Region	VCOs (# of responses)	NCOs (# of responses)	FVGVEs (# of responses)	Total (# of responses)
Europe	8.9% (4)	12.5% (5)	7.7% (1)	**10.2% (10)**
North	44.4% (20)	47.5% (19)	23.1% (3)	**42.9% (42)**
Pacific	20.0% (9)	2.5% (1)	0.0% (0)	**10.2% (10)**
South	4.4% (2)	0.0% (0)	15.4% (2)	**4.1% (4)**
West	22.2% (10)	37.5% (15)	53.8% (7)	**32.7% (32)**
Total	*45*	*40*	*13*	***98***

A number of reasons could account for the regional differences in response rate. Because the survey links were sent out a second time via the command channel, receipt by the target audience depended on timely e-mail forwarding by everyone superior to them. Moreover, the Europe VET commander indicated he first became aware of the surveys when LTC Schiavetta sent out the FYGVE link just one day before the VCO survey closed, so somehow personnel in Europe missed both of the first two e-mails. The commander also indicated there were a number of prestigious visits, audits, and other activities going on in Europe at the time that was going to make it difficult for personnel to complete the survey in such a short time frame. Furthermore, July is also a popular time for Soldiers to take personal leave and

PCS (permanent change of station), so it is also plausible that targeted respondents were out of touch or busy catching up on more vital mission activities.

IV. Conclusions and Recommendations

A. TG355 and Training on new policies

Less than half of VCOs felt that the TG355 was helpful to them in achieving mission success, and very few agreed that the training they received on it was adequate. An overwhelming majority of both VCOs and NCOs responded that receiving face-to-face training on new policies as they are released would enrich their understanding of the material and improve their ability to achieve mission success. These opinions strongly indicate the desire and need for training on new policies, as well as the review of newly implemented policies to ensure that they are effective.

FYGVE cadre requested being notified of new or updated policies and memoranda, preferably with some level of instruction on the document and guidance on how to teach it.

B. ATO Acquaintance and Interaction

Over half of the VCOs indicated that they did not know who the ATO was at their installation. Food Defense NCOs have done a better job of identifying and collaborating with the ATO on their installation(s).

Regarding why some individuals did not know who the ATO is at their installation(s), the most common response by VCOs was that the NCO on their installation is responsible for food defense. This demonstrates a profound misconception and lack of training for VCOs, which is further illustrated by an additional quarter of VCOs and a majority of FYGVEs who replied that they were not aware they are supposed to meet with the ATO. In one instance, the District Warrant Officer appears to be attending instead. In another situation, the officer has tried to initiate a meeting, but the ATO does not believe it is a priority. One NCO indicated that the ATO is too busy.

Collaboration with ATOs occurred most commonly during IFVA in- and out-briefings, though participation levels are far from perfect. Less than 50% of VCOs and NCOs collaborated in any of the other settings. A worrisome finding is that only about one-third of VCOs and NCOs responded that they collaborate with the ATO immediately upon identifying a potential concern or vulnerability.

C. FDAT Meetings

Less than one-third of installations appear to hold these meetings quarterly or semi-annually. One-third of VCOs did not even know how frequently these meetings are held compared to only 5% of NCOs. However, one quarter of NCOs replied that these meetings are never held on their installation, though only 7% of VCOs indicated the same, reflecting a difference in knowledge and/or perception.

Approximately one-third of both VCOs and NCOs do not attend FDAT meetings. When probed why they do not, nearly one-fifth of each group replied they did not know they were supposed to attend these meetings, indicating poor training and communication of mission responsibilities.

D. ATWG Meetings

NCOs are equally as likely to participate in ATWG meetings as FDAT meetings. However, VCOs are less likely to attend ATWG meetings on some or all installations than FDAT meetings. At least half of VCOs and NCOs indicated they do not attend the meetings because they are not invited, reflecting a breakdown in communication. Roughly the same percentage indicated they were not aware they were supposed to attend ATWG and FDAT meeting, once again indicating poor training and communication of mission responsibilities.

E. Values

Overall, VCOs and NCOs tended to value the Food Defense Program, their roles within it, and the communication opportunities available; however, they varied on the aspects they considered most and least favorable. The most interesting discrepancy is that while almost all VCOs indicated the communication opportunities with the Food Defense NCO at their installation support mission success, only two-thirds of NCOs felt the same was true in reverse, illustrating a clear difference in perception of the communication process occurring between them.

F. Additional Comments

Opinions regarding the Food Defense Program and communication processes ranged from extremely critical to quite positive. Several people felt the program is not regarded as important or consider it themselves to be a waste of time. Insufficient time, too many responsibilities, and inadequate training, particularly for VCOs, were all cited as frustrations with the program.

An NCO requested the Regional and District Warrant Officers conduct training on the program out in the field and become more involved in the program overall.

One VCO voiced his or her understanding that the food defense program was supposed to be an NCO program in which officers only provided support as necessary. This plainly demonstrates a false perception of the program, which needs to be addressed.

VCOs responded that communication both in general and with the ATO needs to be improved dramatically. However one VCO commented that he or she felt communication flows well between members of the local FDAT, and a couple NCOs described the successful communication that flows between them and their ATOs. One even stated, “It is crucial to be in contact with the ATO(s) to ensure mission success of the Food Defense Program.”

V. Detailed Findings

A. TG355, Installation Food Vulnerability Assessment (IFVA) Program Handbook

1. Document Familiarity

Overall, NCOs appear to be more familiar with the TG355 than VCOs. In fact, 8% of NCOs answered they know the document so well they could teach it, compared to only 2% of VCOs. Moreover, 63% of NCOs had read or skimmed the document in whole compared to only 24% of

VCOs. 33% of VCOs admitted to having never looked at it, and an additional 16% had never even heard of the document, compared to only 4% of NCOs in each category.

A majority of FYGVEs answered they had skimmed some or all of the TG355, while 23% had not looked at it, and the remaining 15% had not even heard of the document.

Table 2: Familiarity with the TG355

Extent of Review	VCOs (# of responses)	NCOs (# of responses)	FYGVEs (# of responses)
I know this TG so well I could teach it	2.0% (1)	7.8% (4)	0.0% (0)
I have read it cover to cover	6.1% (3)	21.6% (11)	0.0% (0)
I have skimmed it cover to cover	18.4% (9)	41.2% (21)	7.7% (1)
I have only skimmed or read some of the contents	24.5% (12)	21.6% (11)	53.8% (7)
I have not looked at it, but I am aware it exists	32.7% (16)	3.9% (2)	23.1% (3)
I have not even heard of this document	16.3% (8)	3.9% (2)	15.4% (2)
Other, please specify:	0.0% (0)	0.0% (0)	0.0% (0)
Total	*49*	*51*	*13*

2. Perceived Value and Training

NCOs more favorably regarded the contents of the TG355 as helpful to achieving mission success than did VCOs (64% vs. 44% strongly agreed/agreed and 11% vs. 20% strongly disagreed/disagreed). The starkest contrast appears in the second statement where VCOs and NCOs oppose each other in the understanding provided by the training they received on the TG355. 59% of NCOs felt their training provided adequate understanding, while only 17% of VCOs did. Both groups overwhelmingly agreed that receiving face-to-face training on new policies would enrich their understanding of the material and improve mission success (VCOS: 79% and NCOs: 85%).

A FYGVE instructor wrote that he or she received no official training or notification of the release. Only through casual conversation with a food safety specialist had the instructor heard about the new policy, at which point he or she invited the specialist to come teach the material to the FYGVE class. Unfortunately, the instructor found the presentation unorganized, and thus not very helpful.

Table 3: Perceptions Regarding the TG355

Statement	VCOs				NCOs			
	Strongly Agree or Agree (# of Responses)	**Neither Agree nor Disagree (# of Responses)**	**Strongly Disagree or Disagree (# of Responses)**	***Total***	**Strongly Agree or Agree (# of Responses)**	**Neither Agree nor Disagree (# of Responses)**	**Strongly Disagree or Disagree (# of Responses)**	***Total***
The contents of the TG355 help me achieve mission success in my role as a VCO/NCO.	44.0% (11)	36.0% (9)	20.0% (5)	*25*	63.8% (30)	25.5% (12)	10.6% (5)	*47*
The training I received on the TG355 provided adequate understanding to achieve mission success in my role as a VCO/NCO.	16.7% (4)	37.5% (9)	45.8% (11)	*24*	58.7% (27)	26.1% (12)	15.2% (7)	*46*
Receiving face-to-face training on new policies, such as the TG355, as they are released would enrich my understanding of the material and improve my ability to achieve mission success.	79.2% (19)	16.7% (4)	4.2% (1)	*24*	84.8% (39)	8.7% (4)	6.5% (3)	*46*

B. Number of Installations

No trends were identified regarding the number of installations that VCOs and NCOs considered themselves responsible for food defense at, nor was there any trend when cross-analyzing by region. 69% of VCOs and 75% of NCOs were responsible for greater than one installation. A higher percentage of VCOs (16% vs. 4%) indicated they were responsible for food defense at 0 installations and branched out of the survey because they were either on an Air Force or Joint Base, FYGVE cadre, or a 64F. NCOs who branched out indicated they were stationed on an Air Force or Joint Base.

Table 4: Number of Installations at which Responsible for Food Defense

# Installations	VCOs (# of responses)	NCOs (# of responses)
0	16.3% (8)	3.9% (2)
1	14.3% (7)	21.6% (11)
2	10.2% (5)	17.6% (9)
3	12.2% (6)	13.7% (7)
4	6.1% (3)	15.7% (8)
5	10.2% (5)	13.7% (7)
6	4.1% (2)	0.0% (0)
7	6.1% (3)	3.9% (2)
8	4.1% (2)	0.0% (0)
9	0.0% (0)	2.0% (1)
10+	16.3% (8)	7.8% (4)
Total	*49*	*51*

C. ATO Acquaintance and Interaction

NCOs were significantly more likely to know who the ATO is at their installation(s) (82% vs. 45%).

Table 5: Knowledge of ATO

	VCOs (# of responses)	NCOs (# of responses)
Yes	45.0% (18)	81.6% (40)
No	55.0% (22)	18.4% (9)
Total	*40*	*49*

Regarding reasons why personnel did not know who the ATO is, the most common response for VCOs at 36% was that the NCO on their installation is responsible for food defense. One-quarter of VCOs and 13 percent of NCOs indicated they were not aware they are supposed to meet with the ATO. Another 20% of VCOs and 25% of NCOs replied that they had arrived at the installation less than three months ago. An additional 25% of NCOs cited distance/travel. Under "Other," responses included the following:

- Deployment
- District Warrant Officer attends instead
- ATO is too busy
- Some food facilities are not in an installation and thus do not have an ATO

One VCO stated, "I have been told who the ATO is supposed to be, but they never seem like it is a priority to meet with me or when I call them they say call someone else."

Table 6: Reasons for Not Knowing the ATO

	VCOs (# of responses)	NCOs (# of responses)	FYGVEs (# of responses)
I recently arrived at the installation (less than 3 months ago).	19.6% (2)	25.0% (2)	22.2% (2)
I do not have time to meet with the ATO.	0.0% (0)	12.5% (1)	0.0% (0)
I was not aware I am supposed to meet with the ATO.	25.8% (8)	12.5% (1)	55.6% (5)
I am responsible for multiple installations and cannot regularly travel to each of them for face-to-face meetings with every ATO.	9.7% (3)	25.0% (2)	N/A
The/another NCO on my installation is responsible for food defense.	35.5% (11)	25.0% (2)	0.0% (0)
The VCO communicates with the ATO.	N/A	0.0% (0)	N/A
Other	9.7% (3)	37.5% (3)	22.2% (2)
Total	*31*	*8*	*9*

Of the 45% of VCOs who knew their ATO, only half of them had met with the ATO at the installation(s) they were responsible for. Thus, NCOs were also much more likely to have met face-to-face with the ATO on all of their installations (75% vs. 50%).

Table 7: History of Face-to-Face Meeting with ATO

	VCOs (# of responses)	NCOs (# of responses)
Yes/Yes (all installations)	50.0% (9)	75.0% (30)
Yes (some installations)	33.3% (6)	20.0% (8)
No	16.7% (3)	5.0% (2)
Total	*18*	*40*

When asked why they had not met with their ATO, one NCO indicated it was because he or she had arrived at the installation less than three months ago. Two VCOs cited distance/travel, and the third VCO

replied that the Food Defense NCO communicates with the ATO. 56% of FYGVEs indicated that they were not aware that they are supposed to meet with the ATO.

Table 8: Reasons for No Face-to-Face Meeting with ATO

	VCOs (# of responses)	NCOs (# of responses)
I recently arrived at the installation (less than 3 months ago).	50.0% (1)	50.0% (1)
I do not have time to meet with the ATO.	0.0% (0)	0.0% (0)
I was not aware I am supposed to meet with the ATO.	0.0% (0)	0.0% (0)
Personality differences make it difficult to work with the ATO.	0.0% (0)	0.0% (0)
I am responsible for multiple installations and cannot regularly travel to each of them for face-to-face meetings with every ATO.	66.7% (2)	0.0% (0)
The Food Defense NCO/VCO communicates with the ATO.	33.3% (1)	0.0% (0)
Another NCO on my installation is responsible for food defense.	N/A	0.0% (0)
Other	0.0% (0)	50.0% (1)
Total	*3*	*2*

A majority of both VCOs and NCOs indicated they collaborate with the ATO between 1-2 times per quarter or 1-3 times per year. Only about 5% in either group responded that they collaborate with the ATO greater than 1 time per month. There was no trend for frequency when analyzing by the number of installations in which the respondent was responsible for food defense.

Table 9: Frequency of Collaboration with ATO

	VCOs (# of responses)	NCOs (# of responses)
Greater than 1 time per month	6.7% (1)	5.3% (2)
Once per month	0.0% (0)	21.1% (8)
1-2 times per quarter	16.7% (2)	34.2% (13)
1-3 times per year	60.0% (9)	28.9% (11)
Less than 1 time per year	20.0% (3)	10.5% (4)
Total	*15*	*38*

The most frequent setting by far for NCOs to collaborate with their ATO is at IFVA in-briefings (84%), followed by IVFA out-briefings (68%). VCOs also identified these as the most frequent settings, but at a lower percentage (67% and 53% respectively). At the other end of the spectrum, less than one third of NCOs indicated they meet with the ATO immediately upon identifying a potential concern or vulnerability. Only 7% of VCOs answered that they collaborate during an HHA. Answers under "Other" included miscellaneous visits and general installation meetings.

Table 10: ATO Collaboration Setting(s)

	VCOs (# of responses)	NCOs (# of responses)
Food Defense Assistance Team (FDAT) meetings	40.0% (6)	52.6% (20)
Antiterrorism Working Group (ATWG)/Force Protection Group meetings	40.0% (6)	47.4% (18)
Installation Food Vulnerability Assessment (IFVA) in-briefing	66.7% (10)	84.2% (32)
IFVA out-briefing	53.3% (8)	68.4% (26)
Immediately upon identifying a potential concern or vulnerability	40.0% (6)	31.6% (12)
Higher Headquarters Assessment (HHA)	6.7% (1)	34.2% (13)
Other	13.3% (2)	5.3% (2)
*Total**	*15*	*38*

*Respondents could select as few or as many options as they desired. The total reflects the number of respondents who provided at least one answer to the question.

D. FDAT Meetings

About one-fourth of VCOs and NCOs replied that their installation(s) hosts FDAT meetings quarterly. Roughly another quarter indicated these meetings are held annually. An additional 25% of NCOs responded that these meetings are never held, though only 7% of VCOs agreed. One-third of VCOs do not even know when these meetings are held. Those in the "Other" category replied that times vary.

Table 11: Frequency of FDAT Meetings

	VCOs (# of responses)	**NCOs (# of responses)**
Quarterly	26.7% (4)	23.7% (9)
Semi-annually	0.0% (0)	7.9% (3)
Annually	26.7% (4)	18.4% (7)
Never	6.7% (1)	23.7% (9)
I do not know	33.3% (5)	5.3% (2)
Other	6.7% (1)	7.9% (3)
Total	*15*	*38*

VCOs were slightly more likely to participate in FDAT meetings at either all or some of their installations (69% vs. 61%). However, NCOs were significantly more likely to participate in these meetings at all installations (36% vs. 15%).

Table 12: Participation in FDAT Meetings

	VCOs (# of responses)	**NCOs (# of responses)**
Yes/Yes (all installations)	15.4% (2)	35.7% (10)
Yes (some installations)	53.8% (7)	25.0% (7)
No	30.8% (4)	39.3% (11)
Total	*13*	*28*

The most frequent response (55%) for not attending FDAT meetings regularly by VCOs was that the Food Defense NCO attends instead. With only 38%, NCOs most frequently responded that they are not invited to these meetings. Nearly a third of respondents in each group indicated that they simply cannot travel between all of the installations where they are responsible for food defense in order to attend these meetings. Roughly 20% answered that they were not aware they are supposed to attend these meetings. Approximately only 10% of VCOs and NCOs indicated that not having enough time was why they did not attend FDAT meetings. 0% indicated that they did not think attending these meetings was part of their mission. "Other" responses included that the meetings are just getting established, the

meetings are held irregularly, the other Food Defense NCOs attend instead, and they attend only when the importance of the meeting requires it.

Table 13: Reasons for Not Attending FDAT Meetings Regularly

	VCOs (# of responses)	NCOs (# of responses)
I do not have time to attend these meetings.	9.1% (1)	12.5% (2)
I am responsible for multiple installations and cannot regularly travel to each of them to attend these meetings	36.4% (4)	31.3% (5)
The meetings are unproductive.	9.1% (1)	12.5% (2)
I do not think attending these meetings falls within my mission.	0.0% (0)	0.0% (0)
I was not aware I am supposed to attend these meetings.	18.2% (2)	18.8% (3)
I was told I do not have to attend these meetings.	9.1% (1)	12.5% (2)
The Food Defense NCO (VCO) on my installation attends instead.	54.5% (6)	0.0% (0)
I am not invited to these meetings.	27.3% (3)	37.5% (6)
Other	27.3% (3)	25.0% (4)
*Total**	*11*	*16*

*Respondents could select as few or as many options as they desired. The total reflects the number of respondents who provided at least one answer to the question.

E. ATWG Meetings

Overall, ATWG meetings appear to be held more frequently than FDAT meetings. Over 40% of VCOs and 50% of NCOs reported that these meetings are held quarterly or semi-annually. Only 5% of NCOs report that these meetings are never held compared to 24% who said that FDAT meetings are never held (Table 9). Compared to FDAT meetings, approximately the same number of VCOs reported that they did not know when ATWG meetings are held.

Table 14: Frequency of ATWG Meetings

	VCOs (# of responses)	NCOs (# of responses)
Quarterly	28.6% (4)	40.5% (15)
Semi-annually	14.3% (2)	10.8% (4)
Annually	7.1% (1)	5.4% (2)
Never	7.1% (1)	5.4% (2)
I do not know	35.7% (5)	32.4% (12)
Other	7.1% (1)	5.4% (2)
Total	*14*	*37*

NCOs are equally as likely to participate in ATWG meetings as FDAT meetings. However, VCOs are less likely to attend ATWG meetings on some or all installations than FDAT meetings (69% vs. 47%).

Table 15: Participation in ATWG Meetings

	VCOs (# of responses)	NCOs (# of responses)
Yes/Yes (all installations)	7.7% (1)	31.4% (11)
Yes (some installations)	38.5% (5)	28.6% (10)
No	53.8% (7)	40.0% (14)
Total	*13*	*35*

The most frequent response for why personnel in both groups do not attend ATWG meetings regularly was that they are not invited to attend (50% VCOs, 54% NCOs). Roughly a quarter of each group indicated that it was because they could not travel between all of the installations for which they are responsible for food defense, slightly decreased from the FDAT meetings response. Roughly the same percentage indicated they were not aware they were supposed to attend ATWG and FDAT meetings. Only 33% of VCOs answered that the Food Defense NCO attends instead, compared to 55% for FDAT meetings. “Other” responses included that the other Food Defense NCO attends instead and recently took over the branch and awaiting notification.

Table 16: Reasons for Not Attending ATWG Meetings Regularly

	VCOs (# of responses)	NCOs (# of responses)
I do not have time to attend these meetings.	16.7% (2)	16.7% (4)
I am responsible for multiple installations and cannot regularly travel to each of them to attend these meetings	25.0% (3)	25.0% (6)
The meetings are unproductive.	8.3% (1)	4.2% (1)
I do not think attending these meetings falls within my mission.	0.0% (0)	4.2% (1)
I was not aware I am supposed to attend these meetings.	16.7% (2)	16.7% (4)
I was told I do not have to attend these meetings.	8.3% (1)	4.2% (1)
The Food Defense NCO on my installation attends instead.	33.3% (4)	8.3% (2)
I am not invited to these meetings.	50.0% (6)	54.2% (13)
Other	8.3% (1)	12.5% (3)
*Total**	*12*	*24*

*Respondents could select as few or as many options as they desired. The total reflects the number of respondents who provided at least one answer to the question.

F. Value Statements

An overwhelming majority of both VCOs and NCOs (86% and 84% respectively) felt that their role is valuable to the Food Defense Program mission, though 14% of NCOs did not agree. While 64% of VCOs indicated that on-the-job training in food defense would be adequate for success in accomplishing the Food Defense Program mission, 79% agreed that formal food defense training would substantially improve their ability to achieve mission success.

While 93% of VCOs indicated the communication opportunities with the Food Defense NCO at their installation support mission success, only 70% of NCOs felt the same was true in reverse. Approximately 75% of both groups responded that the communication opportunities with the ATO at their installation support mission success. Finally, 64% of VCOs and 73% of NCOs answered that they felt effective communication channels were available to them as a member of the Installation Food Vulnerability Assessment Program.

Between 61-74% of both VCOs and NCOs felt that attending FDAT and ATWG meetings is or would be helpful to their mission. When analyzing by previous questions which inquired about participation in these meetings, there were no distinct trends. Of those who do not attend FDAT meetings, 75% of VCOs and 55% of NCOs agreed that attendance would be helpful to their mission (Table 16). Of those who do

not attend ATWG meetings, 71% of VCOs and only 43% of NCOs agreed or strongly agreed that attendance would be helpful to their mission (Table 17).

Table 15: Perceptions and Value Statements

Statement	VCOs			NCOs		
	Strongly Agree or Agree (# of Responses)	Neither Agree nor Disagree (# of Responses)	Strongly Disagree or Disagree (# of Responses)	Strongly Agree or Agree (# of Responses)	Neither Agree nor Disagree (# of Responses)	Strongly Disagree or Disagree (# of Responses)
I feel my role as the VCO (Food Defense NCO) is valuable to the Food Defense Program mission.	85.7% (12)	7.1% (1)	7.1% (1)	83.8% (31)	2.7% (1)	13.5% (5)
On-the-job food defense training is adequate for the success of the Food Defense Program mission.	64.3% (9)	14.3% (2)	21.4% (3)	N/A	N/A	N/A
Formal food defense training would substantially improve my ability to achieve mission success within the Food Defense Program.	78.6% (11)	14.3% (2)	7.1% (1)	N/A	N/A	N/A
The food defense training provided to me was critical to the success of the Food Defense Program mission.	N/A	N/A	N/A	78.4% (29)	16.2% (6)	5.4% (2)
Attending FDAT meetings is/would be helpful to my mission as a VCO (Food Defense NCO).	64.3% (9)	21.4% (3)	14.3% (2)	70.3% (26)	21.6% (8)	8.1% (3)
Attending ATWG/Force Protection Group meetings is/would be helpful to my mission as a VCO (Food Defense NCO).	71.4% (10)	14.3% (2)	14.3% (2)	64.9% (24)	27.0% (10)	8.1% (3)
The communication opportunities with the Food Defense NCO (VCO) at my installation support mission success.	92.9% (13)	0.0% (0)	7.1% (1)	70.3% (26)	24.3% (9)	5.4% (2)
The communication opportunities with the ATO at my installation support mission success.	78.6% (11)	21.4% (3)	0.0% (0)	75.7% (28)	13.5% (5)	10.8% (4)
There are effective communication channels available to me as a member of the Installation Food Vulnerability Assessment Program.	64.3% (9)	28.6% (4)	7.1% (1)	73.0% (27)	13.5% (5)	13.5% (5)

Table 16: FDAT Cross Analysis

			Attending FDAT meetings is/would be helpful to my mission as a VCO/Food Defense NCO					
			VCOs			**NCOs**		
			Strongly Agree or Agree	Neither Agree nor Disagree	Strongly Disagree or Disagree	**Strongly Agree or Agree**	Neither Agree nor Disagree	Strongly Disagree or Disagree
Do you participate in these FDAT meetings regularly?	Yes (all)	% Yes (all)	50% (1/2)	0% (0/0)	50% (1/2)	90% (9/10)	10% (1/10)	0% (0/0)
		% of Column	13% (1/8)	0% (0/0)	50% (1/2)	43% (9/21)	20% (1/5)	0% (0/0)
	Yes (some)	% Yes (some)	57% (4/7)	29% (2/7)	14% (1/7)	86% (6/7)	14% (1/7)	0% (0/0)
		% of Column	50% (4/8)	67% (2/3)	50% (1/2)	29% (6/21)	20% (1/5)	0% (0/0)
	No	% No	**75% (3/4)**	25% (1/4)	0% (0/0)	**55% (6/11)**	27% (3/11)	18% (2/11)
		% of Column	38% (3/8)	33% (1/3)	0% (0/0)	29% (6/21)	60% (3/5)	100% (2/2)
	Total	*% Column Total*	*62% (8/13)*	*23% (3/13)*	*15% (2/13)*	*75% (21/28)*	*18% (5/28)*	*7% (2/28)*

Table 17: ATWG Cross Analysis

			Attending ATWG meetings is/would be helpful to my mission as a VCO/Food Defense NCO					
			VCOs			**NCOs**		
			Strongly Agree or Agree	Neither Agree nor Disagree	Strongly Disagree or Disagree	**Strongly Agree or Agree**	Neither Agree nor Disagree	Strongly Disagree or Disagree
Do you participate in these ATWG meetings regularly?	Yes (all)	% Yes (all)	100% (1/1)	0% (0/1)	0% (0/1)	91% (10/11)	9% (1/11)	0% (0/11)
		% of Column	11% (1/9)	0% (0/2)	0% (0/2)	42% (10/24)	11% (1/9)	0% (0/2)
	Yes (some)	% Yes (some)	60% (3/5)	20% (1/5)	20% (1/5)	80% (8/10)	10% (1/10)	10% (1/10)
		% of Column	33% (3/9)	50% (1/2)	50% (1/2)	33% (8/24)	11% (1/9)	50% (1/2)
	No	% No	**71% (5/7)**	14% (1/7)	14% (1/7)	**43% (6/14)**	50% (7/14)	7% (1/14)
		% of Column	56% (5/9)	50% (1/2)	50% (1/2)	25% (6/24)	78% (7/9)	50% (1/2)
	Total	*% Column Total*	*69% (9/13)*	*15% (2/13)*	*15% (2/13)*	*69% (24/35)*	*26% (9/35)*	*6% (2/35)*

G. Additional Comments

1. Food Defense Program

One NCO's feelings are best represented by simply quoting the response, "I don't want to say that this program is a waste of time. However, I don't see the need for it. Especially with an installation like the one that I am located at that in my opinion is very secure. To my understanding, once our assessments are made and the ATO presents whatever issues we identify within our installation to the base commander, the issues are just brushed off to the side anyway—a perfect example of this program being somewhat of a waste of time. I think the program should be held to a minimum at all times. The only time this program should really be enforced, is when an installation's FPCON level is raised."

Another critical opinion was that "this has become a check the block program that is not enforced at installation level, region level, district level or branch level." One person bluntly stated, "It is not seen as important and is ignored."

One NCO mentioned that better access to SIPRNET would help.

Yet another NCO cited insufficient time, too many responsibilities, and no funding to attend a training course that was cancelled as frustrations with the program. A VCO also indicated that additional training would be beneficial. An NCO requested the Regional and District Warrant Officers conduct training on the program out in the field and become more involved in the program overall. One frustrated NCO wrote in, "Communication about the Food Defense Program with the VCOs at my installation is pointless. I recommend that all VCOs receive more information on the Food Defense Program, how it works, their part in the process, how they can support the program and the time needed for the NCO(s) to properly conduct the annual FVAs."

A VCO voiced his or her understanding that the food defense program was supposed to be an NCO program in which officers only provided support as necessary.

2. Communication Processes

VCOs responded that communication both in general and with the ATO needs to be improved dramatically.

However, it's not all bad. A different NCO replied that the ATO will call him/her personally once or twice a month to discuss any issues that have arisen. Another NCO knows the ATOs at his/her installation very well and communicates with them frequently, citing JSIVA as the key to success. "It is crucial to be in contact with the ATO(s) to ensure mission success of the Food Defense Program." Finally, a VCO wrote that communication flows well between members of the local FDAT.

VI. Limitations of the Study

From a questionnaire standpoint, some questions may have benefitted from more clarification or options. Future studies should seek to improve the questionnaire instrument to gain more insight from each question.

- For example, when asking if the training received on the TG355 provided adequate understanding to achieve mission success, it could have differentiated between formal vs. on-the-job training for NCOs. This would have indicated whether they felt on-the-job training was sufficient or they needed formal training at the schoolhouse, region, or district level.
- In a different example, while 64% of VCOs indicated that on-the-job training in food defense would be adequate for success in accomplishing the Food Defense Program mission, 79% agreed that formal food defense training would substantially improve their ability to achieve mission success. Such high percentages for each of these questions indicates perhaps that they feel they could achieve minimum mission success with only on–the –job training, but would perform to a higher standard if formal food defense training was provided. These statements would benefit from more clarity.
- Question 5, which asked whether the individual knew the ATO at his or her installation, should have had the same options as the subsequent question. This would have distinguished between knowing the ATO for all or only some installations at which the individual is responsible for food defense.
- E-mail distribution proved to be quite challenging with these surveys and resulted in a delayed response from Europe and poor response rates from the Pacific and South regions. A distribution list for only the NCOs involved in food defense would have refined the target audience. As noted previously, July is also a popular time to take personal leave and PCS, so it is also plausible that targeted respondents were out of touch or busy catching up on more vital mission activities.

Glossary

Antiterrorism Officer (ATO)—the principal military or civilian advisor charged with managing the AT program for the commander or DoD civilian exercising equivalent authority

Base—an Air Force or Navy installation

Commissary—a store that sells groceries and household supplies, especially one located on a military base

Force Protection Condition (FPCON)—a DoD-approved system standardizing DoD's identification of and recommended preventive actions and responses to terrorist threats against U.S. personnel and facilities. The system is the principal means for a commander to apply an operational decision on how to protect against terrorism and facilitates coordination among DoD Components and support for antiterrorism activities

Food Defense Noncommissioned Officer (Food Defense NCO)—a Veterinary Services NCO (68R) who has been formally trained and certified by AMEDDC&S and whose primary role is to conduct IFVAs and participate in SEAs

Installation—a generic term for a permanent military establishment

Post—an Army installation

Special Event—an event in non-routine surroundings such as a meeting or conference where senior DoD leadership, who are an attractive target to terrorists, may be at an increased risk of attack by terrorists; as part of the planning process for such an event, a terrorism vulnerability assessment (to include an IFVA) shall be conducted

Subsistence—the source from which food and other items necessary to exist are obtained

Terrorism Vulnerability Assessment

[1]An assessment to determine the vulnerability to a terrorist attack against an installation, unit, exercise, port, ship, residence, facility, or other site. It identifies areas of improvement to withstand, mitigate, or deter acts of violence or terrorism.

[2]The process the commander uses to determine the susceptibility to attack from the full range of threats to the security of personnel, family members, and facilities, which provide a basis for determining AT measures that can protect personnel and assets from terrorist attacks.

[3]A systematic examination of the characteristics of an installation, system, asset, application, or its dependencies to identify vulnerabilities.