



Study on the USPHS Commissioned Corps' Value to DHHS Mission to National and Global Health Priorities and Initiatives

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Submitted by:



School of Public Health
University of Maryland
College Park, MD 20742

Principal Investigator:

Muhiuddin Haider, Ph.D.
email: mhaider@umd.edu
mobile: 202.256.3106
office: 301.405.7431



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Table of Acronyms
AIDS – Acquired Immune Deficiency Syndrome
ASH – Assistant Secretary for Health
AHRQ – Agency for Healthcare Research and Quality
APHA – American Public Health Association
ATSDR – Agency for Toxic Substances and Disease Registry
BOP – Bureau of Prisons
CDC – Centers for Disease Control and Prevention
CIA – Central Intelligence Agency
CMS – Centers for Medicare and Medicaid Services
DHS – Department of Homeland Security
DHHS – Department of Health and Human Services
DOC – Department of Commerce
DOD – Department of Defense
DOD TMA – Department of Defense TRICARE Management Activity
DMAT – Disaster Medical Assistance Team
EPA – Environmental Protection Agency
FDA – Food and Drug Administration
GS – General Schedule (Civil Service) employees
HIV – Human Immunodeficiency Virus
HRSA – Health Resources and Services Administration
IHS – Indian Health Service
DOI – Department of the Interior
DOJ – Department of Justice
DOS – Department of State
NIH – National Institutes of Health
OASH – Office of the Assistant Secretary for Health
OS – Office of the (DHHS) Secretary
OFRD – Office of Force Readiness and Deployment
OSG – Office of the Surgeon General
PHST – Public Health Science Track
PPACA – Patient Protection and Affordable Care Act
PSC – (DHHS) Program Support Center
SAMHSA – Substance Abuse and Mental Health Services Administration
TFAH – Trust for America’s Health
USAMRMC – U.S. Army Medical Research and Materiel Command
USMA – U.S. Marshall’s Service
USPHS CC – U.S. Public Health Service Commissioned Corps
WHO – World Health Organization

I. Executive Summary

The U.S. Public Health Service Commissioned Corps (USPHS CC) is a cadre of trained health professionals, encompassing clinicians, administrators, and research scientists.

These health professionals are commissioned uniformed officers, who are led by the U.S. PHS Surgeon General, are detailed to positions/billets through the federal government, predominantly the Department of Health and Human Services. The USPHS CC is one of the seven uniformed services of the U.S. Government, and provides leadership and personnel for clinical care, scientific research, and other regulatory service tasks for a variety of federal government entities across the broad spectrum of public health operations.

This study assesses the value of the USPHS CC as a provider of leadership and service for federal and state public health efforts at the national and global levels. For the purposes of this study, value is defined as the contribution of the USPHS CC to the health and welfare of the nation. Specifically, this report examines the environmental factors, human resource and task factors, management approach and systems factors, and operations management factors of the USPHS CC. The assessment of these factors provides data on the value (dollar value, comparative value, capacity to respond to emergency needs) of employing a commissioned officer compared to a federal civil servant. Cost-effectiveness is one central issue in determining a prudent approach for staffing future public health initiatives. Cost comparisons that omit Title 38 and Title 42 employees, compensated at significantly higher levels than either USPHS CC officers or GS employees, are irrelevant. **The effectiveness, efficiency, efficacy, and comprehensive value of the USPHS CC cannot be determined based on cost factors**

alone, although almost all previous studies of the Corps have relied solely on this single data point. There exist in the federal workforce too many variables, too many inconsistencies, too many un-measurable attributes, and too many contraindications to make any meaningful evaluation based on cost alone, much less useful in assessing overall value and contribution to national health and security.

This report also assesses the organizational capacity to determine performance potential and future roles of the USPHS CC. Organizational capacity includes the current and future role of the USPHS CC, the coordination and skills of commissioned officers across government agencies, and the quality of work/performance compared to salary and administrative costs of USPHS CC.

This study uses a variety of data collection methods to evaluate the capacities of the USPHS CC at all levels of the government, including interviews, questionnaires, participant observation, focus groups, and extensive document and record reviews. These varied methods yielded data on behavioral, economic, functional, and structural dimensions of the USPHS CC. Interviews yielded qualitative data about workplace attitudes; budgetary matters, including salary, administrative, and travel costs; and organizational support. Additionally, questionnaires, participant observation, and focus groups produced qualitative data about the experiences, behavior, and organizational performance of Commissioned Corps officers. Overall, the results of this study indicate that 1) the USPHS CC is decentralized, unmonitored, and misunderstood; and 2) the USPHS CC needs to review historical data to determine future direction, such as redefining the Service to meet current challenges and using national initiatives to set goals for CC action and leadership. The study examined characteristics of the uniformed

officers of the Commissioned Corps and civil servants employed to meet national public health needs (see Table 1.1).

Table 1.1: Characteristics of Commissioned Officers and Civil Servants	
<i>Commissioned Officers</i>	<i>Civil Servants</i>
<ul style="list-style-type: none"> • Dedicated to USPHS CC mission and mission of assigned duty station. • Not unionized. • Base pay is not determined by location. • No paid overtime. May work weekends, night shifts, and holidays without additional compensation. • Extensive additional training. • Officer’s minimum education requirements include college degree and professional licensure. • Competitive promotion is based on performance, education, experience, leadership, officership, emergency preparedness/readiness, and length of time in service/grade. Promotion board reviews eligible officers annually. • May be reassigned/relocated as needed by the agency. • Need to retire after 30 years of service, which removes highly experienced officers from the Corps. • Deployed officers in supervisory role leave void in leadership. • Relocation beyond 60 miles of previous 	<ul style="list-style-type: none"> • Dedicated to mission of hiring agency. • Unionized. • Base pay is determined by location. • Lower cost at entry level. Receive overtime pay for additional hours worked. • Not required to complete extensive additional training. • High-level positions do not require advanced education or licensure. • Employee must be in previous pay grade for 52 weeks before promotion to next pay grade. Promoted on manager’s determination of satisfactory work, no promotion board or benchmark requirement. • Cannot be reassigned based on agency needs. • Not required to retire after a specific period. • Cannot be deployed, does not leave void in leadership if in a supervisory position. Lacks easy mobilization of

<p>duty station paid by agency.</p> <ul style="list-style-type: none"> • Non-contributory health care entitlement at uniformed services facilities or other approved sources. 	<p>resources to address public health emergencies.</p> <ul style="list-style-type: none"> • Choose from various contributory health insurance programs with different premiums. Agency does not pick up the cost of healthcare.
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Finally, this study reviewed source documents pertaining to administrative and salary costs, project implementation and evaluation, and structure and organizational functioning, which yielded multiple recommendations, including how the USPHS CC can evolve to better meet the ever-changing needs of national and global public health. These recommendations include:

- Build Relationships with the Private Sector and Organizations such as the American Public Health Association to Increase Innovative Training Opportunities: Public and private-sector relationships provide innovative opportunities for training and facilitate conversation to meet the public health needs of the nation. Under the provisions of the Affordable Care Act, non-profit foundations may provide funding for Public Health Science Track scholarships.
- Increase the officers' Role in Achieving Healthy People 2020 Goals: Officer's leadership skills and experience make them ideal to play a larger role in achieving health equity, eliminating health disparities, and improving the health of all people.
- Increase Public Health Roles of Officers to Meet the Health Workforce Needs of America and Serve At-Risk Populations: The USPHS CC needs

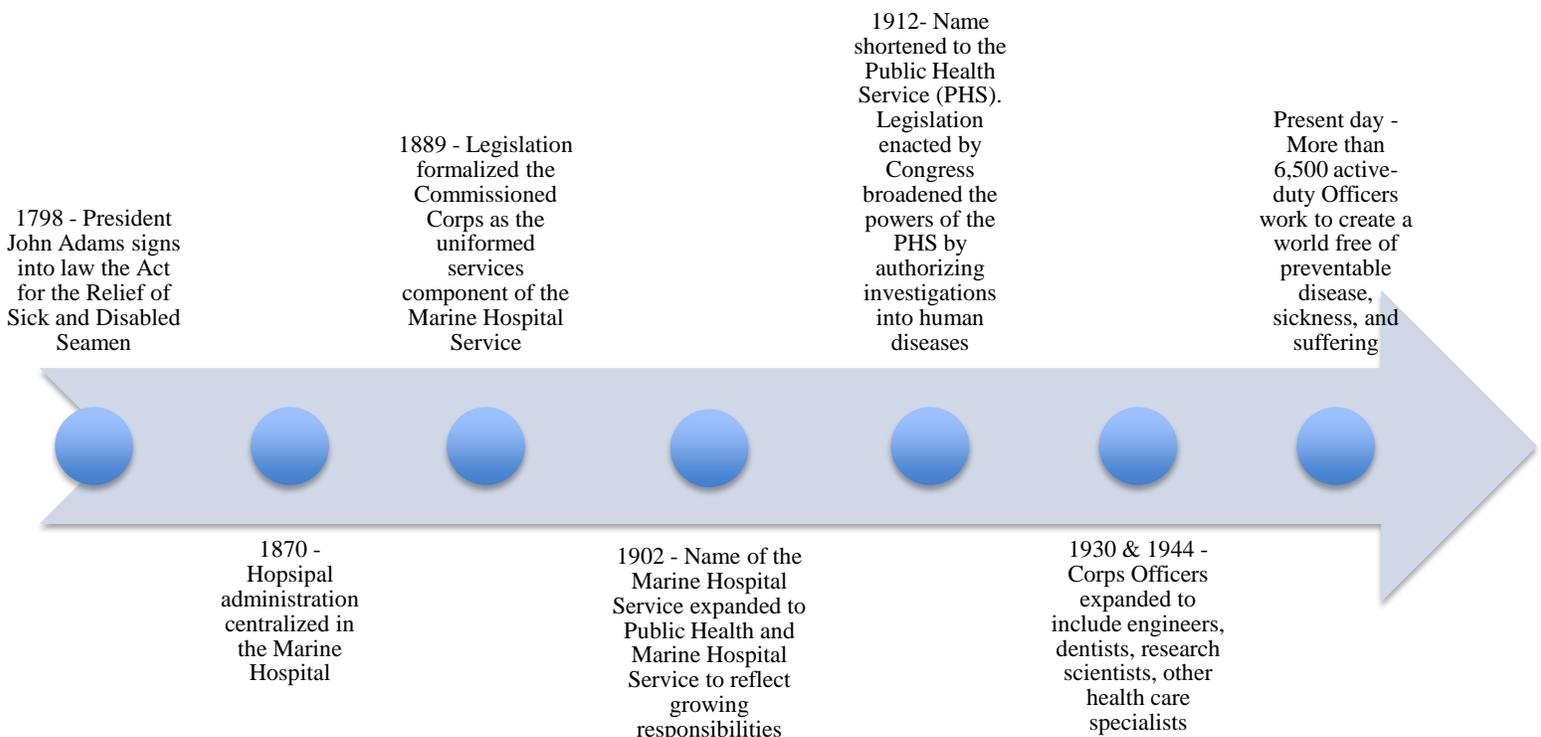
to be at the forefront of providing care, including medical treatment, vaccinations, and health literacy to communities.

- **Increase Recognition of Leadership and Services Provided by Officers Stationed in Different Agencies and Departments:** Officers leadership and management skills need to be recognized when developing collaborations with different agencies and departments.
- **Increase Officers Role in Global Health Efforts:** Officers knowledge and skills to work with at-risk and low resource populations and the Corps unique diversity makes them ideal to collaborate with international organizations, like the World Health Organization.
- **Establish Strategic Objectives for the USPHS CC to Improve Functioning and Collaboration Between Managing Agencies:** The Assistant Secretary for Health and the Office of the Surgeon General should develop a collaborative team to improve management and set strategic objectives for the USPHS CC.

II. Introduction

Background Information of the USPHS CC. For 200 years, the U.S. Public Health Service Commissioned Corps (USPHS CC) has served as frontline defenders of public health. This long history has been punctuated by multiple changes, including redefinition and reorganization (see Figure 2.1).

Figure 2.1: USPHS CC Timeline¹



On January 4, 1889, President Grover Cleveland signed into law “An Act to Regulate Appointments in the Marine Hospital Service of the United States,” a forerunner of the U.S. Public Health Service Commissioned Corps (USPHS CC). The mission of the

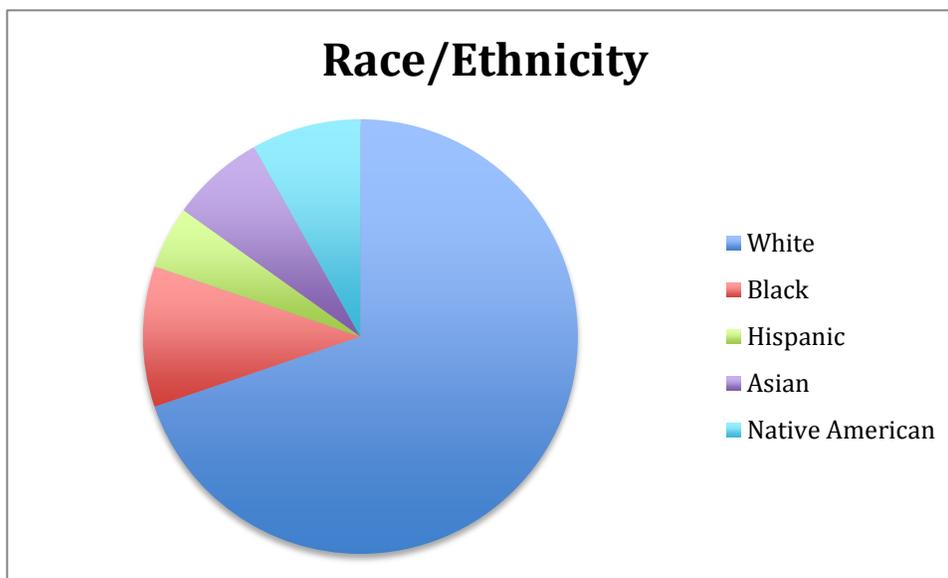
¹ U.S. Public Health Service Commissioned Corps. (2012). History. Retrieved from <http://www.usphs.gov/aboutus/history.aspx>

USPHS CC “is to protect, promotion, and advance the health and safety of our Nation.”²

The USPHS CC provides healthcare services to at-risk populations, implements and provides ongoing leadership and support for health research, food and drug regulation, epidemic control, and public health promotion and disease prevention programs.

Currently, the USPHS CC consists of 11 categories of health professionals from multiple public health disciplines, with 6,500 commissioned officers. In 2006, the demographic profile of the Corps was 60 percent white, 9 percent black, 7 percent Native American, 6 percent Asian, and 4 percent Hispanic (see Figure 2.2).

Figure 2.2: USPHS CC Officer by Race/Ethnicity³



*Survey options used the term “Indian” rather than Native American.

**The sample included 5,995 participants, but 784 unknowns were dropped from the analysis.

² U.S. Public Health Service. 2011. Mission and Core Values. Retrieved from <http://www.usphs.gov/aboutus/mission.aspx>.

³ Minority Officers Liaison Council. (2006). Commissioned Corps by Race/Ethnicity 1985-2006 Presentation.

Minority officers make up 31 percent of junior-ranking officers, 23 percent of senior-ranking officers, and 29 percent of flag-ranking officers.⁴ Officers serve in all departments of the Federal government that have health and environment program implementation and health-oriented research components. Officers also serve in many state and local health agencies, providing backup and advice for multiple programs that impact the nation's health. Commissioned officers are research scientists, regulators, environmental specialists, health administrators, food and drug inspectors, clinicians, and emergency responders.

In the first decade of the 21st century, numerous events have required USPHS CC involvement in disaster prevention and mitigation. These events, including terrorist attacks, the threat of biologic terror attacks, domestic and global natural disasters, the rise of pandemic threats, and increasing rates of preventable diseases have focused attention on the capacity of the government to respond. Historically, the USPHS CC has responded to the changing priorities of public health nationally and globally, and this report includes how the USPHS CC can evolve to better meet the ever-changing needs of national and global public health.

In 2008, the Trust for America's Health (TFAH) published the *Blueprint for a Healthier America*, a comprehensive report detailing necessary actions to address the growing crisis in the nation's public health and health care systems, including specific recommendations for the USPHS CC, as a result of the TFAH's report, Congress included provisions in the Patient Protection and Affordable Care Act (PPACA), PL 111-

⁴ Minority Officers Liaison Council. (2006). Commissioned Corps by Race/Ethnicity 1985-2006 Presentation.

148, to translate the TFAH recommendations on the USPHS CC into law. Specifically, the PPACA:

- Eliminates the numerical cap on the size of the Regular Corps; Authorizes a Ready Reserve component for the Corps to help with disaster mitigation and;
- Authorizes a Public Health Science Track scholarship program for USPHS officer candidates in order to increase the number of clinicians who can be ready to meet any natural or national disaster as well as serve the needs of the underserved citizens such as Native Americans and Alaska Natives.

Despite support for the USPHS CC over the past decade, the USPHS CC faces significant challenges to achieving its full potential as specified by law and the USPHS CC mission. Originally organized as a centrally administered and funded health resource of the Federal government, the USPHS CC has devolved into a human services resource where its head, the Surgeon General no longer maintains overall control of the officer assignments. As a result, officers are dispersed among divisions of DHHS and other federal agencies without linkage to a central health priority system, but are linked for professional growth, promotion, deployment, and salary. Efforts by previous Surgeons General to revitalize or transform the USPHS CC have been only partially successful. Furthermore, in 2010-11, the USPHS CC endured a pause in new accessions and, since 2012, has ceased accepting and processing new applications for commissioned officers for an undefined period. Additionally, the process to implement the Public Health Science Track and the Ready Reserve has not yet begun. In the changing landscape of public health and healthcare, there is an opportunity restructure and reorganize the mission of the department and the role of the USPHS CC. The necessity of these actions

results from the shortage in the public health and healthcare workforce and the increasing pressure on the current workforce due to the Patient Protection and Affordable Care Act (PPACA). By examining and strengthening a key part of the public health workforce, the USPHS CC, DHHS can meet these growing demands on the workforce and contribute to the goals of Healthy People 2020 (see Document 10) and improve the overall health status of the nation.

Overview of the Study. Given the current state of affairs, a thorough programmatic review of the USPHS CC was commissioned by the PHS Commissioned Officers Foundation for the Advancement of Public Health. The charge for the study was to assess the role, mission, and value of the USPHS CC in preserving, protecting, and advancing public health both within the U.S. and the greater global community. This study aims to identify issues and recommendations, which might be incorporated into the USPHS CC program development and supervision. This study presents the findings of the assessment and is intended to serve as a background document to inform the future direction of the USPHS CC. Below we provide an outline of the remaining chapters in this report:

- Chapter III: Details data collection and analysis methods and the objectives and research questions guiding this study
- Chapter IV: Provides an overview of the current role of the USPHS CC and discusses the current stability of the Commissioned Corps as it relates to the current leadership strategy.
- Chapter V: Examines the USPHS CC employment system and workforce and assess the cost of officer salaries.

- Chapter VI: Inspects USPHS CC management factors and integration into Federal agencies.
- Chapter VII: Explores operation management and the scope of USPHS CC operations during times of peace and times of emergency.
- Chapter VIII: Concludes with recommendations based on study findings as a preliminary operational framework to integrate into USPHS CC program development, implementation, activities, and the supervision process.

III. Research Methods

Objectives of the Study. This study aims to meet the following objectives put forth by the Commissioned Officers Foundation for the Advancement of Public Health:

- **Objective 1.** A comprehensive review of the PHS Commissioned Corps’ current and future roles to add value to U.S. public health.
- **Objective 2.** An examination of the advantages and disadvantages of hiring a commissioned officer compared to a federal Civil Servant, including:
 - Salary and administrative costs
 - Comparative costs, efficiency, and cost-effectiveness
 - Benefit to the taxpayer (value added and return on investment)
 - Comparison of and compatibility between a commissioned officer and federal civil servant, using both limited qualitative and quantitative methodologies including case studies, focus groups, and interviews
- **Objective 3.** An analysis of the USPHS CC uniformed service-civilian dynamics and assessment of organizational relationships.

Research Questions. The study meets these objectives through the analysis of the following research questions:

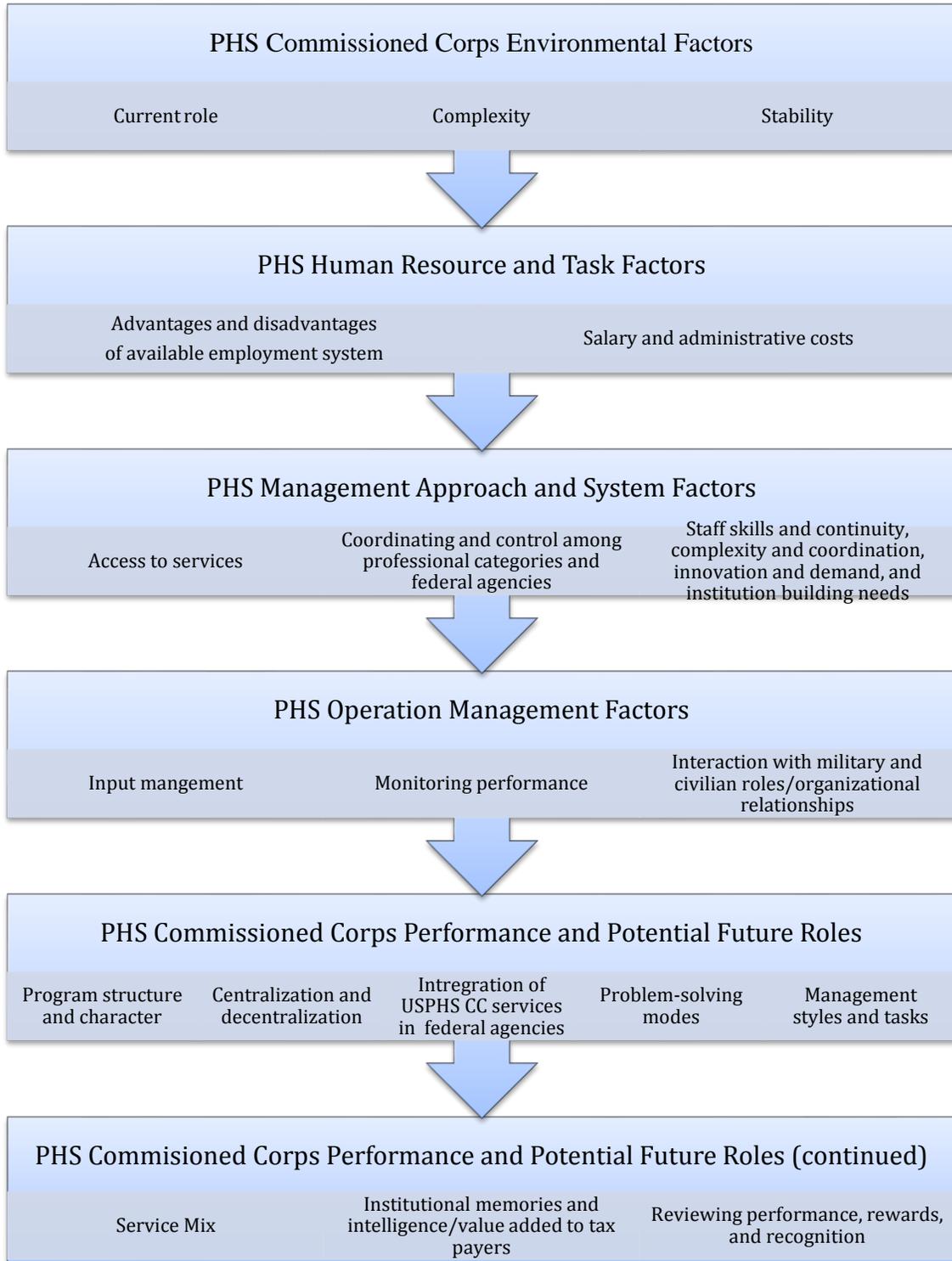
Table 3.1: Research Questions	
<i>Factor/Topic Area</i>	<i>Research questions</i>
USPHS Commissioned Corp Environmental Factors <ul style="list-style-type: none"> • Current Role & Structure 	<ul style="list-style-type: none"> • What is the actual current role of the USPHS Commissioned Corps? • What organizational factors threaten the stability of the PHS and its future?

<i>Factor/Topic Area</i>	<i>Research questions</i>
USPHS CC Human Resource and Task Factors <ul style="list-style-type: none"> • Workforce • Financial Management 	<ul style="list-style-type: none"> • What are the major advantages and disadvantages of the PHS employment system? • What are the characteristics of the PHS workforce in terms of skill set, employment continuity, services offered, etc.? • What gaps exist in the makeup of this workforce? • How is the PHS Corps organized financially? • How are funds apportioned between salaries and administrative costs? • How can efficiency be improved?
USPHS CC Management Approach and System Factors <ul style="list-style-type: none"> • Management and Operation 	<ul style="list-style-type: none"> • How well does the PHS coordinate, innovate, and build for the future? • How are the services of the PHS Corps integrated into Federal agencies?
USPHS CC Operation Management Factors <ul style="list-style-type: none"> • Evaluation and Performance 	<ul style="list-style-type: none"> • What is the impact of USPHS CC programs? • How is performance monitored and evaluated across organizations? • What kinds of relationships exist between military and civilian entities? How well do these relationships function?
USPHS Commissioned Corps Performance and Potential Future Role <ul style="list-style-type: none"> • Potential Role for the Future 	<ul style="list-style-type: none"> • What special functions could the USPHS CC potentially fulfill in terms of emergency preparedness and national security? • In what environments could the skills, services, and structure of the USPHS CC be advantageous?

This study examines the aforementioned research questions using a detailed analytical framework (Figure 3.1), which details the factors and topic areas of each chapter.

Analytical Framework. Figure 3.1 below provides a schematic of the factors and topics areas.

Figure 3.1: Analytical Framework Factors



Data Collection and Data Analysis. Data collection for this study included four components:

- 1) A review of USPHS CC literature
- 2) Primary and secondary informants, including past and current USPHS CC officers and civil servant counterparts from various agencies
- 3) A review of media-based literature of relevance to the USPHS CC
- 4) Findings from the recent HHS study analyzing the benefits (efficiency, cost-effectiveness, dedication to duty) of using the USPHS CC compared to federal Civil Servants⁵

The first component included a review of existing material on USPHS CC, including, but not limited to, policy briefs, guidelines, management and operations guidelines and tools, fiscal and employment policies and guidelines, and annual reports. The second component included interviews with primary and secondary informants. The primary informants were chosen from the Department of Health & Human Services (DHHS) and Defense, and two DHHS operating divisions - the Food and Drug Administration and the Indian Health Service. Secondary informants were chosen from the remaining operating divisions of DHHS as well as other departments and agencies where officers are assigned. For privacy purposes, no direct quotes from informants are included in this report. The third component included the review and analysis of media-based information, including websites, newspapers, newsletters, events, and major news outlets. The analytical framework and research questions guided all data collection methods and techniques.

⁵ Office of Business Management and Transformation. (August 2010) U.S. Public Health Service Commissioned Corps Financial Supplement. *Department of Health and Human Services.*

Due to the types of data collected for this study, data analysis was carried out using mostly qualitative methods, with limited quantitative methodology. Qualitative data include informant interviews, case studies, focus groups interviews, and literature without quantitative data. Quantitative data are limited to salary and administrative costs, and budgets from the literature. While a mainly qualitative analysis lacks statistical power to apply to a wider population, this analysis allows the study to increase the breadth and depth of information collected and examine a range of issues present at many agencies in which USPHS CC officers work. These data will provide a basis for future research and, it is our hope, stimulate discussions about the USPHS CC. The data enabled us to establish high-level observations and possible recommendations for the USPHS CC.

We contacted over 60 potential primary and secondary informants to participate in interviews. Of those potential informants, 45 participated in the interviews for a response rate of 75 percent. We contacted both USPHS CC officers and civil servants working at the DOD, DHHS (FDA, CDC, NIH, IHS), DOJ (BOP), and other stationing agencies. In addition, we conducted an extensive search of the academic and governmental literature on the USPHS CC. We used a snowball approach to collect literature by asking informants and contacts to recommend literature, and then reviewed sources referenced in those articles. We also conducted an Internet search for media-based literature on the USPHS CC using multiple keywords, including:

- Public Health Service Commissioned Corps
- USPHS CC
- USPHSCC
- Commissioned Corps

We provide a list of informants contacted and an extensive bibliography as appendices to this report.

Implications of the Study. This study provides critical analysis of USPHS CC achievements in the field of public health. Moreover, it provides suggestions for future policies and program development. Providing new insight into the organization of the USPHS CC, both fiscally and organizationally, the analysis provides a sound base for discussions on fiscal and management operations, opportunities for potential collaboration, and coordination among the units and between departments. With this analysis and new knowledge about the Commissioned Corps, future leaders can determine where and how to use the USPHS CC so the Corps serves the best interest of the nation (and the taxpayer). Additionally, future leaders can determine whether the USPHS CC provides the best service to the nation's public health operations or if another service model would be a better alternative.

Limitations of the Study. The limitations of the study include time constraints for data collection and analysis. Informational interviews with informants provide a breadth and depth of data, but do not provide statistically significant findings. In addition, selection of informants in the study was not random and the study did not allow site visits to gather observational data. Data on USPHS CC officers is incomplete and sporadic due to the current organization and management, therefore some data are difficult to obtain. The data from this study may provide a strong basis to develop a quantitative instrument to collect data from a large sample of USPHS CC officers to better inform management and organizational changes.

IV. PHS Commissioned Corps Environmental Factors

Overview of Finding. Environmental factors include historical, political, regulatory, and cultural factors which impact the functioning of the USPHS CC. This chapter aims to examine these factors to contribute to the accurate measurement of USPHS CC performance and overall value in supporting public health-oriented efforts. The research questions guiding the examination of this topic include:

- What is the current role of the USPHS Commissioned Corps (USPHS CC)?
- What organizational factors threaten the stability of the USPHS CC and its future?

The analysis of source documents and informant interview data reveal that:

- The current role of the USPHS CC stems from its long history as a provider of public health and contributes to many of the current issues identified in this study (see Chapters IV, V, and VI).
- The primary roles of USPHS CC officers currently are clinical care provision to vulnerable populations, disease prevention, elimination of health disparities, disaster/emergency preparedness, and program management.
- USPHS CC officers are stationed in numerous agencies and organizations at the national, state, and local levels, but may be deployed elsewhere.
- Organizational factors that threaten the stability of the USPHS CC include lack of direct leadership from the Office of the Surgeon General and a lack of clear, simple chain of command for the USPHS CC.
- The future of the USPHS CC hinges on its ability to evolve to meet the ever-changing needs of public health.

- Lack of understanding of Corps mission and functions of officers by program leadership where officers are detailed

Below, this study provides the detailed findings from the analysis.

Current Role of the USPHS CC. The current role of the USPHS CC is a function of its long and complex history and the evolution from the Marine Hospital Service to the modern USPHS CC. In 1798, President John Adams signed the Act for Relief of Sick and Disabled Seamen, which created a fund to finance construction of hospitals and clinics (Marine Hospital Service) in all of the major ports under the jurisdiction of the U.S. and the medical care for military personnel (see Document 2).⁶ These early hospitals received funds via the United States Treasury based on a primitive form of health insurance, which stipulated a financial contribution based on the number of seamen serving on merchant ships.

Through the efforts at these first hospitals and clinics, the President and early program leaders recognized the importance of eliminating infectious disease epidemics at the source. This realization pushed disease prevention to the forefront of the Marine Hospital Service's role. Therefore, in the 1800's, the Marine Hospital Service was charged with preventing the spread of infectious diseases within the U.S. through three distinct duties. First, the government granted the Marine Hospital Service quarantine authority through the passage of the National Quarantine Act of 1878.⁷ The Marine Hospital Service had the power to quarantine whole areas of the nation. Second, as a part

⁶ Jerrold Michael RADM, USPHS (Ret.). History of the U.S. Public Health Service and the PHS Commissioned Corps.

⁷ U.S. Public Health Service Commissioned Corps. (2012). History. Retrieved from <http://www.usphs.gov/aboutus/history.aspx>

of their role to prevent the spread of infectious disease, the Marine Hospital Service gained responsibility for examining immigrants entering the U.S. Third, Marine Hospital Service officers began researching infectious disease. For example, at the Marine Service Hospital on Staten Island, New York, officers investigated the bacteriology of infectious diseases, such as cholera. This early research site was a precursor to the Services Hygienic Laboratory, which became the National Institutes of Health.⁸ This laboratory effort expanded to include a new research component in Atlanta, Georgia prior to World War II. This program was called the Malaria in War Areas Program with the tasks of controlling the spread of malaria around military facilities in the U.S. This program became the Communicable Disease Center with the majority of contributing professional members of the Corps. The Communicable Disease Center evolved to become the foundation for the Centers for Disease Control and Prevention. The USPHS CC also had a long history of involvement in the elimination of health disparities. For example, officers led the effort to enhance public health programs in the Bureau of Indian Affairs. In 1955, the government transferred health care responsibilities for immigrant health, prisoners, and American Indians and Alaskan Natives to the Public Health Service. Eventually, this led to the creation of the Indian Health Program. Today, the Indian Health Program is the Indian Health Service.

While the long history of the USPHS CC explains its multifaceted role in public health including disease prevention and health disparities elimination, this history also contributes to issues that the modern USPHS CC faces. Early on, the Marine Hospital Service experienced organizational and financial management issues for the numerous

⁸ Jerrold Michael RADM, USPHS (Ret.). History of the U.S. Public Health Service and the PHS Commissioned Corps.

hospitals and clinics. Initially, all 27 hospitals operated independently and their only connection to the Federal government was a lone Treasury Department official who maintained the financial records. In 1870, the Federal Government recognized a need for a more defined management system, so they reorganized the Marine Hospital Service overseen by a “supervising surgeon,” who later became designated as the Surgeon General. The first Surgeon General, John Woodworth, developed the initial model that later led officers of the Marine Hospital Service to be designated a uniformed service that is structured using a military model.⁹ This initial model only included physicians as authorized health staff of the Marine Hospital Service. These officers dedicated their careers to the “Service” as a whole, not a particular hospital or organization. Finally, in 1889 the Federal government officially recognized officers of the Marine Hospital Service as a Commissioned Corps of uniformed personnel.

Since the USPHS CC developed over time and has evolved to address modern public health issues and function in a complex governmental, bureaucratic, and political environment, some aspects of the organization require close examination and revision to effectively operate in the 21st century (see Chapters VI, VII, and VIII).

Main Roles of the USPHS CC. As mentioned above, the history of the USPHS CC contributes greatly to the main role of the USPHS CC, which includes disease prevention, elimination of health disparities, and disaster/emergency preparedness. The disease prevention efforts of the USPHS CC have expanded to encompass infectious diseases and chronic diseases, which includes healthy lifestyle promotion. For example, many

⁹ U.S. Public Health Service Commissioned Corps. (2012). History. Retrieved from <http://www.usphs.gov/aboutus/history.aspx>

Americans are familiar with the Surgeon General because of the warnings on alcohol and tobacco products, which caution users of the potential harm to their health by using the product. These warnings, consistently placed on alcohol and tobacco products, serve as one avenue for the Surgeon General and the USPHS CC to emphasize the importance of disease prevention and health promotion in the nation. USPHS CC officers also engage in many other disease prevention efforts, but many are not acknowledged (see Chapter VI). Current health enhancement mandates also state that all programs in which USPHS CC officers serve must focus on building health equity and eliminating racial, socioeconomic, and gender health disparities. Officers are creating new culturally sensitive, community-level interventions and programs to target at-risk populations and provide vulnerable populations with more options to seek treatment and receive preventive care. Lastly, the USPHS CC also plays an important role in the nation's disaster/emergency preparedness because of the extensive training and rapid deployment capabilities of officers. During natural disasters and threats of biological warfare, officers are deployed to maintain vital public health-related services including: emergency health care; environmental sanitation, such as a clean water supply and waste disposal; nutrition; and mental health. Officers also played a major role in developing and distributing vaccinations and appropriate treatments during national and natural disasters. For example, in 1964 Surgeon General Luther L. Terry released the first report on tobacco, which increased public concern and led to the first anti-smoking campaign. This generated a public view of the Surgeon General as a trusted provider of health information and service. In the 1980s, commissioned officers became more visible under the direction of Surgeon General C. Everett Koop, who prepared an extensive report on

AIDS and initiated the largest public health mailing to inform the public about the disease. Under Surgeon General David Satcher, officers were deployed in response to the 9/11 attacks on New York City and their global role began expanding.

USPHS CC Officers Stationing Agencies. The initial service model developed by John Woodworth, dictated that officers dedicate their careers to the “Service” and not one particular hospital or organization. This service model has led to the stationing of USPHS CC officers in numerous agencies and organizations at the national, state, and local levels. For example, officers are stationed in Department of Health and Human Services (DHHS) agencies, including the:

- Agency for Health Care Research and Quality
- Agency for Toxic Substance and Disease Registry
- Centers for Disease Control and Prevention
- Food and Drug Administration
- Health Resources and Services Administration
- Centers for Medicare and Medicaid Services
- Indian Health Service
- National Institutes of Health
- Office of the Assistant Secretary for Health
- Substance Abuse and Mental Health Services Administration
- Office of the Assistant Secretary for Preparedness and Response

Officers also play important roles in other federal agencies, including the Department of Justice (Federal Bureau of Prisons); the Department of Homeland Security (U.S. Coast

Guard and the Immigration Health Service); the Environmental Protection Agency; the Department of State; the Department of Defense; and the National Park Service. Officers are also fill important roles in state health departments and agencies; and local health organizations.

As mentioned previously, the development of the USPHS CC over time and the evolution to address modern public health issues and function in a complex governmental, bureaucratic, and political environment has led to issues with current organizational factors. The data indicate that the organizational factors that threaten the stability of the USPHS CC include lack of direct leadership from the Office of the Surgeon General and a lack of clear chain of command for the USPHS CC. **These current problems mirror the problems experienced early in the USPHS CC history when Marine Hospital Service hospitals and clinics operated independently of central leadership.** To address these issues, the Marine Hospital Service transformed leadership to centralize and standardize the hospital and clinic management. These lessons can inform the current USPHS CC as it re-evaluates its leadership and management practices so that commissioned officers are not merely operating independently in separate agencies, but are united under a strong and centralized leadership working toward a common goal. The improvements in public health, beginning with the reorganization of the Marine Hospital Service under Supervising Surgeon Woodworth in the late 1800s and extending into the 20th century, are a compelling argument for reestablishing Commissioned Corps leadership throughout the Public Health Service.

While the Surgeon General oversees one aspect of the USPHS CC with officers stationed in more than 21 Federal agencies and state and local organizations, it is difficult for the Surgeon General to effectively manage the officers since authority for the USPHS CC is split between multiple agencies (see Chapter VI). The USPHS CC has undergone multiple episodes of restructuring, many of which are short-lived. Therefore, to ensure future efforts do not detract from USPHS CC potential, it is important to look at previous changes in the management and leadership. After Secretary John Gardner implemented the Departmental Reorganization Plan Number 3 in 1966-1967, authority for the USPHS CC was shifted from the Surgeon General to the Secretary of Health, Education, and Welfare. This authority was later transferred to the Assistant Secretary for Health and Scientific Affairs. Moreover, in 1995 the federal government restructured the Public Health Service so that agencies function as Operating Divisions, which report directly to the Secretary of Health and Human Services. Ideally, this structural change allows for greater management control in the DHHS because all health-related agencies are reporting directly to the Secretary of the DHHS. The reality is that the public health “system” resulting from these changes is a stovepipe set of organizations with overlapping, duplicative responsibilities competing for increasingly scarce resources.

The restructuring also changed how the Surgeon General oversees the USPHS CC and how the position is filled. Originally, the position of Surgeon General was restricted to a career member of the USPHS CC, but evolved to be a position that is filled by a political appointee who is no longer required to be a career officer (see Chapter VI). Twice in the history of the USPHS CC, the Surgeon General and the Assistant Secretary for Health were filled by the same person: Julius B. Richmond (1977-1981) and David

Satcher (1998-2002).¹⁰ In the past 23 years, only one Surgeon General, Antonia C. Novello (1990-1993), was a career officer.¹¹ These major shifts in structure and line-of-command for the management of the USPHS CC have resulted in a lack of a strong, centralized management system and have led to increasing complexity to coordinate and oversee officers (see Chapter VI). This in turn leads to inefficient management of time, financial assets, and human resources, which threaten both the stability and future of the USPHS CC (see Chapter V).

Future of the USPHS CC. Lastly, the data indicate that the future of the USPHS CC hinges on its ability to evolve to meet the ever-changing needs of public health. Unlike Civil Servants who may remain in the same position for a career, USPHS CC officers may not always spend their entire careers in one position or focusing on one particular research project. Instead, officers have a duty to the Service and if Service needs require the officer to transfer to a different position, then the officer must leave one position for another. Theoretically, this allows the USPHS CC to place officers in areas of greatest or higher need at any time and adapt to changing health priorities, but in practice the USPHS CC does not fully utilize this option. This practice, if implemented fully, would allow the USPHS CC to evolve and enhance the institutional ability to maximize effectiveness of Public Health Service operations, as was the case in the first half of the 20th century.

¹⁰ Department of Health and Human Services. (n.d.). Previous Surgeons General. Retrieved from <http://www.surgeongeneral.gov/about/previous/index.html>

¹¹ Department of Health and Human Services. (n.d.). Previous Surgeons General. Retrieved from <http://www.surgeongeneral.gov/about/previous/index.html>

V. PHS Human Resource and Task Factors

Overview of Findings. PHS Human Resource and Task factors are the characteristics of the employment system and the costs of the organization. This chapter aims to examine how these factors contribute to the accurate measurement of USPHS CC performance and overall value in supporting public health-oriented efforts. The research questions guiding the examination of this topic include:

- What are the major characteristics of the USPHS CC employment system?
- What are the characteristics of the USPHS CC workforce in terms of skill set, employment continuity, services offered, etc.?
- What gaps exist in the makeup of the USPHS CC workforce?
- How is the USPHS CC organized financially?
- How are funds apportioned between salaries and administrative costs?
- How can the USPHS CC improve cost effectiveness?

The analysis of informant interviews and source documents indicate that:

- Disadvantages of the USPHS CC employment system include the current lack of career development for leadership and managerial roles, including overseeing clinicians and researchers; and the use of political appointees to fill upper-level leadership roles.
- Advantages of the USPHS CC employment system include the recruitment of highly skilled professionals, officer dedication to the USPHS CC mission, lack of officer unionization and paid overtime, additional training for officers, and officer reassignment/relocation as necessary.

- The characteristics of the USPHS CC workforce include higher levels of training, more leadership and managerial skills, low employment continuity, and a multitude of services offered.
- There are two gaps in the USPHS CC workforce including a lack of USPHS CC experienced, upper-level leaders, and a lack of representative distribution of officers in the various health professions, such as behavioral health, clinical and rehabilitation therapists, dietitians, engineers, environmental health, health services, nurses, pharmacists, science and research, and veterinary.
- The USPHS CC financial organization is funded through a complex, multi-component system, which is unnecessarily Byzantine and difficult to manage and control.
- It is difficult to analyze how funds are apportioned between salaries and administrative costs and to assess the cost of hiring officers vs. civil servants.
- The USPHS CC can increase cost-effectiveness by streamlining many administrative processes.

Below, this study provides the detailed findings from the analysis.

Disadvantages of the USPHS CC Employment System. While the USPHS CC recruits the best possible officers leaders from their pool of candidates, the central structure/office lacks the ability to fill current leadership and managerial roles by career USPHS CC officers for an extended period. Officers are selected for supervisory roles more frequently than their civil servant counterparts with 42 percent of officers serving as

supervisors compared to 19 percent of Civil Servants.¹² Despite this, the number of officers selected for top leadership roles is declining, especially in mid- to senior-level positions. One contributing factor may be officer retirement before selection for leadership roles. Therefore, civil servants and political appointees instead fill upper-level leadership roles, which should be filled by officers. By filling leadership roles with political appointees, the government sends the message that to be a leader within the USPHS CC, one does not require rigorous on-the-job training that only service in the Corps can provide. This is also a disservice to the long tradition of the USPHS CC and its values because when political appointees receive instant rank within the USPHS CC, it gives the impression that an officer's uniform and, to a lesser extent, title are something that a person can just "put" on. This is contrary to the core values of dedication and loyalty in the USPHS CC, especially when politically appointees rarely fill their appointed position for more than a few years.

Short term political appointees are inherently partisan and understandably subject to those kinds of pressures. They do not notably contribute to the institution's longer-term vitality, and their ascension creates a system inherently incapable of providing expert, science-based, nonpartisan public health policy advice. Leadership positions held by transient appointees breeds opportunism and political correctness. The Service's *esprit de corps* is undermined and institutional memory is lost.

¹² Coviello, D. (n.d.) Public Health Commissioned Corps: Data Analysis.

Advantages of the USPHS CC Employment System. Although the USPHS CC struggles to fill leadership positions with long-time career officers, the Corps does recruit highly skilled professionals to serve as officers. Additionally, Corps officers are dedicated to USPHS CC mission, are not unionized or paid overtime, but are generally not eligible for mid-career training programs funded by the government that are often restricted to federal “employees” and not “officers.” Officer base pay is not determined by location and officers may be reassigned/relocated as needed by the agency.

Characteristics of the USPHS CC Workforce. The characteristics of the USPHS CC workforce include higher levels of training compared to civil service counterparts, more leadership and managerial skills, low employment permanence (continuation in the Corps), and a multitude of services offered. As mentioned above, the USPHS CC effectively recruits highly skilled professionals to serve as officers. In fact, compared to their civil service counterparts, officers are more prepared if measured using health-related standards. For example, Nurse officers are required to have a Bachelor’s degree in Nursing or an advanced degree (i.e. Master’s degree in Nursing), while civil service nurses can seek employment with only an Associate’s Degree with a nursing license. In fact, only 50 percent of nurses outside of the USPHS CC have Bachelor’s degrees and only 13.2 percent have a Master’s or Doctoral degree.¹³ Additionally, officers routinely complete training in leadership skills, management, and profession-specific topics recommended for the Corps. Indeed, at the annual USPHS Scientific & Training Symposium, officers can receive 1.5 to 31.50 Continuing Education credits depending on

¹³ American Nurses Association. (2011). Fact Sheet. Retrieved from <http://nursingworld.org/NursingbytheNumbersFactSheet.aspx>

professional category.¹⁴ This training equips officers with additional skills to serve in high-risk areas, remain on-call 24/7, and respond to natural or national disasters. Lastly, officers regularly serve at more than one agency in their career and bring with them a broad perspective of public health informed by various agency missions and the mission of the USPHS CC.

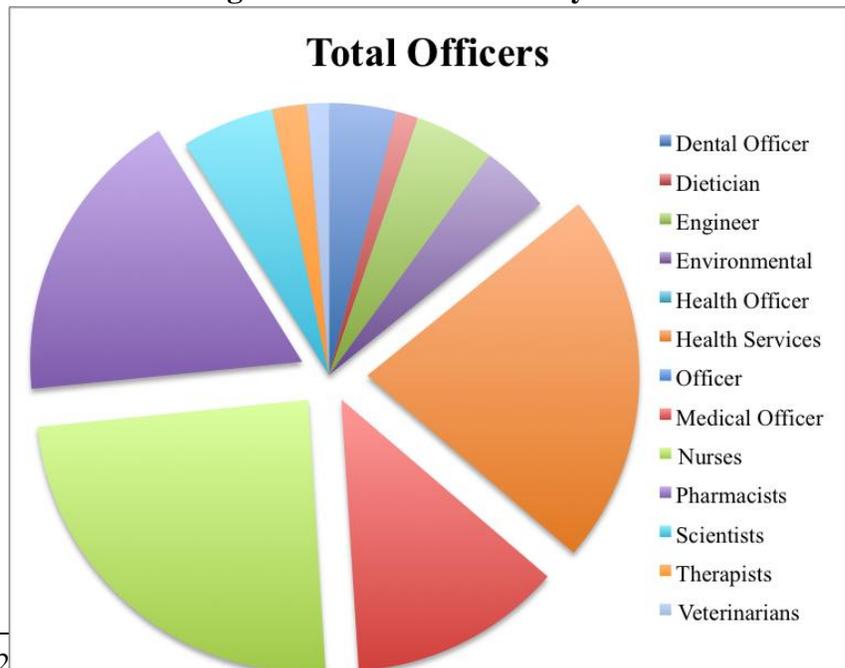
While officers are highly trained, many retire early or are lost to private sector employment. As mentioned previously, this leads to problems filling high-level leadership positions with career officers who understand the USPHS CC. Despite this phenomenon, officers provide many services, including disease prevention, health disparities elimination, and both health-related services and leadership during disaster and emergency response (see Chapter IV). Due to these specialized skills and broad range of services, PSHCC officers are uniquely qualified to deploy to international locations in which the Armed Forces or others are serving. For example, all embassies have a military attaché, but while global health concerns are increasingly recognized as national security issues, few embassies have a health attaché – an assignment ideally suited for Commissioned Corps officers. While there is the potential for new missions and location of USPHS CC officers, it is essential that they receive additional training in leadership skills and disaster preparation along with cultural sensitivity (see Chapter VIII).

¹⁴ USPHS Commissioned Officers Foundation for the Advancement of Public Health. (2012). Continuing Education Credits. Retrieved from <http://symposium.phscof.org/agenda/continuing-education-credits>

Gaps in the USPHS CC Workforce. Although there are advantages and disadvantages to the current USPHS CC employment system, there are two gaps in the USPHS CC workforce including a lack of USPHS CC experienced, upper-level leaders (see Chapter IV) and a representative distribution of officers across the different health professions and regionally. While the USPHS CC recruits professionals from 11 different professional categories (see Figure 5.1), more than three-quarters (77 percent) of all USPHS CC officers hired between 2001 and 2011 fell into four categories: nursing (24 percent), health services officer (22 percent), pharmacist (18 percent), and medical officer (13 percent) (see Document 11).¹⁵ This can pose an operational problem during times of deployment and emergency/disaster response (see Chapter VII). While clinicians, such as physicians and nurses are essential to respond to immediate needs after an emergency/disaster, long-term response requires pharmacists, health service officers, environmental health officers, scientists, therapists, and veterinarians.

Figure 5.1: Total Officers by Profession¹⁶

Regional distribution of the Commissioned Corps officers is also unequal. The majority of officers are stationed in the Northeast/Mid-Atlantic (Regions 1, 2, 3) and



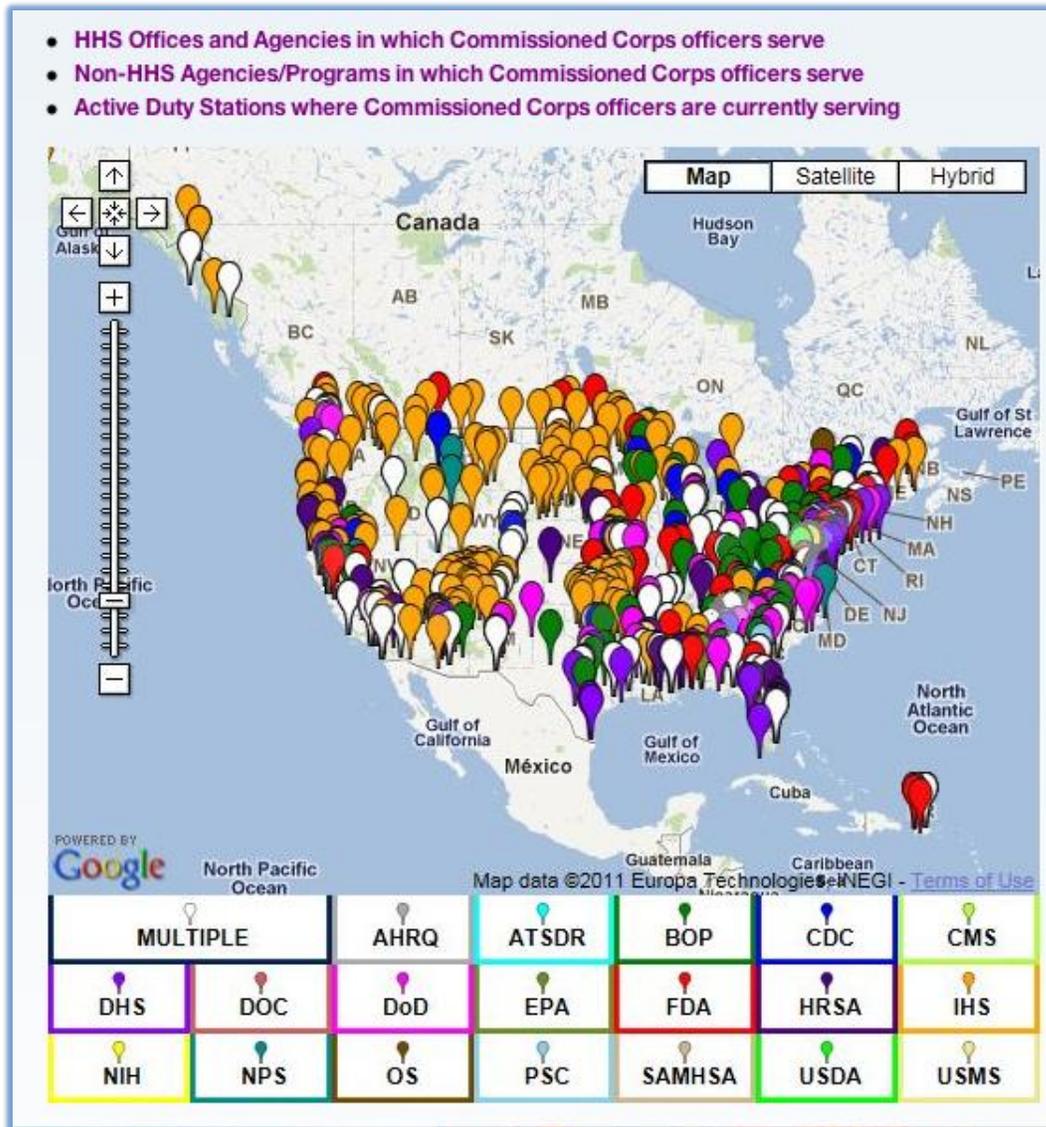
¹⁵ U.S. Public Health Service. (2012).

¹⁶ U.S. Public Health Service. (2012). 2001-2011 CAD data. *CAD PowerPoint Data*

Southeast (Region 4) (see Figure 5.2) despite high numbers of under-served, at-risk populations located in many rural areas of the Midwest, West, and Northwest. In fact, of the 5,864 designated primary care Health Professional Shortage Areas (HPSAs) nationwide, 3,903 or two-thirds (66 percent) are located outside of Regions 1-4.¹⁷ Figure 5.3 shows the regional distribution of officers hired between 2001 and 2011. In general, the demand for officers is generated by the DHHS and where officers are stationed depends upon the location of the departments and organizations. There is currently no strategic objective to address the needs of underserved populations by reallocating officers.

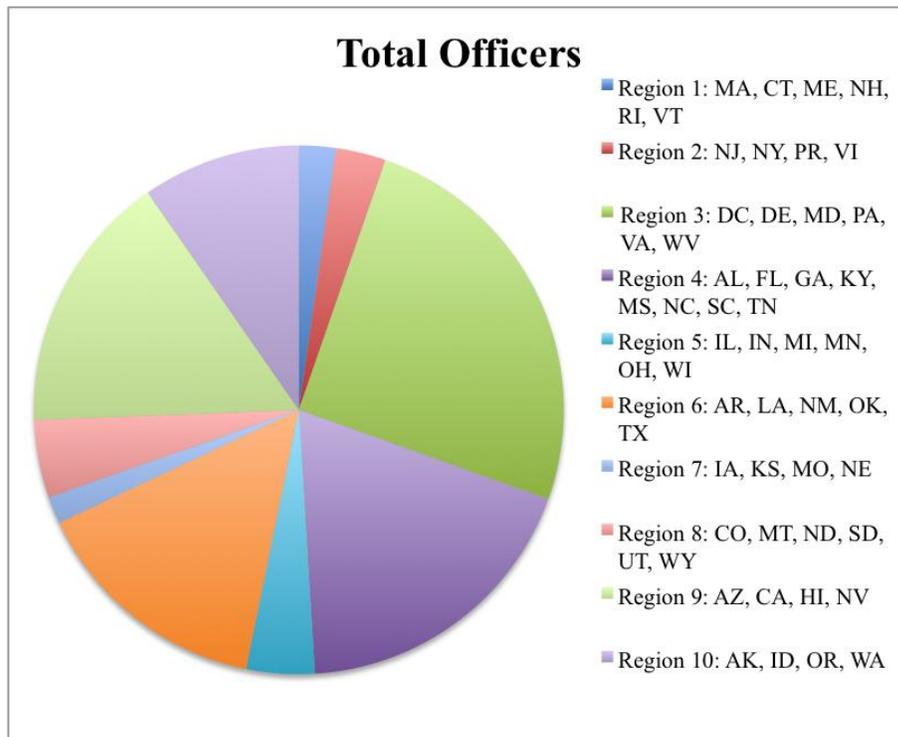
¹⁷ Human Resources and Services Administration. (2013). Designated Health Professional Shortage Areas (HPSA) Statistics. Retrieved from http://ersrs.hrsa.gov/ReportServer/Pages/ReportViewer.aspx?/HGDW_Reports/BCD_HPSA/BCD_HPSA_SCR50_Smry&rs:Format=HTML4.0

Figure 5.2: Active Duty Station Map¹⁸



¹⁸ U.S. Public Health Service Commissioned Corps. (2013). Where We Work. Retrieved from <http://www.usphs.gov/aboutus/agencies/>

Figure 5.3: Total Officers Hired by Region¹⁹



USPHS CC Financial Organization. Many problems exist regarding the financial organization of the Corps. While the Senate and House Appropriations Committees provide key funding for USPHS CC officers, the federal budget does not contain a line item for the Surgeon General to manage these funds. The Surgeon General has little control over where officers are assigned and determining how funding and resources should be applied. The current funding system makes it difficult for the Surgeon General to evaluate the value of the service provided by the USPHS CC (see Chapter VII). This also leads to problems analyzing the distribution of funds between salaries and administrative costs and determining the cost effectiveness of USPHS CC officers compared to civil servants. Cost effectiveness cannot be determined by simply

¹⁹ U.S. Public Health Service. (2012). 2001-2011 CAD data. *CAD PowerPoint Data*

calculating base salaries and administrative costs, such as benefits and the costs of controlling and managing the USPHS CC.

Cost effectiveness “assumes that a certain benefit or outcome is desired, and that there are several alternative ways to achieve it.”²⁰ Additionally, a cost-effectiveness evaluation often includes another outcome variable in addition to monetary cost, such as infant mortality rate. This addresses “whether the **unit cost** is greater for one approach than another, which is often much easier to do, and more informative, than assigning a dollar value to the outcome.”²¹ A cost effectiveness analysis does not indicate whether a program is having a significant effect on the outcome variable and it **does not indicate whether the least expensive alternative is the best alternative.**²²

Fund Apportioning and Cost of the USPHS CC. It is difficult to analyze how funds are apportioned between salaries and administrative costs because detailed data on the salaries of officers is difficult to access, but an Office of Business Management and Transformation report indicates that 69 percent of the average cost of a Commissioned officer is for salary, while 2 percent is for administrative costs (see Document 3).²³ Once an officer is stationed at an agency or organization, his or her salary is paid by the agency, not the USPHS CC. A separate Congressional appropriation funds officers’

²⁰ Sewell, M. and Marczak, M. (n.d.). Using Cost Analysis in Evaluation. CYFERnet – Evaluation. The University of Arizona, Tucson, AZ.

²¹ White, K.R. (1988). Cost analyses in family support programs (pp. 429-443). In H.B. Weiss and F. H. Jacobs (Eds.), *Evaluating family programs*. New York: Aldyne de Gruyter. Cited in Sewell, M. and Marczak, M. (n.d.). Using Cost Analysis in Evaluation. CYFERnet – Evaluation. The University of Arizona, Tucson, AZ.

²² Sewell, M. and Marczak, M. (n.d.). Using Cost Analysis in Evaluation. CYFERnet – Evaluation. The University of Arizona, Tucson, AZ.

²³ Office of Business Management and Transformation. (2010). U.S. Public Health Service Commissioned Corps Financial Supplement. Washington, DC: Department of Health and Human Services.

healthcare and retirement benefits.²⁴ Assessing the cost of hiring officers vs. civil servants is also difficult. A report by the Office of Business Management and Transformation concludes that using a civilian workforce would be less expensive than commissioned officers.²⁵ While the report provides calculations from two different studies to determine the comparison, the cost differential is based on an estimate of overtime hours worked by officers based on overtime accrued by civilians. The USPHS CC and stationing agencies and organizations do not track overtime hours worked by officers to fulfill USPHS CC trainings nor agency duties. Therefore, their formulas likely grossly underestimate the total number of overtime hours worked by officers, as indicated by the frequency in which this topic came up during informant interviews.

In addition, the Institute of Medicine's report on Health and Human Services in the 21st Century (2006), states that one impediment to recruiting highly-trained federal public health workers is lower salaries under the General Schedule (GS) system compared to the public sector.²⁶ Therefore, comparing the cost of civil servants vs. officers does not accurately reflect what may be best for the public health of the nation. In fact, ensuring a strong public health workforce is currently hampered by "low salaries, poor benefits, adverse working conditions, and low status,"²⁷ which may be overcome by the benefits and prestige of the USPHS CC.

²⁴ Office of Business Management and Transformation. (2010). U.S. Public Health Service Commissioned Corps Financial Supplement. Washington, DC: Department of Health and Human Services.

²⁵ Office of Business Management and Transformation. (2010). U.S. Public Health Service Commissioned Corps Financial Supplement. Washington, DC: Department of Health and Human Services.

²⁶ Institute of Medicine. (2006). HHS in the 21st Century: Charting a New Course for a Healthier America. Washington, DC: National Academies Press

²⁷ Tilson, H., and B. Berkowitz. 2006. The public health enterprise: Examining our twenty-first-century policy challenges. *Health Affairs* 25(4): 900-910

While looking at the data in the Office of Business Management and Transformation report may lead one to assume Civil Servants are a more cost-effective alternative, this model neglects to take into account the broader picture of services that the USPHS CC provides to the nation. Additionally, assessment of the base salaries paid to private sector employees, civil servants, and commissioned officers indicates that private sector employees have the highest salaries – specifically individuals with undergraduate degrees received comparable wages in both the public and private sector, while private sector employees benefits were 46 percent better. Individuals with advanced degrees in the public sector earn 23 percent less than the private sector, but the two have comparable benefits.²⁸ While it would be extremely difficult for the government to match salaries provided in the private sector, both civil servants and commissioned officers receive additional benefits on top of their base salaries. Civil servants receive overtime pay, while commissioned officers do not. Commissioned officers do receive military-related benefits, including housing and subsistence allowances, access to military base facilities, and relocation benefits.

Further, there is more than ample evidence to conclude that pay and benefits for PHS Commissioned Corps officers are insufficient to meet government requirements for health professionals. The DHHS Office of Business Management and Transformation analysis completely ignores Title 38 and Title 42 employees whose level of education, expertise, and experience is far more comparable to PHS commissioned officers than the “average” GS employee chosen for comparison in that report.

²⁸ Congressional Budget Office. (2012). Comparing the Compensation of Federal and Private-Sector Employees. Retrieved from <http://www.cbo.gov/publication/42921>

Title 38 and Title 42 employees are compensated far above total pay and benefits for PHS officers with similar skills and are actively and aggressively recruited by operating divisions of DHHS.

To take into account all of these factors, a cost-effectiveness model for the USPHS CC should take into account the following factors, which are both tangible and intangible:

- **Dedication to Service:** Officers are on duty 24 hours a day, seven days a week and are not subject to the same labor guidelines as civil servants. Therefore, during an emergency, officers can work many more hours because they are not forced to go off-duty like Civil Servants. In addition, officers are not wed to a single agency or program and can be transferred to new locations and agencies to best address the changing public health needs of the nation.
- Officers are not subject to furlough in the event of a temporary suspension of appropriated funds thus providing continuity for public health operations during times of fiscal crisis.
- **Leadership:** Officers provide a strong sense of leadership and recognizable authority during difficult times of emergency, both for the public, for civil servants, and other uniformed service members.

- Skills: Officers generally have high levels of education than their civil servant counterparts and are more likely to be placed in supervisory roles (see previous).²⁹

These factors are nearly impossible to quantify in an equation to provide hard numbers about the cost of the USPHS CC officers compared to civil servants especially when Title 38 and Title 42 employees are omitted from the calculus. In addition, as pointed out previously, most previous measures of the cost of the USPHS CC rely exclusively on tangible factors. Some people contend that “Cost per Troop” of cost per officer formulas send the wrong message,³⁰ especially if one defines value as “not determined by just measuring the costs and benefits to the health sector, but ... [also by] estimates of societal costs and benefits.”³¹ **The effectiveness, efficiency, efficacy, and comprehensive value of the USPHS CC cannot be determined based on cost factors alone, although almost all previous studies of the Corps have relied solely on this single data point. There exist in the federal workforce too many variables, too many inconsistencies, too many un-measurable attributes, and too many contraindications to make any meaningful evaluation based on cost alone, much less useful in assessing overall value and contribution to national health and security.**

²⁹ Coviello, Daniel. (n.d.) Public Health Commissioned Corps: Data Analysis

³⁰ Military Officers Association of America. (2013). “Cost per Troop” Formulas Send Wrong Message. Retrieved from http://www.moaa.org/main_menu/Take_Action/Top_Issues/Serving_in_Uniform/National_Guard_and_Reserve/Cost_Per_Troop_Formulas_Send_Wrong_Message.html

³¹ Institute of Medicine. (2006). HHS in the 21st Century: Charting a New Course for a Healthier America. Washington, DC: National Academies Press.

Lastly, when determining value in health care and public health, “value should always be defined around the customer... [and] the creation of value for patients... Since value depends on results, not inputs, value in health care is measured by the outcomes achieved”³² (pp. 2477). The use of outcome variables, as mentioned above when conducting a cost effectiveness analysis, would provide accurate data to assess the USPHS CC’s provision of public health service to the nation.

Increasing Cost-Efficiency. Despite this, there are still multitudes of ways in which the USPHS CC can operate more cost-efficiently. For example, in FY2010 the total annual cost for USPHS CC personnel management, payroll, and budget planning purposes totaled \$12.8 million, mostly due to a surplus of systems unique to the USPHS CC, which increase complexity and inefficiency (see Document 4).³³ Using a more efficient system, which unifies human resource management information system and payroll services, would reduce cost. In addition, transitioning medical support services from the OCCSS Medical Affairs Branch to TRICARE could result in an annual savings of \$2.5 million.³⁴

³² Porter, M.E. (2010). What is Value in Health Care? *The New England Journal of Medicine*, 363(26), 2477-2481.

³³ Office of Public Health and Science. (2010). A Review of Management of the U.S. Public Health Service Commissioned Corps. Washington, DC: Department of Health and Human Services.

³⁴ Office of Public Health and Science. (2010). A Review of Management of the U.S. Public Health Service Commissioned Corps. Washington, DC: Department of Health and Human Services.

VI. PHS Management Approach and System Factors

Overview of Findings. The management approach and system factors are the overarching organizational and implementation practices which impact the functioning of the USPHS CC. This study aims to examine these factors to contribute to the accurate measurement of USPHS CC performance and overall value in supporting public health-oriented efforts.

The research questions guiding the examination of this topic include:

- How is the USPHS Commissioned Corps integrated into Federal agencies?
- How well does the USPHS coordinate, innovate, and build for the future?

Analysis of the data indicates that the:

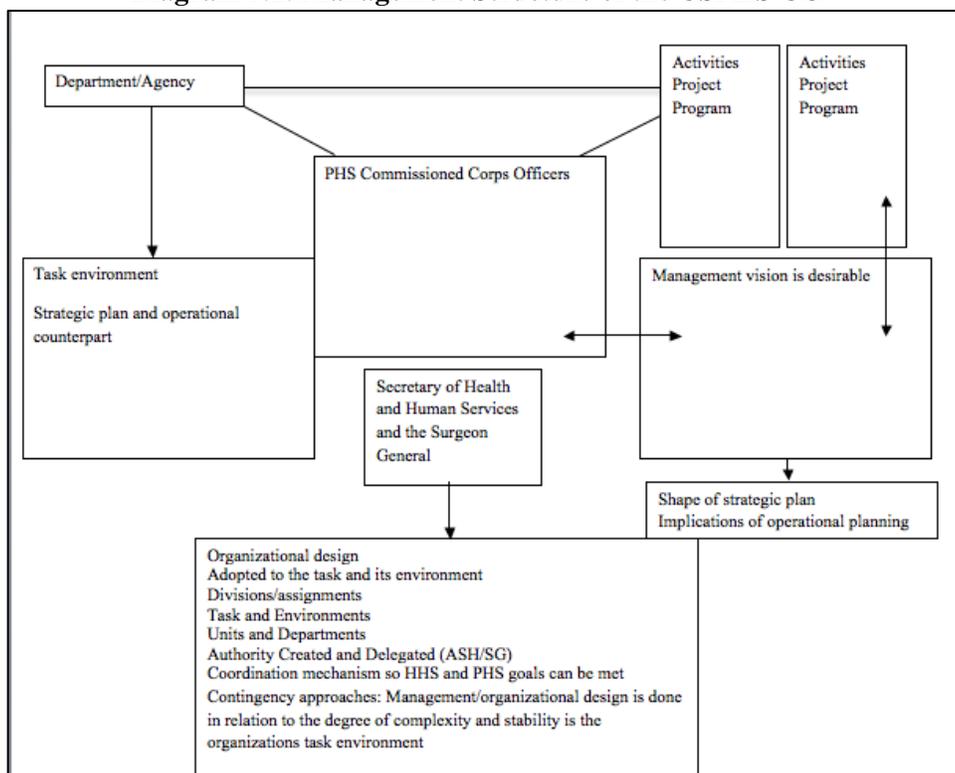
- USPHS CC's coordination of Commissioned Corps officers within government agencies, across professional categories, and for deployment is inadequate and may require additional organization and clearer channels of command.
- USPHS CC manages officer response during times of disaster expeditiously, and officers provide an important level of on-the-ground leadership during disaster response.
- USPHS CC may be missing an important opportunity to innovate and build for the future by not articulating the value of Commissioned Corps officers to outside agencies, which can be expressed by the Surgeon General.
- USPHS CC lacks a strategy to build leaders for future leadership roles within the Commissioned Corps due to decreased training for long-term and mid-career funding.
- USPHS CC officers are unevenly integrated into Federal agencies and may be missing vital opportunities to enhance domestic public health.

Below, this study provides the detailed findings from the analysis.

USPHS CC Coordination of Officers. Coordination of Commissioned Corps officers within government agencies is a complex process for two interrelated reasons: 1) The current management structure of the USPHS CC, and 2) The way commissioned officers function within an agency. First, the USPHS CC is a part of the Department of Health and Human Services (HHS) and is under the leadership of the Assistant Secretary for Health (ASH) and the Surgeon General. The ASH provides strategic and policy direction, while the Surgeon General oversees the USPHS CC. The Surgeon General is the operational head of the USPHS CC, but the Surgeon General is not necessarily a career officer. The position is filled via Presidential appointment, with confirmation by the Senate. Once appointed by the President, the Surgeon General receives rank within the Commissioned Corps.³⁵ Although the Surgeon General is the head of the USPHS CC, the Office of the Surgeon General does not have a centralized management system in which to recruit, manage, and provide central funding for personnel; instead, the Assistant Secretary for the Health is responsible for these tasks. Diagram 7.1 provides a schematic of the management structure of the USPHS CC.

³⁵ U.S. Public Health Service Commissioned Corps. (2012). *Leadership*. Retrieved from <http://www.usphs.gov/aboutus/leadership.aspx>

Diagram 7.1: Management Structure of the USPHS CC



Second, Commissioned Corps officers are stationed at over 21 Federal agencies, in addition to several state health departments, and local offices (Table 7.2); and once stationed, the Commissioned Corps officers are integrated into the stationing agencies

Table 7.1: Total USPHS CC Recruits from 2001-2011 by Professional Category³⁶	
<i>Professional Category</i>	<i>Total</i>
Dental Officer	193
Dietician	63
Engineer	229
Environmental Health Officer	199
Health Services Officer	1070
Medical Officer	613
Nurse	1181
Pharmacist	857
Scientist	265
Therapist	100
Veterinarian	63

³⁶ U.S. Public Health Service. (2012). 2001-2011 CAD data. *CAD PowerPoint Data*.

staffing and management. As a result, Commissioned Corps officers' work becomes the property of the stationing agency and all credit for the accomplishment goes to the agency, not the USPHS CC. **This is problematic because it becomes nearly impossible to tease out the full effect the USPHS CC has on domestic public health.** In addition, this structure makes evaluation and performance of officer's difficult (see Chapter VII) and does not lend itself to interagency coordination of Commissioned Corps officers to maximize efforts to improve public health.

Coordination of Commissioned Corps officers across professional categories is also an issue for the USPHS CC. While the USPHS CC strives to respond to the various domestic and international health and environmental challenges by uniting an array of diverse health professionals in one organization, recruitment of professionals is unequally distributed across the range of categories. The USPHS CC recruits professionals from 11 different categories (see Table 7.1), although almost half (46 percent) of professionals recently hired fall under two categories: nurses (24 percent) and health service officers (22 percent).³⁷ Officers are hired in disproportionate numbers for different categories because recruits are hired based on the needs of stationing agencies and organizations (see below). Due to the diversity of health professionals serving in the USPHS CC, current coordination among categories of professional is inadequate. The data indicate that more collaboration among professionals stationed at different agencies and organizations may improve cohesiveness and effectiveness through the sharing of strategies and information.

³⁷ U.S. Public Health Service. (2012). 2001-2011 CAD data. *CAD PowerPoint Data*

USPHS CC Disaster Response Management. Coordination of Commissioned Corps officers for deployment, especially during emergency deployment, is a complex, bureaucratic process requiring multiple levels of approvals. This process can be time consuming and may be highly inefficient. Commissioned Corps officers are on call 24 hours a day, seven days a week and can be deployed at any time to respond to public health emergencies. The Office of Force Readiness and Deployment (OFRD) is responsible for the deployment of USPHS CC officers, but only deploys officers if:

- The President of the United States or the Secretary of Health and Human Services (DHHS) declares a national emergency;
- There is an urgent public health need; or
- The Secretary of Homeland Security declares a special security event.^{38,39}

After one of the above declarations, the OFRD receives a request for assistance to deploy the USPHS CC. Then, the OFRD submits the request for USPHS CC assistance to the Surgeon General and briefs the Assistant Secretary for Health.⁴⁰ After the briefing, if the Assistant Secretary for Health concurs with the deployment recommendations, the Office of the Surgeon General develops rosters of active officers, matching the officers' skills with the needs of the mission. After officers are identified, the Office of the Surgeon General notifies the stationing agencies and organizations that the officers are needed for

³⁸ Hammond, J.R., Savalia, V.B., Nguyen, Q. (December 2009). The U.S. Public Health Service Commissioned Corps' Roles and Responsibilities in Disaster Response.

³⁹ Office of Force Readiness and Deployment. (2011). Essentials. Retrieved from http://ccrf.hhs.gov/ccrf_essentials.htm

⁴⁰ Office of Force Readiness and Deployment. (2011). Essentials. Retrieved from http://ccrf.hhs.gov/ccrf_essentials.htm

deployment. Then, after the officers receive approval/release from their supervisors, the USPHS CC issues travel orders and officers can finally deploy.⁴¹

While the data indicate that USPHS CC's coordination of Commissioned Corps officers for deployment is complex and may be time consuming, the data also indicate that USPHS CC manages officer response during disaster response expeditiously. For example, in response to Hurricane Katrina in 2005, Hurricane Gustav in 2008, and the earthquake in Haiti in 2010, more Commissioned Corps officers deployed in the first two weeks of the emergencies than Civil Servants.⁴² Additionally, as emergency first responders and for longer-term emergency response, Commissioned Corp officers' deployment tours are almost twice as long as civilian personnel.⁴³ The presence of uniformed officers in the time of an emergency also provides a strong presence and leadership for teams of both civilian and non-civilian personnel. Officer preparation for emergency response is extensive. Unrestricted work hours enable them to complete trainings beyond the requirements for their professional category, stationing agency, or organization. Loyalty to the USPHS, which prepares them exceptionally well to respond to emergencies, further enhances their capability and capacity as emergency responders. While the USPHS CC officers bring experience and efficiency to the agencies in which they are stationed to meet objectives and enhance capacity to respond to emergencies, sustainability is an issue. The length of time agency retains an officer depends on the budget, which is not assured.

⁴¹ Office of Force Readiness and Deployment. (2011). Essentials. Retrieved from http://ccrf.hhs.gov/ccrf_essentials.htm

⁴² Office of Business Management and Transformation. (August 2010) U.S. Public Health Service Commissioned Corps Financial Supplement. *Department of Health and Human Services*.

⁴³ Office of Business Management and Transformation. (August 2010) U.S. Public Health Service Commissioned Corps Financial Supplement. *Department of Health and Human Services*.

In conclusion, **the lack of organized unit structure and a strong chain-of-command authority and control complicate the rapid mobilization of the Corps for emergent, quick deployment and tasking. Despite these significant constraints, the Corps has responded exceptionally well as demonstrated by response to Hurricanes Katrina, Ike, and Sandy.**

Opportunities to Innovate and Build for the Future. The data also indicate that the USPHS CC may be missing an important opportunity to innovate and build for the future by not emphasizing the value of Commissioned Corps officers to outside agencies. This has also led to a devaluing of the officers' skills by the DHHS, the stationing agencies, and the stationing organizations in which the officers work. The USPHS CC emphasizes four major values:

- Leadership: A vision and purpose in public health
- Service: A commitment to public health
- Integrity: Uncompromising ethical conduct
- Excellence: Superior performance and continuous improvement (see Document 5)⁴⁴

While these values may not be unique to the USPHS CC, the emphasis on personal and professional commitment to such virtues is unique to the uniformed services. Officers are expected to embody these four values, provide public health support to the agencies and organization in which they work, and meet the rigorous requirements for deployment

⁴⁴ Wyatt, Richard. (2007, January). Establishing the Value of Commissioned Officers: Fulfilling the Dual Mission of the USPHS Commissioned Corps and Balancing the Changing Demands on Officers' Time. *Draft Discussion Paper*

and emergency preparedness.⁴⁵ To complete all of these tasks, officers spend a substantial number of “non-duty hours” completing necessary training to meet requirements for USPHS CC activities. These tasks include taking Continuing Education Units (CEUs) to maintain licensure, completing training modules, attending professional meetings and scientific and training symposiums, and maintaining proper emergency readiness through periodic physical exams and immunizations.⁴⁶ These tasks are just one example of how officers are expected to go above-and-beyond the 40-hour-work-week of their Civil Servant counterparts (see Chapter V). Not emphasizing the myriad skills and services that USPHS CC officers bring to the various stationing agencies and organizations in which they work and to the emergency preparedness of the country in general, leads to under-utilization of officer’s skills and above all reduces the effectiveness of the USPHS CC. The dual role officers fill in the realm of public health situates them to play a much larger and vital role to meet the public health goals of the nation (see Chapter VII).

Strategy to Build Leaders. The data also indicate that the USPHS CC lacks a strategy to build leaders for future leadership roles within the Commissioned Corps. The USPHS CC struggles to retain officers for long periods; therefore, rarely organically develops qualified leaders through the ranks who are able to fill senior positions. The USPHS CC has a defined strategy for recruiting new officers, but it needs to evaluate the method,

⁴⁵ Wyatt, Richard. (2007, January). Establishing the Value of Commissioned Officers: Fulfilling the Dual Mission of the USPHS Commissioned Corps and Balancing the Changing Demands on Officers’ Time. *Draft Discussion Paper*

⁴⁶ Wyatt, Richard. (2007, January). Establishing the Value of Commissioned Officers: Fulfilling the Dual Mission of the USPHS Commissioned Corps and Balancing the Changing Demands on Officers’ Time. *Draft Discussion Paper*

resources, and management of senior-level officers to retain officers in the USPHS CC, rather than losing them to early retirement or to private sector industry.

Officer Integration in Federal Agencies. Lastly, USPHS CC officers are unevenly

Table 7.2:⁴⁷ Distribution of USPHS CC Officers by Agency	
<i>Agency</i>	<i>Total Number</i>
IHS	1668
CDC	725
BOP	604
FDA	541
HRSA	335
NIH	196
DHS	174
OS	111
Unknown	177
DOD	90
SAMHSA	41
PSC	41
CMS	35
EPA	27
USDA	23
ATSDR	20
DOJ	12
INT	7
AHRQ	3
DOC	1
ACF	1
DOS	1

integrated into federal agencies, and, therefore, may be missing vital opportunities to enhance domestic public health. Table 7.2 and Figure 7.2 below list USPHS CC officers by agency and organization.

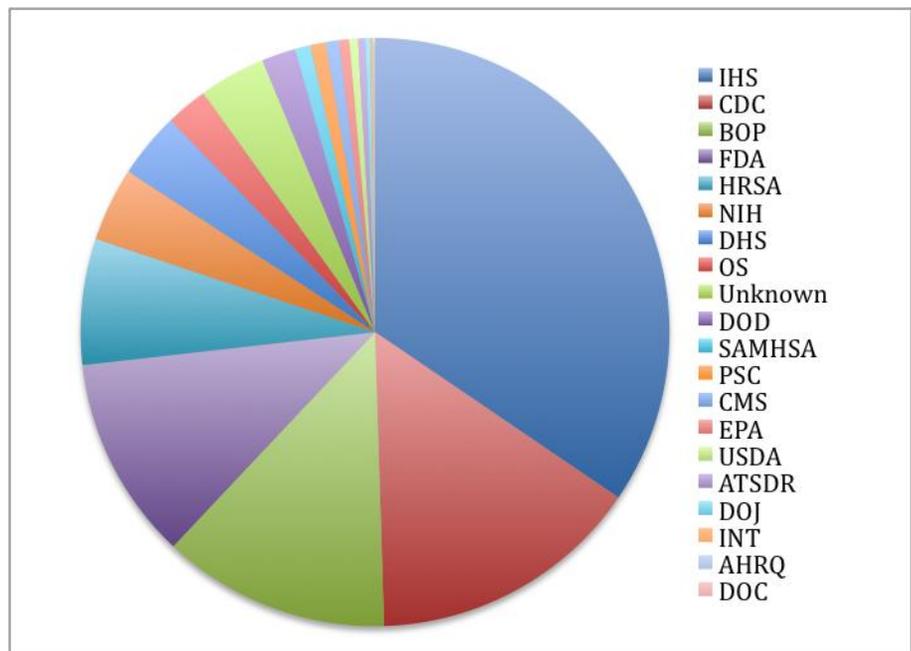


Figure 7.2: Distribution of USPHS CC Officers by Agency⁴⁸

From 2001-2011, approximately 4,656 officers were hired for 21 known agencies and 177 were hired for unknown organizations for a total of 4,833 USPHS CC officers. The application and acceptance process, as mentioned above, is currently on hold. The

⁴⁷ U.S. Public Health Service. (2012). 2001-2011 CAD data. *CAD PowerPoint Data*

⁴⁸ U.S. Public Health Service. (2012). 2001-2011 CAD data. *CAD PowerPoint Data*

USPHS CC is not accepting applications except for physician and dental applicants. These applications are reviewed and if the applicant meets the criteria, a position is identified and then they receive a detail. While officers are hired and stationed at an array of Federal agencies, 80 percent of the active USPHS CC officers hired work at five agencies: the Indian Health Service (IHS), Centers for Disease Control and Prevention (CDC), Federal Bureau of Prisons (BOP), Food and Drug Administration (FDA), Health Resources and Services Administration (HRSA). In their roles at these five agencies, officers often work with minority and/or disadvantaged populations. This work allows them to use their leadership skills and extensive training (see above) to work in positions that Civil Servants may be reluctant or not have the skills to fill.

This is especially true of officers stationed at the IHS and BOP. For example, a USPHS CC pharmacist working in the BOP may manage the care of up to 50 incarcerated patients with HIV/AIDS under the supervision of a clinical director. Pharmacists initiate treatments, modify existing treatments, and order laboratory tests to determine the state of infection. In this role, USPHS CC pharmacists play an important and unique role in managing HIV/AIDS in the BOP population.⁴⁹ In addition, USPHS CC pharmacists working in the IHS broaden their scope of practice by obtaining additional certification to “coordinate and administer medication during sedation, rapid sequence intubation, traumatic injury, and cardiac codes,” and in some states, properly trained pharmacists immunize patients.⁵⁰ For example, at an isolated clinic in Washington State staffed only by pharmacists, a PHS pharmacist completed the American

⁴⁹ Flowers et al. (2003). U.S. Public Health Service Commissioned Corps Pharmacists: Making a Difference in Advancing the Nation’s Health. *Journal of the American Pharmacy Association* 49(3): 446-452

⁵⁰ Flowers et al. (2003). U.S. Public Health Service Commissioned Corps Pharmacists: Making a Difference in Advancing the Nation’s Health. *Journal of the American Pharmacy Association* 49(3): 446-452

Pharmacists Association Pharmacy-Based Immunization Delivery certification, and within one year provided immunizations to 40 patients who may have otherwise not received immunizations because extensive travel was necessary to reach the closest facility with trained staff.⁵¹ In addition to individual officers who broaden the scope of their profession to serve disadvantaged populations, the USPHS CC has also been instrumental to implement wide-scale programs for American Indian/Alaskan Native communities. After collaborating with SAMHSA, the National Institute of Mental Health, and IHS, the Commissioned Corps provided strategic planning and operation strategies that allowed American Indian communities to implement the “Surgeon General’s Call to Action to Prevent Suicide.” Additionally, officers direct clinical and programmatic work with the American Indian communities, earned them the trust and respect of local communities, which enables officers to implement sustainable long-term change. While a significant number of USPHS CC officers currently work with minority and at-risk populations, there are many other areas where officers would have a positive, lasting impact on public health (see Chapter VII), especially when they broaden the traditional scope of practice for their given profession.

⁵¹ Flowers et al. (2003). U.S. Public Health Service Commissioned Corps Pharmacists: Making a Difference in Advancing the Nation’s Health. *Journal of the American Pharmacy Association* 49(3): 446-452

VII. PHS Operation Management Factors

Overview of Findings. The operation management factors are the ways the overarching organizational and implementation practices discussed above effect the operation and performance of the USPHS CC. This study aims to examine these factors to contribute to the accurate measurement of USPHS CC performance and overall value in supporting public health-oriented efforts. The research questions guiding the examination of this topic include:

- What is the impact of PHS programs?
- How is performance monitored and evaluated across the organization?
- What kinds of relationships exist between military and civilian entities? How well do these relationships function?

Analysis of the data indicates that:

- As a whole, the USPHS CC does not have strategic objectives or force management; therefore, the operation of the Corps is not objective driven and is less effective.
- The USPHS CC has the greatest impact on vulnerable, at-risk, and hard-to-reach populations, but has the capacity to increase this impact exponentially.
- The USPHS CC disaster response model, while complex (see Chapter V), has a great impact because it operates on a tiered system. In addition, previous Corps disaster response models paved the way for other organizations' development of disaster response teams.

- The USPHS CC has no way to monitor and evaluate officers across organizations, which leads to ineffective management because officer's skills are not utilized in the best manner.
- USPHS CC officers are integrated into branches of the military, such as the Coast Guard, and into numerous federal agencies where they work on a daily basis with civilians. In general, these relationships function by subsuming USPHS CC officers into the functioning of the agency or organization in which they are assigned.

Strategic and Operational Objectives. As a whole, the USPHS CC does not have strategic objectives or force management; therefore, the management of the Corps is not objective driven and is less effective. Strategic objectives translate a broad mission statement into long-term goals executed through tangible plans, which include specific, measurable benchmarks.⁵² Strategic objectives are then carried out in the short-term through operational objectives with their own detailed benchmarks.⁵³ Since the USPHS CC lacks clear, defined objectives, they struggle to operationalize their mission statement, which leads to a diminished impact on public health. In addition, the lack of clear objectives leads to gaps in the USPHS CC workforce, which also leads to problems addressing public health needs. Generally, the USPHS CC recruits professionals to meet the needs of other agencies, furthering the other agencies' missions and only partially

⁵² Petryni, M. (n.d.) Difference Between Strategic and Operational Objectives. *The Small Business Chronicle*. Retrieved from <http://smallbusiness.chron.com/difference-between-strategic-operational-objectives-24572.html>

⁵³ Petryni, M. (n.d.) Difference Between Strategic and Operational Objectives. *The Small Business Chronicle*. Retrieved from <http://smallbusiness.chron.com/difference-between-strategic-operational-objectives-24572.html>

furthering their own mission. This leads to an unequal distribution of professionals in the USPHS CC, which may reduce to potential to address public health needs. Table 6.1 provides the current breakdown of the professional role of the 6,669 officers currently on duty and the agency in which they work.

Table 6.1: USPHS CC Officers by professional category

	<i>DEN</i>	<i>DIET</i>	<i>EHO</i>	<i>ENG</i>	<i>HSO</i>	<i>MED</i>	<i>NURSE</i>	<i>PHARM</i>	<i>SCI</i>	<i>THER</i>	<i>VET</i>	<i>Total</i>
<i>ACF</i>	0	0	1	0	4	0	1	0	0	0	0	6
<i>AHRO</i>	0	0	0	0	2	4	0	1	1	0	1	9
<i>ATSDR</i>	1	0	18	3	6	1	1	0	7	0	1	38
<i>BOP</i>	62	6	2	1	197	17	360	155	13	32	0	845
<i>CDC</i>	6	4	69	21	126	409	44	22	140	4	46	891
<i>CIA</i>	0	0	0	0	1	0	0	0	0	0	0	1
<i>CMS</i>	0	3	1	3	39	10	45	22	2	7	0	132
<i>DHS</i>	66	0	23	2	84	77	203	32	5	3	2	497
<i>DOC</i>	0	0	0	0	8	0	8	0	0	0	0	16
<i>DOD</i>	0	0	0	0	1	1	0	0	3	0	3	8
<i>DOD TMA</i>	1	1	2	4	125	16	55	14	43	12	0	273
<i>EPA</i>	0	0	17	35	8	0	0	0	3	0	4	67
<i>FDA</i>	4	27	80	66	175	42	143	340	68	7	13	965
<i>HRSA</i>	10	7	5	3	84	24	53	12	6	5	0	209
<i>IHS</i>	143	49	98	243	259	137	520	536	8	70	0	2063
<i>DOI</i>	0	0	11	20	9	3	2	0	1	0	1	47
<i>DOJ</i>	0	0	0	0	1	2	9	0	0	0	0	12
<i>NIH</i>	1	5	9	7	32	97	98	11	21	5	18	304
<i>OS</i>	2	1	7	10	62	20	38	12	7	6	2	167
<i>PSC</i>	1	1	8	2	13	5	17	0	1	0	0	48
<i>SAMHSA</i>	0	0	0	1	34	1	6	6	1	1	0	50
<i>USAMRMC</i>	0	0	0	1	0	0	0	0	0	0	0	1
<i>USDA</i>	0	1	4	0	7	1	0	0	0	1	6	20
<i>Total</i>	297	105	355	422	1277	867	1603	1163	330	153	97	6669

Impact of USPHS CC on Vulnerable Populations. The distribution of agencies in which the majority of USPHS CC officers work, including the Indian Health Service (IHS) and the Federal Bureau of Prisons (BOP), indicates that officers are well-suited to working among at-risk, vulnerable, and hard-to-reach populations. Therefore, the USPHS CC has the greatest impact on vulnerable, at-risk, and hard-to-reach problems, but has the capacity to increase this impact exponentially. Access to care is a problem for many people, especially vulnerable populations, in fact, the DHHS Healthy People 2020 goals seek to address this problem. As a part of the DHHS, the USPHS CC can play an expanding role in helping the nation achieve public health goals, especially with officers serving in most DHHS agencies.

Healthy People establishes objectives, for 10-year increments, to improve Americans' health. The four broad goals of Healthy People 2020 include:

- Attain high-quality, longer lives free of preventable disease, disability, injury, and premature death
- Achieve health equity, eliminate disparities, and improve the health of all groups
- Create social and physical environments that promote good health for all
- Promote quality of life, healthy development, and healthy behaviors across all life stages⁵⁴

⁵⁴ Healthy People. (2012). About Healthy People. U.S. Department of Health and Human Services. Retrieved from <http://www.healthypeople.gov/2020/about/default.aspx>

The Healthy People 2020 objectives are divided into 42 topic areas and include 1,200 individual objectives.⁵⁵ Healthy People 2020 also includes a new Foundation Health Measures section to address important topics:

- General Health Status
- Determinants of Health
- Health-Related Quality of Life and Well-Being
- Disparities

Many of these leading health indicators align with the mission of the USPHS CC and by evaluating these goals and integrating them into the strategic and operational objectives mentioned above, the USPHS CC could play an integral role in achieving national public health goals. The Healthy People 2020 objectives are measured nationally and their success depends on both governmental and non-governmental organizations,⁵⁶ and cooperation among all of the organizations. As a part of the complex health workforce in the U.S. working in DHHS agencies, state health departments, and local organizations, the USPHS Commissioned Corps is uniquely situated to contribute to the goals of Healthy People 2020. In fact, USPHS CC officers could provide important linkages between agencies and organizations to encourage cooperation and collaboration to meet Healthy People 2020 goals. Specifically, the USPHS CC can contribute officers to increase the workforce at the state and county-levels to increase services for vulnerable populations and ensure there is an adequate workforce to address the health needs of the

⁵⁵ Centers for Disease Control and Prevention. (2011). Healthy People 2020. Retrieved from http://www.cdc.gov/nchs/healthy_people/hp2020.htm

⁵⁶ Centers for Disease Control and Prevention. (2011). Healthy People 2020. Retrieved from http://www.cdc.gov/nchs/healthy_people/hp2020.htm

U.S. population. Indeed, the USPHS CC can play an important role in addressing HP2020 goals by following recommendations in the IOM report on the HHS in the 21st century. Among these are recruiting highly-qualified public health professionals with public health experience who can provide care to rural and low-income communities, which are disproportionately affected by shortages of health professionals.⁵⁷

Disaster Response Model. While the USPHS CC is positioned to make a large contribution to the Healthy People 2020 goals, it has already had a large impact on disaster response in the U.S. The USPHS CC disaster response model, while complex (see Chapter V), operates on a tiered system, which has a large impact and has paved the way for other organizations' development of disaster response teams. The USPHS CC disaster response has three tiers:

- Tier I includes the Rapid Deployment Force Teams and the Incident Response Coordination Teams who are expected to report for duty within 12 hours of notification.
- Tier II includes the Applied Public Health Teams and the Mental Health Teams who are expected to report for duty within 36 hours of notification.

⁵⁷ Institute of Medicine. (2006). HHS in the 21st Century: Charting a New Course for a Healthier America. Washington, DC: National Academies Press

- Tier III includes all other officers who are not on a specific team who are expected to report for duty within 72 hours of notification. Tier III officers role is to support Tier I and II Teams.⁵⁸

This model allows the USPHS CC to deploy quickly to disaster sites and provide many different services. In fact, Disaster Medical Assistance Teams (DMATs) led by officers starting in the 1980's served as prototypes to current day DMATs.⁵⁹ But unlike the current civilian DMAT teams, the USPHS CC DMATs provided primary care, emergency community outreach, and preventative medicine and were staffed by not only primary care professionals, but mental health, laboratory, preventive medicine, and dental professionals.⁶⁰ Corps officers from the original DMATs are part of the Tier I Rapid Deployment Force and they and other officers in Tiers I to III "address the universal need in any public health disaster... In fact, every disaster response should be considered multidimensional, where root cause analysis applies public health principles through a public health team to achieve the very best approaches to wellness, preventive medicine, mental health, triage, ambulatory care, clinical and long-term care."⁶¹ Therefore, the USPHS CC disaster response model also includes:

- Disaster Medical Assistance Teams
- Veterinary Medical Assistance Teams

⁵⁸ Hammond, J.R., Savalia, V.B., and Nguyen, Q. (December 2009). The U.S. Public Health Service Commissioned Corps' Role and Responsibilities in Disaster Response.

⁵⁹ PHSChat. (2012). Corps-led DMATs Precede Present Day Deployment Teams and Civilian DMATs. Retrieved from <http://www.phschat.com/forums/content.php?258-USPHS-DMAT-s-Led-the-Way-to-Present-Day>

⁶⁰ PHSChat. (2012). Corps-led DMATs Precede Present Day Deployment Teams and Civilian DMATs. Retrieved from <http://www.phschat.com/forums/content.php?258-USPHS-DMAT-s-Led-the-Way-to-Present-Day>

⁶¹ PHSChat. (2012). Corps-led DMATs Precede Present Day Deployment Teams and Civilian DMATs. Retrieved from <http://www.phschat.com/forums/content.php?258-USPHS-DMAT-s-Led-the-Way-to-Present-Day>

- Disaster Mortuary Assistance Teams

All officers are trained to develop and maintain Federal Medical Stations and provide quality medical care to patients despite a lack of infrastructure and resources, while coordinating with local and Federal officials.⁶²

USPHS CC Officer Monitoring and Evaluation. As mentioned above, the USPHS CC can play an integral role in achieving the goals of Healthy People 2020, but one important component of Healthy People 2020 is measuring goals nationally. Currently, the USPHS CC lacks a coordinated method to monitor and evaluate officers across organizations, which leads to ineffective management. Monitoring and evaluation of officers ensure that the USPHS CC can assign and deploy officers in the areas they are most needed, in addition, it allows the USPHS CC to determine areas of weakness and strength within the ranks and provide additional training to train officers through the ranks to serve as high-level officials (see Chapter V).

Uniformed Service and Civilian Relationships. In addition, USPHS CC officers are integrated into branches of the military, such as the Coast Guard,⁶³ and into numerous Federal agencies where they work on a daily basis with civilians. In general, these relationships function by subsuming USPHS CC officers into the functioning of the agency or organization in which they are assigned. In fact, when USPHS CC officers are

⁶² Hammond, J.R., Savalia, V.B., and Nguyen, Q. (December 2009). The U.S. Public Health Service Commissioned Corps' Role and Responsibilities in Disaster Response.

⁶³ U.S. Public Health Service Commissioned Corps. (2012). The Road Less Traveled. Retrieved from <http://www.usphs.gov/newsroom/features/radm-dollymore.aspx>

stationed with the Coast Guard, they wear the Coast Guard uniform with the USPHS CC emblem. All work completed by USPHS CC officers is credited to their stationing agency or organization (see Chapter V); therefore, although USPHS CC officers build a network of relationships with various military and civilian organizations, the relationships strongly favor the stationing agencies and organizations.

VIII. Lessons Learned and Recommendations

Comprehensive Overview of Findings. In Chapters III through VII of this report, we provided the findings from a mixed-methods analysis of data about the USPHS CC.

Specifically,

- Chapter III: Detailed data collection and analysis methods and the objectives and research questions guiding this study
- Chapter IV: Provided an overview of the current role of the USPHS CC and discusses the current stability of the Commissioned Corps as it relates to the current leadership strategy.
- Chapter V: Examined the USPHS CC employment system and workforce and assessed the cost of officer salaries.
- Chapter VI: Inspected USPHS CC management factors and integration into Federal agencies.
- Chapter VII: Explored operation management and the scope of USPHS CC operations during times of peace and times of emergency.

Below we summarize the major findings of the study as reported in Chapters IV through VII. Table 8.1 provides an overview of the findings of this study by chapter.

Table 8.1: Overview of findings

<i>Chapter</i>	<i>Findings</i>
<p>IV: PHS Commissioned Corps Environmental Factors</p>	<ul style="list-style-type: none"> • The current role of the USPHS CC stems from its long history as a provider of public health and contributes to many of the current issues identified in this study (see Chapters IV, V, and VI). • The main role of the USPHS CC currently is disease prevention, elimination of health disparities, and disaster/emergency preparedness. • USPHS CC officers are stationed in numerous agencies and organizations at the national, state, and local levels. • Organizational factors that threaten the stability of the USPHS CC include lack of direct leadership from the Office of the Surgeon General and a lack of clear, simple chain of command for the USPHS CC. • The future of the USPHS CC hinges on its ability to evolve to meet the ever-changing needs of public health in the context of a changing federal organization structure.
<p>V: PHS Human Resource and Task Factors</p>	<ul style="list-style-type: none"> • A disadvantage of the USPHS CC employment system is the current lack of leadership and managerial roles to be filled by career USPHS CC officers. An advantage of the USPHS CC employment system is the recruitment of highly skilled professionals.

<p>V: PHS Human Resource and Task Factors</p>	<ul style="list-style-type: none"> • The characteristics of the USPHS CC workforce include higher levels of training, more leadership and managerial skills, low employment continuity, and a multitude of services offered. • There are two gaps in the USPHS CC workforce including a lack of USPHS CC experienced, upper-level leaders and a representative distribution of officers in the various health professions. • The USPHS CC financial organization is funded through a multi-component system, which is complex and difficult to manage and control. • It is difficult to analyze how funds are apportioned between salaries and administrative costs and to assess the cost of hiring officers vs. civil servants. • The USPHS CC can increase cost-efficiency by streamlining many administrative processes.
<p>VI: PHS Management Approach and System Factors</p>	<ul style="list-style-type: none"> • USPHS CC's coordination of Commissioned Corps officers within government agencies, across professional categories, and for deployment is inadequate and may require additional organization and clearer channels of command. • USPHS CC manages officer response during times of disaster expeditiously, and officers provide an important level of on-the-ground leadership during disaster response. • USPHS CC may be missing an important opportunity to innovate and build for the future by not articulating the value of Commissioned Corps officers to agencies in which officers do not serve.

	<ul style="list-style-type: none"> • USPHS CC lacks a strategy to build leaders for future leadership roles within the Commissioned Corps. • USPHS CC officers are unevenly integrated into Federal agencies and may be missing vital opportunities to enhance domestic public health.
<p>VII: PHS Operation Management Factors</p>	<ul style="list-style-type: none"> • As a whole, the USPHS CC does not have strategic objectives or force management; therefore, the operation of the Corps is not objective driven and is less effective. • The USPHS CC has the greatest impact on vulnerable, at-risk, and hard-to-reach populations, but has the capacity to increase this impact exponentially. • The USPHS CC disaster response model, while complex (see Chapter V), has a great impact because it operates on a tiered system. In addition, previous Corps disaster response models paved the way for other organizations' development of disaster response teams. • The USPHS CC has no way to consistently monitor and evaluate officers across organizations, which leads to ineffective management. • USPHS CC officers are integrated into branches of the military, such as the Coast Guard, and into numerous Federal agencies where they work on a daily basis with civilians. In general, these relationships function by subsuming USPHS CC officers into the functioning of the agency or organization in which they are assigned.

We recognize that the limitations of this study include time constraints for data collection and analysis, the lack of site visits to agencies and departments to gather observational data, and the qualitative nature of the majority of the data. Despite this, the purpose of the study is to elucidate the concerns of commissioned officers and civil servants to improve the current and future role of the USPHS CC.

Lessons Learned. During data analysis, we noticed several discernable trends and themes emerging from the interviews and literature. First, the financial benefits and costs associated with operating the USPHS CC emerged as one of the most important issues in the study. While we proposed a cost efficiency and effectiveness model between officers and civil servants, it is very important to highlight that **Commissioned officers do not get paid overtime and are on duty 24 hours a day, seven days a week.** While documents from the Office of Business Management and Transformation argue that Commissioned officers are more expensive compared to civil servants and therefore not worth the additional costs,⁶⁴ our analysis of the formulas and models used in the document reveal that they do not properly take into account the overtime hours for which officers are not compensated. In addition, **this model fails to take into account several key factors. Many agencies/operating divisions/departments actively seek (Title 38 and Title 42) authority to pay more than USPHS CC (or GS) salaries in order to recruit and retain needed staff. Less tangible aspects of officers' leadership skills, higher levels of education and training, and dedication to the mission of the USPHS**

⁶⁴ Office of Business Management and Transformation. (August 2010). U.S. Public Health Service Commissioned Corps Financial Supplement. *Department of Health and Human Services*. Document No: HHS-OS-OBMT-2010-003.

CC, cannot be quantified with a monetary value. The real goal should therefore NOT be finding the cheapest personnel system, but making the best matchup between system characteristics and program needs.

Our research into cost effectiveness analysis and value in healthcare also indicates that a purely monetary value approach that does not correlate to an outcome variable, such as infant mortality, lacks insight into the actual impact of the program. Additionally, financial issues related to USPHS CC budget control came up multiple times in our analysis. **Specifically, the Office of the Surgeon General does not have a line-by-line budget to manage the USPHS CC, which reduces the Surgeon General's control and management abilities over the USPHS CC.**

Part of the problem associated with the Office of Business Management and Transformation devaluing the USPHS CC relates to the lack of reporting and overall knowledge of the USPHS CC by other departments and agencies in the U.S. As a uniformed service, the USPHS CC must be recognized for its leadership capabilities both during times of peace and disaster. As an organization with rapid deployment capabilities,⁶⁵ the USPHS CC should be **acknowledged for its role in disaster response** such as the earthquake in Haiti in 2010, Hurricane Gustav in 2008, Hurricane Ike in 2008, Hurricane Rita in 2005, and Hurricane Katrina in 2005.⁶⁶

The USPHS CC can be at the forefront of innovative new programs and policies to partner with other departments and agencies in high-risk area. Almost half (43 percent)

⁶⁵ Hammond, J.R., Savalia, V.B., & Nguyen, Q. (December 2009). The U.S. Public Health Service Commissioned Corps' Roles and Responsibilities in Disaster Response

⁶⁶ Commissioned Corps Management Information Systems. (2012). Public Statistical Information. U.S. Department of Health and Human Services. Retrieved from <http://dcp.psc.gov/CCMIS/StatusCharts/PublicPivot.aspx>

of commissioned officers work either with American Indians, Alaskan Natives, or incarcerated individuals through the IHS or BOP,⁶⁷ and have the ability to increase this potential. In addition to their leadership skills, USPHS CC has characteristics, which are important to plan future operations. These characteristics include: a steadfast code of conduct dedicated to upholding the traditions of the uniformed service while protecting the nation's public health interests,⁶⁸ dedication to the service and no particular agency,⁶⁹ and a loyalty to the mission that cannot be given a monetary value.

The data also reveal that while the leadership skills of commissioned officers cannot be questioned, records indicate that **leadership within the Commissioned Corps is decreasing due to a lack of senior-level officers**. While we were unable to establish why commissioned officers are not choosing to stay in the USPHS CC for their entire career, it is clear that without senior-level officers in leadership positions, the USPHS CC is negatively affected because of an inability to manage and evolve. There is a lack of high-level personnel with long-term Corps work experience to recognize the problems and gain authority to fix them; and there is a lack of identified career paths for junior-level officers to follow.

Lastly, our analysis revealed that there are concerns about the authority of the Surgeon General and the Assistant Secretary for Health. Informant interviews reveal three major contradictory opinions about the two positions:

⁶⁷ Commissioned Corps Management Information Systems. (2012). Public Statistical Information. U.S. Department of Health and Human Services. Retrieved from <http://dcp.psc.gov/CCMIS/StatusCharts/PublicPivot.aspx>

⁶⁸ Junior Officer Advisory Group. (December 2009). Commissioned Officer's Code of Conduct. *United States Public Health Service*. Retrieved from

http://www.usphs.gov/corpslinks/JOAG/documents/JOAG_CodeOfConduct_Jan2010.pdf

⁶⁹ Coviello, D. (n.d). Public Health Commissioned Corps: Data Analysis

- The Surgeon General should be a career officer from within the Commissioned Corps, not merely a presidential appointee who is granted the rank of Vice Admiral upon appointment confirmation.
- The Surgeon General should have the same authority as the Assistant Secretary for Health to have more influence and leadership abilities regarding the nation's health.
- The Surgeon General should continue to be appointed by the president with no requirement of service in the USPHS CC.

Recommendations. Flowing from these lessons learned we have isolated a few specific recommendations to better utilize the skills, resources, and leadership that the Commissioned Corps commands.

Build Relationships with the private sector and organizations such as the American Public Health Association to increase innovative training opportunities: Public and private-sector relationships provide innovative opportunities for training and facilitate conversation to meet the public health needs of the nation. Under the provisions of the Affordable Care Act, non-profit foundations may provide funding for Public Health Science Track scholarships.

The USPHS CC should build relationships with the American Public Health Association (APHA) and private sector industry. By working with the APHA, the USPHS CC can analyze revolving trends in education needs so that officers can stay up-to-date and meet the changing needs of public health head-on. By coordinating with the

private sector industry, the USPHS can develop a model of cost-effectiveness for the Corps based on private sector salaries. In addition, working with the private sector will ensure that officers keep up with the innovations generated by private sector companies, which may help advance public health goals. This can increase training opportunities for officer career development and facilitate an exchange of skills among the public and private sector to meet the nation's public health needs.

Increase the Officers' Role in Achieving Healthy People 2020 Goals: The leadership skills and experience of commissioned officers makes them ideal to play a larger role in achieving the goals and objectives of Healthy People 2020. With a focus on achieving health equity, eliminating health disparities, and improving the health of all people,⁷⁰ Healthy People 2020 already aligns closely with current PSHCC efforts. For example, almost half of all officers already work with underserved populations, including American Indians and Alaskan Natives in the IHS and incarcerated individuals in the BOP. With these skills and the ways in which USPHS CC officers broaden the roles of their practice, they can develop and implement sustainable programs to improve the health and access to care for other underserved and at-risk population throughout the US to meet the goals of Healthy People 2020.

Increase Public Health Roles of Officers to Meet the Health Workforce Needs of America and Serve At-Risk Populations: There is a growing need for a strong, reliable health workforce due to changes caused by the Patient Protection and Affordable Care Act (PPACA). This need will only increase as more American gain access to

⁷⁰ Healthy People. (December 2012). Introducing Healthy People 2020. U.S. Department of Health and Human Services. Retrieved from <http://healthypeople.gov/2020/about/default.aspx>

affordable health care. With this increase in access to health care, the USPHS CC needs to be at the forefront of providing care including medical treatment, vaccinations, and health literacy to communities that previously did not have access. Officers also need to be leaders in gaining the trust of these communities and populations so that they utilize the services. Previous case studies have shown that access to a clinic does not necessarily mean that a population will utilize the services if they do not trust the providers or care is not provided in a culturally sensitive way. In addition, the USPHS CC needs to critically examine current access to care barriers for vulnerable populations, including lack of providers who accept Medicare and Medicaid and a lack of providers who speak a language other than English. This is especially important for the growing Hispanic population in the U.S. Officers are also uniquely trained and situated to address complex problems such as human trafficking and homelessness. For example, a Health and Human Services report on human trafficking lists system-wide outreach as a promising approach to identify victims, including “outreach to child welfare agencies, police departments, juvenile detention facilities, healthcare systems, congregations, youth-serving agencies, and schools or school districts.”⁷¹ Another Health and Human Services report on supportive housing for chronically homeless people also details the importance of coordinating stakeholder, strong leadership, and collaboration.⁷² USPHS CC officers, who gain broad public health experience working across agencies and with many stakeholders, are well suited to conduct this type of outreach.

⁷¹ U.S. Department of Health and Human Services and the Office of the Assistant Secretary for Planning and Evaluation. (2009). Study of HHS Programs Serving Human Trafficking Victim: Final Report. Department of Health and Human Services, Washington, DC.

⁷² U.S. Department of Health and Human Services, the Office of the Assistant Secretary for Planning and Evaluation, the Office of Disability, Aging and Long-Term Care Policy. (2012). Public Housing Agencies and Permanent Supportive Housing for Chronically Homeless People. Department of Health and Human Services: Washington, DC.

Increase Recognition of Leadership and Services Provided by Officers

Stationed in Different Agencies and Departments: Commissioned officers are effective leaders and work well with at-risk population, but their leadership and management skills need to be recognized when developing collaborations with different agencies and departments. For this to happen, officers work, while a part of their stationing agencies achievements, should still be noted as USPHS CC work. This would allow the USPHS CC to quantify the effect officers have on public health and to emphasize the role officers play as leaders. Almost two times as many officers serve in supervisory and leadership positions than civil servants, but this often goes unrecognized. These leadership roles should be cultivated in the USPHS CC through additional training and education and should be used to improve collaboration between agencies.

Increase Advocacy for the USPHS CC: Increasing the visibility of the USPHS CC through advocacy ensures that the commissioned officers are utilized to the best of their abilities. It ensures that the general public and politicians understand the USPHS CC. Increased visibility and recognition will also ensure that the Corps continues to expand, evolve, and challenges the current roles it plays to meet the future public health needs of the nation. In addition, advocates should push to increase the stationing of USPHS CC at the state and county level to increase awareness and understanding of the officers' knowledge, skills, and contributions among these stakeholders in public health. While stationing officers at federal agencies is beneficial for improving inter-departmental and inter-agency coordination, stationing officers at county-level health department and organizations would increase their visibility to the general public and

demonstrate to state and local governments that commissioned officers are a valuable public health resource during times of peace and especially during times of disaster. Advocacy for the PHS Commissioned Corps is principally, but not exclusively, the responsibility of DHHS, OASH, and OSG.

Increase Officers Role in Global Health Efforts: While Commissioned Officers lead and facilitate public health initiatives in the U.S., they can also participate in global efforts. For example, with additional cultural sensitivity and language training, officers could act as health attaches to U.S. Embassies around the world. While officers deployed after the Haiti earthquake in 2010, deploying officers does not need to be a singular event or only happen during times of crisis. The USPHS CC could deploy to all embassies to provide on-the-ground health services to both U.S. citizens in the embassies and serve as health ambassadors to the local populations, thus embodying the tenants of health diplomacy. If officers served at U.S. Embassies, they could act as health diplomats, working with the local communities to set up effective and sustainable public health programs. While officers have skills and knowledge to work with at-risk and low resource populations, they could collaborate with global health organizations like the World Health Organization (WHO) to improve the health and relationships with populations around the world. If officers received additional cultural sensitivity training, their work abroad could garner a higher level of respect for the U.S. uniformed service and serve as liaisons between the U.S. and other countries.

Establish Strategic Objectives for the USPHS CC to Improve Functioning and Collaboration Between Managing Agencies: While there is no one solution to improve the functioning of USPHS CC management while divided between the Assistant

Secretary for Health and the Office of the Surgeon General, the two groups should develop a collaborative team to improve management and set strategic objectives for the USPHS CC. As mentioned previously, strategic objectives will allow the USPHS CC to effectively achieve its mission to improve public health. These strategic objectives should include the clear communication of the role and responsibilities of the Surgeon General within the Department of Health and Human Services, to other departments, and to the public. In addition, the collaborative team should re-evaluate the role of the USPHS CC domestically and abroad, determine the advantages of using officers for tasks and missions, and assess gaps in the workforce. The ultimate goal of this collaboration is to develop a mutual understanding between the two groups so that they can better utilize the USPHS CC to fulfill public health needs.

Fund the Public Health Science Track: Authorized in the Affordable Care Act, the Public Health Science Track (PHST) will provide 850 scholarships per year for students of certain health professions who commit to two years of service in the PHS Commissioned Corps for each year of funded education. The PHST provides a steady stream of qualified PHS officer candidates, is less costly than comparable National Health Service Corps scholarship programs and provides twice the benefit in terms of obligated service. Funding the PHST will provide additional clinicians for underserved populations and help to alleviate the looming shortage of primary care practitioners.

Conclusion. While this study has its limitations as mentioned previously, we hope that it generates spirited and productive discussion on the different issues that we have identified. We hope the findings from this study can help guide the development of new strategies and policies.

